YAZAKI

TECHNICAL DATA

• 6th Edition •

MASCI

ISO 9000 QMS03196/800
TIS 18001 OHS07012/210
OHSAS 18001 OHSAS07009/130

ISO 14001 TH009912
ISO 14001 TH013591

TIS 11-2553
TIS 85-2548
TIS 293-2541
TIS 2202-2547

TIS 64-2517
TIS 118-2522
TIS 2143-2546
TIS 386-2531
TIS 2341-2564

THAI-YAZAKI ELECTRIC WIRE COMPANY LIMITED

YAZAKI

THAI-YAZAKI ELECTRIC WIRE CO., LTD.

Technical Data

For
Electric Wires
and Cables

Publication : 6th Edition JUNE 2024

This catalog provides a comprehensive descriptions of the main products of Thai-Yazaki Electric Wire Co., Ltd.

These products are manufactured in conformity to the Thai Industrial Standard (TIS), Thai-Yazaki Standard, and IEC 60502 Standard.

Head Office/Sale Office:
21st Floor, O-NES Tower, 6 Sukhumvit Soi 6, Klongtoey Sub-District, Klongtoey District, Bangkok, 10110 Thailand
Tel : 0-26532550 Fax : 0-26532613, 0-26532614
Tax Identification No.0105505001539

FACTORY :
283 Moo1 Suksawad Rd., Tambol Pak- Klong Bangplakot, Amphur Phrasamutchedi, Samutprakan 10290, Thailand
Tel . 0-2463-0058, 0-2463-4135-7
Fax : 0-2463-2477

Index

A Technical Data and General Information

B Copper Conductor Cables

C Aluminium Conductor Cables

D Electrical Insulation Tape

Technical Data and General Information

A

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
5/0	-	710	-	500	12.700	250,000	0.1964	126.7	756.9	1,126
-	-	-	12	472.4	12.000	223,162	0.1753	113.1	675.6	1,005
-	-	6/0	-	464	11.786	215,296	0.1691	109.1	651.7	969.9
-	4/0	-	-	460	11.684	211,600	0.1662	107.2	640.5	953.0
4/0	-	-	-	454	11.532	206,100	0.1619	104.4	624.0	928.1
-	-	5/0	-	432	10.973	186,624	0.1466	94.56	565.0	840.6
3/0	-	-	-	425	10.795	180,600	0.1419	91.52	546.9	813.6
-	3/0	-	-	409.6	10.404	167,772	0.1318	85.03	508.0	755.9
-	-	4/0	-	400	10.160	160,000	0.1257	81.07	484.5	720.7
-	-	-	10	393.7	10.000	155,000	0.1217	78.54	468.0	698.2
2/0	-	-	-	380	9.652	144,400	0.1134	73.17	437.1	650.5
-	-	3/0	-	372	9.440	138,384	0.1087	70.12	418.9	623.4
-	2/0	-	-	364.8	9.266	133,079	0.1045	67.42	402.7	599.4
-	-	-	9	354.3	9.000	125,528	0.09859	63.62	380.0	565.6
-	-	2/0	-	348	8.839	121,104	0.09512	61.36	366.6	545.5
0	-	-	-	340	8.636	115,600	0.09079	58.58	349.9	520.8
-	0	-	-	324.9	8.250	105,560	0.08291	53.49	319.5	475.5
-	-	0	-	324	8.230	104,976	0.08245	53.19	317.8	472.8
-	-	-	8	315	8.000	99,225	0.07793	50.27	300.3	446.9
1	-	1	-	300	7.629	90,000	0.07069	45.60	272.4	405.4
-	1	-	-	289.3	7.348	83,694	0.06573	42.41	253.3	377.0
2	-	-	-	284	7.214	80,660	0.06335	40.87	244.2	363.3
-	-	2	-	276	7.010	76,176	0.05983	39.60	230.6	343.2
-	-	-	7.0	275.6	7.000	75,955	0.05966	38.48	229.9	342.1
3	-	-	-	259	6.579	67,080	0.05269	33.99	203.1	302.2
-	2	-	-	257.6	6.544	66,358	0.05212	33.63	200.9	299.0
-	-	-	6.5	255.9	6.500	65,485	0.05143	22.18	189.2	295.0
-	-	3	-	252	6.401	63,504	0.04988	32.18	192.2	286.1
4	-	-	-	238	6.045	56,640	0.04449	28.70	171.5	255.1
-	-	-	6.0	236.2	6.000	55,790	0.04382	28.27	168.9	251.1
-	-	4	-	232	5.893	53,824	0.04227	27.27	162.9	242.4
-	3	-	-	229.4	5.827	52,624	0.04133	26.66	159.3	237.0
5	-	-	-	220	5.588	48,400	0.03801	24.52	146.5	218.0
-	-	-	5.5	216.5	5.500	46,872	0.03681	23.72	141.9	210.9
-	-	5	-	212	5.385	44,944	0.03530	22.77	136.0	202.4
-	4	-	-	204.3	5.189	41,738	0.03278	21.15	126.3	188.0
6	-	-	-	203	5.156	41,210	0.03237	20.88	124.8	185.6
-	-	-	5.0	196.9	5.000	38,770	0.03045	19.63	117.4	174.5
-	-	6	-	192	4.877	36,864	0.02895	18.68	111.6	166.3
-	5	-	-	181.9	4.621	33,088	0.02599	16.77	100.2	149.1
7	-	-	-	180	4.572	32,400	0.02545	16.42	98.08	146.0
-	-	-	4.5	177.2	4.500	31,400	0.02466	15.90	95.04	141.4
-	-	7	-	176	4.470	30,976	0.02433	15.70	93.77	139.6
8	-	-	-	165	4.191	27,220	0.02138	13.80	82.40	122.7
-	6	-	-	162	4.115	26,244	0.02061	13.30	79.43	118.2

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
-	-	8	-	160	4.064	25,600	0.02011	12.97	77.50	115.30
-	-	-	4.0	157.5	4.000	24,806	0.01948	12.57	75.08	111.80
9	-	-	-	148	3.759	21,900	0.01720	11.10	66.29	98.68
-	7	-	-	144.3	3.665	20,822	0.01635	10.55	63.01	93.79
-	-	9	-	144	3.658	20,736	0.01629	10.52	62.78	93.52
-	-	-	3.5	137.8	3.500	18,989	0.01491	9.621	57.46	85.53
10	-	-	-	134	3.404	17,960	0.01410	9.098	54.34	80.88
-	8	-	-	128.5	3.264	16,512	0.01297	8.368	49.99	74.39
-	-	10	-	128	3.251	16,384	0.01287	8.302	49.60	73.81
-	-	-	3.2	126	3.200	15,876	0.01247	8.042	48.06	71.49
11	-	-	-	120	3.048	14,400	0.01131	7.297	43.59	64.87
-	-	11	-	116	2.946	13,456	0.01057	6.818	40.74	60.61
-	9	-	-	114.4	2.906	13,087	0.01028	6.632	39.62	58.96
-	-	-	2.9	114.2	2.900	13,042	0.01024	6.605	39.47	58.72
12	-	-	-	109	2.769	11,880	0.009331	6.020	35.96	53.52
-	-	12	-	104	2.642	10,816	0.008495	5.481	32.74	48.73
-	-	-	2.6	102.4	2.600	10,486	0.008246	5.309	31.78	47.29
-	10	-	-	101.9	2.588	10,384	0.008156	5.262	31.43	46.78
13	-	-	-	95	2.413	9,025	0.007088	4.573	27.32	40.65
-	-	13	-	92	2.337	8,464	0.006648	4.289	25.62	38.13
-	11	-	-	90.74	2.305	8,234	0.006467	4.172	24.92	37.09
-	-	-	2.3	90.55	2.300	8,199	0.006439	4.155	24.82	36.94
14	-	-	-	83	2.108	6,889	0.005411	3.491	20.85	31.04
-	12	-	-	80.81	2.053	6,530	0.005129	3.309	19.77	29.42
-	-	14	-	80	2.032	6,400	0.005027	3.243	19.37	28.83
-	-	-	2.0	78.74	2.000	6,200	0.004869	3.142	18.77	27.93
15	-	15	-	72	1.829	5,184	0.004072	2.627	18.46	27.36
-	13	-	-	71.96	1.828	5,178	0.004067	2.624	15.67	23.33
-	-	-	1.8	70.87	1.800	5,023	0.003945	2.545	15.20	22.63
16	-	-	-	65	1.651	4,225	0.003318	2.141	12.79	19.03
-	14	-	-	64.08	1.628	4,106	0.003225	2.081	12.43	18.50
-	-	16	-	64	1.626	4,096	0.003217	2.075	12.40	18.45
-	-	-	1.6	62.99	1.600	3,968	0.003116	2.011	12.01	17.88
17	-	-	-	58	1.473	3,364	0.002642	1.705	10.18	15.16
-	15	-	-	57.07	1.450	3,257	0.002558	1.650	9.859	14.67
-	-	17	-	56	1.422	3,136	0.002463	1.589	9.493	14.13
-	-	-	1.4	55.12	1.400	3,038	0.002386	1.539	9.196	13.68
-	16	-	-	50.82	1.291	2,583	0.002029	1.309	7.820	11.64
18	-	-	-	49	1.245	2,401	0.001886	1.217	7.269	10.82
-	-	18	-	48	1.219	2,304	0.001810	1.167	6.976	10.38
-	-	-	1.2	47.24	1.200	2,232	0.001753	1.131	6.756	10.06
-	17	-	-	45.26	1.150	2,048	0.001608	1.037	6.197	9.219
19	-	-	-	42	1.067	1,764	0.001385	0.8938	5.388	7.946
-	18	-	-	40.3	1.024	1,624	0.001275	0.8226	4.914	7.313
-		19	-	40	1.016	1,600	0.001257	0.8107	4.845	7.207
-	-	-	1.0	39.37	1.000	1,550	0.001217	0.7854	4.690	6.982
-	-	20	-	36	0.914	1,296	0.001018	0.6576	3.923	5.838

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
-	19	-	-	35.89	0.9116	1,288	0.001012	0.6529	3.900	5.804
-	-	-	0.90	35.43	0.9000	1,255	0.0009857	0.6362	3.799	5.656
20	-	-	-	35	0.8890	1,225	0.0009621	0.6207	3.708	5.518
21	-	21	-	32	0.8128	1,024	0.0008042	0.5189	3.099	4.613
-	20	-	-	31.96	0.8118	1,021	0.0008019	0.5174	3.091	4.600
-	-	-	0.80	31.50	0.8000	992.3	0.0007794	0.5027	3.004	4.469
-	21	-	-	28.46	0.7229	810	0.0006362	0.4105	2.452	3.649
22	-	22	-	28	0.7112	784	0.0006158	0.3973	2.373	3.532
-	-	-	0.70	27.56	0.7000	759.6	0.0005966	0.3848	2.299	3.421
-	-	-	0.65	25.59	0.6500	654.8	0.0005143	0.3318	1.982	2.950
	22	-	-	25.35	0.6438	642.6	0.0005047	0.3256	1.945	2.895
23	-	-	-	25	0.6350	625	0.0004909	0.3167	1.892	2.816
-	-	23	-	24	0.6096	576	0.0004524	0.2919	1.744	2.595
-	-	-	0.60	23.62	0.6000	557.9	0.0004382	0.2827	1.689	2.513
-	23	-	-	22.57	0.5733	509.4	0.0004001	0.2581	1.542	2.295
24	-	24	-	22	0.5583	484	0.0003801	0.2452	1.465	2.180
-	-	-	0.55	21.65	0.5500	468.7	0.0003681	0.2376	1.419	2.112
-	24	-	-	20.10	0.5106	404	0.0003173	0.2047	1.223	1.820
25	-	25	-	20	0.5080	400	0.0003142	0.2027	1.211	1.802
-	-	-	0.50	19.69	0.5000	387.7	0.0003045	0.1963	1.174	1.745
26	-	26	-	18	0.4572	324	0.0002545	0.1642	0.9809	1.460
-	25	-	-	17.90	0.4547	320.4	0.0002516	0.1623	0.9697	1.443
-	-	-	0.45	17.72	0.4500	314	0.0002466	0.1590	0.9504	1.414
-	-	27	-	16.4	0.4166	269	0.0002113	0.1363	0.7844	1.212
27	-	-	-	16	0.4064	256	0.0002011	0.1297	0.7750	1.153
-	26	-	-	15.94	0.4049	254.1	0.0001996	0.1288	0.7693	1.145
-	-	-	0.40	15.75	0.400	248.1	0.0001949	0.1257	0.7512	1.118
-	-	28	-	14.8	0.3759	219	0.0001720	0.1110	0.6629	0.9868
-	27	-	-	14.20	0.361	201.6	0.0001583	0.1021	0.6101	0.9077
28	-	-	-	14	0.3556	196	0.0001539	0.09932	0.5931	0.8330
-	-	-	0.35	13.78	0.3500	189.9	0.0001491	0.09621	0.5746	0.8553
-	-	29	-	13.6	0.3454	185	0.0001453	0.09372	0.5600	0.8332
29	-	-	-	13	0.3302	169	0.0001327	0.08563	0.5114	0.7613
-	28	-	-	12.64	0.3211	159.8	0.0001255	0.08097	0.4837	0.7198
-	-	-	0.30	12.60	0.3200	158.8	0.0001246	0.08042	0.7806	0.7149
-	-	30	-	12.4	0.3150	153.8	0.0001208	0.07791	0.4656	0.6926
30	-	-	-	12	0.3048	144	0.0001131	0.07297	0.4359	0.6487
-	-	31		11.6	0.2946	134.6	0.0001057	0.06818	0.4074	0.6061
-	-	-	0.29	11.42	0.2900	130.4	0.0001024	0.06605	0.3947	0.5872
-	29	-	-	11.26	0.2859	126.8	0.00009959	0.06425	0.3838	0.5712
-	-	32	-	10.8	0.2743	116.6	0.00009158	0.05913	0.3530	0.5257
-	-	-	0.26	10.24	0.2600	104.9	0.00008239	0.05309	0.3175	0.4720
-	30	-	-	10.03	0.2546	100.6	0.00007901	0.05097	0.305	0.4531
31	-	33	-	10	0.2540	100	0.00007954	0.05067	0.3027	0.4505
-	-	34	-	9.2	0.2337	84.64	0.00006648	0.04289	0.2562	0.3813
-	-	-	0.23	9.055	0.2300	81.99	0.00006440	0.04155	0.2482	0.3694

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
32	-	-	-	9	0.2286	81.102	0.00006362	0.04104	0.2452	0.3649
-	31	-	-	8.928	0.2238	79.71	0.00006260	0.04039	0.2413	0.3591
-	-	35	-	8.4	0.2134	70.56	0.00005542	0.03575	0.2136	0.3178
33	-	-	-	8	0.2032	64	0.00005027	0.03243	0.1937	0.2883
-	32	-	-	7.950	0.2019	65.20	0.00004964	0.03203	0.1913	0.2847
-	-	-	0.20	7.874	0.2000	62	0.00004869	0.03142	0.1877	0.2793
-	-	36	-	7.6	0.1930	57.76	0.00004536	0.02927	0.1748	0.2602
-	-	-	0.18	7.087	0.1800	50.23	0.00003945	0.02545	0.1520	0.2263
-	33	-	-	7.080	0.1798	50.13	0.00003937	0.02540	0.1517	0.2258
34	-	-	-	7.	0.1778	49	0.00003848	0.02483	0.1483	0.2207
-	-	37	-	6.8	0.1727	46.24	0.00003632	0.02343	0.1400	0.2083
-	34	-	-	6.305	0.1601	39.75	0.00003122	0.02014	0.1203	0.1790
-	-	-	0.16	6.299	0.1600	39.68	0.00003116	0.02011	0.1201	0.1788
-	-	38	-	6	0.1524	36	0.00002827	0.01824	0.1090	0.1622
-	35	-	-	5.615	0.1426	31.53	0.00002476	0.01597	0.09543	0.1420
-	-	-	0.14	5.512	0.1400	30.38	0.00002386	0.01539	0.09196	0.1368
-	-	39	-	5.2	0.1321	27.04	0.00002124	0.01370	0.08186	0.1218
35	36	-	-	5.000	0.1270	25	0.00001963	0.01267	0.07565	0.1126
-	-	40	-	4.8	0.1219	23.04	0.00001810	0.01167	0.06976	0.1037
-	-	-	0.12	4.724	0.1200	22.32	0.00001753	0.01131	0.06756	0.1006
-	37	-	-	4.453	0.1131	19.83	0.00001557	0.01005	0.06001	0.08934
-	-	41	-	4.4	0.1118	19.36	0.00001521	0.009810	0.05812	0.08721
36	-	42	-	4	0.1016	16.00	0.00001257	0.008107	0.04845	0.07207
-	38	-	-	3.965	0.1007	15.72	0.00001235	0.007968	0.04760	0.07084
-	-	-	0.10	3.937	0.1000	15.50	0.00001217	0.007854	0.04690	0.06982
-	-	43	-	3.6	0.09114	12.96	0.00001018	0.006567	0.03923	0.05838
-	39	-	-	3.531	0.08969	12.47	0.000009794	0.006319	0.03775	0.05618
-	-	44	-	3.2	0.08138	10.24	0.000008042	0.005819	0.03099	0.04613
-	40	-	-	3.145	0.07987	9.891	0.000007768	0.005012	0.02994	0.04456
-	41	45	-	3.800	0.07113	7.842	0.000006159	0.003973	0.02374	0.03532
-	42	-	-	2.494	0.06334	6.219	0.000004884	0.003151	0.01882	0.02801
-	-	46	-	2.4	0.06096	5.760	0.000004528	0.002929	0.01744	0.02595
-	43	-	-	2.221	0.05641	4.932	0.000003873	0.002495	0.01498	0.02222
-	-	47	-	2	0.05080	4.000	0.000003142	0.002027	0.01211	0.01802
-	44	-	-	1.987	0.05023	3.911	0.000003072	0.001982	0.01184	0.01762
-	-	-	0.05	1.969	0.05000	3.877	0.000003045	0.001963	0.01174	0.01745
-	45	-	-	1.761	0.04473	3.102	0.000002436	0.001572	0.009383	0.01398
-	-	48	-	1.6	0.04064	2.560	0.000002011	0.001297	0.007750	0.01153
-	46	-	-	1.568	0.03984	2.460	0.000001931	0.001246	0.007446	0.01108
-	47	-	-	1.397	0.03547	1.951	0.000001532	0.0009884	0.005904	0.008787
-	48	-	-	1.224	0.03159	1.547	0.000001215	0.0007838	0.004683	0.006968
-	-	49	-	1.2	0.03048	1.440	0.000001131	0.0007297	0.004359	0.006487
-	49	-	-	1.108	0.02813	1.227	0.000009635	0.0006216	0.003713	0.005526
-	-	50	-	1	0.02540	1.000	0.000007854	0.0005067	0.003027	0.004505
-	50	-	-	0.986	0.02505	0.9728	0.000007641	0.0004929	0.002945	0.004382

NOTE B.W.G. - Birmingham Iron Wire Gauge
A.W.G. - American Wire Gauge
S.W.G. - British Standard Wire Gauge
mm.G. - Millimeter Gauge

Conversion table AWG/MCM (kcmil) to the metric cross-section area

Conductor Cross-swection area AWG/MCM (kcmil)		Theoretical Cross-Section area mm²	Advised Cross-Section area lb/1,000 ft
AWG	20	0.51	0.5
	18	0.82	1
	16	1.31	1.5
	14	2.08	2.5
	12	3.31	4
	10	5.27	6
	8	8.40	10
	6	13.30	16
	4	21.20	25
	3	26.70	25
	2	33.60	35
	1	42.40	so
	1/0	53.40	so
	2/0	67.50	70
	3/0	85.00	95
	4/0	107.02	120
MCM (kcmil)	250	126.70	120
	300	152.00	150
	350	177.40	185
	400	202.70	240
	500	253.40	240
	600	304.00	300
	700	354.00	400
	750	380.00	400
	800	405.40	400
	900	456.00	500
	1000	506.70	500
	1250	633.40	630
	1500	760.10	800

A

SI Prefixes

Multiply factor								Prefix	Symbol
	1	000	000	000	000	=	10^{12}	tera	T
		1	000	000	000	=	10^{9}	giga	G
			1	000	000	=	10^{6}	mega	M
				1	000	=	10^{3}	kilo	k
					100	=	10^{2}	hecto	h
					10	=	10^{1}	deca	da
					0.1	=	10^{-1}	deci	d
					0.01	=	10^{-2}	centi	c
					0.001	=	10^{-3}	milli	m
				0.000	001	=	10^{-6}	micro	μ
			0.000	000	001	=	10^{-9}	nano	n
		0.000	000	000	001	=	10^{-12}	pico	p
	0.000	000	000	000	001	=	10^{-15}	femto	f
0.000	000	000	000	000	001	=	10^{-18}	atto	a

Properties of Insulation and Jacket Materials

Resistance to Industrial Chemicals

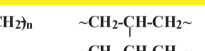
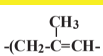
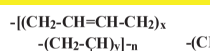
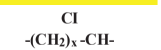
A

Reagent	Relative Rating							Reagent	Relative Rating						
	BR	CR	ERC	PVC	PE	XLPE	NYLON		BR	CR	ERC	PVC	PE	XLPE	NYLON
Acetone	◎	○	◎	×	◎	◎	○	Chlorine Gas	△	△	×	×	×	×	◎
Aniline	○	×	○	○	○	○		Ozone	○		○	○	◎	◎	×
Ethanol	◎	◎	◎	△	○	○	○	Bromine	×	×	×	×	×	×	
Ethyleneglycol	○	◎	○	△	◎	◎	○	Nirtic Acid, conc.	×	×	×	×	△	△	×
Xylene	×	×	×	×	○	○	○	Nitric Acid, 10%	×	×	△	○	○	○	△
Glycerin	◎	◎	◎	○	◎	◎	○	Fuming Nitric Acid	×	×		×	×	×	
Cresol	○	△	○	△	○	○	×	TapWater	◎	◎	◎	◎	◎	◎	◎
Chloroform	×	×	×	×	△	△	×	Seawater	○	◎	◎	◎	◎	◎	
Acetic Acid, conc.	○	△	○	×	○	○	△	Sulfuric Acid, conc.	×	×	×	△	△	△	×
Acetic Acid, 10%	○	×	○	△	◎	◎	○	Sulfuric Acid, 10%	○	○	○	◎	○	○	○
Ethyl Acetate	○	×	△	×	○	○	○	Phosphoric Acid	○	△	○	×	◎	◎	○
Carbon Tetrachloride	×	×	×	×	×	×	△	Sodium Hydroxide, 10%	○	○	○	○	○	○	◎
Cyclohexane	△	×	×		△	△		Freon	×	×		○	○	○	
Dioctyl Phthalate	◎	×		×				Formic Acid	△	×		○	○	○	◎
Trichloroethylene	×	×	×	△	△	△	△	JIC No.1 Oil (OF Oil)	×	△	×	△	○	○	
Trichlorobenzene	×	×	×		△	△		ASTM No.1 Oil	○	○	△	△	○	○	
Toluene	×	×	×	×	△	△	○	ASTM No.2 Oil	△	○	△	△	○	○	
Carbon Disulfide	×	×	×	△	○	○		ASTM No.3 Oil	×	△	×	△	△	△	
Phenol	○	△	○	×	○	○	×	Gasoline	×	△	×	×	○	○	○
Furfural	◎	○	◎	△	◎	◎		Creosote Oil	△	×	×	×	△	△	
Hexane	×	△	×	△	○	○		JIS No.2 Oil	×	×	×	△	○	○	
Benzene	×	×	×	×	△	△	○	Heavy Oil	×	×	×	△	△	△	
Methanol	◎	◎	◎	×	○	○	△	Lube Oil	×	△	△	△	△	△	○
Methyl Ethyl Ketone	△	×	△	×	○	○		Silicone Oil	◎	◎	◎	○	◎	◎	
Dioxane				×	○	○		Vegetable Oil	◎	◎	○		◎	◎	
Nitrobenzene	○	×	○	×	○	○		Petroleum Ether	△	△		×	◎	◎	
Formaline	○	○		○	○	○	△	Trans Oil	×	△	×	○	○	○	
Ammonia, conc.	○	△	○	△	○	○	○	Naphtha	×	×	×	○	○	○	○
Ammonia,10%	○	△	○	○	○	○	◎	Coal Tar					○	○	
Sodium Chloride	○	○	○	○	◎	◎	◎								
Hydrochloric Acid, conc.	○	○	○	△	○	○	×								
Hydrochloric Acid, 10%	◎	○	○	○	◎	◎	○								

Where: ◎ : High Resistance ○ : Fair Resistance
× : Not Applicable △ : Poor Resistance, care on use

Properties of Insulation and Jacket Materials

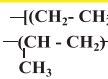
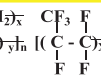
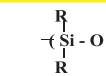
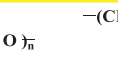
General Comparison Data

Material		Polyvinyl Chloride	Low Density Polyethylene	Cross-liked Polyethylene	Polyisoprene	Styrene Butadiene Copolymer	Polyisprene	Chlorosulphonated Polyethylene
Designation		**PVC**	**PE**	**XLPE**	**NR**	**SBR**	**CR**	**CSM**
Chemical structure								
Density		1.3 - 1.5	0.91 - 0.93	0.91 - 0.93	0.93 - 0.94	0.93 - 0.94	1.15 - 1.23	1.10
Hardness (Shore)		D30 - 90	D45 - 60		30 - 90	10 - 95	20 - 90	50 - 90
Max. Operating Temp.	°C	70	75	90	60	75	80	90
Emergency Temp. Rating	°C	85	90	130	85			
Short Circuit Temp. Rating	°C	120	150	250	150			
Brittleness Temp.	°C	~ -40	< - 70	< - 70	-55 ~ -58	-30 ~ -65	-30 ~ -50	-20 ~ -50
Softening Temp.	/°C	120 - 140	100 - 115					
Thermal Expansion	°C	0.7 - 2.5 x 10^{-4}	1.6 - 1.8 x 10^{-4}	1.6 - 1.8 x 10^{-4}	1.8 x 10^{-4}	1.8 x 10^{-4}	1.9 x 10^{-4}	1.8 x 10^{-4}
Thermal Conductivity Cal / cm•sec•	°C	3.0 - 4.0 x 10^{-4}	8.0 x 10^{-4}	8.0 x 10^{-4}	5.1 x 10^{-4}	5.8 x 10^{-4}	5.6 x 10^{-4}	6.3 x 10^{-4}
Specific Heat	Cal /°C•g	0.3 - 0.5	0.55	0.55	0.52	-	0.52	
Tensile Strength	kg / mm^2	1.5 - 2.5	1.5 - 2.0	1.8 - 3.0	0.8 - 3.0	0.4 - 3.0	0.7 - 3.0	0.5 - 2.0
Elongation	%	200 - 400	300 - 700	300 - 700	300 - 700	100 - 700	400 - 900	100 - 500
Abrasion Resistance		Excellent	Good	Excellent	Good	Good	Good	Good
Voltage Breakdown	kv / mm	20 - 30	30 - 50	30 - 50	16 - 32	16 - 30	15 - 25	16 - 32
Volume Resistivity	Ω•cm	10^{12} - 10^{15}	>10^{16}	>10^{16}	10^{15}	10^{14} - 10^{15}	10^{10} - 10^{12}	10^{13} - 10^{14}
Dielectric Constant		5.7	2.2 - 2.4	2.2 - 2.4	3 - 5	3 - 5	7 - 10	
Dissipation Factor (tan δ)		0.1 - 0.03	<0.0005	<0.0005	0.3 - 0.5	2 - 5	1.7 - 4	-
Weathering		Good	Inferior*	Inferior*	Poor	Poor	Excellent	Good
Ozone Resistance		Excellent	Excellent	Excellent	Poor	Inferior	Good	Good
Flame Resistance		Self - Extinguish	Burns	Burns	Burn	Burn	Self - Extinguish	Self - Extinguish
Track Resistance		Inferior	Excellent	Excellent	Fair	Fair	Inferior	Good
Water Resistance		Fair	Excellent	Excellent	Fair	Fair	Fair	Fair
Acid Resistance		Excellent	Good	Good	Good	Fair	Excellent	Good
Alcari Resistance		Excellent	Excellent	Excellent	Good	Good	Excellent	Excellent
Oil Resistance		Good	Excellent	Excellent	Poor	Inferior	Good	Fair
Solvent Resistance		Fair	Excellent	Excellent	Inferior	Inferior	Fair	Fair

* Improved to "good" with mixture of carbon black.

Properties of Insulation and Jacket Materials

General Comparison Data (Continued)

Material		Ethylene Propylene Copolymer	Hexafluoropropylene Vinylidenefluoride Copolymer	Polyorganosiloxane	Polypropylene	Polytetra Fluoroethylene	Polychloro Trifluoroethylene	Polyamide
Designation		**EPM, EPDM**	**FPM**	**Q**	**PP**	**PTFE**	**PCTFE**	**Nylon(12)**
Chemical structure								
Density		0.86 - 0.87	1.82 - 1.85	0.97 - 1.40	0.9 - 0.915	2.13 - 2.2	2.1	1.01 - 1.02
Hardness (Shore)		40 - 85	60 - 90	50 - 85	R85 - 110	D50 - 65	R110 - 115	R100 - 110
Max. Operating Temp.	°C	90	200	180	80	260	180	90
Emergency Temp. Rating	°C							
Short Circuit Temp. Rating	°C				150	310		120
Brittleness Temp.	°C	-40 ~ -60	-44 ~ -60	-70 ~ -100		<-70	<-70	-70
Softening Temp.	/°C						210	170 - 180
Thermal Expansion	°C		1.6×10^{-4}	2.6×10^{-4}	$6.0 - 8.5 \times 10^{-4}$	1.0×10^{-5}	$4.5 - 7.0 \times 10^{-5}$	12×10^{-5}
Thermal Conductivity Cal / cm•sec•	°C		5.5×10^{-4}	5.7×10^{-4}	2.8×10^{-4}	6×10^{-4}	6×10^{-4}	$5.9 - 8.3 \times 10^{-4}$
Specific Heat	Cal /°C•g				0.46	0.25	0.22	0.62
Tensile Strength	kg / mm^2	0.5 - 1.5	1.5 - 2.5	0.3 - 1.0	2.0 - 4.0	1.4 - 2.1	2.8 - 3.5	5.0 - 6.0
Elongation	%	300 - 700	200 - 600	50 - 300	200 - 700	200	10 - 100	180 - 285
Abrasion Resistance		Good	Good	Fair	Excellent	Excellent	Excellent	Excellent
Voltage Breakdown	kv / mm	20 - 35	24	20 - 40	20 - 32	15 - 30	10 - 20	20 - 30
Volume Resistivity	Ω•cm	$10^{14} - 10^{15}$	$10^{12} - 10^{14}$	$10^{14} - 10^{15}$	$>10^{16}$	$>10^{18}$	$1.2 - 10^{18}$	$10^{14} - 10^{15}$
Dielectric Constant		3 - 5	6 - 7	3 - 4	2.0 - 2.2	2.0	2.24 - 2.8	3.5 - 4.5
Dissipation Factor (tan δ)		0.2 - 0.8		0.1 -1.0	0.0002 - 0.0006	<0.0002	0.0012 - 0.0036	0.03 - 0.06
Weathering		Excellent	Good	Good	Inferior*	Excellent	Excellent	Inferior*
Ozone Resistance		Excellent	Good	Excellent	Excellent	Excellent	Excellent	Good
Flame Resistance		Burn	Self - Extinguish	Burn	Burn	No Burn	No Burn	Burn
Track Resistance		Excellent	Fair	Excellent	Excellent	Excellent	Excellent	Good
Water Resistance		Good	Excellent	Fair	Excellent	Excellent	Excellent	Excellent
Acid Resistance		Excellent	Excellent	Poor	Excellent	Excellent	Excellentt	Good
Alcari Resistance		Excellent	Excellent	Good	Excellent	Excellent	Excellent	Excellent
Oil Resistance		Inferior*	Excellent	Fair	Excellent	Excellent	Excellent	Excellent
Solvent Resistance		Poor	Excellent	Fair	Excellent	Excellent	Excellentt	Good

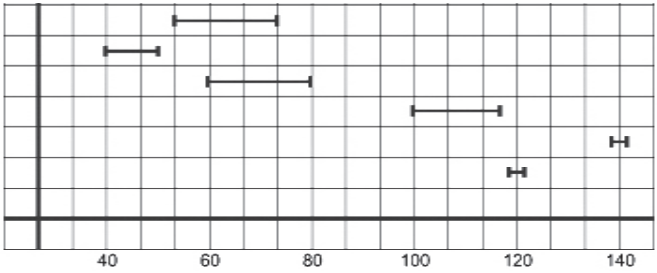
* Improved to "goodH with mixture of carbon black.

Properties of Insulation and Jacket Materials

Thermal Properties

Deflection temperature of plastics under load [ASTM D648]

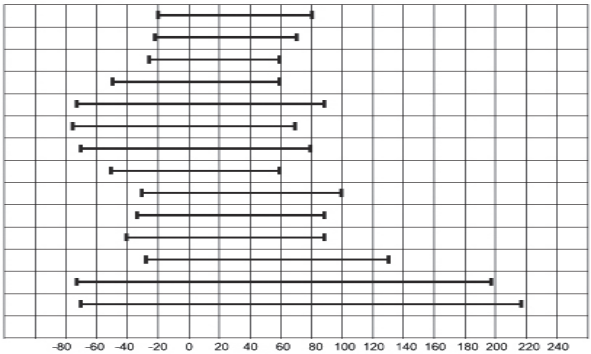
Polyvinyle Choloride (Hard Type)
Low Density Polyethylene
High Density Polyethylene
Polypropylene Polyamide
Polytetrafluoroethylene



Temperature - degrees C

Operating Temperature

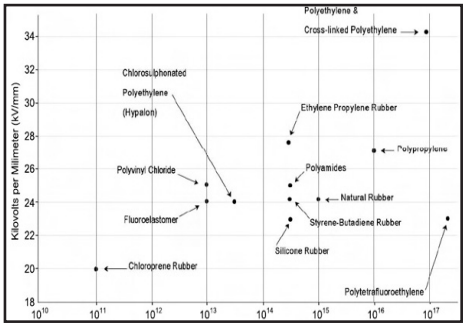
[Max. point : Max Continuous Operating Temperature
Min.point : Brittleness Temperature]



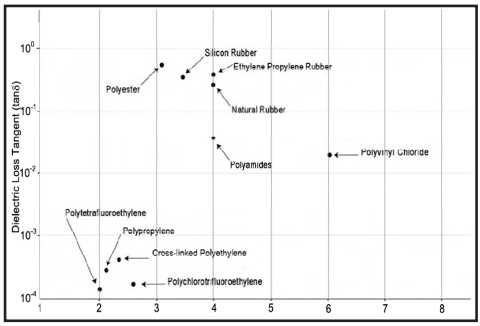
Temperature - degrees C

Polyvinyle Chloride, 80°C Grade
Polyvinyle Chloride, 75°C Grade
Polyvinyle Chloride, 60°C Grade Cold Resisting Polyvinyle Chloride
Cross-Linked Polyethylene Polyethylene
Nylon
Synthetic Natural Rubber
Chloroprene
Styrene-Butadiene Rubber
Ethylene-Propylene Rubber
Chlorosulphonated Polyethylene (Hypalon)
Silicone
Teflon

Electrical Properties



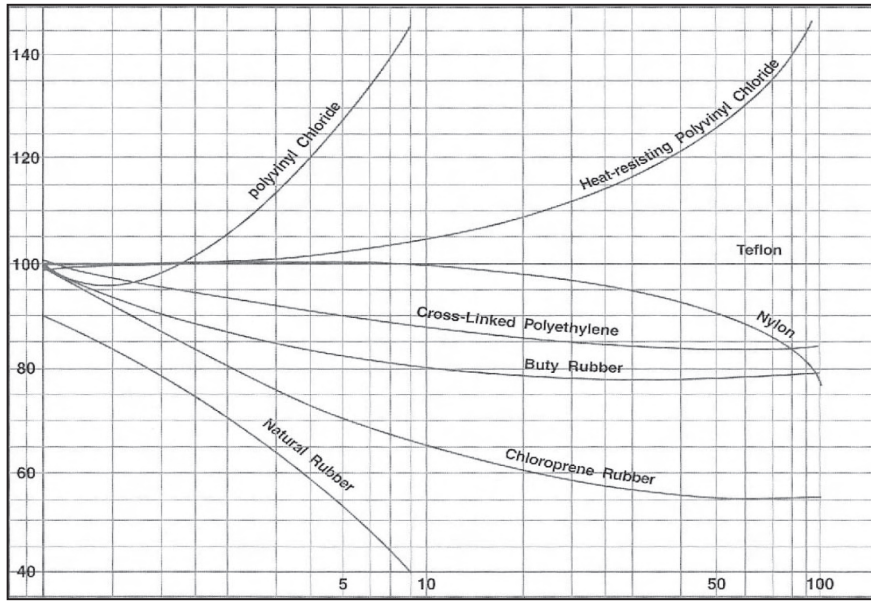
Volume Resistivity [Ω•cm]

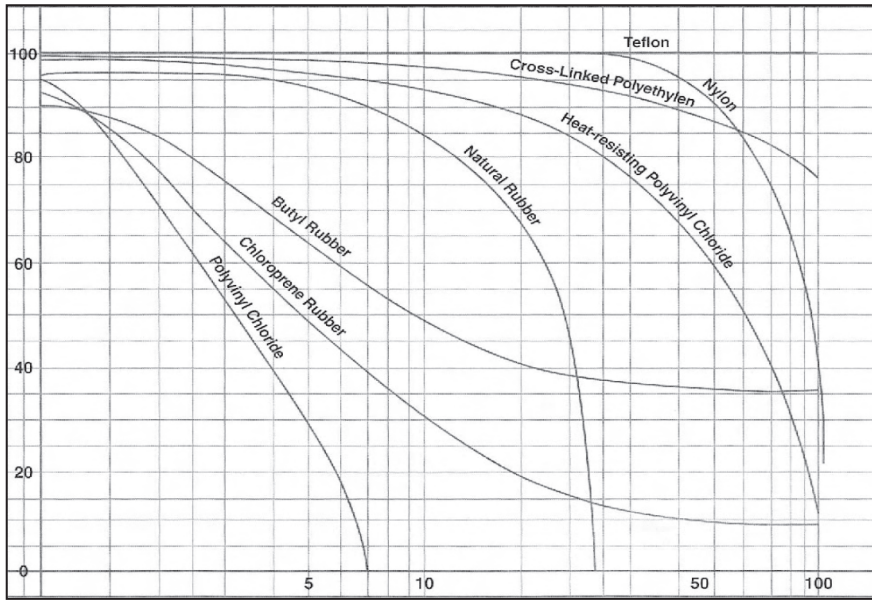


Dielectric Constant [ε]

Properties of Insulation and Jacket Materials

Long - Time Heat Aging Curves





Condition of Installation

Minimum Bending Radius

Type of cable \ Number of core		Single core		Multi cores
		Round conductor	Sector shape conductor	
PVC & PE Sheath	Unshield cable	8D	12D	6D
	Shield Cable	10D	12D	8D
Wire armoured cable		10D	12D	10D
Lead sheathed		10D	12D	10D
Corrugated metal armouredcable		-	-	8D
Flattape armoured cable		-	-	8D
Al. flat sheathed cable		20D	20D	20D
Al. corrugated sheathed cable		15D	15D	15D
Al. solidconductor		-	-	10D
Cabtyre cable		6D	-	4D

D: Overall diameter of cable

A

Pennissible Maximum Pulling Tension

Pulling tool	Material of conductor	Permissible maximum pulling tension (kgf)
Pulling eye	Copper	7 x (Number or core) x (Cross-sectional area of conductor)
	Aluminium	4 x (Number of core) x (Cross-sectional area of conductor)
Cable grip	Copper & Aluminium	The same as using the pulling eye, but the maximum tension should be less than 1.5 tons.

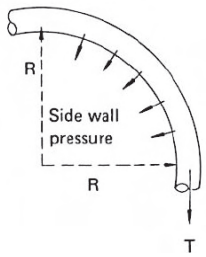
Note : When cable grip is used is should cover more than 500 mm. in length of the cable end and be bound to the cable sheath

Side Wall Pressure to cable

Permissible maximum side wall pressure to the cable at bending point during installation is

500 kg/m for at cable (Single core and multi core)
300 kg/m for PVC insulated PVC sheathed cable
250 kg/m for at triplex type

Side wall pressure to cable = $\frac{\text{Pulling tension (kgf)}}{\text{bending radius (m)}}$



Symbols of Electrical Units

Electrical Unit		Symbol
CURRENT	(AMPERE)	A
VOLTAGE	(VOLT)	V (kV)
RESISTANCE	(OHM)	Ω (kΩ, MΩ)
ELECTRIC POWER	(WATT)	W (kW, MW.)
ELECTRIC ENERGY	(WATT HOUR)	Wh (kWh.)
HORSE POWER		HP
POWER FACTOR	(COS 0)	P.F.
FREQUENCY	(HERTZ)	Hz
CAPACITANCE	(FARAD)	F (μF, pF.)
APPARENT POWER	(VOLTAMPERE)	VA (kVA)
DIRECT CURRENT		DC
ALTERNATING CURRENT		AC
EFFICENCY		Eff.
MAXIMUM VALUES	(VOLTAMPERE)	Em, Im
AVERAGE VALUES	(VOLTAMPERE)	Eav, Iav
EFFECTIVE VALUES	(VOLTAMPERE)	E. I
INSTANTANEOUS VALUES	(VOLTAMPERE)	e, I

Electrical Formulas

Direct Current	Alternating Current	
	Single Phase	Three Phase
$A = \frac{kW \times 1000}{V}$	$A = \frac{kW \times 1000}{V \times P.F.}$	$A = \frac{kW \times 1000}{1.73 \times V \times P.F.}$
$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{1.73 \times V}$
$A = \frac{HP \times 746}{V \times (\%Eff.)}$	$A = \frac{HP \times 746}{V \times (\%Eff.) \times P.F.}$	$A = \frac{HP \times 746}{1.73 \times V \times (\%Eff.) \times P.F.}$
$kW = \frac{A \times V}{1000}$	$kW = \frac{A \times V \times P.F.}{1000}$	$kW = \frac{A \times V \times 1.73 \times P.F.}{1000}$
$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V \times 1.73}{1000}$
$HP = \frac{A \times V (\%Eff.)}{746}$	$HP = \frac{A \times V \times (\%Eff.) \times P.F.}{746}$	$HP = \frac{A \times V \times 1.73 (\%Eff.) \times P.F.}{746}$

Approximate Motor Amperes per Terminal

1 phase	220 V ac = 4	amps/HP
3 phase	200 V ac = 2.5	amps/HP
3 phase	380 V ac = 1.41	amps/HP
3 phase	440 V ac = 1	amps/HP
3 phase	550 V ac = 1	amps/HP

Table of The Dimesions for The Motor Starters

The figures are based on normal 3 - phase motor for a.c. at 50 c.p.s. 1400 - 1450 r.p.m.

Moter ratings in HP at searvice voltage						Rating of motor starter (A)	Relay setting (A)	Max. quick-blow back-up fuse (A)	Min cross section of cables (mm^2)
220 V		380 V		440 V					
HP	Full load current (A)	HP	Full load current (A)	HP	Full load current (A)				
		0.05		0.05		15	0.15 - 0.25	1	1.5
0.05		0.1		0.1		15	0.25 - 0.4	2	1.5
		0.15		0.20		15	0.4 - 0.65	4	1.5
0.1		0.2		0.25	0.5	15	0.4 - 0.65	4	1.5
0.15		0.25	0.6	0.50	0.9	15	0.6 - 1	6	1.5
0.25	1.1	0.5	1.0			15	1.0 - 1.6	6	1.5
		0.75	1.5	0.75	1.2	15	1.0 - 1.6	6	1.5
0.5	1.8	1.0	1.9	1.0	1.6	15	1.5 - 2.5	15 (10)	1.5
0.75	2.5	1.5	2.6	2	3.2	15	2.5 - 4	25 (15)	1.5
1.0	3.2	2	3.4	2.5	3.9	15	2.5 - 4	25 (15)	1.5
1.5	4.4	2.5	4.2	3	4.5	15	4 - 6.5	25 (20)	1.5
2.0	5.8	3	4.9	4	6.0	15	4 - 6.5	25 (20)	1.5
2.5	7.3	4	6.3	5	7.5	15	6 - 10	35 (25)	1.5
3	8.4	5	7.8	6	8.5	15	6 - 10	35 (25)	1.5
4	11	6	9.3	7.5	11.0	15	9 - 14	35	1.5
5	13.5	7.5	11.5			15	9 - 14	35	1.5
		10	15	10	14	25	13 - 20	60	2.5
7.5	19.5	15	22	15	21	25	16 - 25	60	4
10	26	20	29	20	27	60	20 - 31	100	6
15	39	25	36	30	39	60	28 - 43	125	10
20	51	30	42			60	40 - 60	160	16
		35	50	35	46	60	40 - 60	160	16
		40	56	40	52	60	40 - 60	160	16
25	63	50	69	50	65	100	50 - 75	200	16
35	91	60	83	60	76	100	70 - 100	200	25
40	100	75	104	75	96	200	84 - 120	400	35
50	125	100	136	100	125	200	105 - 150	500	50
75	184	125	167	125	155	200	140 - 200	500	95
		150	200	150	180	350	175 - 250	600	120
100	245	175	245	175	215	350	175 - 250	600	120
120	295	200	268	200	240	350	210 - 300	850	150
150	370	250	335	250	300	600	280 - 400	850	240
175	425	300	400	300	360	600	350 - 500	1000	400
200	475	350	470	350	410	600	350 - 500	1000	400
225	540	400	535	400	450	600	420 - 600	1000	

Figures in brackets apply to hand operated motor starters.

Standard Coefficient of Conversion

Items		Description			
1. LENGTH	1 micron	= 0.001 mm	= 3.94 X 10^{-5} in.		
	1 mil	= 0.0254 mm	= 0.001 in		
	1 mm	= 39.37 mils	= 0.03937 in.		
	1 cm	= 0.3937 in	= 0.0328 ft.		
	1 inch	= 25.4 mm	= 0.083 ft.	= 0.0278 yd.	= 2.54 cm.
	1 feet	= 0.305 m	= 0.33 yd.		
	1 yard	= 0.914 m	= 91.44 cm.		
	1 meter	= 39.37 in	= 3.28 ft.	= 1.094 yd.	
	1 kilometer	= 3,281 ft.	= 1,094 yd.	= 0.6213 mile	
	1 mile	= 5,280 ft.	= 1,760 yd.	= 1,609 m	= 1.609 km
2. AREA	1 MCM	= 1000 CM	(Circular Mil)	= 0.5067 mm^2	= 1/1000 in^2
	1 CM	= 0.0005067 mm^2	= 0.0000007854 in^2		= 0.7854 sq. mil.
	1 mm^2	= 1973 CM	= 0.00155 in^2	= 1,550 sq. mil.	
	1 in^2	= 1273240 CM	= 645.1 mm^2	= 0.0069 $ft.^2$	
	1 yd^2	= 1,296 in^2	= 0.83613 m^2		
	1 m^2	= 1,550 in^2	= 10.7 $ft.^2$	= 1.195 $yd.^2$	
	1 km^2	= 0.001562 $mile^2$			
	1 $mile^2$	= 27,880,000 $ft.^2$	= 3,098,000 $yd.^2$	= 2,590,000 m^2	= 2.59 km^2
3. VOLUME	1 cm^3	= 0.061 in^3			
	1 in^3	= 16.39 cm^3	= 0.0036 gal.	= 0.0005787 $ft.^3$	
	1 l	= 1,000 cm^3	= 61.023 in^3	= 0.2642 gal	= 0.03531 $ft.^3$
	1 gal.	= 3,785 cm^3	= 231 in^3	= 0.1337 $ft.^3$	= 0.004951 $yd.^3$
	1 $ft.^3$	= 28,317 cm^3	= 1,728 in^3	= 28.32 l.	= 7.48 gal
	1 yd^3	= 46,656 in^3	= 0.7646 m^3		
	1 m^3	= 61,023 in^3	= 35.31 $ft.^3$	= 1.308 yd^3	
4. WEIGHT	1 g.	= 15.43 gr.	= 0.03527 oz.	= 0.002205 lb.	
	1 oz.	= 437.5 gr.	= 28.35 g.	= 0.0625 lb.	
	1 lb.	= 7,000 gr.	= 453.6 g.	= 16 oz.	= 0.4536 kg.
	1 kg.	= 15,432 gr.	= 35.27 oz.	= 2.205 lb.	
	1 ton (short)	= 2,000 lb.	= 907.2 kg.	= 0.8928 ton (long)	
	1 ton (long)	= 2,240 lb.	= 1.12 ton (short)	= 1.016 ton (metric)	
	1 ton (metric)	= 2,204.62 lb.			
5. ENERGY	1 Btu.	= 1,055 joules	= 778.1 ft.-lb	= 252 g-cal.	= 107.6 kg.-m.
		= 0.2930 watt-hr.			
	1 watt-hr.	= 3,600 joules	= 2,655.4 ft. -lb.	= 860 g-cal.	= 367.1 kg.-m.
		= 3.413 B.t.u.	= 0.001341 hp.-hr.		
	1 hp.-hr.	= 2,684,000 joules	= 1,980,000 ft.-lb	= 273,700 kg.-cm.	
		= 745.6 watt-hr.			
	1 kw - hr.	= 2,655,000 ft.-lb.	= 367,100 kg.-m.	= 1.34 hp.-hr.	
6. POWER	1 watt	= 44.26 ft.-lb./min	= 6.199 kg-m/min	= 0.001341 hp.	
	1 hp	= 33,000 ft.-lb./min		= 745.6 watts	= 550 ft.-lb./sec.
		= 76.04 kg-m/sec			
	1 kw	= 44,256.7 ft-lb./min		= 101.979 kg-m/sec	= 1.341 hp.
		= 1,000 watts.			
7. TEMPERATURE	Temp °C	= 5/9 (temp °F-32)			
	Temp °F	= (9/5 x temp °C) +32			

Conductivity and Density of Metals

Kind	Symbol	Conductivty (% IACS)	Density (g/cm^3)
Silver	Ag	108.6	10.50
Stranded Copper (Annealed)	Cu	100.0	8.89
Gold	Au	72.5	19.30
Aluminium	Al	61.0	2.70
Iron	Fe	13.0	7.78
Tin	Sn	12.2	7.29
Steel	-	11.6	7.78

Conductor Materials

Material	Specific resistance 20°C			Temperature coefficient, 20°C	Density (g/cm3)
	μΩ-cm	μΩ-in	Ω-cmil/ft		
Annealed copper	1.724	0.6788	10.37	0.00393	8.89
Hard-drawn copper	1.79	0.695	10.77	0.00378	8.89
Annealed aluminium	2.82	1.113	17.0	0.0039	2.70
Hard-drawn aluminium	2.92	1.15	17.5	0.0038	2.70
Pure iron	10.0	3.93	60.0	0.006	7.86
Steel wire	10.7-17.5	4.2-6.9	64-106	0.006-0.00036	7.78
Cast iron	75-100	29.5-39.4	450-600	0.001-0.00074	7.32

Temperature Correction Factors for Conductor Resistance

Factors for correcting resistances at various temperatures of conductor to the standard reference temperature of 20°C and reciprocals of the factors for calculating resistances at other temperatures from the value at 20°C

Temperature °C	Correction Factor		Reciprocal of Factor	
	Copper	Aluminum	Copper	Aluminum
0	1.085	1.088	0.921	0.919
5	1.063	1.064	0.941	0.940
10	1.041	1.042	0.961	0.960
15	1.020	1.021	0.980	0.980
20	1.000	1.000	1.000	1.000
25	0.981	0.980	1.020	1.020
30	0.962	0.961	1.039	1.040
35	0.944	0.943	1.059	1.060
40	0.927	0.925	1.079	1.081
45	0.911	0.908	1.098	1.101
50	0.895	0.892	1.118	1.121
55	0.879	0.876	1.138	1.141
60	0.864	0.861	1.157	1.161
65	0.850	0.846	1.177	1.181
70	0.836	0.832	1.197	1.202
75	0.822	0.819	1.216	1.222
80	0.809	0.805	1.236	1.242
85	0.797	0.792	1.255	1.262
90	0.784	0.780	1.275	1.282

A

The correction factor is given by:

$$k = \frac{1}{k_1} = \frac{1}{1 + \alpha(\theta - 20)}$$

Where:

k = temperature correction factor of conductor

k_1 = reciprocal of k

α = constant mass temperature coefficient at 20°C per °C
= 0.00393 for copper (based on 100% conductivity)
= 0.00403 for aluminum (based on 61% conductivity)

θ = referred temperature, °C

Electrical Formulas

D.C. resistance

Method of calculation of conductor maximum d.c. resistance

$$R_{dc} = \frac{4A}{n\pi d^2} \times K_1 \times K_2 \times K_3$$

Where:

R_{dc} = the d.c. resistance at 20°C, Ω/km

A = the standard resistivity of the conductor metal at 20°C
- 17.241 for annealed copper
- 28.264 for aluminium alloy 1350
- 17.654 for tinned copper

K_1 = a factor dependent on the diameter of the wire in the conductor, on the kind of metal and on whether or not the copper wires are tinned or nickel-coated.

K_2 = A factor dependent on the conductor construction.
- 1.00 for Solid conductors
- 1.02 for stranded or uniaxial conductors in fixed cables, where the diameter of wires exceeds 0.6 mm
- 1.03 for stranded or bunched conductors in all cables where the diameter of wires<= 0.6 mm
- 1.04 for stranded or bunched conductors in all cables where the diameter of wires>= 0.6 mm

K_3 = A factor dependent on whether or not the conductor is, typically, used also in multicore cables.
- 1.00 for conductors in fixed cables of< 500 mm² (typically single core cables)
- 1.02 for conductors in fixed cables of< 500 mm² (typically multi core cables)
- 1.05 for conductors in all flexible cords and cables

n = the number of wires in the conductor

d = the diameter of wires in the conductor

Diameter of wire in conductor mm		K_1			
		Soild Conductor		Stranded Conductor	
		Plain or silver plated copper	Tinned copper or plain aluminium	Plain or silver plated copper	Tinned copper or plain aluminium
	≤0.10	-	-	1.07	1.12
>0.10	≤0.31	-	-	1.04	1.07
>0.31	≤0.91	1.03	1.05	1.02	1.04
>0.91	≤3.60	1.03	1.04	1.02	1.03
>3.60	≤4.50	1.03	1.04	-	-
>4.50		1.03	1.03	-	-

A

Inductance

The inductance, L, per core of a 3-core cable or of three single-core cables comprises two parts namely the self-inductance of the conductor and the mutual inductance with other cores.

The formula for calculating the Inductance of a cable is given by:

$$L = K + 0.2\log_{10}\left(\frac{2S}{d}\right) \text{ (mH/km)}$$

Where:

L = Inductance of cable in (mH/km)
K = Constant relating to the conductor formation (see table below)
5 = Axial spacing between conductors within the cable (mm) or axial spacing between Conductors of a trefoil group of single core cables (mm) or
= 1.26 x phase spacing for a flat formation of three single-core cables (mm)
d = conductor diameter or for shaped designs the diameter of an equivalent circular conductor (mm)

Typical Values for K for Different Stranded Conductors (at 50Hz)

Number of Wires in Conductor	K
9	0.0642
7	0.0554
37	0.0528
61 and Over	0.0514
1 (Solid)	0.05
Hollow core conductor, 12 mm duct	0.0383

A

Reactance (Inductive Reactance)

$$X = 2 \times \pi \times f \times L \text{ (}\Omega\text{/km)}$$

Where:

f = Frequency (Hz)
L = Inductance (mH/km)

Impedance

$$Z = \sqrt{R^2 + X^2} \text{ (}\Omega\text{/km)}$$

Where:

R = Conductor Resistance (Ω/km)
X = cable Inductive Reactance (Ω/km)

Dielectric loss (A.C. cables only)

The dielectric loss per unit length in each phase is giving by :

$$W_d = \omega C U_0^2 \tan\delta \text{ (W/m)}$$

Where:

ω = 2πf
C = capacitance per unit length (F/m)
U_o = voltage to earth (V)

Type of cable	Permittivity (ε)	tanδ	U_0
PVC	8	0.1	6
PE (HD and LD)	2.3	0.001	127
XLPE			
• up to and including 18/30 (36)kV cable (unfilled)	2.5	0.004	127
• greater 18/30 (36)kV cable (unfilled)	2.5	0.001	127
• greater 18/30 (36)kV cable (filled)	3	0.005	63.5

Capacitance

The capacitance of circular conductor is giving by :

$$C = \frac{\varepsilon}{18 \ln\left(\frac{D_i}{d_c}\right)} 10^{-9} \text{ (F/m)}$$

Where:

ε = relative permittivity of the insulation
D_i = external diameter of the insulation (excluding screen) (mm)
d_c = diameter of conductor, including screen, if any (mm)

The same formula can be used for oval conductors if the geometric mean of the appropriate major and minor diameters is substituted for D_i and d_c

AC resistance at temperature :

$$R_{ac} = R_{dc_t}(1 + y_s + y_p)$$

Where:

R_{dc_t} = DC resistance at operating temperature
y_s = Skin effect factor
y_p = Proximity effect factor

Skin effect factor y_s

$$y_s = X_s^4 /(192 + X_s^4)$$

Where:

$$X_s^4 = 8 \times \pi \times f \times 10^{-7} \times \frac{k_s}{R_{dc_t}}$$

k_s = Factor determined by conductor construction

Type of conductor	Wheather dried and impregnated or not	k_s	k_p
Copper			
Round, stranded	Yes	1	0.8
Round, stranded	No	1	1
Aluminium	Either		see note
Round, stranded	Either	1	

f = Frequency (Hz)
R_{dc_t} = DC resistance at operating temperature

Proximity effect factor y_p

1. For 2 core and 2 single core cables :

$$y_p = X_p^4/(192+0.8X_p^4) \times \left(\frac{d_c}{S}\right)^2 \times 2.9$$

2. For 3 core and 3 single core cables :

$$y_p = X_p^4/(192+0.8X_p^4) \times \left(\frac{d_c}{S}\right)^2 \times \left[0.312 \times \left(\frac{d_c}{S}\right)^2 + \frac{1.18}{[X_p^4/(192+0.8X_p^4)0.27]}\right]$$

Where:

$$X_p^4 = 8 \times \pi \times f \times 10^{-7} \times \frac{k_p}{R_{dc_t}}$$

R_{dc_t} = DC resistance at operating temperature
k_p = Factor determined by conductor construction
d_c = Diameter of conductor (mm)
S = Spacing between conductor centres (mm)

A

Charging Current

$$I_c = \omega CV \times 10^{-6} (A)$$

Where:

I_c = charging current (A/km)
ω = 2π time the frequency of the applied voltage
C = capacitance between the electrodes between which the voltage is applied (μF/km)
V = applied voltage (V)

Insulation Resistance

$$IR \text{ at } 20°C = 3.67 \times 10^{-12} \times p \times \log_{10}\left(\frac{D_2}{D_1}\right) \ (M\Omega\text{- km})$$

Where:

R_i = insulation resistance of one kilometer of cable in Meggaohms (MΩ-km)
D_1 = inner diameters of the insulation (mm)
D_2 = outer diameters of the insulations (mm)
p = resistivity (Ω-cm)

XLPE : 2.5×10^{15}

PVC : 1×10^{13} - 1×10^{14}

A

Short-Circuit Current Rating

Copper Conductor $$I = A \times \sqrt{\left(\frac{0.0297}{t}\right) \log\left(\frac{234 + T_2}{234 + T_1}\right)} \times 1.973$$

Aluminium Conductor $$I = A \times \sqrt{\left(\frac{0.0125}{t}\right) \log\left(\frac{228 + T_2}{228 + T_1}\right)} \times 1.973$$

Where:

I = Short circuit current (kA)
A = Cross-section area (mm^2)
t = Short circuit duration (sec)
T_1 = Max. permissible continuous operating temp (°C); PVC=70, XLPE=90
T_2 = Max. permissible temperature at short circuit (°C); PVC=160, XLPE=250

Short-Circuit Current 1 sec at conductor (kA)

Size (mm^2)	Copper		Aluminium	
	XLPE	PVC	XLPE	PVC
1.5	0.21	0.17	-	-
2.5	0.35	0.29	-	-
4	0.57	0.46	-	-
6	0.85	0.68	-	-
10	1.42	1.14	0.93	0.75
16	2.27	1.83	1.48	1.19
25	3.55	2.85	2.32	1.87
35	4.97	3.99	3.25	2.61
50	7.10	5.71	4.64	3.73
70	9.94	7.99	6.50	5.23
95	13.5	10.8	8.82	7.09
120	17.0	13.7	11.1	8.96
150	21.3	17.1	13.9	11.2
185	26.3	21.1	17.2	13.8
240	34.1	27.4	22.3	17.9
300	42.6	34.2	27.8	22.4
400	56.8	45.6	37.1	29.9
500	71.0	57.1	46.4	37.3
630	89.4	71.9	58.5	47.0
800	113.6	91.3	74.2	59.7
1000	142.0	114.1	92.8	74.7

Short Circuit Performance of Metallic Shields and Sheath of Insulated Cable

$$I = \frac{A}{\sqrt{t}}\sqrt{K \log\left[\frac{T_2 + \lambda}{T_1 + \lambda}\right]}$$

$$M = \sqrt{K \log\left[\frac{T_2 + \lambda}{T_1 + \lambda}\right]}$$

$$I = \frac{MA}{\sqrt{t}}$$

I = Short-circuit current of copper shield (A)
A = Effective cross-sectional area of shield or sheath (circular mils) see table below
t = Time of short circuit (second)

Type of shield or sheath	Formula for calculating A
1. Wires applied either helically. as a braid or serving or longitudinally with corrugations.	nd_s^2
2. Helically applied tape. not overlapped.	1.27nwb
3. Helically applied flat tape. overlapped. See note 3.	$4bd_m \times \sqrt{\frac{100}{2(100 - L)}}$
4. Corrugated tape. longitudinally applied.	$1.27[\pi(d_{is} + 50) + B]b$
5. Tubular sheath.	$4bd_m$

Where:

A = Effective cross-sectional area. shield or sheath, cmil.
B = Tape overlap. mils (usually 375)
b = Thickness of tape. mils.
d_{is} = Diameter over extruded insulation screen, mils.
d_m = Mean diameter of shield or sheath. mils.
d_s = Diameter of wires. mils.
w = Width of tape. mils.
n = Number of serving or braid wires. or tapes.
L = Overlap of tape. percent.

Voltage Drop Calculation

For single phase:

$$V_{1\phi} = \frac{2I(R\cos\theta + X\sin\theta)L}{1000}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
L is the length of the cable (m)

For three phase:

$$V_{3\phi} = \frac{\sqrt{3}I(R\cos\theta + X\sin\theta)L}{1000}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
L is the length of the cable (m)

Calculating Maximum Cable Length Due to Voltage Drop

It may be more convenient to calculate the maximum length of a cable for a particular conductor size given a maximum permissible voltage drop (5% of the at full load Ref. NEC Standard) rather than the voltage drop itself. The maximum cable length that will achieve this can be calculated by re-arranging the voltage maximum permissible voltage drop:

For single phase:

$$L_{max} = \frac{1000V_{3\phi}}{2I(R\cos\theta + X\sin\theta)}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
$V_{1\phi}$ is the maximum permissible single phase voltage drop (V)

For three phase:

$$L_{max} = \frac{1000V_{3\phi}}{\sqrt{3}I(R\cos\theta + X\sin\theta)}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
$V_{3\phi}$ is the maximum permissible single phase voltage drop (V)

CURRENT-CARRYING CAPACITIES OF CABLE

(Refer EIT Standard 022001-22)

Table 5-8 : Correction factor for a group of circuits, or a group of multi-cores cable

No. of circuits or multi-cores cable	In cable raceway	Single layer on wall or floor
2	0.80	0.85
3	0.70	0.79
4	0.65	0.75
5	0.60	0.73
6	0.57	0.72
7	0.54	0.72
8	0.52	0.71
9	0.50	0.70
10·12	0.45	0.70
13-16	0.41	0.70
17-20	0.38	0.70

Table 5-20: Current rating of copper conductor, PVC insulated with/without sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed in raceway in air.

Installation Group	Group 1				Group 2			
No. of loaded Conductor	2		3		2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method								
Electrical system	AC or DC		AC		AC or DC		AC	
Cable Code	60227 IEC 01, 60227 IEC 02, 60227 IEC 05, 60227 IEC 06, 60227 IEC 10, NYY, NYY-G, VCT, VCT-G, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.							
Size (mm²)	Current rating (A)							
1	10	10	9	9	12	11	10	10
1.5	13	12	12	11	15	14	13	13
2.5	17	16	16	15	21	20	18	17
4	23	22	21	20	28	26	24	23
6	30	28	27	25	36	33	31	30
10	40	37	37	34	50	45	44	40
16	53	50	49	45	66	60	59	54
25	70	65	64	59	88	78	77	70
35	86	80	77	72	109	97	96	86
50	104	96	94	86	131	116	117	103
70	131	121	118	109	167	146	149	130
95	158	145	143	131	202	175	180	156
120	183	167	164	150	234	202	208	179
150	209	191	188	171	261	224	228	196
185	238	216	213	194	297	256	258	222
240	279	253	249	227	348	299	301	258
300	319	291	285	259	398	343	343	295
400	-	-	-	-	475	-	406	-
500	-	-	-	-	545	-	464	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

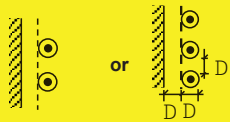
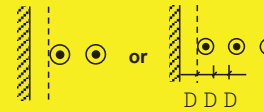
Table 5-21: Current rating of copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC, installed on wall.

Installation Group	Group 3								
Cable Type	Flat	Round				Round			
Conductor Type	Multi-cores	Single-core				Multi-cores			
Insulation Type	PVC	PVC		XLPE		PVC		XLPE	
Conductor temperature	70°C	70°C		90°C		70°C		90°C	
No. of loaded conductor	2	2	3	2	3	2	3	2	3
Installation Method									
Electrical system	AC	AC, DC	AC	AC, DC	AC	AC, DC	AC	AC, DC	AC
Cable Code	VAF, VAF-G	NYY, IEC 60502-1		IEC60502-1		NYY, NYY-G, VCT, 60227 IEC 10, IEC 60502-1		IEC 60502-1	
Size (mm²)	Current rating (A)								
1	14	13	12	17	16	13	12	17	15
1.5	17	17	16	23	21	17	15	22	20
2.5	23	23	22	31	29	23	21	30	27
4	32	32	29	42	37	31	28	41	36
6	41	41	37	54	49	40	36	53	47
10	56	57	51	74	67	55	50	73	65
16	74	76	69	99	90	74	66	97	87
25	-	99	90	130	118	97	84	126	108
35	-	123	112	160	147	120	104	156	134
50	-	158	145	207	190	146	125	190	163
70	-	204	186	267	244	185	160	245	208
95	-	247	227	323	297	224	194	298	253
120	-	287	264	375	345	260	225	348	293
150	-	331	304	433	397	299	260	401	338
185	-	379	348	496	455	341	297	460	386
240	-	448	411	586	537	401	351	545	455
300	-	517	474	676	620	461	404	630	524
400	-	604	552	790	722	-	-	-	-
500	-	689	629	900	823	-	-	-	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.
3. For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.

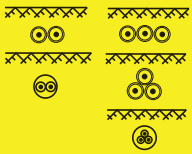
A

Table 5-22: Current rating of copper conductor, PVC insulated TIS 11-2553 for $U_0/U \leq 450/750V$, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC installed on insulator in air.

Installation Group	Group 4	
Installation Method		
Cable Code	60227 IEC 01, NYY	
Size (mm²)	Current rating (A)	
4	30	37
6	39	48
10	56	67
16	78	92
25	113	127
35	141	157
50	171	191
70	221	244
95	271	297
120	315	345
150	365	397
185	418	453
240	495	535
300	573	617
400	692	741

Remark: *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied*

Table 5-23: Current rating for copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1kV$, conductor temperature 70°C, ambient temperature 30°C, installed underground conduit or direct burial.

Installation Group	Group 5		Group 6
No. of loaded conductors	2	3	≤ 3
Conductor Type	Single-core/Multi-cores	Single-core/Multi-cores	Single-core/Multi-cores
Installation Method	 or	 or	 or or
Cable Code	NYY, VCT, and cable according with IEC 60502-1		
Size (mm²)	Current rating (A)		
1	17	15	21
1.5	21	19	26
2.5	28	25	35
4	36	33	45
6	46	41	57
10	62	55	76
16	81	72	99
25	106	94	128
35	129	114	154
50	153	136	181
70	190	168	223
95	232	204	267
120	265	234	304
150	303	266	342
185	344	303	386
240	404	361	448
300	462	404	507
400	529	462	577
500	605	527	654

Remark :

1. *For ground temperature other than 30°C, correction factor given in Table 5-44 shall be applied.*
2. *For installation more than one circuit, correction factor given in Table 5-45 or 5-46 shall be applied.*
3. *For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.*
4. *The installation of the electrical system which is belong to MEA or PEA, Please consider current rating according to MEA or PEA standard except that no current rating is specified.*

Table 5-24: Current rating for copper conductor, PVC insulated single-core TIS 11-2553 for $U_0/U \leq 300/500V$, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC, installed in air.

Conductor temperature	70°C	90°C
Cable Code	60227 IEC 05, 60227 IEC 06	60227 IEC 07, 60227 IEC 08
Size (mm²)	Current rating (A)	
0.5	3	3
0.75	6	6
1	10*	10
1.5	-	16
2.5	-	25

Remark :

1. *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. **Current rating for 60227 IEC 06 cable only.*

Table 5-25: Current rating for flexible copper conductor, PVC insulated with sheathed TIS 11-2553 for U0/U ≤ 300/500V, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC, installed in air.

No. of loaded conductors	2	3
Cable Code	60227 IEC 52, 60227 IEC 53, 60227 IEC 56, 60227 IEC 57	
Size (mm²)	Current rating (A)	
0.5	3	3
0.75	6	6
1	10	10
1.5	16	16
2.5	25	20

Remark : *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*

Table 5-26: Current rating for flexible copper conductor, PVC insulated with/without sheathed TIS 11-2553 for $U_0/U \leq 450/750V$, conductor temperature 70°C, ambient temperature 40°C, installed in air.

Conductor Type/ No. of loaded conductor	2 Single-core cable or 2 Cores cable with/without ground	3, 4, 5 Cores cable
Cable Code	60227 IEC 02, VCT, VCT-G	VCT, VCT-G
Size (mm^2)	Current rating (A)	
1	13	11
1.5	16	14
2.5	25	21
4	30	26
6	39	34
10	51	47
16	73	63
25	97	83
35	140	102
50	175	-
70	216	-
95	258	-
120	302	-
150	347	-
185	394	-
240	471	-

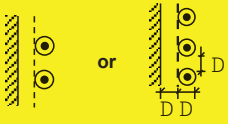
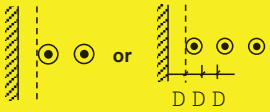
Remark : *For ambient temperature other than 40°C, correction factor given in Table 5-43 shall be applied.*

Table 5-27: Current rating for copper conductor, XLPE insulated with/without sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed in raceway in air.

Installation Group	Group 1				Group 2			
No. of loaded Conductor	2		3		2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method								
Electrical system	AC or DC		AC		AC or DC		AC	
Cable Code	IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.							
Size (mm²)	Current rating (A)							
1	13	13	12	12	15	15	14	14
1.5	17	17	15	15	21	20	18	18
2.5	24	23	21	20	28	27	25	24
4	32	30	28	27	38	36	34	32
6	41	38	36	35	49	46	44	40
10	56	52	49	46	68	63	60	55
16	74	69	66	62	91	83	80	73
25	96	90	86	81	121	108	106	96
35	119	110	106	99	149	133	131	116
50	144	132	128	118	180	159	159	140
70	182	167	163	149	230	201	202	177
95	219	200	197	179	278	241	245	212
120	253	230	227	207	322	278	284	244
150	289	264	259	236	358	304	311	273
185	329	299	295	268	409	349	349	309
240	386	351	346	315	480	418	410	362
300	442	402	396	360	549	484	468	414
400	-	-	-	-	622	-	531	-
500	-	-	-	-	713	-	606	-

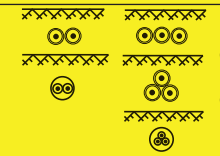
Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

Table 5-28: Current rating for copper conductor, XLPE insulated with/without sheathed for U_0/U ≤ 0.6/1kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on insulator in air.

Installation Group	Group 4	
Installation Method		
Cable Code	Cable according with IEC 60502-1	
Size (mm²)	Current rating (A)	
4	47	54
6	60	68
10	82	90
16	110	124
25	147	166
35	183	206
50	224	250
70	289	321
95	354	391
120	413	455
150	480	525
185	551	602
240	654	711
300	758	821
400	917	987
500	1,064	1,140

Remark: *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied*

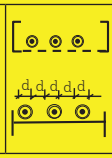
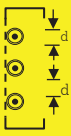
Table 5-29: Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 30ºC, installed underground conduit or direct burial.

Installation Group	Group 5		Group 6
No. of loaded conductors	2	3	≤ 3
Conductor Type	Single-core/Multi-cores	Single-core/Multi-cores	Single-core/Multi-cores
Installation Method	 or	 or	 or or
Cable Code	Cable according with IEC 60502-1		
Size (mm²)	Current rating (A)		
1.5	25	22	33
2.5	33	29	43
4	43	38	55
6	54	47	70
10	71	63	92
16	94	83	119
25	124	109	152
35	150	132	184
50	180	159	217
70	223	196	266
95	271	238	318
120	313	275	362
150	355	312	406
185	406	356	459
240	477	418	533
300	543	475	601
400	625	545	684
500	717	623	777

Remark :

1. *For ground temperature other than 30ºC, correction factor given in Table 5-44 shall be applied.*
2. *For installation more than one circuit, correction factor given in Table 5-45 or 5-46 shall be applied.*
3. *For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.*
4. *The installation of the electrical system which is belong to MEA or PEA, Please consider current rating according to MEA or PEA standard except that no current rating is specified.*

Table 5-30: Current rating of copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed on perforated cable tray or cable ladder without cover.

Installation Group	Group 7						
No. of loaded conductors	2		3				
Conductor Type	Single-core/Multi-cores		Single-core				Multi-cores
Installation Method							
Electrical system	AC or DC		AC				
Cable Code	60227 IEC 10, NYY, VCT, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.						
Size (mm²)	Current rating (A)						
1	-	15	-	-	-	-	13
1.5	-	19	-	-	-	-	16
2.5	-	26	-	-	-	-	22
4	-	35	-	-	-	-	30
6	-	44	-	-	-	-	37
10	-	61	-	-	-	-	52
16	-	82	-	-	-	-	70
25	114	104	99	96	127	113	88
35	141	129	124	119	157	141	110
50	171	157	151	145	191	171	133
70	218	202	196	188	244	221	171
95	264	245	239	230	297	271	207
120	306	285	279	268	345	315	240
150	353	330	324	310	397	365	278
185	403	378	371	356	453	418	317
240	475	447	441	422	535	495	374
300	547	516	511	488	617	573	432
400	656	-	599	571	741	692	-
500	755	-	686	652	854	800	-

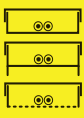
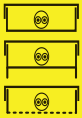
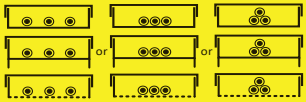
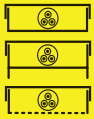
Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 40 or 5-41 for single core and multi cores cable respectively shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

Table 5-30 (a): Current rating of copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed on unperforated cable tray without cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	3 or 4
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	60227 IEC 10, NYY, VCT, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	13	-	12
1.5	-	17	-	15
2.5	-	23	-	21
4	-	31	-	28
6	-	40	-	36
10	-	55	-	50
16	-	74	-	66
25	99	97	90	84
35	123	120	112	104
50	158	146	145	125
70	204	185	186	160
95	247	224	227	194
120	287	260	264	225
150	331	299	304	260
185	379	341	348	297
240	448	401	411	351
300	517	461	474	404
400	604	-	552	-
500	689	-	629	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

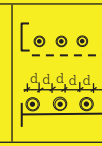
Table 5-31: Current rating for copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed on perforated or unperforated cable tray or cable ladder with cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	60227 IEC 10, NYY, VCT, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	11	-	10
1.5	-	14	-	13
2.5	-	20	-	17
4	-	26	-	23
6	-	33	-	30
10	-	45	-	40
16	-	60	-	54
25	88	78	77	70
35	109	97	96	86
50	131	116	117	103
70	167	146	149	130
95	202	175	180	156
120	234	202	208	179
150	261	224	228	196
185	279	256	258	222
240	348	299	301	258
300	398	343	343	295
400	475	-	406	-
500	545	-	464	-

Remark *(Table 5-31)*

1. *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. *For installation more than one circuit, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied.*
3. *The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.*

Table 5-32: Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on perforated cable tray or cable ladder without cover.

Installation Group	Group 7						
No. of loaded conductors	2		3				
Conductor Type	Single-core	Multi-cores	Single-core				Multi-cores
Installation Method							
Electrical system	AC or DC		AC				
Cable Code	Cable according with IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.						
Size (mm²)	Current rating (A)						
1	-	19	-				16
1.5	-	24	-				21
2.5	-	33	-				29
4	-	45	-				38
6	-	57	-				49
10	-	78	-				68
16	-	105	-				91
25	147	136	128	123	166	147	116
35	182	168	160	154	206	183	144
50	220	205	197	188	250	224	175
70	282	263	254	244	321	289	224
95	343	320	311	298	391	354	271
120	398	374	364	349	455	413	315
150	459	430	422	404	525	480	363
185	523	493	485	464	602	551	415
240	618	583	577	552	711	654	490
300	713	674	670	640	821	758	564
400	855	-	790	749	987	917	-
500	986	-	908	861	1,140	1,064	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

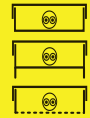
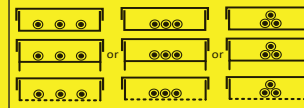
Table 5-32 (a): Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on unperforated cable tray without cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	Cable according with IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	17	-	15
1.5	-	22	-	20
2.5	-	30	-	27
4	-	41	-	36
6	-	53	-	47
10	-	73	-	65
16	-	97	-	87
25	130	126	118	108
35	160	156	147	134
50	207	190	190	163
70	267	245	244	208
95	323	298	297	253
120	376	348	345	293
150	433	401	397	338
185	496	460	455	386
240	586	545	537	455
300	676	630	620	524
400	790	-	722	-
500	901	-	823	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied. .
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

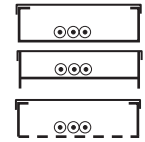
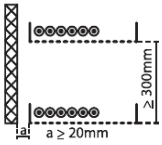
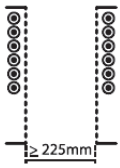
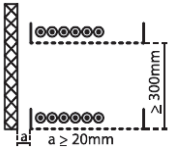
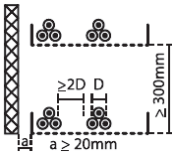
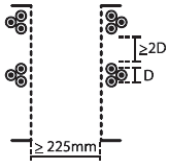
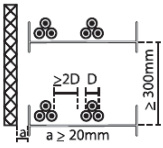
A

Table 5-33: Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on unperforated or perforated cable tray or cable ladder with cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	15	-	14
1.5	-	20	-	18
2.5	-	27	-	24
4	-	36	-	32
6	-	46	-	40
10	-	63	-	55
16	-	83	-	73
25	121	108	106	96
35	149	133	131	116
50	180	159	159	140
70	230	201	202	177
95	278	241	245	212
120	322	278	284	244
150	358	304	311	273
185	409	349	349	309
240	480	418	410	362
300	549	484	468	414
400	622	-	531	-
500	713	-	606	-

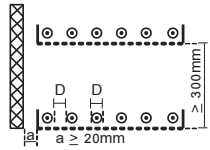
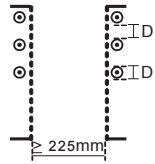
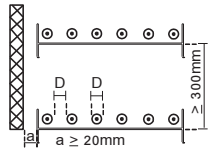
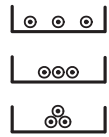
Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied. .
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

Table 5-40: Correction factor for current rating of single-core cable installed on cable tray for more than one circuit.

Installation method		No. of trays or ladders	No. of circuits / tray or ladder						Method of wiring
			1	2	3	4	5-6	7-9	
Perforated or unperforated cable tray or cable ladder with cover		1	See Table 5-40(a), Column 2						Flat laying, touching, Trefoil
Perforated cable tray (Note 2)		1	1.00	0.91	0.87	0.82	0.78	0.77	Flat laying, touching
		2	0.96	0.87	0.81	0.78	0.74	0.69	
		3	0.95	0.85	0.78	0.75	0.70	0.65	
Vertical perforated cable tray (Note 3)		1	1.00	0.86	0.80	0.75	0.71	0.70	Flat laying, vertical, touching
		2	0.95	0.84	0.77	0.72	0.67	0.66	
Cable ladder (Note 2)		1	1.00	0.97	0.96	0.94	0.93	0.92	Flat laying, touching
		2	0.98	0.93	0.89	0.88	0.86	0.83	
		3	0.97	0.90	0.86	0.83	0.80	0.77	
Perforated cable tray (Note 2)		1	1.00	0.98	0.96	0.93	0.89	-	Trefoil laying, space between group ≥ 2 times of the overall diameter of cable
		2	0.97	0.93	0.89	0.85	0.80	-	
		3	0.96	0.92	0.86	0.82	0.76	-	
Vertical perforated cable tray (Note 3)		1	1.00	0.91	0.89	0.88	0.87	-	
		2	1.00	0.90	0.86	0.85	0.83	-	
Cable ladder (Note 2)		1	1.00	1.00	1.00	1.00	1.00	-	
		2	0.97	0.95	0.93	0.92	0.91	-	
		3	0.96	0.94	0.90	0.89	0.86	-	

A

Table 5-40 (Continuous)

Installation method		No. of trays or ladders	No. of circuits / tray or ladder						Method of wiring
			1	2	3	4	5-6	7-9	
Perforated cable tray (Note 2)		1	1.00	0.93	0.90	0.87	0.83	-	Space between cable not less than diameter of cable
		2	0.97	0.89	0.85	0.81	0.76	-	
		3	0.96	0.88	0.82	0.78	0.72	-	
Vertical perforated cable tray (Note 3)		1	1.00	0.91	0.89	0.88	0.87	-	
		2	0.94	0.90	0.86	0.85	0.83	-	
Cable ladder (Note 2)		1	1.00	0.97	0.96	0.96	0.96	-	
		2	0.97	0.94	0.93	0.92	0.91	-	
		3	0.96	0.93	0.92	0.91	0.88	-	
Unperforated cable tray without cover		1	See Table 5-40(a), Column 3						Flat laying, touching

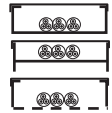
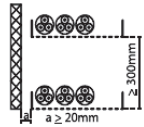
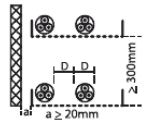
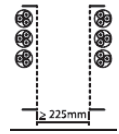
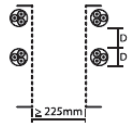
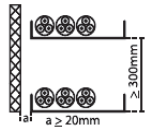
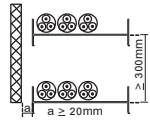
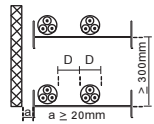
Remark: *1. Correction factors are given for single layer of cable.*
2. Correction factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall.
3. Correction factors are given for horizontal spacing between trays of 225 mm with trays mounted back to back.
4. In case of more than one cable tray, correction factors shall be used from the cable tray which has highest number of cable circuits.
5. In case of one cable tray with more than 9 circuits, correction factor for 9 circuits shall be used.

A

Table 5-40(a): Correction factor for current rating of single-core cable installed on cable tray for more than one circuit.

Column 1	Column 2	Column 3
Group of circuit	**Correction factor for cable tray or cable ladder with cover**	**Correction factor for unperforated cable tray without cover**
1	1.0	1.0
2	0.8	0.85
3	0.7	0.79
4	0.65	0.75
5	0.60	0.73
6	0.57	0.72
7	0.54	0.72
8	0.52	0.71
9	0.50	0.70
10-12	0.45	0.70
13-16	0.41	0.70
17-20	0.38	0.70

Table 5-41: Correction factor for current rating of single-core cable installed on cable tray for more than one circuit.

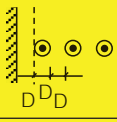
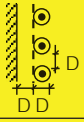
Installation method		No. of trays or ladders	No. of circuits / tray or ladder					
			1	2	3	4	5-6	7-9
Perforated or Unperforated cable tray or cable ladder with cover		1	See Table 5-40(a), Column 2					
Perforated cable tray (Note 2)		1	1.00	0.88	0.82	0.77	0.73	0.72
		2	1.00	0.87	0.80	0.77	0.73	0.68
		3	1.00	0.86	0.79	0.76	0.71	0.65
		4-6	1.00	0.84	0.77	0.73	0.68	0.64
		1	1.00	1.00	0.98	0.95	0.91	-
		2	1.00	0.99	0.96	0.92	0.87	-
		3	1.00	0.98	0.95	0.91	0.85	-
Vertical perforated cable tray (Note 3)		1	1.00	0.88	0.82	0.77	0.73	0.72
		2	1.00	0.88	0.81	0.76	0.71	0.70
		1	1.00	0.91	0.89	0.88	0.87	-
		2	1.00	0.91	0.88	0.87	0.85	-
Unperforated cable tray (Note 2)		1	0.97	0.84	0.78	0.75	0.71	0.68
		2	0.97	0.83	0.76	0.72	0.68	0.63
		3	0.97	0.82	0.75	0.71	0.66	0.61
		4-6	0.97	0.81	0.73	0.69	0.63	0.58
Cable ladder (Note 2)		1	1.00	0.87	0.82	0.80	0.79	0.78
		2	1.00	0.86	0.80	0.78	0.76	0.73
		3	1.00	0.85	0.79	0.76	0.73	0.70
		4-6	1.00	0.84	0.77	0.73	0.68	0.64
		1	1.00	1.00	1.00	1.00	1.00	-
		2	1.00	0.99	0.98	0.97	0.96	-
		3	1.00	0.98	0.97	0.96	0.93	-

A

Remark *(Table 5-41)*

1. *Correction factors are given for single layer of cable.*
2. *Correction factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall.*
3. *Correction factors are given for horizontal spacing between trays of 225 mm with trays mounted back to back.*
4. *In case of more than one cable tray, correction factors shall be used from the cable tray which has highest number of cable circuits.*
5. *In case of one cable tray with more than 9 circuits, correction factor for 9 circuits shall be used.*

Table 5-42: Current rating for aluminium conductor, PVC insulated TIS 293-2541 for U_0/U ≤ 450/750V, conductor temperature 70ºC, ambient temperature 40ºC, installed on insulator in air.

Installation Method		
Size (mm^2)	**Current rating (A)**	
25	97	86
35	121	108
50	147	132
70	189	171
95	231	210
120	268	245
150	310	284
185	354	327
240	419	389
300	485	452
400	584	547
500	674	635

Remark: *Where the ambient temperature in other than 40ºC, the correction factor given in Table 5-43*

Table 5-43: Correction factor for ambient temperature other than 40ºC to be applied to the current-carrying capacities for cable in air.

Ambient Temperature (ºC)	Insulation				
	PVC		XLPE or EPR	MI	
	70°C	90°C	90°C	70°C	105°C
11-15	1.34	-	1.23	1.41	1.21
16-20	1.29	-	1.19	1.34	1.16
21-25	1.22	-	1.14	1.26	1.13
26-30	1.15	-	1.10	1.18	1.09
31-35	1.08	1.00	1.05	1.09	1.04
36-40	1.00	1.00	1.00	1.00	1.00
41-45	0.91	1.00	0.96	0.91	0.96
46-50	0.82	1.00	0.90	0.79	0.91
51-55	0.70	0.96	0.84	0.67	0.87
56-60	0.57	0.83	0.78	0.53	0.82
61-65	-	0.67	0.71	-	0.76
66-70	-	0.47	0.64	-	0.70
71-75	-	-	0.55	-	0.65
76-80	-	-	0.45	-	0.59
81-85	-	-	-	-	0.51
86-90	-	-	-	-	0.43
91-95	-	-	-	-	0.35

Table 5-44: Correction factor for ambient air temperatures other than 30°C to be applied to current-carrying capacities for cables in the ground.

Ambient Temperature (ºC)	Insulation	
	PVC	XLPE or EPR
11-15	1.18	1.12
16-20	1.12	1.08
21-25	1.07	1.03
26-30	1.00	1.00
31-35	0.94	0.96
36-40	0.87	0.91
41-45	0.80	0.86
46-50	0.71	0.82
51-55	0.62	0.76
56-60	0.51	0.70
61-65	-	0.65
66-70	-	0.57
71-75	-	0.49
76-80	-	0.41

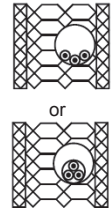
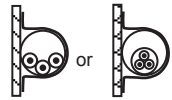
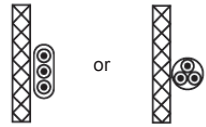
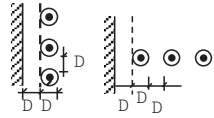
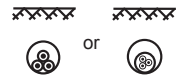
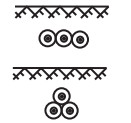
Table 5-45: Correction factor for more than one circuit, single-core or multi-cores cable U_0/U ≤ 0.6/1kV, Cables laid directly in ground

No. of circuit	Cable-to-cable clearance (mm)				
	Touching	One cable diameter	125	250	500
2	0.75	0.80	0.85	0.90	0.90
3	0.65	0.70	0.75	0.80	0.85
4	0.60	0.60	0.70	0.75	0.80
5	0.55	0.55	0.65	0.70	0.80
6	0.50	0.55	0.60	0.70	0.80

Table 5-46: Correction factor for more than one circuit, single-core or multi-cores cable U_0/U ≤ 0.6/1kV, Cables in duct in ground

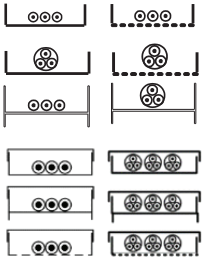
No. of circuit	Duct-to-duct clearance (mm.)			
	Touching	250	500	1,000
2	0.85	0.90	0.95	0.95
3	0.75	0.85	0.90	0.95
4	0.70	0.80	0.85	0.90
5	0.65	0.80	0.85	0.90
6	0.60	0.80	0.80	0.90

Table 5-47: Schedule of reference method of installation which form the basis of the tabulated current-carrying capacities

Method of Wiring	Method of Installation	Group of Installation	Note
Single-core or multi-cores insulated cable with/without sheathed installed in metallic or non-metallic raceway in a thermal insulated wall or ceiling.		Group 1	Calling or thermal insulated wall has a thermal conductant not less than 10 W/m²•K
Single-core or multi-cores insulated cable with/without sheathed installed in metallic or non-metallic raceway on wall or ceiling in concrete wall.		Group 2	Ceiling or concrete wall have thermal resistivity not more than 2 K•m/W
Single-core or multi-cores insulated cable with/without sheathed on wall and no enclosre.		Group 3	-
Single-core or multi-cores insulated cable with/without sheathed installed in air on insulators with space.		Group 4	Spacing between cable and cable, wall and cable not less than diameter of cable.
Single-core or multi-cores insulated cable with/without sheathed installed underground in metallic or non-metallic conduit.		Group 5	-
Single-core or multi-cores insulated cable with/without sheathed installed directly underground.		Group 6	-

A

Table 5-47: (Continuous)

Methods of Wiring	Methods of Installation	Group of Installation	Note
Single-core or multi-cores insulated cable with sheathed installed on perforated or unperforated cable trays or cable ladder.		Group 7	Perforated tray shall have the perforation of not less than 30% of the total surface area of the tray.

A

Table 5-48: Requirement for installation copper conductor, PVC insulated cable according to TIS 11-2553 and TIS 11 Part 101-2559

Cable Name	Size (mm^2)	Type of conductor	No. of core	Temp. of conductor	Sheath	Rated voltage Uo/U(V)	Application
60227 IEC 01	1.5-400	Solid or Stranded	Single core	70°C	-	450/750	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 02	1.5-240	Flexible	Single core	70°C	-	450/750	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 05	0.5-1	Solid	Single core	70°C	-	300/500	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 06	0.5-1	Flexible	Single core	70°C	-	300/500	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 07	0.5-2.5	Solid	Single core	90°C	-	300/500	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 08	0.5-2.5	Flexible	Single core	90°C	-	300/500	• Installation exposed. • Installation in raceway • Don't allow for underground installing

Table 5-48 (Continuous)

Cable Name	Size (mm^2)	Type of conductor	No. of core	Temp. of conductor	Sheath	Rated voltage Uo/U(V)	Application
60227 IEC 10	1.5-35	Solid or Stranded	Multi cores (with/without ground)	70°C	-	300/500	• Installation exposed • Installation on cable tray • Don't allow for underground installing
60227 IEC 52	0.5-0.75	Flexible	Multi cores (with/without ground)	70°C	-	300/300	For mobile-electrical equipment, electrical appliances
60227 IEC 53	0.75-2.5	Flexible	Multi cores (with/without ground)	70°C	o	300/500	For mobile-electrical equipment, electrical appliances
60227 IEC 56	0.5-0.75	Flexible	Multi cores (with/without ground)	90°C	o	300/300	For mobile-electrical equipment, electrical appliances
60227 IEC 57	0.75-2.5	Flexible	Multi cores (with/without ground)	90°C	o	300/500	For mobile-electrical equipment, electrical appliances
NYY	1-500	Solid or Stranded	Single core	70°C	o	450/750	• Installation exposed • Installation in raceway • Can use allow for underground installing
	1-300		Multi cores				
NYY-G	1-300		Multi cores (with/without ground)				
VAF VAF-G	1-16	Solid or Stranded	2 cores 2 cores with ground	70°C	o	300/500	• Installation on a wall • Installation in raceway • Don't allow for underground installing
VCT VCT-G	1-35	Flexible	Single core Multi cores (with/without ground)	70°C	o	450/750	• Installation exposed • For electrical appliances • Installation on cable tray • Can use allow for underground installing

A

Voltage Drop for Single-core and Multi-cores cable

Table 1: Single-core 70°C, Copper conductor, PVC insulated cable

Size (mm²)	Single-phase, AC (mV/A/m)			Three-phase, AC (mV/A/m)			
	Installation method						
	Group 1, 2	Group 3, 7		Group 1, 2	Group 3, 7		
		Touching	Spaced		Trefoil	Flat	Spaced
1.0	44	44	44	38	38	38	38
1.5	29	29	29	25	25	25	25
2.5	18	18	18	15	15	15	15
4	11	11	11	9.5	9.5	9.5	9.5
6	7.3	7.3	7.3	6.4	6.4	6.4	6.4
10	4.4	4.4	4.4	3.8	3.8	3.8	3.8
16	2.8	2.8	2.8	2.4	2.4	2.4	2.4
25	1.81	1.75	1.75	1.52	1.50	1.50	1.52
35	1.33	1.25	1.27	1.13	1.11	1.12	1.15
50	1.00	0.94	0.97	0.85	0.81	0.84	0.86
70	0.71	0.66	0.69	0.61	0.57	0.60	0.63
95	0.56	0.50	0.54	0.48	0.44	0.47	0.50
120	0.48	0.41	0.45	0.40	0.35	0.39	0.43
150	0.41	0.35	0.39	0.35	0.30	0.34	0.38
185	0.36	0.29	0.34	0.31	0.26	0.30	0.34
240	0.30	0.25	0.29	0.27	0.21	0.25	0.29
300	0.27	0.22	0.26	0.24	0.18	0.23	0.26
400	0.25	0.19	0.23	0.22	0.16	0.20	0.24
500	0.23	0.17	0.21	0.20	0.15	0.18	0.22

Refer EIT Standard 022001-22

Table 2: Multi-cores 70°C, Copper conductor, PVC insulated cable

Size (mm²)	Single-phase AC (mV/A/m)	Three-phase AC (mV/A/m)
1.0	44	38
1.5	29	25
2.5	18	15
4	11	9.5
6	7.3	6.4
10	4.4	3.8
16	2.8	2.4
25	1.75	1.50
35	1.25	1.10
50	0.93	0.80
70	0.65	0.57
95	0.49	0.43
120	0.41	0.36
150	0.34	0.29
185	0.29	0.25
240	0.24	0.21
300	0.21	0.18
400	0.17	0.15

Refer EIT Standard 022001-22

Table 3: Single-core 90°C, Copper conductor, XLPE insulation cable

Size (mm²)	Single-phase, AC (mV/A/m)			Three-phase, AC (mV/A/m)			
	Installation method						
	Group 1, 2	Group 3, 7		Group 1, 2	Group 3, 7		
		Touching	Spaced		Trefoil	Flat	Spaced
1.0	46	46	46	40	40	40	40
1.5	31	31	31	27	27	27	27
2.5	19	19	19	16	16	16	16
4	12	12	12	10	10	10	10
6	7.9	7.9	7.9	6.8	6.8	6.8	6.8
10	4.7	4.7	4.7	4.0	4.0	4.0	4.0
16	2.9	2.9	2.9	2.5	2.5	2.5	2.5
25	1.85	1.85	1.85	1.60	1.57	1.58	1.60
35	1.37	1.35	1.37	1.17	1.14	1.15	1.17
50	1.04	1.00	1.02	0.91	0.87	0.87	0.90
70	0.75	0.70	0.73	0.65	0.61	0.62	0.64
95	0.58	0.52	0.56	0.50	0.45	0.46	0.50
120	0.49	0.42	0.47	0.42	0.37	0.38	0.42
150	0.42	0.36	0.40	0.37	0.31	0.33	0.37
185	0.37	0.31	0.35	0.32	0.26	0.27	0.31
240	0.32	0.25	0.30	0.27	0.22	0.23	0.27
300	0.28	0.22	0.26	0.24	0.19	0.20	0.24
400	0.25	0.19	0.23	0.22	0.17	0.18	0.22
500	0.23	0.17	0.21	0.20	0.15	0.16	0.20

Refer EIT Standard 022001-22

Table 34: Multi-cores 90°C, Copper conductor, XLPE insulation cable

Size (mm²)	Single-phase AC (mV/A/m)	Three-phase AC (mV/A/m)
1.0	46	40
1.5	31	27
2.5	19	16
4	12	10
6	7.9	6.8
10	4.7	4.0
16	2.9	2.5
25	1.85	1.60
35	1.35	1.15
50	0.99	0.86
70	0.68	0.60
95	0.52	0.44
120	0.42	0.36
150	0.35	0.31
185	0.30	0.25
240	0.24	0.22
300	0.21	0.18
400	0.19	0.16

Refer EIT Standard 022001-22

Copper Conductor Cables

Building Wires and Cables

TIS 11 Part 3-2553 : Non-Sheathed Cables for Fixed Wiring

60227 IEC 01 THW or YK 60227 IEC 01 THW	450/750V 70°C SOILD AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE	B1
60227 IEC 02 THW (f)	450/750V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B3
60227 IEC 05 IV	300/500 V 70°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE	B4
60227 IEC 06 IV (f)	300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B5
60227 IEC 07 HIV	300/500 V 90°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE	B6
60227 IEC 08 HIV (f)	300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B7

B

TIS 11 Part 4-2553: Sheathed Cables for Fixed Wiring

60227 IEC 10	300/500 V 70'C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED	B8

TIS 11 Part 5-2553 Flexible Cables (Cords)

B

TIS 11 Part 101-2559: Sheathed Cables for General Purposes

Low Voltage Power Cables

Medium Voltage Power Cables

B

High Voltage Power Cables

Control Cables

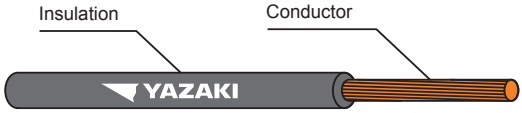
Automobile Wire and Cables

Bare Conductor

B

60227 IEC 01 or YK 60227 IEC 01 THW

450/750V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 3-2553 Table 1

APPLICATION

Insulation : Polyvinyl chloride (PVC/C)

Cable name	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating			Cable weight approx.	Standard Length
				minimum	maximum			In free air at (40°C)	In Conduit in air at 40°C			
									Single-phase	Three-phase		
	(mm^2)		(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)			(kg/km)	(m)
60227 IEC 01 THW	1.5	Solid	0.7	2.6	3.2	12.1	0.011	21	15	13	20	100/C
	1.5	Non-compacted	0.7	2.7	3.3	12.1	0.010	21	15	13	25	100/C
	2.5	Solid	0.8	3.2	3.9	7.41	0.010	28	21	18	35	100/C
	2.5	Non-compacted	0.8	3.3	4.0	7.41	0.009	28	21	18	35	100/C
	4	Solid	0.8	3.6	4.4	4.61	0.0085	37	28	24	50	100/C
	4	Non-compacted	0.8	3.8	4.6	4.61	0.0077	37	28	24	55	100/C
YK 60227 IEC 01 THW	6	Non-compacted	0.8	4.3	5.2	3.08	0.0065	49	36	31	70	100/C
	10	Non-compacted	1.0	5.6	6.7	1.83	0.0065	68	50	44	120	100/C
	16	Compacted	1.0	6.4	7.8	1.15	0.0050	91	66	59	170	100/C
	25	Compacted	1.2	8.1	9.7	0.727	0.0050	122	88	77	270	100/C
	35	Compacted	1.2	9.0	10.9	0.524	0.0043	151	109	96	360	100/C
	50	Compacted	1.4	10.6	12.8	0.387	0.0043	184	131	117	490	1000/D
	70	Compacted	1.4	12.1	14.6	0.268	0.0035	234	167	149	670	1000/D
	95	Compacted	1.6	14.1	17.1	0.193	0.0035	292	202	180	930	1000/D
	120	Compacted	1.6	15.6	18.8	0.153	0.0032	341	234	208	1150	1000/D
	150	Compacted	1.8	17.3	20.9	0.124	0.0032	391	261	228	1420	1000/D
	185	Compacted	2.0	19.3	23.3	0.0991	0.0032	454	297	258	1780	1000/D
	240	Compacted	2.2	22.0	26.6	0.0754	0.0032	543	348	301	2300	1000/D
60227 IEC 01 THW	300	Non-compacted	2.4	24.5	29.6	0.0601	0.0030	628	398	343	3090	500/D
	400	Non-compacted	2.6	27.5	33.2	0.047	0.0028	736	475	406	3930	500/D

C = Packing in Coil
D = Packing in drum

B

60227 IEC 01 or YK 60227 IEC 01 THW

450/750V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 3-2553 Table 1

APPLICATION

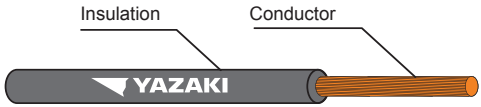
Building wiring for installation on insulator or in raceway dry location.

B

Cable name	Nominal cross sectional area (mm²)	Conductor type	A.C Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
60227 IEC 01 THW	1.5	Solid	14.4777	0.5259	0.1652	14.4786
	1.5	Non-compacted	14.4777	0.5276	0.1658	14.4786
	2.5	Solid	8.8661	0.5121	0.1609	8.8676
	2.5	Non-compacted	8.8661	0.5202	0.1634	8.8676
	4	Solid	5.5159	0.4917	0.1545	5.5181
	4	Non-compacted	5.5159	0.4870	0.1530	5.5180
YK 60227 IEC 01 THW	6	Non-compacted	3.6852	0.5606	0.1761	3.6894
	10	Non-compacted	2.1896	0.5219	0.1640	2.1957
	16	Compacted	1.3776	0.4642	0.1458	1.3853
	25	Compacted	0.8700	0.4594	0.1443	0.8819
	35	Compacted	0.6271	0.4496	0.1412	0.6428
	50	Compacted	0.4633	0.4477	0.1406	0.4842
	70	Compacted	0.3210	0.4354	0.1368	0.3489
	95	Compacted	0.2314	0.4347	0.1366	0.2687
	120	Compacted	0.1836	0.4295	0.1349	0.2278
	150	Compacted	0.1491	0.4292	0.1348	0.2010
	185	Compacted	0.1194	0.4281	0.1345	0.1798
	240	Compacted	0.0914	0.4257	0.1337	0.1620
60227 IEC 01 THW	300	Non-compacted	0.0734	0.4177	0.1312	0.1504
	400	Non-compacted	0.0581	0.4160	0.1307	0.1430

60227 IEC 02 THW (f)

450/750V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 3-2553 Table 3

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
1.5	Flexible	0.7	2.8	3.4	13.3	0.010	16	21	100/C
2.5	Flexible	0.8	3.4	4.1	7.98	0.009	25	33	100/C
4	Flexible	0.8	3.9	4.8	4.95	0.0070	30	50	100/C
6	Flexible	0.8	4.4	5.3	3.30	0.0060	39	75	100/C
10	Flexible	1.0	5.7	6.8	1.91	0.0056	51	130	100/C
16	Flexible	1.0	6.7	8.1	1.21	0.0046	73	180	100/C
25	Flexible	1.2	8.4	10.2	0.780	0.0044	97	280	100/C
35	Flexible	1.2	9.7	11.7	0.554	0.0038	140	390	100/C
50	Flexible	1.4	11.5	13.9	0.386	0.0037	175	550	500/D
70	Flexible	1.4	13.2	16.0	0.272	0.0032	216	750	500/D
95	Flexible	1.6	15.1	18.2	0.206	0.0032	258	1000	500/D
120	Flexible	1.6	16.7	20.2	0.161	0.0029	302	1300	500/D
150	Flexible	1.8	18.6	22.5	0.129	0.0029	347	1600	500/D
185	Flexible	2.0	20.6	24.9	0.106	0.0029	394	1900	500/D
240	Flexible	2.2	23.5	28.4	0.081	0.0028	471	2500	500/D

C = Packing in Coil
D = Packing in drum

Nominal cross sectional area (mm²)	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
1.5	15.9135	0.5149	0.1618	15.9143
2.5	9.5481	0.5038	0.1583	9.5494
4	5.9227	0.4846	0.1522	5.9246
6	3.9485	0.4637	0.1457	3.9512
10	2.2854	0.4631	0.1423	2.2898
16	1.4478	0.4537	0.1394	1.4545
25	0.9334	0.4409	0.1385	0.9436
35	0.6630	0.4312	0.1355	0.6767
50	0.4621	0.4294	0.1349	0.4814
70	0.3258	0.4215	0.1324	0.3517
95	0.2469	0.4230	0.1329	0.2804
120	0.1932	0.4174	0.1311	0.2335
150	0.1550	0.4172	0.1311	0.2030
185	0.1277	0.4187	0.1315	0.1833
240	0.0969	0.4164	0.1308	0.1628

B

60227 IEC 05 IV

300/500 V 70°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 5

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

B

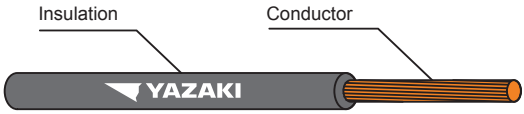
Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Solid	0.6	1.9	2.3	36.0	0.015	3	8.8	100/C
0.75	Solid	0.6	2.1	2.5	24.5	0.012	6	12	100/C
1	Solid	0.6	2.2	2.7	18.1	0.011	10	14	100/C

C = Packing in Coil

Nominal cross sectional area (mm²)	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
0.5	43.0740	0.5798	0.1821	43.0744
0.75	29.3143	0.5486	0.1723	29.3148
1	21.6567	0.5366	0.1686	21.6573

60227 IEC 06 IV (f)

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Fiexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 7

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Nominal cross sectional area	Conductor type	Insulation thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air maximum (40°C)	Cable weight approx.	Standard Length
			minimum	maximum					
(mm^2)		(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
0.5	Flexible	0.6	2.1	2.5	39.0	0.013	3	9	100/C
0.75	Flexible	0.6	2.2	2.7	26.0	0.011	6	12	100/C
1	Flexible	0.6	2.4	2.8	19.5	0.010	10	15	100/C

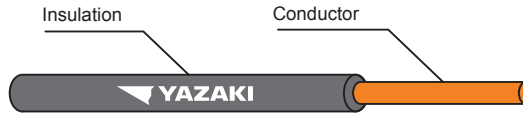
C = Packing in Coil

Nominal cross sectional area	A.C Resistance	Inductance	Reactance	Impedance
	R	L	XL	Z
(mm^2)	(Ω/km)	(MΩ-km)	(MΩ-km)	(MΩ-km)
0.5	46.6635	0.5642	0.1773	46.6638
0.75	31.1090	0.5394	0.1695	31.1095
1	23.3318	0.5225	0.1641	23.3323

B

60227 IEC 07 HIV

300/500 V 90°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 9

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

B

Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 90°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Solid	0.6	1.9	2.3	36.0	0.015	3	8.6	100/C
0.75	Solid	0.6	2.1	2.5	24.5	0.013	6	11	100/C
1	Solid	0.6	2.2	2.7	18.1	0.012	10	14	100/C
1.5	Solid	0.7	2.6	3.2	12.1	0.011	16	20	100/C
2.5	Solid	0.8	3.2	3.9	7.41	0.009	25	32	100/C

C = Packing in Coil

Nominal cross sectional area (mm²)	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
0.5	43.0740	0.5758	0.1809	43.0744
0.75	29.3143	0.5526	0.1736	29.3148
1	21.6567	0.5401	0.1697	21.6573
1.5	14.4777	0.5288	0.1661	14.4786
2.5	8.8661	0.5198	0.1633	8.8676

60227 IEC 08 HIV (f)

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Fiexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 11

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 90°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Flexible	0.6	2.1	2.5	39.0	0.013	3	9	100/C
0.75	Flexible	0.6	2.2	2.7	26.0	0.012	6	12	100/C
1	Flexible	0.6	2.4	2.8	19.5	0.010	10	15	100/C
1.5	Flexible	0.7	2.8	3.4	13.3	0.009	16	21	100/C
2.5	Flexible	0.8	3.4	4.1	7.93	0.009	25	33	100/C

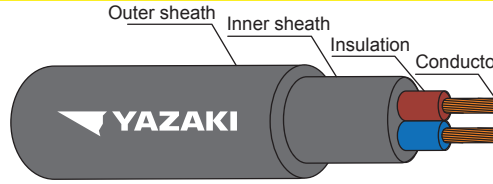
C = Packing in Coil

Nominal cross sectional area (mm²)	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
0.5	46.6635	0.5642	0.1773	46.6638
0.75	31.1090	0.5394	0.1695	31.1095
1	23.3318	0.5225	0.1641	23.3323
1.5	15.9135	0.5149	0.1618	15.9143
2.5	9.581	0.5038	0.1583	9.5494

B

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Solid	0.7	0.4	1.2	7.6	10.0	12.1	0.011	19	120	100/C
	1.5	Stranded	0.7	0.4	1.2	7.8	10.5	12.1	0.010	19	130	100/C
	2.5	Solid	0.8	0.4	1.2	8.6	11.5	7.41	0.010	26	160	100/C
	2.5	Stranded	0.8	0.4	1.2	9.0	12.0	7.41	0.009	26	180	100/C
	4	Solid	0.8	0.4	1.2	9.6	12.5	4.61	0.0085	35	210	100/C
2	4	Stranded	0.8	0.4	1.2	10.0	13.0	4.61	0.0077	35	230	100/C
	6	Stranded	0.8	0.4	1.2	11.0	14.0	3.08	0.0065	44	290	100/C
	10	Stranded	1.0	0.6	1.4	13.5	17.5	1.83	0.0065	61	470	500/D
	16	Stranded	1.0	0.6	1.4	15.5	20.0	1.15	0.0052	82	650	500/D
	25	Stranded	1.2	0.8	1.4	18.5	24.0	0.727	0.0050	104	950	500/D
	35	Stranded	1.2	1.0	1.6	21.0	27.5	0.524	0.0044	129	1300	500/D

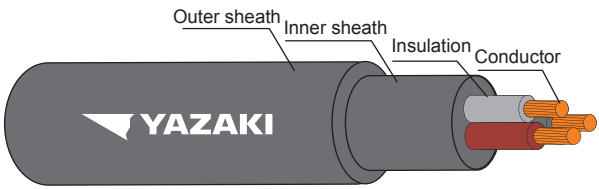
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	Conductor type	A.C Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
2	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Stranded	2.1897	0.2943	0.0925	2.1917
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8700	0.2748	0.0863	0.8743
	35	Stranded	0.6272	0.2554	0.0803	0.6323

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter maximum minimum (mm)	Overall diameter maximum maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Solid	0.7	0.4	1.2	7.6	10.0	12.1	0.011	16	140	100/C
	1.5	Stranded	0.7	0.4	1.2	7.8	10.5	12.1	0.010	16	150	100/C
	2.5	Solid	0.8	0.4	1.2	8.6	11.5	7.41	0.010	22	190	100/C
	2.5	Stranded	0.8	0.4	1.2	9.0	12.00	7.41	0.009	22	210	100/C
	4	Solid	0.8	0.4	1.2	9.6	12.5	4.61	0.0085	30	250	100/C
3	4	Stranded	0.8	0.4	1.2	10.0	13.0	4.61	0.0077	30	270	100/C
	6	Stranded	0.8	0.4	1.2	11.0	14.0	3.08	0.065	37	370	500/D
	10	Stranded	1.0	0.6	1.4	13.5	17.5	1.83	0.0065	52	600	500/D
	16	Stranded	1.0	0.6	1.4	15.5	20.0	1.15	0.0052	70	800	500/D
	25	Stranded	1.2	0.8	1.4	18.5	24.0	0.727	0.0050	88	1200	500/D
	35	Stranded	1.2	1.0	1.6	21.0	27.5	0.524	0.0044	110	1600	500/D

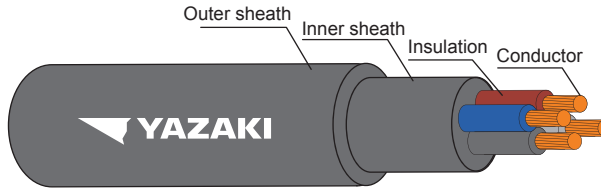
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C Resistance R (Ω/km	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.667
	2.5	Stranded	8.8661	0.3405	0.1070	8.667
	4	Solid	5.5159	0.3135	0.985	5.5168
3	4	Stranded	5.5159	3.3164	0.994	5.5168
	6	Stranded	3.6853	0.3011	0.946	3.6865
	10	Stranded	2.1879	0.2943	0.925	2.1916
	16	Stranded	1.3761	0.2773	0.871	1.3788
	25	Stranded	0.8701	0.2748	0.863	0.8743
	35	Stranded	06.273	0.2554	0.803	0.6234

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter maximum minimum (mm)	Overall diameter maximum maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Solid	0.7	0.4	1.2	8.6	11.5	12.1	0.011	16	170	100/C
	1.5	Stranded	0.7	0.4	1.2	9.0	12.0	12.1	0.010	16	180	100/C
	2.5	Solid	0.8	0.4	1.2	10.0	13.0	7.41	0.010	22	230	100/C
	2.5	Stranded	0.8	0.4	1.2	10.0	13.5	7.41	0.009	22	250	100/C
	4	Solid	0.8	0.4	1.2	11.5	14.5	4.61	0.0085	30	320	100/C
4	4	Stranded	0.8	0.4	1.2	12.0	15.0	4.61	0.0077	30	340	100/C
	6	Stranded	0.8	0.4	1.2	13.0	17.0	3.08	0.0065	37	470	500/D
	10	Stranded	1.0	0.6	1.4	16.0	20.5	1.83	0.0065	52	700	500/D
	16	Stranded	1.0	0.6	1.4	18.0	23.5	1.15	0.0052	70	1000	500/D
	25	Stranded	1.2	0.8	1.4	22.5	28.5	0.727	0.0050	88	1600	500/D
	35	Stranded	1.2	1.0	1.6	24.5	32.0	0.524	0.0044	110	2100	500/D

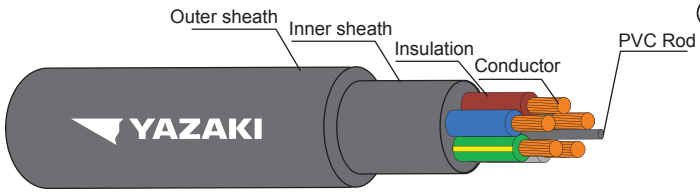
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
4	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Stranded	3.6853	0.3011	0.0946	3.865
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8701	0.2748	0.0863	0.8744
	35	Stranded	0.6273	0.2554	0.0803	0.6324

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown, Black, Grey, Green/Yelow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter maximum minimum (mm)	Overall diameter maximum maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Solid	0.7	0.7	1.2	9.4	12.0	12.1	0.011	16	200	100/C
	1.5	Stranded	0.7	0.7	1.2	9.8	12.5	12.1	0.010	16	220	100/C
	2.5	Solid	0.8	0.8	1.2	11.0	14.0	7.41	0.010	22	280	100/C
	2.5	Stranded	0.8	0.8	1.2	11.0	14.5	7.41	0.009	22	310	100/C
	4	Solid	0.8	0.8	1.2	12.5	16.0	4.61	0.0085	30	410	100/C
5	4	Stranded	0.8	0.8	1.2	13.0	17.0	4.61	0.0077	30	430	100/C
	6	Stranded	0.8	0.8	1.2	14.5	18.5	3.08	0.065	37	550	500/D
	10	Stranded	1.0	1.0	1.4	17.5	22.0	1.83	0.0065	52	900	500/D
	16	Stranded	1.0	1.0	1.4	20.5	26.0	1.15	0.0052	70	1300	500/D
	25	Stranded	1.2	1.2	1.4	24.5	31.5	0.727	0.0050	88	1900	500/D
	35	Stranded	1.2	1.2	1.6	27.0	35.0	0.524	0.0044	110	2600	500/D

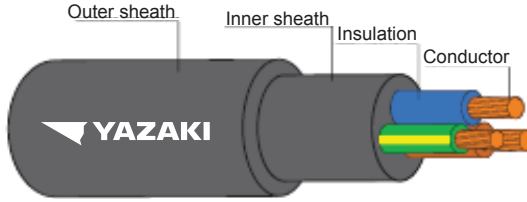
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
5	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8701	0.2748	0.0863	0.8744
	35	Stranded	0.6273	0.2554	0.0803	0.6324

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

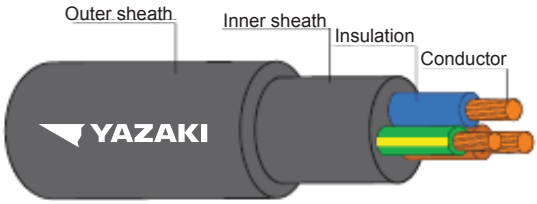
B

Number of cores	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C)	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor					Minimum	Maximum	Phase	Ground				
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
	1.5	1.5	Solid		0.7	0.4	1.2	8.0	10.5	12.1	12.1	0.011	19	150	100/C
	1.5	1.5	Stranded		0.7	0.4	1.2	8.2	11.0	12.1	12.1	0.010	19	160	100/C
	2.5	2.5	Solid		0.8	0.4	1.2	9.2	12.0	7.41	7.41	0.010	26	200	100/C
	2.5	2.5	Stranded		0.8	0.4	1.2	9.4	12.5	7.41	7.41	0.009	26	220	100/C
2+G	4	4	Solid		0.8	0.4	1.2	10.0	13.0	4.61	4.61	0.0085	35	260	100/C
	4	4	Stranded		0.8	0.4	1.2	10.5	13.5	4.61	4.61	0.0077	35	280	100/C
	6	6	Stranded		0.8	0.4	1.4	12.0	15.5	3.08	3.08	0.0065	44	380	100/C
	10	10	Stranded		1.0	0.6	1.4	14.5	19.0	1.83	1.83	0.0065	61	590	500/D
	16	16	Stranded		1.0	0.8	1.4	16.5	21.5	1.15	1.15	0.0052	82	830	500/D

C = Packing in coil
D = Packing in drum

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

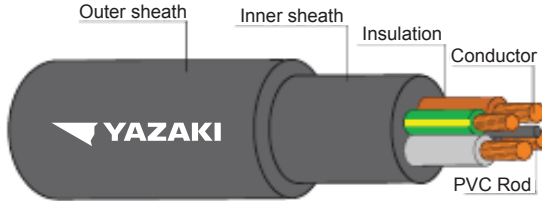
APPLICATION

For installation exposed, or in raceway, wet or dry location.

Number of cores	Nominal cross sectional area		A.C Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
2+G	1.5	1.5	14.4777	0.3439	0.1081	14.4781
	1.5	1.5	14.4777	0.3427	0.1077	14.4781
	2.5	2.5	8.8661	0.3350	0.1052	8.8667
	2.5	2.5	8.8661	0.3405	0.1070	8.8667
	4	4	5.5159	0.3135	0.0985	5.5168
	4	4	5.5159	0.3164	0.0994	5.5168
	6	6	3.6853	0.3011	0.0946	3.6865
	10	10	2.1897	0.2943	0.0925	2.1917
	16	16	1.3761	0.2773	0.0871	1.3789

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

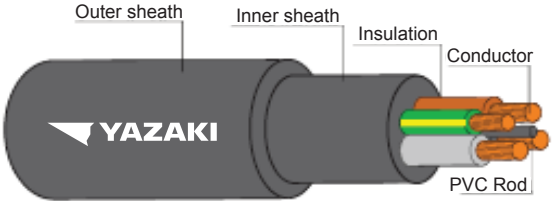
Number of cores	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C)	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor					Minimum	Maximum	Phase	Ground				
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
3+G	1.5	1.5	Solid		0.7	0.4	1.2	8.6	11.5	12.1	12.1	0.011	16	170	100/C
	1.5	1.5	Stranded		0.7	0.4	1.2	9.0	12.0	12.1	12.1	0.010	16	190	100/C
	2.5	2.5	Solid		0.8	0.4	1.2	10.0	13.0	7.41	7.41	0.010	22	240	100/C
	2.5	2.5	Stranded		0.8	0.4	1.2	10.0	13.5	7.41	7.41	0.009	22	260	100/C
	4	4	Solid		0.8	0.4	1.4	11.5	14.5	4.61	4.61	0.0085	30	330	100/C
	4	4	Stranded		0.8	0.4	1.4	12.0	15.0	4.61	4.61	0.0077	30	350	100/C
	6	6	Stranded		0.8	0.6	1.4	13.0	17.0	3.08	3.08	0.0065	37	480	500/D
	10	10	Stranded		1.0	0.6	1.4	16.0	20.5	1.83	1.83	0.0065	52	730	500/D
	16	16	Stranded		1.0	0.8	1.4	18.0	23.5	1.15	1.15	0.0052	70	1040	500/D

C = Packing in coil
D = Packing in drum

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

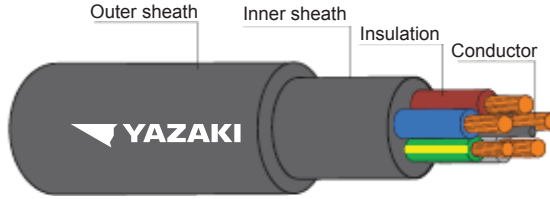
Number of cores	Nominal cross sectional area		A.C Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3+G	1.5	1.5	14.4777	0.3439	0.1081	14.4781
	1.5	1.5	14.4777	0.3427	0.1077	14.4781
	2.5	2.5	8.8661	0.3350	0.1052	8.8667
	2.5	2.5	8.8661	0.3405	0.1070	8.8667
	4	4	5.5159	0.3135	0.0985	5.5168
	4	4	5.5159	0.3164	0.0994	5.5168
	6	6	3.6853	0.3011	0.0946	3.6865
	10	10	2.1897	0.2943	0.0925	2.1917
	16	16	1.3761	0.2773	0.0871	1.3789

B

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

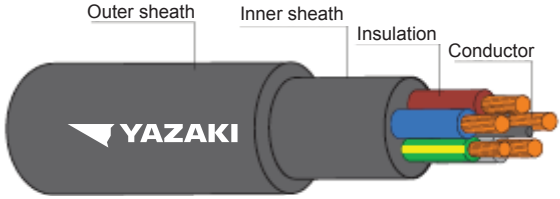
Number of cores	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C)	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor												
	Phase	Ground	Phase	Ground				Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
4+G	1.5	1.5	Solid		0.7	0.4	1.2	9.4	12.0	12.1	12.1	0.011	16	210	100/C
	1.5	1.5	Stranded		0.7	0.4	1.2	9.8	12.5	12.1	12.1	0.010	16	230	100/C
	2.5	2.5	Solid		0.8	0.4	1.2	11.0	14.0	7.41	7.41	0.010	22	290	100/C
	2.5	2.5	Stranded		0.8	0.4	1.2	11.0	14.5	7.41	7.41	0.009	22	310	100/C
	4	4	Solid		0.8	0.6	1.4	12.5	16.0	4.61	4.61	0.0085	30	410	100/C
	4	4	Stranded		0.8	0.6	1.4	13.0	17.0	4.61	4.61	0.0077	30	440	100/C
	6	6	Stranded		0.8	0.6	1.4	14.5	18.5	3.08	3.08	0.0065	37	580	500/D
	10	10	Stranded		1.0	0.6	1.4	17.5	22.0	1.83	1.83	0.0065	52	880	500/D
	16	16	Stranded		1.0	0.8	1.6	20.5	26.0	1.15	1.15	0.0052	70	1300	500/D

C = Packing in coil
D = Packing in drum

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

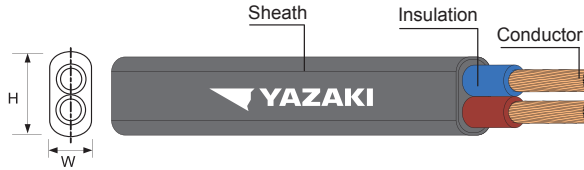
For installation exposed, or in raceway, wet or dry location.

Number of cores	Nominal cross sectional area		A.C Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
4+G	1.5	1.5	14.4777	0.3439	0.1081	14.4781
	1.5	1.5	14.4777	0.3427	0.1077	14.4781
	2.5	2.5	8.8661	0.3350	0.1052	8.8667
	2.5	2.5	8.8661	0.3405	0.1070	8.8667
	4	4	5.5159	0.3135	0.0985	5.5168
	4	4	5.5159	0.3164	0.0994	5.5168
	6	6	3.6853	0.3011	0.0946	3.6865
	10	10	2.1897	0.2943	0.0925	2.1917
	16	16	1.3761	0.2773	0.0871	1.3789

B

60227 IEC 52 VKF

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	3.0 x 4.9	3.7 x 5.9	39.0	0.012	3	28	100/C
	0.75	Flexible	0.5	0.6	3.2 x 5.2	3.8 x 6.3	26.0	0.010	6	35	100/C

C = Packing in Coil

60227 IEC 52

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification :
2 Cores Blue, Brown
3 Cores Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

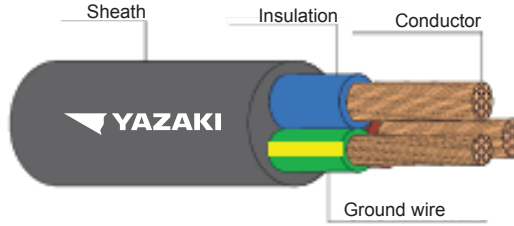
For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	4.6	5.9	39.0	0.012	3	40	100/C
	0.75	Flexible	0.5	0.6	4.9	6.3	26.0	0.010	6	48	100/C
3	0.5	Flexible	0.5	0.6	4.9	6.3	39.0	0.012	3	47	100/C
	0.75	Flexible	0.5	0.6	5.2	6.7	26.0	0.010	6	58	100/C

B

60227 IEC 52

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED WITH GROUND, ROUND TYPE



TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification : Blue, Brown + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

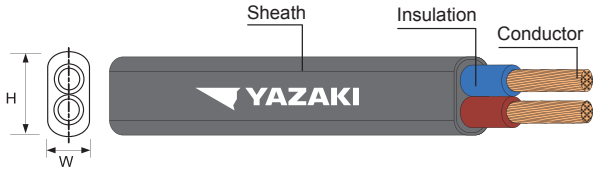
B

Number of cores	Conductor				Insulation thickness nominal	Sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C) maximum	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor											
	Phase	Ground	Phase	Ground			Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2+G	0.5	0.5	Flexible		0.5	0.6	4.9	6.3	39.0	39.0	0.012	3	47	100/C
	0.75	0.75	Flexible		0.5	0.6	5.2	6.7	26.0	26.0	0.010	6	60	100/C

C = Packing in coil

60227 IEC 53 VKF

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE



TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 9

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	3.7 x 6.0	4.5 x 7.2	26.0	0.011	6	43	100/C
	1	Flexible	0.6	0.8	3.9 x 6.2	4.7 x 7.5	19.5	0.010	10	50	100/C

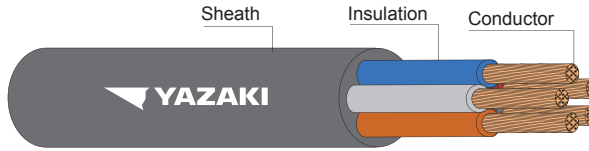
C = Packing in Coil

B

60227 IEC 53

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black and Grey
5 Cores	Blue, Brown, Black, Grey, Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 9

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

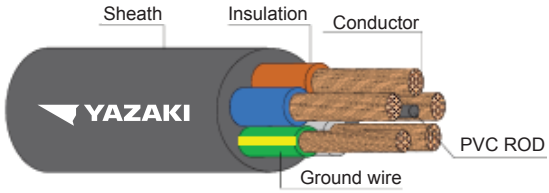
B

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm²)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	5.7	7.2	26.0	0.011	6	60	100/C
	1	Flexible	0.6	0.8	5.9	7.5	19.5	0.010	10	70	100/C
	1.5	Flexible	0.7	0.8	6.8	8.6	13.3	0.010	16	90	100/C
	2.5	Flexible	0.8	1.0	8.4	10.6	7.98	0.009	25	140	100/C
3	0.75	Flexible	0.6	0.8	6.0	7.6	26.0	0.011	6	70	100/C
	1	Flexible	0.6	0.8	6.3	8.0	19.5	0.010	10	80	100/C
	1.5	Flexible	0.7	0.8	7.4	9.4	13.3	0.010	16	110	100/C
	2.5	Flexible	0.8	1.0	9.2	11.4	7.98	0.009	20	180	100/C
4	0.75	Flexible	0.6	0.8	6.6	8.3	26.0	0.011	6	85	100/C
	1	Flexible	0.6	0.8	7.1	9.0	19.5	0.010	10	100	100/C
	1.5	Flexible	0.7	0.8	8.4	10.5	13.3	0.010	16	140	100/C
	2.5	Flexible	0.8	1.0	10.1	12.5	7.98	0.009	20	210	100/C
5	0.75	Flexible	0.6	0.8	7.4	9.3	26.0	0.011	6	100	100/C
	1	Flexible	0.6	0.8	7.8	9.8	19.5	0.010	10	120	100/C
	1.5	Flexible	0.7	1.1	9.3	11.6	13.3	0.010	16	170	100/C
	2.5	Flexible	0.8	1.2	11.2	13.9	7.98	0.009	20	260	100/C

C = Packing in Coil

60227 IEC 53

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE



TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification :

2 Cores + G : Blue, Brown + Green/Yellow
3 Cores + G : Brown, Black, Grey + Green/Yellow
4 Cores + G : Blue, Brown, Black, Grey + Green/Yellow

Outer sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 9

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Conductor				Insulation thickness nominal	Sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C) maximum	Cable weight approx.	Standard length
	Nominal cross section area		Type of Conductor											
	Phase	Ground	Phase	Ground			Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2+G	0.75	0.75	Flexible		0.6	0.8	6.0	7.6	26.0	26.0	0.011	6	70	100/C
	1	1	Flexible		0.6	0.8	6.3	8.0	19.5	19.5	0.010	10	80	100/C
	1.5	1.5	Flexible		0.7	0.9	7.4	9.4	13.3	13.3	0.010	16	120	100/C
	2.5	2.5	Flexible		0.8	1.1	9.2	11.4	7.98	7.98	0.009	25	180	100/C
3+G	0.75	0.75	Flexible		0.6	0.8	6.6	8.3	26.0	26.0	0.011	6	85	100/C
	1	1	Flexible		0.6	0.9	7.1	9.0	19.5	19.5	0.010	10	100	100/C
	1.5	1.5	Flexible		0.7	1.0	8.4	10.5	13.3	13.3	0.010	16	140	100/C
	2.5	2.5	Flexible		0.8	1.1	10.1	12.5	7.98	7.98	0.009	20	220	100/C
4+G	0.75	0.75	Flexible		0.6	0.9	7.4	9.3	26.0	26.0	0.011	6	100	100/C
	1	1	Flexible		0.6	0.9	7.8	9.8	19.5	19.5	0.010	10	120	100/C
	1.5	1.5	Flexible		0.7	1.1	9.3	11.6	13.3	13.3	0.010	16	180	100/C
	2.5	2.5	Flexible		0.8	1.2	11.2	13.9	7.98	7.98	0.009	20	260	100/C

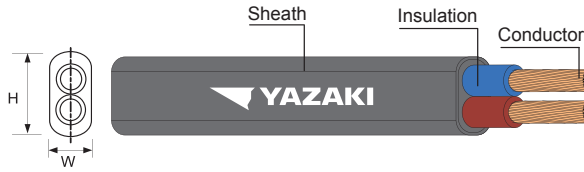
C = Packing in Coil

B

60227 IEC 56 HVKF

300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 11

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

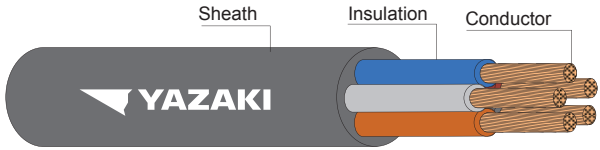
Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating lin free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.50	Flexible	0.5	0.6	3.0 x 4.9	3.7 x 5.9	39.0	0.012	3	28	100/C
	0.75	Flexible	0.5	0.6	3.2 x 5.2	3.8 x 6.3	26.0	0.010	6	35	100/C

C = Packing in Coil

60227 IEC 56

300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification :
2 Cores Blue, Brown
3 Cores Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 11

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	4.6	5.9	39.0	0.012	3	38	100/C
	0.75	Flexible	0.5	0.6	4.9	6.3	26.0	0.010	6	46	100/C
3	0.5	Flexible	0.5	0.6	4.9	6.3	39.0	0.012	3	44	100/C
	0.75	Flexible	0.5	0.6	5.2	6.7	26.0	0.010	6	55	100/C

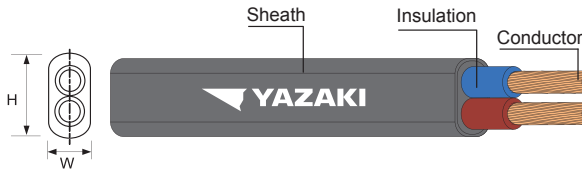
C = Packing in Coil

B

60227 IEC 57 HVKF

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 13

B

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

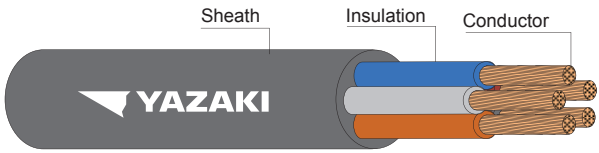
Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	3.7 x 6.0	4.5 x 7.2	26.0	0.011	6	42	100/C
	1	Flexible	0.6	0.8	3.9 x 6.2	4.7 x 7.5	19.5	0.010	10	50	100/C

C = Packing in Coil

60227 IEC 57

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black, Grey
5 Cores	Blue, Brown, Black, Grey, Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 13

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

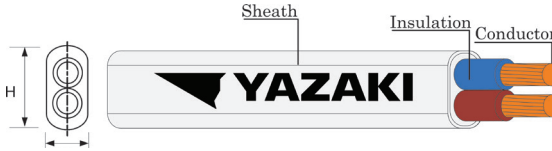
Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	5.7	7.2	26.0	0.011	6	57	100/C
	1	Flexible	0.6	0.8	5.9	7.5	19.5	0.010	10	66	100/C
	1.5	Flexible	0.7	0.8	6.8	8.6	13.3	0.010	16	89	100/C
	2.5	Flexible	0.8	1.0	8.4	10.6	7.98	0.009	25	135	100/C
3	0.75	Flexible	0.6	0.8	6.0	7.6	26.0	0.011	6	66	100/C
	1	Flexible	0.6	0.8	6.3	8.0	19.5	0.010	10	78	100/C
	1.5	Flexible	0.7	0.9	7.4	9.4	13.3	0.010	16	110	100/C
	2.5	Flexible	0.8	1.0	9.2	11.4	7.98	0.009	20	170	100/C
4	0.75	Flexible	0.6	0.8	6.6	8.3	26.0	0.011	16	80	100/C
	1	Flexible	0.6	0.9	7.1	9.0	19.5	0.010	10	99	100/C
	1.5	Flexible	0.7	1.0	8.4	10.5	13.3	0.010	16	140	100/C
	2.5	Flexible	0.8	1.1	10.1	12.5	7.98	0.009	20	205	100/C
5	0.75	Flexible	0.6	0.9	7.4	9.3	26.0	0.011	6	99	100/C
	1	Flexible	0.6	0.9	7.8	9.8	19.5	0.010	10	120	100/C
	1.5	Flexible	0.7	1.1	9.3	11.6	13.3	0.010	16	170	100/C
	2.5	Flexible	0.8	1.2	11.2	13.9	7.98	0.009	20	250	100/C

C = Packing in Coil

VAF

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Sheath : White polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 101-2559 Table 1

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

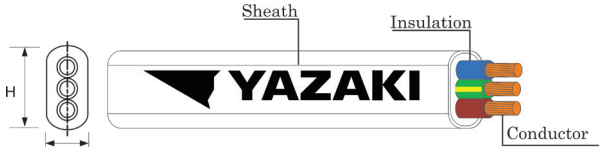
Number of cores	Nominal cross sectional area	Conduc-tor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	1	Solid	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	0.0110	14	50	100/C
	1.5	Solid	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	0.0110	17	70	100/C
	2.5	Solid	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	0.0100	23	100	100/C
	4	Standard	0.8	1.1	5.6 x 9.6	7.2 x 11.5	4.61	0.0077	32	150	100/C
	6	Standard	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	0.0065	41	200	100/C
	10	Standard	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	0.0065	56	310	100/C
	16	Standard	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	0.0052	74	450	100/C

C = Packing in Coil

VAF-G

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, FLAT TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown + Green/Yellow

Sheath : White polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 101-2559 Table 1

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

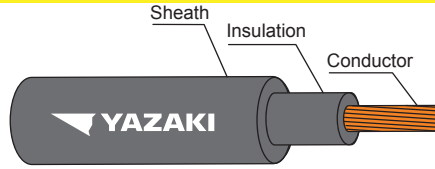
Number of cores	Nominal cross sectional area		Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor re-sistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Phase	Ground				W x H minimum	W x H maximum	Phase	Ground				
	(mm^2)	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km))	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2+G	1	1	Solid	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	18.1	0.0110	14	75	100/C
	1.5	1.5	Solid	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	12.1	0.0110	17	100	100/C
	2.5	2.5	Solid	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	7.41	0.0100	23	150	100/C
	4	4	Standard	0.8	1.1	5.6 x 9.6	7.2 x 11.5	4.61	4.61	0.0077	32	220	100/C
	6	6	Standard	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	3.08	0.0065	41	290	100/C
	10	10	Standard	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	1.83	0.0065	56	460	100/C
	16	16	Standard	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	1.15	0.0052	74	650	500/D

C = Packing in Coil
D = Packing in drum

B

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, SINGLE CORE



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Black

Sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 3

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Cable name	Number x Size of conductor	Conductor Type	Insulation thickness nominal	Sheat thickness nominal	Overall diameter maximum	Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous currunt rating in free air at 40°C maximum (A)			Continuous currunt rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(No. x mm²)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
NYY	1×1	Solid	1.5	1.8	8.6	18.1	0.0207	19	16	15	21	86	100/C
	1×1	Non-compacted	1.5	1.8	8.8	18.1	0.0200	19	16	15	21	88	100/C
	1×1.5	Solid	1.5	1.8	9.0	12.1	0.0184	24	19	19	26	93	100/C
	1×1.5	Non-compacted	1.5	1.8	9.2	12.1	0.0175	24	19	19	26	98	100/C
	1×2.5	Solid	1.5	1.8	9.4	7.41	0.0157	32	24	26	35	109	100/C
	1×2.5	Non-compacted	1.5	1.8	9.8	7.41	0.0146	32	24	26	35	115	100/C
	1×4	Solid	1.5	1.8	10.0	4.61	0.0135	42	33	34	45	130	100/C
	1×4	Non-compacted	1.5	1.8	10.5	4.61	0.0124	42	33	34	45	137	100/C
YK NYY	1×6	Non-compacted	1.5	1.8	11.0	3.08	0.0107	54	42	43	57	159	1000/D
	1×10	Non-compacted	1.5	1.8	12.0	1.83	0.0088	73	57	59	76	210	1000/D
	1×16	Compacted	1.5	1.8	13.0	1.15	0.0074	96	76	78	99	273	1000/D
	1×25	Compacted	1.5	1.8	14.5	0.727	0.0061	127	99	96	128	372	1000/D
	1×35	Compacted	1.5	1.8	16.0	0.524	0.0053	157	124	119	154	472	1000/D
	1×50	Compacted	1.5	1.8	17.0	0.387	0.0046	191	151	145	181	600	1000/D
	1×70	Compacted	1.5	1.8	19.0	0.268	0.0039	244	196	188	223	800	1000/D
	1×95	Compacted	1.7	1.8	21.5	0.193	0.0038	297	239	230	267	1074	1000/D
	1×120	Compacted	1.7	1.8	23.0	0.153	0.0034	345	279	268	304	1314	1000/D
	1×150	Compacted	1.9	2.0	26.0	0.124	0.0034	397	324	310	342	1609	1000/D
	1×185	Compacted	2.1	2.0	28.0	0.0991	0.0034	453	371	356	386	1991	1000/D
	1×240	Compacted	2.3	2.2	31.5	0.0754	0.0033	535	441	422	448	2576	1000/D
NYY	1×300	Non-compacted	2.5	2.2	35.0	0.0601	0.0032	617	511	488	507	3420	500/D
	1×400	Non-compacted	2.7	2.2	38.5	0.0470	0.0030	741	599	571	577	4301	500/D
	1×500	Non-compacted	3.1	2.4	43.0	0.0366	0.0031	854	686	652	654	5422	500/D

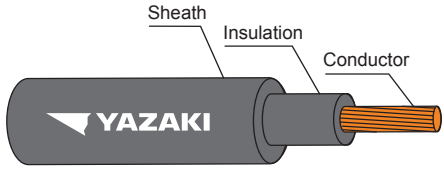
C = Packing in Coil
D = Packing in drum

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, SINGLE CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Black

Sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 3

APPLICATION

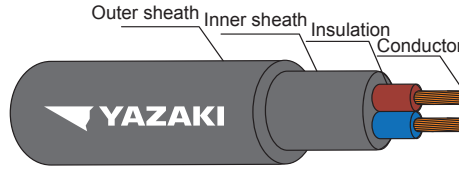
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
			Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
NYY	1×1	Solid	21.6567	21.6567	21.6567	0.7840	0.6454	0.5991	0.2463	0.2028	0.1882	21.6581	21.6576	21.6575
	1×1	Non-compacted	21.6567	21.6567	21.6567	0.7740	0.6353	0.5891	0.2432	0.1996	0.1851	21.6581	21.6576	21.6575
	1×1.5	Solid	14.4777	14.4777	14.4777	0.7485	0.6099	0.5637	0.2351	0.1916	0.1771	14.4796	14.4790	14.4788
	1×1.5	Non-compacted	14.4777	14.4777	14.4777	0.7388	0.6001	0.5539	0.2321	0.1885	0.1740	14.4796	14.4789	14.4787
	1×2.5	Solid	8.8661	8.8661	8.8661	0.7063	0.5677	0.5214	0.2219	0.1783	0.1638	8.8689	8.8679	8.8676
	1×2.5	Non-compacted	8.8661	8.8661	8.8661	0.7025	0.5639	0.5176	0.2207	0.1772	0.1626	8.8688	8.8679	8.8676
	1×4	Solid	5.5159	5.5159	5.5159	0.6698	0.5312	0.4850	0.2104	0.1669	0.1524	5.5199	5.5184	5.5180
	1×4	Non-compacted	5.5159	5.5159	5.5159	0.6649	0.5263	0.4801	0.2089	0.1653	0.1508	5.5199	5.5184	5.5180
YK NYY	1×6	Non-compacted	3.6852	3.6852	3.6852	0.6360	0.4974	0.4512	0.1998	0.1563	0.1417	3.6906	3.6885	3.6879
	1×10	Non-compacted	2.1896	2.1896	2.1896	0.5999	0.4612	0.4150	0.1885	0.1449	0.1304	2.1977	2.1944	2.1935
	1×16	Compacted	1.3760	1.3761	1.3761	0.5702	0.4315	0.3853	0.1791	0.1356	0.1210	1.3876	1.3827	1.3814
	1×25	Compacted	0.8700	0.8700	0.8700	0.5450	0.4064	0.3602	0.1712	0.1277	0.1132	0.8866	0.8793	0.8773
	1×35	Compacted	0.6271	0.6272	0.6272	0.5175	0.3789	0.3327	0.1626	0.1190	0.1045	0.6478	0.6384	0.6358
	1×50	Compacted	0.4632	0.4633	0.4634	0.5023	0.3637	0.3175	0.1578	0.1143	0.0997	0.4894	0.4772	0.4740
	1×70	Compacted	0.3210	0.3211	0.3212	0.4862	0.3476	0.3014	0.1527	0.1092	0.0947	0.3555	0.3391	0.3348
	1×95	Compacted	0.2313	0.2315	0.2317	0.4772	0.3386	0.2923	0.1499	0.1064	0.0918	0.2757	0.2548	0.2492
	1×120	Compacted	0.1836	0.1838	0.1840	0.4664	0.3278	0.2816	0.1465	0.1030	0.0885	0.2349	0.2107	0.2420
	1×150	Compacted	0.1490	0.1493	0.1496	0.4663	0.3276	0.2814	0.1465	0.1029	0.0884	0.2090	0.1814	0.1737
	1×185	Compacted	0.1194	0.1198	0.1201	0.4622	0.3235	0.2773	0.1452	0.1016	0.0871	0.1880	0.1571	0.1484
	1×240	Compacted	0.0913	0.0918	0.0922	0.4568	0.3182	0.2719	0.1435	0.1000	0.0854	0.1701	0.1357	0.1257
NYY	1×300	Non-compacted	0.0733	0.0740	0.0745	0.4517	0.3131	0.2668	0.1419	0.0984	0.0838	0.1597	0.1231	0.1121
	1×400	Non-compacted	0.0580	0.0589	0.0596	0.4465	0.3079	0.2617	0.1403	0.0967	0.0822	0.1518	0.1133	0.1015
	1×500	Non-compacted	0.0460	0.0471	0.0480	0.4460	0.3074	0.2612	0.1401	0.0966	0.0821	0.1475	0.1074	0.0951

B

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, TWO CORES



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard: TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

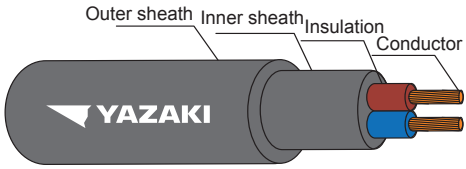
Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
NYY	2×1	Solid	0.8	0.8	1.8	12.0	18.1	0.0141	15	21	163	100/C
	2×1	Non-compacted	0.8	0.8	1.8	12.5	18.1	0.0135	15	21	172	100/C
	2×1.5	Solid	0.8	0.8	1.8	12.5	12.1	0.0123	19	27	184	100/C
	2×1.5	Non-compacted	0.8	0.8	1.8	13.0	12.1	0.0116	19	27	196	100/C
	2×2.5	Solid	0.8	0.8	1.8	13.5	7.41	0.0102	26	35	222	100/C
	2×2.5	Non-compacted	0.8	0.8	1.8	14.0	7.41	0.0093	26	35	239	100/C
	2×4	Solid	0.9	0.8	1.8	15.0	4.61	0.0094	35	47	287	100/C
	2×4	Non-compacted	0.9	0.8	1.8	15.5	4.61	0.0085	35	47	307	100/C
	2×6	Non-compacted	0.9	0.8	1.8	17.0	3.08	0.0073	44	60	380	100/C
	2×10	Non-compacted	1.1	0.8	1.8	19.5	1.83	0.0069	61	81	546	500/D
YK NYY	2×16	Compacted	1.1	0.8	2.0	22.5	1.15	0.0057	82	105	683	1000/D
	2×25	Compacted	1.3	1.2	2.0	27.0	0.727	0.0054	104	136	1022	1000/D
	2×35	Compacted	1.3	1.2	2.0	29.5	0.524	0.0047	129	165	1269	1000/D
	2×50	Compacted	1.5	1.2	2.2	33.5	0.387	0.0046	157	195	1718	1000/D
	2×70	Compacted	1.5	1.5	2.2	38.0	0.268	0.0039	202	239	2296	1000/D
NYY	2×95	Non-compacted	1.7	1.5	2.2	42.5	0.193	0.0038	245	288	3294	500/D
	2×120	Non-compacted	1.7	1.5	2.4	46.5	0.153	0.0034	285	329	4026	500/D
	2×150	Non-compacted	1.9	1.8	2.6	52.0	0.124	0.0034	330	368	4947	500/D
	2×185	Non-compacted	2.1	1.8	2.8	57.0	0.0991	0.0034	378	417	6100	500/D
	2×240	Non-compacted	2.3	2.0	3.0	64.0	0.0754	0.0033	447	481	7861	300/D
	2×300	Non-compacted	2.5	2.0	3.2	70.5	0.0601	0.0032	516	541	9661	300/D

C = Packing in Coil
D = Packing in drum

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, TWO CORES



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

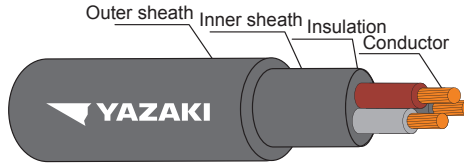
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	2×1	Solid	21.7000	0.3771	0.1185	21.7000
	2×1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	2×1.5	Solid	14.5000	0.3505	0.1101	14.5000
	2×1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	2×2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2×2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	2×4	Solid	5.5200	0.3135	0.0985	5.5210
	2×4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	2×6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	2×10	Non-compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	2×16	Compacted	1.3800	0.2631	0.0827	1.3820
	2×25	Compacted	0.8700	0.2607	0.0819	0.8738
	2×35	Compacted	0.6272	0.2593	0.0814	0.6325
	2×50	Compacted	0.4634	0.2604	0.0818	0.4706
	2×70	Compacted	0.3212	0.2506	0.0787	0.3307
NYY	2×95	Non-compacted	0.2317	0.2480	0.0779	0.2444
	2×120	Non-compacted	0.1840	0.2409	0.0757	0.1990
	2×150	Non-compacted	0.1495	0.2402	0.0755	0.1675
	2×185	Non-compacted	0.1201	0.2401	0.0754	0.1418
	2×240	Non-compacted	0.0922	0.2361	0.0742	0.1183
	2×300	Non-compacted	0.0744	0.2343	0.0736	0.1047

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, THREE CORES



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

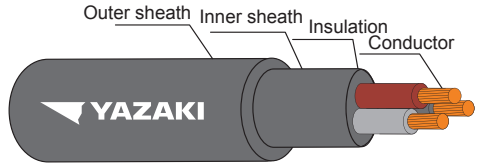
B

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
NYY	3×1	Solid	0.8	0.8	1.8	12.5	18.1	0.0141	13	18	184	100/C
	3×1	Non-compacted	0.8	0.8	1.8	13.0	18.1	0.0135	13	18	190	100/C
	3×1.5	Solid	0.8	0.8	1.8	13.0	12.1	0.0123	16	22	206	100/C
	3×1.5	Non-compacted	0.8	0.8	1.8	13.5	12.1	0.0116	16	22	221	100/C
	3×2.5	Solid	0.8	0.8	1.8	14.0	7.41	0.0102	22	30	255	100/C
	3×2.5	Non-compacted	0.8	0.8	1.8	15.0	7.41	0.0093	22	30	274	100/C
	3×4	Solid	0.9	0.8	1.8	15.5	4.61	0.0094	30	39	336	100/C
	3×4	Non-compacted	0.9	0.8	1.8	16.5	4.61	0.0085	30	39	358	100/C
	3×6	Non-compacted	0.9	0.8	1.8	18.0	3.08	0.0073	37	50	450	100/C
	3×10	Non-compacted	1.1	0.8	1.8	20.5	1.83	0.0069	52	68	656	500/D
YK NYY	3×16	Compacted	1.1	1.2	2.0	24.5	1.15	0.0057	70	87	891	1000/D
	3×25	Compacted	1.3	1.2	2.0	28.5	0.727	0.0054	88	128	1281	1000/D
	3×35	Compacted	1.3	1.2	2.0	31.5	0.524	0.0047	110	154	1614	1000/D
	3×50	Compacted	1.5	1.5	2.2	36.0	0.387	0.0046	133	181	2211	1000/D
	3×70	Compacted	1.5	1.5	2.2	40.5	0.268	0.0039	171	223	2916	1000/D
NYY	3×95	Non-compacted	1.7	1.5	2.4	46.0	0.193	0.0038	207	267	4231	500/D
	3×120	Non-compacted	1.7	1.8	2.6	50.5	0.153	0.0034	240	304	5254	500/D
	3×150	Non-compacted	1.9	1.8	2.8	56.0	0.124	0.0034	278	342	6371	500/D
	3×185	Non-compacted	2.1	2.0	3.0	61.5	0.0991	0.0034	317	386	7937	300/D
	3×240	Non-compacted	2.3	2.0	3.2	69.0	0.0754	0.0033	374	448	10160	300/D
	3×300	Non-compacted	2.5	2.2	3.4	76.0	0.0601	0.0032	432	507	12587	200/D

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, THREE CORES

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

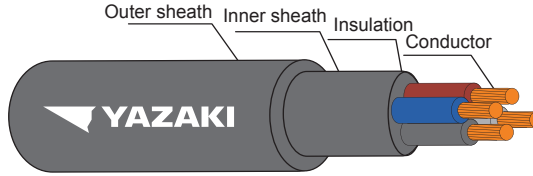
Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	3×1	Solid	21.7000	0.3771	0.1185	21.7000
	3×1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	3×1.5	Solid	14.5000	0.3505	0.1101	14.5000
	3×1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	3×2.5	Solid	8.8700	0.3238	0.1017	8.8710
	3×2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	3×4	Solid	5.5200	0.3135	0.0985	5.5210
	3×4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	3×6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	3×10	Non-compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	3×16	Compacted	1.3800	0.2631	0.0827	1.3820
	3×25	Compacted	0.8700	0.2607	0.0819	0.8738
	3×35	Compacted	0.6273	0.2593	0.0814	0.6326
	3×50	Compacted	0.4635	0.2604	0.0818	0.4707
	3×70	Compacted	0.3213	0.2506	0.0787	0.3308
NYY	3×95	Non-compacted	0.2319	0.2480	0.0779	0.2446
	3×120	Non-compacted	0.1843	0.2409	0.0757	0.1992
	3×150	Non-compacted	0.1499	0.2402	0.0755	0.1678
	3×185	Non-compacted	0.1205	0.2401	0.0754	0.1422
	3×240	Non-compacted	0.0928	0.2361	0.0742	0.1188
	3×300	Non-compacted	0.0751	0.2343	0.0736	0.1052

B

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, FOUR CORES

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
NYY	4×1	Solid	0.8	0.8	1.8	13.5	18.1	0.0141	13	18	210	100/C
	4×1	Non-compacted	0.8	0.8	1.8	14.0	18.1	0.0135	13	18	218	100/C
	4×1.5	Solid	0.8	0.8	1.8	14.0	12.1	0.0123	16	22	239	100/C
	4×1.5	Non-compacted	0.8	0.8	1.8	14.5	12.1	0.0116	16	22	255	100/C
	4×2.5	Solid	0.8	0.8	1.8	15.0	7.41	0.0102	22	30	299	100/C
	4×2.5	Non-compacted	0.8	0.8	1.8	16.0	7.41	0.0093	22	30	321	100/C
	4×4	Solid	0.9	0.8	1.8	17.0	4.61	0.0094	30	39	400	100/C
	4×4	Non-compacted	0.9	0.8	1.8	17.5	4.61	0.0085	30	39	426	100/C
	4×6	Non-compacted	0.9	0.8	1.8	19.0	3.08	0.0073	37	50	550	500/D
	4×10	Non-compacted	1.1	0.8	2.0	23.0	1.83	0.0069	52	68	831	500/D
YK NYY	4×16	Compacted	1.1	1.2	2.0	26.5	1.15	0.0057	70	87	1103	1000/D
	4×25	Compacted	1.3	1.2	2.0	31.0	0.727	0.0054	88	128	1597	1000/D
	4×35	Compacted	1.3	1.5	2.2	35.0	0.524	0.0047	110	154	2105	1000/D
	4×50	Compacted	1.5	1.5	2.2	39.5	0.387	0.0046	133	181	2778	1000/D
	4×70	Compacted	1.5	1.5	2.4	44.5	0.268	0.0039	171	223	3728	800/D
NYY	4×95	Non-compacted	1.7	1.8	2.6	51.5	0.193	0.0038	207	267	5454	500/D
	4×120	Non-compacted	1.7	1.8	2.8	56.0	0.153	0.0034	240	304	6713	500/D
	4×150	Non-compacted	1.9	2.0	3.0	62.0	0.124	0.0034	278	342	8193	300/D
	4×185	Non-compacted	2.1	2.0	3.2	68.0	0.0991	0.0034	317	386	10146	300/D
	4×240	Non-compacted	2.3	2.2	3.4	76.5	0.0754	0.0033	374	448	13047	200/D
	4×300	Non-compacted	2.5	2.2	3.8	85.0	0.0601	0.0032	432	507	16199	200/D

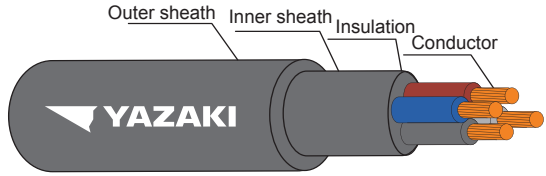
C = Packing in Coil
D = Packing in drum

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, FOUR CORES

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

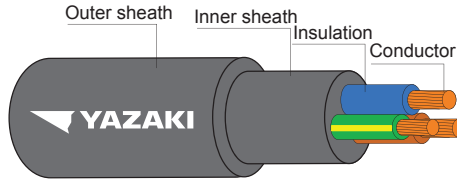
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	4×1	Solid	21.7000	0.3771	0.1185	21.7000
	4×1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	4×1.5	Solid	14.5000	0.3505	0.1101	14.5000
	4×1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	4×2.5	Solid	8.8700	0.3238	0.1017	8.8710
	4×2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	4×4	Solid	5.5200	0.3135	0.0985	5.5210
	4×4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	4×6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	4×10	Non-compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	4×16	Compacted	1.3800	0.2631	0.0827	1.3820
	4×25	Compacted	0.8700	0.2607	0.0819	0.8738
	4×35	Compacted	0.6273	0.2593	0.0814	0.6326
	4×50	Compacted	0.4635	0.2604	0.0818	0.4707
	4×70	Compacted	0.3213	0.2506	0.0787	0.3308
NYY	4×95	Non-compacted	0.2319	0.2480	0.0779	0.2446
	4×120	Non-compacted	0.1843	0.2409	0.0757	0.1992
	4×150	Non-compacted	0.1499	0.2402	0.0755	0.1678
	4×185	Non-compacted	0.1205	0.2401	0.0754	0.1422
	4×240	Non-compacted	0.0928	0.2361	0.0742	0.1188
	4×300	Non-compacted	0.0751	0.2343	0.0736	0.1052

B

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

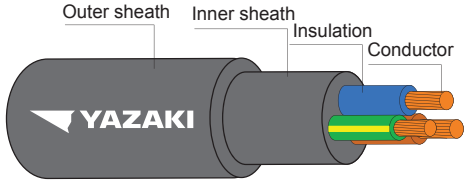
B

Number of coress	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer Sheath thick-ness nominal	Overall diameter maxi-mum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous currunt rating maxium		Cable weight approx.	Stan-dard Length per drum
	Nominal cross section area		Type of Conductor									on cable Ladder at 40°C	direct burial in ground at 30°C		
	Phase	Ground	Phase	Ground					Phase	Ground					
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
2+G	1	1	Solid		0.8	0.8	1.8	13.0	18.1	18.1	0.0141	15	21	184	500
	1	1	Non-compacted		0.8	0.8	1.8	13.5	18.1	18.1	0.0135	15	21	190	500
	1.5	1.5	Solid		0.8	0.8	1.8	13.5	12.1	12.1	0.0123	19	27	206	500
	1.5	1.5	Non-compacted		0.8	0.8	1.8	14.0	12.1	12.1	0.0116	19	27	221	500
	2.5	2.5	Solid		0.8	0.8	1.8	14.5	7.41	7.41	0.0102	26	35	255	500
	2.5	2.5	Non-compacted		0.8	0.8	1.8	15.0	7.41	7.41	0.0093	26	35	273	500
	4	4	Solid		0.9	0.8	1.8	16.0	4.61	4.61	0.0094	35	47	336	500
	4	4	Non-compacted		0.9	0.8	1.8	16.5	4.61	4.61	0.0085	35	47	358	500
	6	6	Non-compacted		0.9	0.8	1.8	18.0	3.08	3.08	0.0073	44	60	450	500
	10	10	Non-compacted		1.1	0.8	1.8	21.0	1.83	1.83	0.0069	61	81	655	500
	16	16	Non-compacted		1.1	0.8	2.0	23.5	1.15	1.15	0.0057	82	105	912	500
	25	16	Non-compacted		1.3	1.2	2.0	28.0	0.727	1.15	0.0054	104	136	1212	500
	35	16	Non-compacted		1.3	1.2	2.0	30.0	0.524	1.15	0.0047	129	165	1506	500
	50	25	Non-compacted		1.5	1.2	2.2	34.0	0.387	0.727	0.0046	157	195	1978	500
	70	35	Non-compacted		1.5	1.5	2.2	38.5	0.268	0.524	0.0039	202	239	2736	500
	95	50	Non-compacted		1.7	15	2.2	43.5	0.193	0.387	0.0038	245	288	3602	500
	120	70	Non-compacted		1.7	1.5	2.4	47.5	0.153	0.268	0.0034	285	329	4525	500
	150	95	Non-compacted		1.9	1.8	2.6	53.0	0.124	0.193	0.0034	330	368	5695	500
	185	95	Non-compacted		2.1	1.8	2.8	57.5	0.0991	0.193	0.0034	378	417	6737	500
	240	120	Non-compacted		2.3	2.0	3.0	64.5	0.0754	0.153	0.0033	447	481	8638	500
	300	150	Non-compacted		2.5	2.0	3.2	71.0	0.0601	0.124	0.0032	516	541	10601	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and staranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

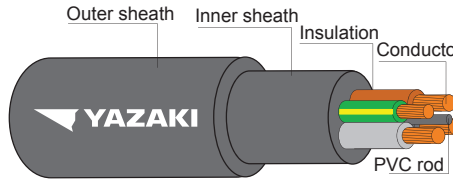
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of coress	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
2+G	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6272	0.2593	0.0814	0.6325
	50	25	0.4634	0.2604	0.0818	0.4706
	70	35	0.3212	0.2506	0.0787	0.3307
	95	50	0.2317	0.2480	0.0779	0.2444
	120	70	0.1840	0.2409	0.0757	0.1990
	150	95	0.1495	0.2402	0.0755	0.1675
	185	95	0.1201	0.2401	0.0754	0.1418
	240	120	0.0922	0.2361	0.0742	0.1183
	300	150	0.0744	0.2343	0.0736	0.1047

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

B

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

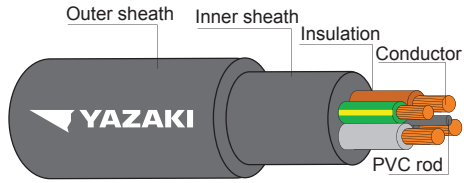
Number of coress	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer Sheath thick-ness nominal	Overall diameter maxi-mum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous currunt rating maxium		Cable weight approx.	Standard Length per drum
	Nominal cross section area		Type of Conductor						Phase	Ground		on cable Ladder at 40°C	direct burial at 30°C		
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
3+G	1	1	Solid		0.8	0.8	1.8	13.5	18.1	18.1	0.0141	13	18	210	500
	1	1	Non-compacted		0.8	0.8	1.8	14.0	18.1	18.1	0.0135	13	18	218	500
	1.5	1.5	Solid		0.8	0.8	1.8	14.0	12.1	12.1	0.0123	16	22	239	500
	1.5	1.5	Non-compacted		0.8	0.8	1.8	15.0	12.1	12.1	0.0116	16	22	255	500
	2.5	2.5	Solid		0.8	0.8	1.8	15.5	7.41	7.41	0.0102	22	30	299	500
	2.5	2.5	Non-compacted		0.8	0.8	1.8	16.0	7.41	7.41	0.0093	22	30	321	500
	4	4	Solid		0.9	0.8	1.8	17.0	4.61	4.61	0.0094	30	39	400	500
	4	4	Non-compacted		0.9	0.8	1.8	18.0	4.61	4.61	0.0085	30	39	426	500
	6	6	Non-compacted		0.9	0.8	1.8	19.0	3.08	3.08	0.0073	37	50	550	500
	10	10	Non-compacted		1.1	0.8	1.8	22.5	1.83	1.83	0.0069	52	68	810	500
	16	16	Non-compacted		1.1	1.2	2.0	26.5	1.15	1.15	0.0057	70	87	1176	500
	25	16	Non-compacted		1.3	1.2	2.0	30.5	0.727	1.15	0.0054	88	128	1537	500
	35	16	Non-compacted		1.3	1.2	2.0	33.0	0.524	1.15	0.0047	110	154	1937	500
	50	25	Non-compacted		1.5	1.5	2.2	38.5	0.387	0.727	0.0046	133	181	2603	500
	70	35	Non-compacted		1.5	1.5	2.2	42.5	0.268	0.524	0.0039	171	223	3557	500
	95	50	Non-compacted		1.7	1.5	2.4	48.5	0.193	0.387	0.0038	207	267	4745	500
	120	70	Non-compacted		1.7	1.8	2.6	53.5	0.153	0.268	0.0034	240	304	6008	500
	150	95	Non-compacted		1.9	1.8	2.8	59.0	0.124	0.193	0.0034	278	342	7437	500
	185	95	Non-compacted		2.1	2.0	3.0	64.5	0.0991	0.193	0.0034	317	386	8944	500
	240	120	Non-compacted		2.3	2.0	3.2	72.0	0.0754	0.153	0.0033	374	448	11417	300
	300	150	Non-compacted		2.5	2.2	3.4	79.5	0.0601	0.124	0.0032	432	507	14097	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer Sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

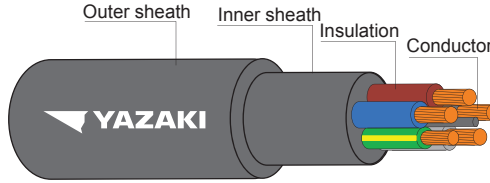
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of coress	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3+G	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6273	0.2593	0.0814	0.6326
	50	25	0.4635	0.2604	0.0818	0.4707
	70	35	0.3213	0.2506	0.0787	0.3308
	95	50	0.2319	0.2480	0.0779	0.2446
	120	70	0.1843	0.2409	0.0757	0.1992
	150	95	0.1499	0.2402	0.0755	0.1678
	185	95	0.1205	0.2401	0.0754	0.1422
	240	120	0.0928	0.2361	0.0742	0.1188
	300	150	0.0751	0.2343	0.0736	0.1052

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

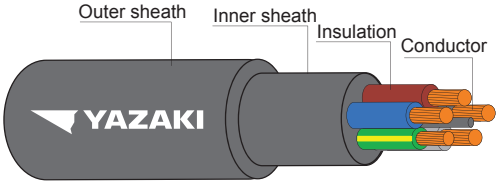
B

Number of coress	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer Sheath thick-ness nominal	Overall diameter maxi-mum	Conductor resistance at 20°C maximum		Insulation resis-tance at 70°C minimum	Continuous currunt rating maxium		Cable weight approx.	Standard length per drum
	Nominal cross section area		Type of Conductor						Phase	Ground		on cable Ladder at 40°C	direct burial at 30°C		
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)		(A)	(A)	(kg/km)	(m)
	1	1	Solid		0.8	0.8	1.8	14.5	18.1	18.1	0.0141	13	18	246	500
	1	1	Non-compacted		0.8	0.8	1.8	15.0	18.1	18.1	0.0135	13	18	256	500
	1.5	1.5	Solid		0.8	0.8	1.8	15.0	12.1	12.1	0.0123	16	22	283	500
	1.5	1.5	Non-compacted		0.8	0.8	1.8	16.0	12.1	12.1	0.0116	16	22	301	500
	2.5	2.5	Solid		0.8	0.8	1.8	16.5	7.41	7.41	0.0102	22	30	354	500
	2.5	2.5	Non-compacted		0.8	0.8	1.8	17.0	7.41	7.41	0.0093	22	30	386	500
	4	4	Solid		0.9	0.8	1.8	18.0	4.61	4.61	0.0094	30	39	481	500
	4	4	Non-compacted		0.9	0.8	1.8	19.0	4.61	4.61	0.0085	30	39	512	500
	6	6	Non-compacted		0.9	0.8	1.8	20.5	3.08	3.08	0.0073	37	50	660	500
	10	10	Non-compacted		1.1	0.8	2.0	25.0	1.83	1.83	0.0069	52	68	1002	500
4+G	16	16	Non-compacted		1.1	1.2	2.0	28.5	1.15	1.15	0.0057	70	87	1419	500
	25	16	Non-compacted		1.3	1.2	2.0	34.0	0.727	1.15	0.0054	88	128	1896	500
	35	16	Non-compacted		1.3	1.5	2.2	39.0	0.524	1.15	0.0047	110	154	2510	500
	50	25	Non-compacted		1.5	1.5	2.2	43.5	0.387	0.727	0.0046	133	181	3243	500
	70	35	Non-compacted		1.5	1.5	2.4	49.0	0.268	0.524	0.0039	171	223	4504	500
	95	50	Non-compacted		1.7	1.8	2.6	56.5	0.193	0.387	0.0038	207	267	6121	500
	120	70	Non-compacted		1.7	1.8	2.8	61.5	0.153	0.268	0.0034	240	304	7605	500
	150	95	Non-compacted		1.9	2.0	3.0	68.0	0.124	0.193	0.0034	278	342	9482	300
	185	95	Non-compacted		2.1	2.0	3.2	75.0	0.0991	0.193	0.0034	317	386	11365	300
	240	120	Non-compacted		2.3	2.2	3.4	84.5	0.0754	0.153	0.0033	374	448	14578	300
	300	150	Non-compacted		2.5	2.2	3.8	93.5	0.0601	0.124	0.0032	432	507	18038	200

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

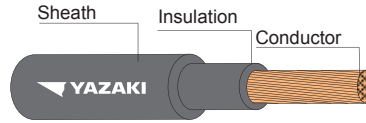
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross section area (No.x mm2)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
4+G	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6273	0.2593	0.0814	0.6326
	50	25	0.4635	0.2604	0.0818	0.4707
	70	35	0.3213	0.2506	0.0787	0.3308
	95	50	0.2319	0.2480	0.0779	0.2446
	120	70	0.1843	0.2409	0.0757	0.1992
	150	95	0.1499	0.2402	0.0755	0.1678
	185	95	0.1205	0.2401	0.0754	0.1422
	240	120	0.0928	0.2361	0.0742	0.1188
	300	150	0.0751	0.2343	0.0736	0.1052

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Insulation color : Black

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 7

APPLICATION

For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

B

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation Inner sheath thickness nominal (mm)	Outer Sheath thickness nominal (mm)	Overall diameter (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1	Flexible	0.8	1.2	6.2	19.5	0.0127	14	42	100/C
	1.5	Flexible	0.8	1.2	6.6	13.3	0.0111	16	49	100/C
	2.5	Flexible	0.8	1.2	7.4	7.98	0.0092	25	61	100/C
	4	Flexible	0.9	1.4	8.6	4.95	0.0084	30	92	100/C
1	6	Flexible	0.9	1.4	9.4	3.30	0.0071	39	122	100/C
	10	Flexible	1.1	1.8	12.0	1.91	0.0068	51	211	100/C
	16	Flexible	1.1	1.8	13.5	1.21	0.0050	73	276	100/C
	25	Flexible	1.3	2.2	16.0	0.780	0.0048	97	418	100/C
	35	Flexible	1.3	2.2	17.5	0.554	0.0041	140	544	500/D

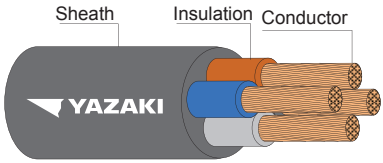
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1	23.3000	0.6620	0.2079	23.3000
	1.5	15.9000	0.6310	0.1983	15.9000
	2.5	9.5500	0.5930	0.1864	9.5520
	4	5.9227	0.5946	0.1868	5.9256
1	6	3.9485	0.5605	0.1761	3.9524
	10	2.2854	0.5529	0.1737	2.2919
	16	1.4478	0.5306	0.1667	1.4574
	25	0.9334	0.5275	0.1657	0.9480
	35	0.6630	0.5086	0.1598	0.6820

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 7

APPLICATION

For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation Inner sheath thickness nominal (mm)	Outer Sheath thickness nominal (mm)	Overall diameter minimum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1	Flexible	0.8	1.2	9.6	19.5	0.0127	14	100	100/C
	1.5	Flexible	0.8	1.4	11.0	13.3	0.011	16	127	100/C
	2.5	Flexible	0.8	1.4	12.5	7.98	0.0092	25	159	100/C
	4	Flexible	0.9	1.6	14.5	4.95	0.0084	30	238	100/C
2	6	Flexible	0.9	1.6	16.0	3.30	0.0071	39	320	100/C
	10	Flexible	1.1	1.8	20.0	1.91	0.0068	51	524	500/D
	16	Flexible	1.1	2.2	23.0	1.21	0.0050	73	728	500/D
	25	Flexible	1.3	2.4	27.5	0.780	0.0048	97	1060	500/D
	35	Flexible	1.3	2.6	31.0	0.554	0.0041	140	1414	500/D
	1	Flexible	0.8	1.4	10.5	19.5	0.0127	12	124	100/C
	1.5	Flexible	0.8	1.4	11.5	13.3	0.0111	15	148	100/C
	2.5	Flexible	0.8	1.4	13.0	7.98	0.0092	20	188	100/C
	4	Flexible	0.9	1.6	15.5	4.95	0.0084	26	284	100/C
3	6	Flexible	0.9	1.8	17.5	3.30	0.0071	34	403	100/C
	10	Flexible	1.1	2.0	21.5	1.91	0.0068	47	657	500/D
	16	Flexible	1.1	2.4	25.0	1.21	0.0050	63	917	500/D
	25	Flexible	1.3	2.6	30.0	0.780	0.0048	83	1342	500/D
	35	Flexible	1.3	2.8	33.5	0.554	0.0041	102	1795	500/D
	1	Flexible	0.8	1.6	10.5	19.5	0.0127	12	159	100/C
	1.5	Flexible	0.8	1.6	11.5	13.3	0.0111	15	188	100/C
	2.5	Flexible	0.8	1.6	13.0	7.98	0.0092	20	241	100/C
	4	Flexible	0.9	1.8	15.5	4.95	0.0084	26	358	100/C
4	6	Flexible	0.9	2.0	17.5	3.30	0.0071	34	513	500/D
	10	Flexible	1.1	2.2	21.5	1.91	0.0068	47	838	500/D
	16	Flexible	1.1	2.6	25.0	1.21	0.0050	63	1170	500/D
	25	Flexible	1.3	2.8	30.0	0.780	0.0048	83	1708	500/D
	35	Flexible	1.3	3.1	33.5	0.554	0.0041	102	2318	500/D

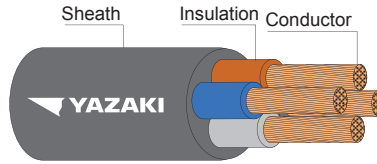
C = Packing in Coil
D = Packing in drum

B

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Insulation color :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 7

APPLICATION

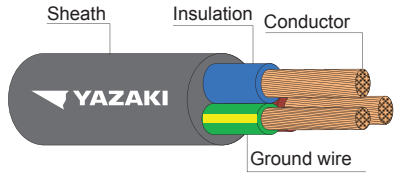
For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

Number of cores	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5500
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.8662	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4502
	25	0.9334	0.2602	0.0817	0.9370
	35	0.6631	0.2500	0.0785	0.6677
3	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5500
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.2862	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4503
	25	0.9335	0.2602	0.0817	0.9371
	35	0.6632	0.2500	0.0785	0.6678
4	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5520
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.2862	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4503
	25	0.9335	0.2602	0.0817	0.9371
	35	0.6632	0.2500	0.0785	0.6678

VCT-G

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Insulation color : Blue, Brown + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

B

Number of coress	Conductor				Insulation thickness nominal	Sheath thickness approx.	Overall diameter maximum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor					Phase	Ground				
	Phase	Ground	Phase	Ground									
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)		(kg/km)	(m)
2+G	1	1	Flexible		0.8	1.2	10.0	19.5	19.5	0.0127	14	115	100/C
	1.5	1.5	Flexible		0.8	1.4	12.0	13.3	13.3	0.0111	16	148	100/C
	2.5	2.5	Flexible		0.8	1.4	13.0	7.98	7.98	0.0092	25	188	100/C
	4	4	Flexible		0.9	1.6	15.5	4.95	4.95	0.00084	30	284	100/C
	6	6	Flexible		0.9	1.8	17.5	3.30	3.30	0.0071	39	403	100/C
	10	10	Flexible		1.1	2.0	21.5	1.91	1.91	0.0068	51	657	500/D
	16	16	Flexible		1.1	2.4	25.0	1.21	1.21	0.0050	73	917	500/D
	25	16	Flexible		1.3	2.6	28.5	0.780	1.21	0.0048	97	1217	500/D
	35	16	Flexible		1.3	2.8	31.5	0.554	1.21	0.0041	140	1538	500/D

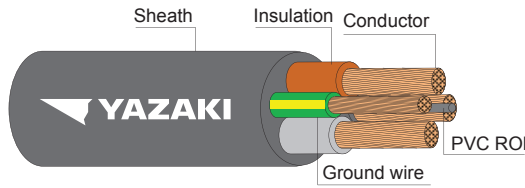
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
2+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5520
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4502
	25	16	0.9334	0.2602	0.0817	0.9370
	35	16	0.6631	0.2500	0.0785	0.6677

VCT-G

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

Number of cores	Conductor				Insulation thickness nominal	Sheath thickness approx.	Overall diameter maximum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor					Phase	Ground				
	Phase	Ground	Phase	Ground									
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)		(kg/km)	(m)
3+G	1	1	Flexible		0.8	1.4	11.5	19.5	19.5	0.0127	12	147	100/C
	1.5	1.5	Flexible		0.8	1.4	12.5	13.3	13.3	0.0111	15	175	100/C
	2.5	2.5	Flexible		0.8	1.4	14.0	7.98	7.98	0.0092	20	227	100/C
	4	4	Flexible		0.9	1.8	17.0	4.95	4.95	0.0084	26	358	100/C
	6	6	Flexible		0.9	2.0	19.5	3.30	3.30	0.0071	34	513	500/D
	10	10	Flexible		1.1	2.2	24.0	1.91	1.91	0.0068	47	838	500/D
	16	16	Flexible		1.1	2.6	28.0	1.21	1.21	0.0050	63	1170	500/D
	25	16	Flexible		1.3	2.8	33.0	0.780	1.21	0.0048	83	1587	500/D
	35	16	Flexible		1.3	3.1	37.0	0.554	1.21	0.0041	102	2058	500/D

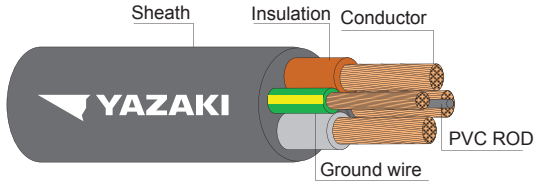
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm2)	Ground (mm2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5500
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4503
	25	16	0.9335	0.2602	0.0817	0.9371
	35	16	0.6632	0.2500	0.0785	0.6678

VCT-G

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Conductor				Insulation Inner sheath thickness nominal	Outer Sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Nominal cross sectional area		Type of Conductor										
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	minimum (mm)	maximum (mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
4+G	1	1	Flexible		0.8	1.6	13.0	19.5	19.5	0.0127	12	189	100/C
	1.5	1.5	Flexible		0.8	1.6	14.0	13.3	13.3	0.0111	15	225	100/C
	2.5	2.5	Flexible		0.8	1.6	15.5	7.98	7.98	0.0092	20	292	100/C
	4	4	Flexible		0.9	1.8	18.5	4.95	4.95	0.0084	26	437	100/C
	6	6	Flexible		0.9	2.0	21.5	3.30	3.30	0.0071	34	622	500/D
	10	10	Flexible		1.1	2.2	26.5	1.91	1.91	0.0068	47	1019	500/D
	16	16	Flexible		1.1	2.6	30.5	1.21	1.21	0.0050	63	1410	500/D
	25	16	Flexible		1.3	2.8	36.5	0.780	1.21	0.0048	83	1962	500/D
	35	16	Flexible		1.3	3.1	41.5	0.554	1.21	0.0041	102	2595	500/D

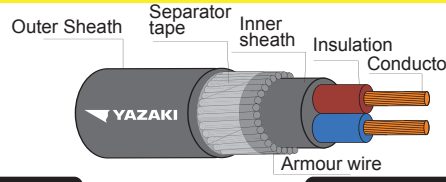
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
4+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5520
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4503
	25	16	0.9335	0.2602	0.0817	0.9371
	35	16	0.6632	0.2500	0.0785	0.6678

B

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

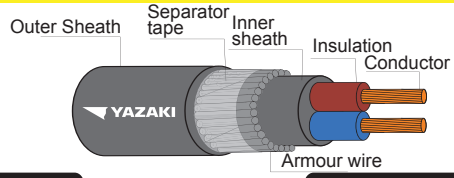
B

Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	Insulation Inner sheath thickness nominal (mm)	Inner sheath thickness approx. (mm)	Diameter of steel wire amor nominal	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating In ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length per drum (m)
	1	Solid	0.8	0.8	0.8	1.8	13.5	18.1	0.0141	22	300	500
	1	Non-compacted	0.8	0.8	0.8	1.8	14.0	18.1	0.0135	22	310	500
	1.5	Solid	0.8	0.8	0.8	1.8	14.0	12.1	0.0123	27	320	500
	1.5	Non-compacted	0.8	0.8	0.8	1.8	14.5	12.1	0.0116	27	340	500
	2.5	Solid	0.8	0.8	0.8	1.8	15.0	7.4	0.0102	36	370	500
	2.5	Non-compacted	0.8	0.8	0.8	1.8	15.5	7.4	0.0093	36	400	500
	4	Solid	0.9	0.8	0.8	1.8	16.5	4.6	0.0094	47	460	500
	4	Non-compacted	0.9	0.8	1.3	1.8	18.0	4.61	0.0085	47	600	500
	6	Non-compacted	0.9	0.8	1.3	1.8	19.0	3.08	0.0073	61	700	500
	10	Non-compacted	1.1	0.8	1.3	1.8	22.0	1.83	0.0069	82	950	500
2	16	Non-compacted	1.1	0.8	1.6	1.8	24.0	1.15	0.0057	107	1300	500
	25	Non-compacted	1.3	1.2	2.0	1.9	30.0	0.727	0.0054	138	2000	500
	35	Non-compacted	1.3	1.2	2.0	2.0	33.0	0.524	0.0047	168	2400	500
	50	Non-compacted	1.5	1.2	2.0	2.1	36.0	0.387	0.0046	199	3000	500
	70	Non-compacted	1.5	1.5	2.0	2.2	41.0	0.268	0.0039	243	3800	500
	95	Non-compacted	1.7	1.5	2.5	2.4	47.0	0.193	0.0038	294	5000	500
	120	Non-compacted	1.7	1.5	2.5	2.6	51.0	0.153	0.0034	336	6000	500
	150	Non-compacted	1.9	1.8	2.5	2.7	56.0	0.124	0.0034	375	7000	500
	185	Non-compacted	2.1	1.8	2.5	2.9	61.0	0.0991	0.0034	424	8500	300
	240	Non-compacted	2.3	2.0	2.5	3.1	68.0	0.0754	0.0033	489	10500	300
	300	Non-compacted	2.5	2.0	3.2	3.4	76.0	0.0601	0.0032	553	13500	200

Remark: Thermal relativity of soll 1.2 Km/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

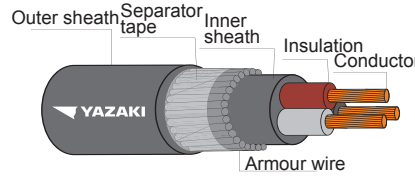
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C. Realstance R (Ω/km)	Inductance L (Ω/km)	Reactance XL (Ω/km)	Impedence Z (Ω/km)
2	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0085	5.5210
	4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	10	Non-compacted	2.1900	0.2801	0.0880	2.1920
	16	Non-compacted	1.3800	0.2631	0.0827	1.3820
	25	Non-compacted	0.8700	0.2607	0.0819	0.8738
	35	Non-compacted	0.6272	0.2593	0.0814	0.6325
	50	Non-compacted	0.4634	0.2604	0.0818	0.4706
	70	Non-compacted	0.3212	0.2506	0.0787	0.3307
	95	Non-compacted	0.2317	0.2480	0.0779	0.2444
	120	Non-compacted	0.1840	0.2409	0.0757	0.1990
	150	Non-compacted	0.1495	0.2402	0.0755	0.1675
	185	Non-compacted	0.1201	0.2401	0.0754	0.1418
	240	Non-compacted	0.0922	0.2361	0.0742	0.1183
	300	Non-compacted	0.0744	0.2343	0.0736	0.1047

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

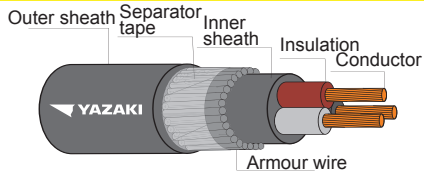
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area	Conductor Type	Insulation Inner sheath thickness nominal	Inner sheath thickness approx.	Diameter of steel wire amor nominal	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating In ground at 30°C maximum	Cable weight approx.	Standard Length per drum
	($mm^{2)}$		(mm)	(mm)		(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
	1	Solid	0.8	0.8	0.8	1.8	14.0	18.1	0.0141	18	330	500
	1	Non-compacted	0.8	0.8	0.8	1.8	14.5	18.1	0.0135	18	340	500
	1.5	Solid	0.8	0.8	0.8	1.8	14.5	12.1	0.0123	23	350	500
	1.5	Non-compacted	0.8	0.8	0.8	1.8	15.0	12.1	0.0116	23	380	500
	2.5	Solid	0.8	0.8	0.8	1.8	15.5	7.41	0.0102	30	420	500
	2.5	Non-compacted	0.8	0.8	0.8	1.8	16.5	7.41	0.0093	30	450	500
	4	Solid	0.9	0.8	1.3	1.8	18.0	4.61	0.0094	40	650	500
	4	Non-compacted	0.9	0.8	1.3	1.8	18.5	4.61	0.0085	40	700	500
	6	Non-compacted	0.9	0.8	1.3	1.8	20.0	3.08	0.0073	51	800	500
	10	Non-compacted	1.1	0.8	1.6	1.8	23.0	1.83	0.0069	69	1200	500
3	16	Non-compacted	1.1	1.2	1.6	1.8	26.0	1.15	0.0057	88	1600	500
	25	Non-compacted	1.3	1.2	2.0	1.9	31.0	0.727	0.0054	115	2300	500
	35	Non-compacted	1.3	1.2	2.0	2.0	34.0	0.524	0.0047	140	2800	500
	50	Non-compacted	1.5	1.5	2.0	2.2	39.0	0.387	0.0046	168	3600	500
	70	Non-compacted	1.5	1.5	2.0	2.3	43.0	0.268	0.0039	209	4500	500
	95	Non-compacted	1.7	1.5	2.5	2.5	50.0	0.193	0.0038	248	6500	500
	120	Non-compacted	1.7	1.8	2.5	2.7	55.0	0.153	0.0034	283	7500	300
	150	Non-compacted	1.9	1.8	2.5	2.8	59.0	0.124	0.0034	310	9000	300
	185	Non-compacted	2.1	2.0	2.5	3.0	65.0	0.0991	0.0034	357	15000	300
	240	Non-compacted	2.3	2.0	2.5	3.3	73.0	0.0754	0.0033	427	13000	200
	300	Non-compacted	2.5	2.2	3.2	3.5	81.0	0.0601	0.0032	453	17000	200

Remark: Thermal relativity of soll 1.2 Km/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

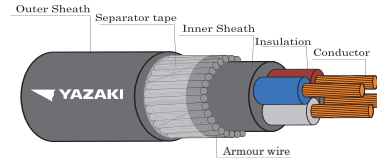
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	A.C. Realstance R (Ω/km)	Inductance L (Ω/km)	Reactance XL (Ω/km)	Impedence Z (Ω/km)
3	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3605	0.1101	14.5000
	1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0085	5.5210
	4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	10	Non-compacted	2.1900	0.2801	0.0880	2.1920
	16	Non-compacted	1.3800	0.2831	0.0827	1.3820
	25	Non-compacted	0.8700	0.2607	0.0819	0.8738
	35	Non-compacted	0.6273	0.2593	0.0814	0.6326
	50	Non-compacted	0.4635	0.2604	0.0818	0.4707
	70	Non-compacted	0.3213	0.2506	0.0787	0.3308
	95	Non-compacted	0.2319	0.2480	0.0779	0.2446
	120	Non-compacted	0.1843	0.2409	0.0757	0.1992
	150	Non-compacted	0.1499	0.2402	0.0755	0.1678
	185	Non-compacted	0.1205	0.2401	0.0754	0.1422
	240	Non-compacted	0.0928	0.2361	0.0742	0.1188
	300	Non-compacted	0.0751	0.2343	0.0736	0.1052

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

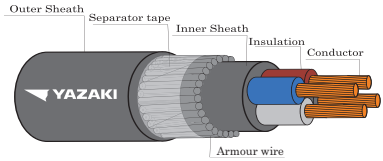
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Diameter of steel norminal	Outer Sheath thickness nominal (mm)	Overall diameter (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length per drum (m)
	1	Solid	0.8	0.8	0.8	1.8	15.0	18.1	0.0141	18	360	500
	1	Non-compacted	0.8	0.8	0.8	1.8	15.0	18.1	0.0135	18	380	500
	1.5	Solid	0.8	0.8	0.8	1.8	15.5	12.1	0.0123	23	400	500
	1.5	Non-compacted	0.8	0.8	0.8	1.8	16.0	12.1	0.0116	23	420	500
	2.5	Solid	0.8	0.8	0.8	1.8	16.5	7.41	0.0102	30	480	500
	2.5	Non-compacted	0.8	0.8	1.3	1.8	18.0	7.41	0.0093	30	650	500
	4	Solid	0.9	0.8	1.3	1.8	19.0	4.61	0.0094	40	750	500
	4	Non-compacted	0.9	0.8	1.3	1.8	20.0	4.61	0.0085	40	800	500
	6	Non-compacted	0.9	0.8	1.3	1.8	21.0	3.08	0.0073	51	950	500
	10	Non-compacted	1.1	0.8	1.6	1.8	25.0	1.83	0.0069	69	1400	500
4	16	Non-compacted	1.1	1.2	1.6	1.8	28.0	1.15	0.0057	88	1800	500
	25	Non-compacted	1.3	1.2	2.0	2.0	34.0	0.727	0.0054	115	2800	500
	35	Non-compacted	1.3	1.5	2.0	2.1	38.0	0.524	0.0047	140	3500	500
	50	Non-compacted	1.5	1.5	2.0	2.3	43.0	0.387	0.0046	168	4300	500
	70	Non-compacted	1.5	1.5	2.5	2.5	49.0	0.268	0.0039	209	6000	500
	95	Non-compacted	1.7	1.8	2.5	2.7	55.0	0.193	0.0038	248	8000	300
	120	Non-compacted	1.7	1.8	2.5	2.9	60.0	0.153	0.0034	283	9000	300
	150	Non-compacted	1.9	2.0	2.5	3.0	65.0	0.124	0.0034	310	11000	300
	185	Non-compacted	2.1	2.0	2.5	3.2	72.0	0.0991	0.0034	357	13000	200
	240	Non-compacted	2.3	2.2	3.2	3.5	81.0	0.0754	0.0033	427	17500	100
	300	Non-compacted	2.5	2.2	3.2	3.8	89.0	0.0601	0.0032	453	21000	100

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

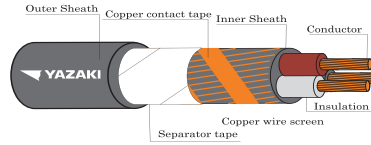
APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm²)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	10	Non-compacted	2.1900	0.2801	0.0880	2.1920
4	16	Non-compacted	1.3800	0.2631	0.0827	1.3820
	25	Non-compacted	0.8700	0.2607	0.0819	0.8738
	35	Non-compacted	0.6273	0.2593	0.0814	0.6326
	50	Non-compacted	0.4635	0.2604	0.0818	0.4707
	70	Non-compacted	0.3213	0.2506	0.0787	0.3308
	95	Non-compacted	0.2319	0.2480	0.0779	0.2446
	120	Non-compacted	0.1843	0.2409	0.0757	0.1992
	150	Non-compacted	0.1499	0.2402	0.0755	0.1678
	185	Non-compacted	0.1205	0.2401	0.0754	0.1422
	240	Non-compacted	0.0928	0.2361	0.0742	0.1188
	300	Non-compacted	0.0751	0.2343	0.0736	0.1052

NYCY

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH CONCENTRIC CONDUCTORS POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Concentric shield : Annealed copper wires with helix of copper tape fully covers

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

or in raceway, wet or dry location, or direct burial in ground

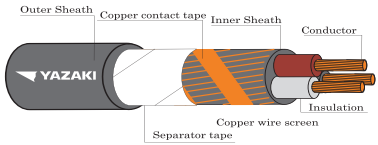
B

Number of cores	Nominal cross sectional area (mm^2)		Conductor type	Diameter of Concentric shield	Insulation thickness nominal	Inner Sheath thickness approx.	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance at 20°C	Insulation resistance at 70°C	Continuous current rating in free air at 40°c	Continuous current rating in ground at 30°C	Cable weight approx	Standard length per drum
	Phase	Concentric Shield		(mm)	(mm)	(mm)	(mm)	(mm)	(01km)	(MD-km)	(A)	(A)	(kg/km)	(m)
3	1.5	1.5	Solid	1.5	0.8	0.8	1.8	14.5	12.1	0.0123	16	22	275	500
	1.5	1.5	Non-compacted	1.5	0.8	0.8	1.8	15.0	12.1	0.0116	16	22	275	500
	2.5	2.5	Solid	2.5	0.8	0.8	1.8	15.5	7.41	0.0102	22	30	323	500
	2.5	2.5	Non-compacted	2.5	0.8	0.8	1.8	16.5	7.41	0.0093	22	30	323	500
	4	4	Solid	4	0.9	0.8	1.8	17.5	4.61	0.0094	30	39	411	500
	4	4	Non-compacted	4	0.9	0.8	1.8	18.0	4.61	0.0085	30	39	411	500
	6	6	Non-compacted	6	0.9	0.8	1.8	19.5	3.08	0.0073	37	50	551	500
	10	10	Non-compacted	10	1.1	0.8	1.8	22.0	1.83	0.0069	52	68	797	500
	16	16	Non-compacted	16	1.1	0.8	2.0	26.0	1.15	0.0057	66	87	1163	500
	25	16	Non-compacted	16	1.3	1.2	2.0	30.0	0.727	0.0054	88	107	1538	500
	25	25	Non-compacted	25	1.3	1.2	2.0	30.0	0.727	0.0054	88	107	1538	500
	35	16	Non-compacted	16	1.3	1.2	2.0	33.0	0.524	0.0047	107	122	1962	500
	35	25	Non-compacted	25	1.3	1.2	2.0	33.0	0.524	0.0047	107	122	1962	500
	50	25	Non-compacted	25	1.5	1.5	2.2	38.0	0.387	0.0046	130	142	2613	500
	50	35	Non-compacted	35	1.5	1.5	2.2	39.0	0.387	0.0046	130	142	2613	500
	70	35	Non-compacted	35	1.5	1.5	2.2	43.0	0.268	0.0039	162	178	3556	500
	70	50	Non-compacted	50	1.5	1.5	2.2	43.0	0.268	0.0039	162	178	3556	500
	95	50	Non-compacted	50	1.7	1.5	2.4	48.0	0.193	0.0038	200	219	4788	500
	95	70	Non-compacted	70	1.7	1.5	2.4	49.0	0.193	0.0038	200	219	4788	500
	120	70	Non-compacted	70	1.7	1.8	2.6	53.0	0.153	0.0034	233	254	6015	500
	120	95	Non-compacted	95	1.7	1.8	2.6	54.0	0.153	0.0034	233	254	6015	500
	150	70	Non-compacted	70	1.9	1.8	2.8	58.0	0.124	0.0034	266	290	6015	500
	150	95	Non-compacted	95	1.9	1.8	2.8	58.0	0.124	0.0034	266	290	7398	500
	150	120	Non-compacted	120	1.9	1.8	2.8	59.0	0.124	0.0034	266	290	7398	500
	185	95	Non-compacted	95	2.1	2.0	3.0	64.0	0.0991	0.0034	306	332	8974	300
	185	120	Non-compacted	120	2.1	2.0	3.0	65.0	0.0991	0.0034	306	332	8974	300
	240	120	Non-compacted	120	2.3	2.0	3.2	72.0	0.0754	0.0033	364	389	11448	300
	300	150	Non-compacted	150	2.5	2.2	3.4	79.0	0.0601	0.0032	417	445	14200	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYCY

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH CONCENTRIC CONDUCTORS POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Concentric shield : Annealed copper wires with helix of copper tape fully covers

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

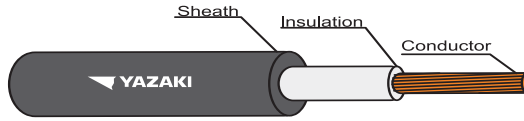
APPLICATION

For in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (0/km)	Inductance L (mH/km)	Reactance XL (0/km)	Impedance Z (0/km)
3	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6273	0.2593	0.0814	0.6326
	50	Stranded	0.4635	0.2604	0.0818	0.4707
	70	Stranded	0.3213	0.2506	0.0787	0.3308
	95	Stranded	0.2319	0.2480	0.0779	0.2446
	120	Stranded	0.1843	0.2409	0.0757	0.1992
	150	Stranded	0.1499	0.2402	0.0755	0.1678
	185	Stranded	0.1205	0.2401	0.0754	0.1422
	240	Stranded	0.0928	0.2361	0.0742	0.1188
	300	Stranded	0.0751	0.2343	0.0736	0.1052

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
								Spaced	Touching	Trefoil			
FD-0.6/1KV-CV	1x1.5	Non-compacted	0.7	1.4	6.5	12.1	2,500	31	24	23	33	51	500
YK FD-0.6/1KV-CV	1x2.5	Non-compacted	0.7	1.4	7.0	7.41	2,100	42	32	31	43	65	1000
	1x4	Non-compacted	0.7	1.4	7.5	4.61	1,700	54	42	41	55	85	1000
	1x6	Non-compacted	0.7	1.4	8.5	3.08	1,450	68	53	52	70	110	1000
	1x10	Non-compacted	0.7	1.4	9.0	1.83	1,250	90	73	71	92	150	1000
	1x16	Compacted	0.7	1.4	10.0	1.15	1,000	124	95	93	119	210	1000
	1x25	Compacted	0.9	1.4	11.5	0.727	1,050	166	128	123	152	310	1000
	1x35	Compacted	0.9	1.4	12.5	0.524	900	206	160	154	184	400	1000
	1x50	Compacted	1.0	1.7	14.5	0.387	850	250	197	188	217	550	1000
	1x70	Compacted	1.1	1.4	16.0	0.268	800	321	254	244	266	720	1000
	1x95	Compacted	1.1	1.5	18.0	0.193	650	391	311	298	318	1250	1000
	1x120	Compacted	1.2	1.8	20.5	0.153	650	455	364	349	362	1200	1000
	1x150	Compacted	1.4	1.6	21.5	0.124	700	525	422	404	406	1490	1000
	1x185	Compacted	1.6	1.6	23.5	0.0991	700	602	485	464	459	1850	1000
	1x240	Compacted	1.7	1.7	26.5	0.0754	650	711	577	552	533	2390	1000
FD-0.6/1KV-CV	1x300	Compacted	1.8	2.5	30.5	0.0601	600	821	670	640	601	3149	500
	1x400	Compacted	2.0	2.7	34.0	0.0470	600	987	790	749	684	4026	500
	1x500	Compacted	2.2	3.0	38.5	0.0366	600	1140	908	861	777	5165	500
	1x630	Compacted	2.4	3.3	43.0	0.0283	550	1298	1064	1014	1229	6616	500
	1x800	Compacted	2.6	3.6	48.0	0.0221	550	1494	1220	1156	1380	8290	500
	1x1000	Compacted	2.8	4.0	55.0	0.0176	500	1712	1391	1307	1532	10882	500

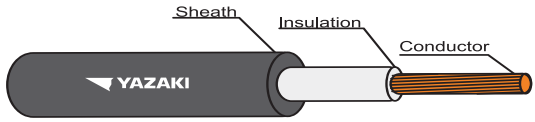
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

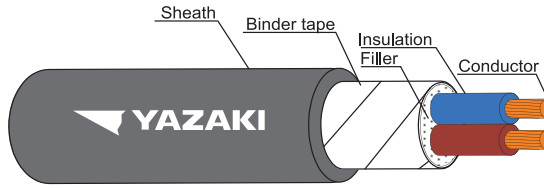
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Inductance Z Impedance		
			Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
FD-0.6/1KV-CV	1x1.5	Non-compacted	15.4287	15.4287	15.4287	0.6630	0.5244	0.4782	0.2083	0.1647	0.1502	15.4301	15.4296	15.4294
YK FD-0.6/1KV-CV	1x2.5	Non-compacted	9.4485	9.4485	9.4485	0.6314	0.4928	0.4466	0.1984	0.1548	0.1403	9.4506	9.4498	9.4495
	1x4	Non-compacted	5.8782	5.8782	5.8782	0.5988	0.4602	0.4140	0.1881	0.1446	0.1301	5.8812	5.8800	5.8796
	1x6	Non-compacted	3.9273	3.9273	3.9273	0.5754	0.4368	0.3906	0.1808	0.1372	0.1227	3.9315	3.9297	3.9292
	1x10	Non-compacted	2.3335	2.3335	2.3335	0.5459	0.4072	0.3610	0.1715	0.1279	0.1134	2.3398	2.3370	2.3363
	1x16	Compacted	1.4664	1.4664	1.4665	0.5284	0.3898	0.3436	0.1660	0.1225	0.1079	1.4758	1.4715	1.4705
	1x25	Compacted	0.9271	0.9271	0.9272	0.5159	0.3772	0.3310	0.1621	0.1185	0.1040	0.9412	0.9346	0.9330
	1x35	Compacted	0.6683	0.6683	0.6684	0.5017	0.3630	0.3168	0.1576	0.1140	0.0995	0.6866	0.6780	0.6758
	1x50	Compacted	0.4937	0.4937	0.4938	0.4913	0.3527	0.3065	0.1543	0.1108	0.0963	0.5173	0.5060	0.5031
	1x70	Compacted	0.3420	0.3421	0.3422	0.4716	0.3330	0.2867	0.1482	0.1046	0.0901	0.3727	0.3577	0.3539
	1x95	Compacted	0.2465	0.2467	0.2468	0.4651	0.3265	0.2803	0.1461	0.1026	0.0881	0.2866	0.2672	0.2620
	1x120	Compacted	0.1956	0.1959	0.1961	0.4587	0.3201	0.2738	0.1441	0.1006	0.0860	0.2430	0.2202	0.2141
	1x150	Compacted	0.1587	0.1591	0.1593	0.4555	0.3169	0.2706	0.1431	0.0996	0.0850	0.2137	0.1877	0.1806
	1x185	Compacted	0.1271	0.1275	0.1279	0.4536	0.3149	0.2687	0.1425	0.0989	0.0844	0.1909	0.1614	0.1532
	1x240	Compacted	0.0972	0.0977	0.0982	0.4484	0.3098	0.2635	0.1409	0.0973	0.0828	0.1711	0.1379	0.1284
FD-0.6/1KV-CV	1x300	Compacted	0.0779	0.0787	0.0792	0.4413	0.3027	0.2565	0.1386	0.0951	0.0806	0.1590	0.1234	0.1130
	1x400	Compacted	0.0616	0.0625	0.0632	0.4393	0.3007	0.2545	0.1380	0.0945	0.0800	0.1511	0.1133	0.1019
	1x500	Compacted	0.0488	0.0499	0.0509	0.4365	0.2979	0.2517	0.1371	0.0936	0.0791	0.1456	0.1061	0.0940
	1x630	Compacted	0.0387	0.0402	0.0414	0.4341	0.2954	0.2492	0.1364	0.0928	0.0783	0.1418	0.1011	0.0886
	1x800	Compacted	0.0314	0.0332	0.0346	0.4309	0.2923	0.2461	0.1354	0.0918	0.0773	0.1390	0.0976	0.0847
	1x1000	Compacted	0.0263	0.0284	0.0301	0.4265	0.2879	0.2416	0.1340	0.0904	0.0759	0.1365	0.0948	0.0817

B

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

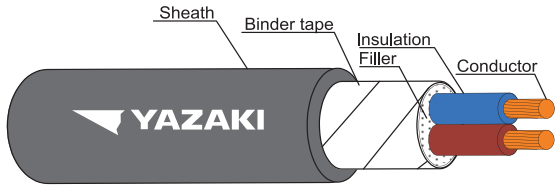
B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
FD-0.6/1KV-CV	2x1.5	Non-compacted	0.7	1.8	11.5	12.1	2,500	27	33	128	500
YK FD-0.6/1KV-CV	2x2.5	Non-compacted	0.7	1.8	13.0	7.41	2,100	36	44	180	1000
	2x4	Non-compacted	0.7	1.8	14.0	4.61	1,700	47	58	220	1000
	2x6	Non-compacted	0.7	1.8	14.5	3.08	1,450	60	73	260	1000
	2x10	Non-compacted	0.7	1.8	16.5	1.83	1,250	81	97	370	1000
	2x16	Compacted	0.7	1.8	18.5	1.15	1,000	107	125	510	1000
	2x25	Compacted	0.9	1.8	22.0	0.727	1,050	143	165	740	1000
	2x35	Compacted	0.9	1.8	24.0	0.524	900	175	195	950	1000
	2x50	Compacted	1.0	2.0	27.0	0.387	850	214	235	1260	1000
	2x70	Compacted	1.1	2.0	31.0	0.268	800	270	290	1730	1000
FD-0.6/1KV-CV	2x95	Compacted	1.1	4.0	38.0	0.193	650	329	350	2618	500
	2x120	Compacted	1.2	4.0	41.5	0.153	650	381	400	3226	500
	2x150	Compacted	1.4	4.0	45.5	0.124	700	436	450	3879	500
	2x185	Compacted	1.6	4.0	49.5	0.0991	700	503	505	4745	500
	2x240	Compacted	1.7	4.0	55.0	0.0754	650	593	585	6055	500
	2x300	Compacted	1.8	4.0	60.0	0.0601	600	676	665	7407	500
	2x400	Compacted	2.0	4.0	66.5	0.0470	600	777	750	9262	500

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90ºC
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

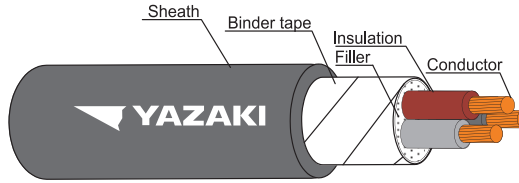
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	2x1.5	Non-compacted	15.4287	0.3427	0.1077	15.4291
YK FD-0.6/1KV-CV	2x2.5	Non-compacted	9.4485	0.3210	0.1009	9.4490
	2x4	Non-compacted	5.8782	0.3010	0.0946	5.8790
	2x6	Non-compacted	3.9273	0.2871	0.0902	3.9284
	2x10	Non-compacted	2.3335	0.2710	0.0851	2.3351
	2x16	Compacted	1.4665	0.2624	0.0824	1.4688
	2x25	Compacted	0.9272	0.2645	0.0831	0.9309
	2x35	Compacted	0.6684	0.2569	0.0807	0.6733
	2x50	Compacted	0.4938	0.2536	0.0797	0.5002
	2x70	Compacted	0.3422	0.2421	0.0761	0.3506
FD-0.6/1KV-CV	2x95	Compacted	0.2468	0.2331	0.0732	0.2575
	2x120	Compacted	0.1960	0.2315	0.0727	0.2091
	2x150	Compacted	0.1593	0.2302	0.0723	0.1749
	2x185	Compacted	0.1278	0.2338	0.0734	0.1474
	2x240	Compacted	0.0981	0.2295	0.0721	0.1217
	2x300	Compacted	0.0791	0.2260	0.0710	0.1063
	2x400	Compacted	0.0630	0.2259	0.0710	0.0949

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

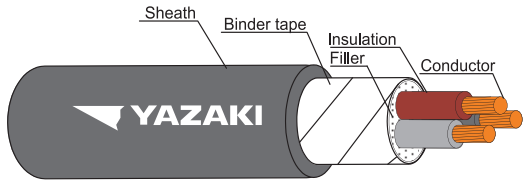
B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
FD-0.6/1KV-CV	3x1.5	Non-compacted	0.7	1.8	12.0	12.1	2,500	22	28	150	500
YK FD-0.6/1KV-CV	3x2.5	Non-compacted	0.7	1.8	13.0	7.41	2,100	29	43	200	1000
	3x4	Non-compacted	0.7	1.8	14.5	4.61	1,700	38	55	270	1000
	3x6	Non-compacted	0.7	1.8	16.0	3.08	1,450	49	70	340	1000
	3x10	Non-compacted	0.7	1.8	17.5	1.83	1,250	68	92	480	1000
	3x16	Compacted	0.7	1.8	19.5	1.15	1,000	91	119	660	1000
	3x25	Compacted	0.9	1.8	23.0	0.727	1,050	116	152	970	1000
	3x35	Compacted	0.9	1.8	25.5	0.524	900	144	184	1270	1000
	3x50	Compacted	1.0	2.0	29.0	0.387	850	175	217	1690	1000
	3x70	Compacted	1.1	2.0	33.0	0.268	800	224	266	2340	1000
FD-0.6/1KV-CV	3x95	Compacted	1.1	4.0	40.5	0.193	650	272	295	3490	500
	3x120	Compacted	1.2	4.0	44.0	0.153	650	320	335	4325	500
	3x150	Compacted	1.4	4.0	48.0	0.124	700	366	380	5247	500
	3x185	Compacted	1.6	4.0	53.0	0.0991	700	422	425	6438	500
	3x240	Compacted	1.7	4.0	59.0	0.0754	650	498	495	8280	500
	3x300	Compacted	1.8	4.0	64.0	0.0601	600	567	560	10183	500
	3x400	Compacted	2.0	4.0	71.0	0.0470	600	652	630	12776	500

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

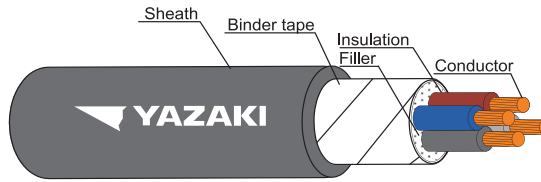
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Cable name	Number x Size of conductor (No.x mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	3x1.5	Non-compacted	15.4287	0.3427	0.1077	15.4291
YK FD-0.6/1KV-CV	3x2.5	Non-compacted	9.4485	0.3210	0.1009	9.4490
	3x4	Non-compacted	5.8782	0.3010	0.0946	5.8790
	3x6	Non-compacted	3.9274	0.2871	0.0902	3.9284
	3x10	Non-compacted	2.3335	0.2710	0.0851	2.3351
	3x16	Compacted	1.4665	0.2624	0.0824	1.4688
	3x25	Compacted	0.9272	0.2645	0.0831	0.9309
	3x35	Compacted	0.6685	0.2569	0.0807	0.6733
	3x50	Compacted	0.4939	0.2536	0.0797	0.5003
	3x70	Compacted	0.3424	0.2421	0.0761	0.3507
FD-0.6/1KV-CV	3x95	Compacted	0.2471	0.2331	0.0732	0.2577
	3x120	Compacted	0.1964	0.2315	0.0727	0.2094
	3x150	Compacted	0.1597	0.2302	0.0723	0.1753
	3x185	Compacted	0.1282	0.2338	0.0734	0.1478
	3x240	Compacted	0.0987	0.2295	0.0721	0.1222
	3x300	Compacted	0.0798	0.2260	0.0710	0.1068
	3x400	Compacted	0.0639	0.2259	0.0710	0.0955

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

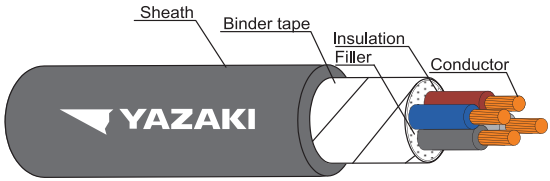
B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
FD-0.6/1KV-CV	4x1.5	Non-compacted	0.7	1.8	12.5	12.1	2,500	22	28	176	500
YK FD-0.6/1KV-CV	4x2.5	Non-compacted	0.7	1.8	14.0	7.41	2,100	29	43	230	1000
	4x4	Non-compacted	0.7	1.8	16.0	4.61	1,700	38	55	330	1000
	4x6	Non-compacted	0.7	1.8	17.5	3.08	1,450	49	70	420	1000
	4x10	Non-compacted	0.7	1.8	19.0	1.83	1,250	68	92	590	1000
	4x16	Compacted	0.7	1.8	21.0	1.15	1,000	91	119	830	1000
	4x25	Compacted	0.9	1.8	25.0	0.727	1,050	116	152	1240	1000
	4x35	Compacted	0.9	1.8	27.5	0.524	900	144	184	1610	1000
	4x50	Compacted	1.0	2.0	31.5	0.387	850	175	217	2170	1000
	4x70	Compacted	1.1	2.0	36.0	0.268	800	224	266	3000	1000
FD-0.6/1KV-CV	4x95	Compacted	1.1	4.0	44.0	0.193	650	272	295	4449	500
	4x120	Compacted	1.2	4.0	48.5	0.153	650	320	335	5550	500
	4x150	Compacted	1.4	4.0	52.5	0.124	700	366	380	6749	500
	4x185	Compacted	1.6	4.0	58.0	0.0991	700	422	425	8305	500
	4x240	Compacted	1.7	4.0	64.5	0.0754	650	498	495	10707	500
	4x300	Compacted	1.8	4.0	70.5	0.0601	600	567	560	13211	500
	4x400	Compacted	2.0	4.0	78.0	0.0470	600	652	630	16623	500

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor	:	Non-compacted and compacted stranded annealed copper wire
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation color	:	Blue, Brown, Black, Grey
Filler	:	Non-hygroscopic material
Binder tape	:	Non-hygroscopic tape
Sheath	:	Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 1,200 Volts
Rated voltage	:	600 Volts between Line to Earth
	:	1,000 Volts between Line to Line
AC Testing voltage	:	3,500 Volts
Reference standard	:	IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

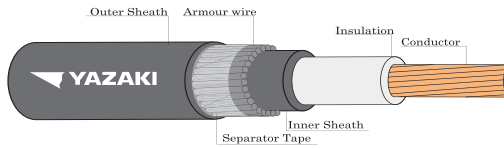
Cable name	Number x Size of conductor (No.x mm²)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	4x1.5	Non-compacted	15.4287	0.3427	0.1077	15.4291
	4x2.5	Non-compacted	9.4485	0.3210	0.1009	9.4490
	4x4	Non-compacted	5.8782	0.3010	0.0946	5.8790
	4x6	Non-compacted	3.9274	0.2871	0.0902	3.9284
	4x10	Non-compacted	2.3335	0.2710	0.0851	2.3351
YK FD-0.6/1KV-CV	4x16	Compacted	1.4665	0.2624	0.0824	1.4688
	4x25	Compacted	0.9272	0.2645	0.0831	0.9309
	4x35	Compacted	0.6685	0.2569	0.0807	0.6733
	4x50	Compacted	0.4939	0.2536	0.0797	0.5002
	4x70	Compacted	0.3424	0.2421	0.0761	0.3506
	4x95	Compacted	0.2471	0.2331	0.0732	0.2577
	4x120	Compacted	0.1964	0.2315	0.0727	0.2094
	4x150	Compacted	0.1597	0.2302	0.0723	0.1753
FD-0.6/1KV-CV	4x185	Compacted	0.1282	0.2338	0.0734	0.1478
	4x240	Compacted	0.0987	0.2295	0.0721	0.1222
	4x300	Compacted	0.0798	0.2260	0.0710	0.1068
	4x400	Compacted	0.0639	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-AWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Aluminium wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Inner Sheath thickness approx.	Dia. Of inner sheath approx.	Diameter of steel wire armor norminal	Outer Sheath thickness norminal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
											Spaced	Touching	Trefoil			
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)				(A)	(kg/km)	(m)
	1.5	Non-compacted	0.7	1.2	6.0	1.25	1.4	12.0	12.1	2.500	36	30	29	32	172	500/D
	2.5	Non-compacted	0.7	1.2	6.5	1.25	1.4	12.5	7.41	2,100	48	39	38	41	190	500/D
	4	Non-compacted	0.7	1.2	7.0	1.25	1.4	13.0	4.61	1,700	62	51	50	53	215	500/D
	6	Non-compacted	0.7	1.2	7.5	1.25	1.4	13.5	3.08	1,450	78	64	63	65	246	500/D
	10	Compacted	0.7	1.2	8.0	1.25	1.4	14.0	1.83	1,250	104	85	83	86	295	500/D
	16	Compacted	0.7	1.2	9.0	1.25	1.4	15.0	1.15	1.000	136	112	109	110	369	500/D
	25	Compacted	0.9	1.2	11.0	1.25	1.5	17.0	0.727	1,050	179	147	143	141	503	500/D
	35	Compacted	0.9	1.2	12.0	1.25	1.5	18.0	0.524	900	217	179	174	169	615	500/D
	50	Compacted	1.0	1.2	13.5	1.25	1.5	19.5	0.387	850	261	216	210	199	762	500/D
	70	Compacted	1.1	1.2	15.0	1.25	1.6	21.5	0.268	800	327	270	262	243	1006	500/D
1	95	Compacted	1.1	1.2	17.0	1.60	1.7	24.0	0.193	650	404	334	325	292	1345	500/D
	120	Compacted	1.2	1.2	18.5	1.60	1.7	26.0	0.153	650	467	387	376	331	1628	500/D
	150	Compacted	1.4	1.2	20.5	1.60	1.8	28.0	0.124	700	532	422	429	371	1953	500/D
	185	Compacted	1.6	1.2	22.5	1.60	1.9	30.5	0.0991	700	617	515	499	421	2345	500/D
	240	Compacted	1.7	1.2	25.5	1.60	2.0	33.5	0.0754	650	733	613	594	487	2973	500/D
	300	Compacted	1.8	1.2	28.0	2.00	2.1	37.0	0.0601	600	844	707	684	549	3724	500/D
	400	Compacted	2.0	1.2	31.0	2.00	2.2	40.0	0.0470	600	979	822	794	622	4645	500/D
	500	Compacted	2.2	1.2	34.5	2.00	2.3	44.0	0.0366	600	1139	957	921	703	5802	500/D
	630	Compacted	2.4	1.3	38.5	2.50	2.5	49.5	0.0283	550	1333	1120	1075	795	7490	500/D
	800	Compacted	2.6	1.4	43.0	2.50	2.7	54.5	0.0221	550	1527	1280	1222	881	9252	300/D
	1000	Compacted	2.8	1.5	49.5	2.50	2.9	61.0	0.0176	500	1739	1453	1377	965	11952	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

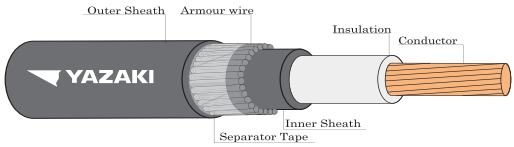
D : Packing in drum

FD-0.6/1KV-CV-AWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Aluminium wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

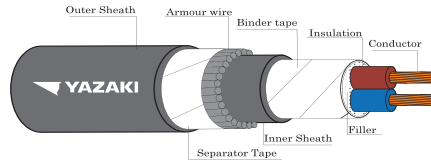
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Nominal cross sectional area	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
	(mm^2)	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	1.5	15.4287	15.4287	15.4287	0.8017	0.6630	0.6168	0.2519	0.2083	0.1938	15.4308	15.4301	15.4299
	2.5	9.4485	9.4485	9.4485	0.7626	0.6239	0.5777	0.2396	0.1960	0.1815	9.4515	9.4505	9.4502
	4	5.8782	5.8782	5.8782	0.7225	0.5838	0.5376	0.2270	0.1834	0.1689	5.8826	5.8811	5.8807
	6	3.9273	3.9273	3.9273	0.6908	0.5521	0.5059	0.2170	0.1735	0.1589	3.9333	3.9312	3.9305
	10	2.3335	2.3335	2.3335	0.6636	0.5250	0.4787	0.2085	0.1649	0.1504	2.3428	2.3393	2.3383
	16	1.4664	1.4664	1.4664	0.6289	0.4903	0.4440	0.1976	0.1540	0.1395	1.4797	1.4745	1.4731
	25	0.9271	0.9271	0.9271	0.6040	0.4654	0.4191	0.1897	0.1462	0.1317	0.9463	0.9386	0.9364
	35	0.6683	0.6683	0.6683	0.5835	0.4449	0.3986	0.1833	0.1398	0.1252	0.6930	0.6828	0.6800
	50	0.4936	0.4937	0.4937	0.5562	0.4176	0.3713	0.1747	0.1312	0.1167	0.5237	0.5108	0.5073
	70	0.3420	0.3421	0.3421	0.5379	03992	0.3530	0.1690	0.1254	0.1109	0.3815	0.3643	0.3596
	95	0.2465	0.2466	0.2466	0.5260	0.3873	0.3411	0.1652	0.1217	0.1072	0.2967	0.2750	0.2689
	120	0.1956	0.1957	0.1958	0.5126	0.3740	0.3278	0.1610	0.1175	0.1030	0.2533	0.2283	0.2212
	150	0.1587	0.1589	0.1590	0.5057	0.3671	0.3209	0.1589	0.1153	0.1008	0.2246	0.1963	0.1883
	185	0.1271	0.1273	0.1275	0.5054	0.3668	0.3206	0.1588	0.1152	0.1007	0.2034	0.1717	0.1625
	240	0.0971	0.0974	0.0977	0.4937	0.3551	0.3089	0.1551	0.1116	0.0970	0.1830	0.1481	0.1377
	300	0.0778	0.0783	0.0787	0.3487	0.3487	0.3025	0.1531	0.1096	0.0950	0.1718	0.1347	0.1234
	400	0.0615	0.0621	0.0625	0.4821	0.3435	0.2973	0.1515	0.1079	0.0934	0.1635	0.1245	0.1124
	500	0.0486	0.0494	0.0501	0.4746	0.3360	0.2898	0.1491	0.1056	0.0910	0.1568	0.1166	0.1039
	630	0.0386	0.0396	0.0403	0.4729	0.3343	0.2880	0.1486	0.1050	0.0905	0.1535	0.1122	0.0991
	800	0.0313	0.0325	0.0335	0.4670	0.3284	0.2822	0.1467	0.1032	0.0887	0.1500	0.1082	0.0948
	1000	0.0262	0.0276	0.0288	0.4593	0.3207	0.2745	0.1443	0.1008	0.0862	0.1467	0.1045	0.0909

FD-0.6/1KV-CV-SWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor norminal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	1.5	Non-compacted	0.7	1.2	10.0	0.80	1.8	15.5	12.1	2,500	28	33	371	500/D
	2.5	Non-Compacted	0.7	1.2	11.0	1.25	1.8	17.5	7.41	2,100	37	43	536	500/D
	4	Non-Compacted	0.7	1.2	12.0	1.25	1.8	18.5	4.61	1,700	50	57	605	500/D
	6	Non-compacted	0.7	1.2	13.0	1.25	1.8	20.0	3.08	1,450	63	71	697	500/D
	10	Compacted	0.7	1.2	14.0	1.25	1.8	21.0	1.83	1,250	83	93	817	500/D
	16	Compacted	0.7	1.2	16.0	1.60	1.8	23.5	1.150	1,000	111	121	1155	500/D
	25	Compacted	0.9	1.2	19.5	1.60	1.8	27.0	0.727	1,050	147	156	1509	500/D
	35	Compacted	0.9	1.2	21.5	1.60	1.8	29.0	0.524	900	182	188	1797	500/D
	50	Compacted	1.0	1.2	24.5	1.60	2.0	32.5	0.387	850	219	222	2218	500/D
	70	Compacted	1.1	1.2	28.5	2.00	2.1	37.5	0.268	800	275	271	3105	500/D
	95	Compacted	1.1	1.2	32.0	2.00	2.2	41.0	0.193	650	337	325	3844	500/D
	120	Compacted	1.2	1.2	35.5	2.00	2.4	45.0	0.153	650	389	368	4638	500/D
	150	Compacted	1.4	1.3	39.0	2.50	2.5	50.0	0.124	700	444	412	5913	500/D
	185	Compacted	1.6	1.4	44.0	2.50	2.7	55.0	0.0991	700	509	463	7050	500/D
	240	Compacted	1.7	1.5	49.5	2.50	2.9	61.5	0.0754	650	600	534	8739	500/D
	300	Compacted	1.8	1.6	54.5	2.50	3.1	67.0	0.0601	600	684	597	10448	300/D
	400	Compacted	2.0	1.7	61.0	2.50	3.3	74.0	0.0470	600	783	670	12748	300/D

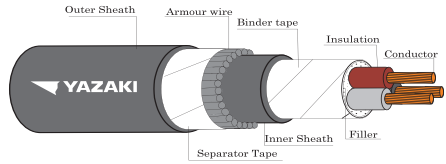
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6684	0.2567	0.0807	0.6733
	50	0.4938	0.2435	0.0765	0.4997
	70	0.3423	0.2395	0.0752	0.3504
	95	0.2468	0.2331	0.0732	0.2575
	120	0.1960	0.2289	0.0719	0.2088
	150	0.1593	0.2302	0.0723	0.1749
	185	0.1278	0.2326	0.0731	0.1472
	240	0.0981	0.2281	0.0717	0.1215
	300	0.0791	0.2260	0.0710	0.1063
	400	0.0630	0.2259	0.0710	0.0949

FD-0.6/1KV-CV-SWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor norminal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	1.5	Non-Compacted	0.7	1.2	10.5	0.80	1.8	16.0	12.1	2,500	24	26	404	500/D
	2.5	Non-Compacted	0.7	1.2	11.5	1.25	1.8	18.0	7.41	2,100	32	34	580	500/D
	4	Non-Compacted	0.7	1.2	12.5	1.25	1.8	19.5	4.61	1,700	42	44	675	500/D
	6	Non-Compacted	0.7	1.2	14.0	1.25	1.8	20.5	3.08	1,450	53	55	787	500/D
	10	Compacted	0.7	1.2	15.0	1.25	1.8	21.5	1.83	1,250	71	72	943	500/D
	16	Compacted	0.7	1.2	17.0	1.60	1.8	24.5	1.150	1,000	94	93	1349	500/D
	25	Compacted	0.9	1.2	21.0	1.60	1.8	28.5	0.727	1,050	125	120	1772	500/D
	35	Compacted	0.9	1.2	23.0	1.60	1.9	31.0	0.524	900	154	145	2171	500/D
	50	Compacted	1.0	1.2	26.5	2.00	2.0	35.0	0.387	850	186	171	2958	500/D
	70	Compacted	1.1	1.2	30.5	2.00	2.2	39.5	0.268	800	233	208	3824	500/D
	95	Compacted	1.1	1.2	34.0	2.00	2.3	43.5	0.193	650	286	249	4833	500/D
	120	Compacted	1.2	1.3	38.0	2.50	2.5	49.0	0.153	650	332	283	6280	500/D
	150	Compacted	1.4	1.4	42.0	2.50	2.6	53.5	0.124	700	376	315	7446	500/D
	185	Compacted	1.6	1.5	47.5	2.50	2.8	59.0	0.0991	700	430	354	8970	500/D
	240	Compacted	1.7	1.6	53.5	2.50	3.0	65.5	0.0754	650	505	406	11245	300/D
	300	Compacted	1.8	1.7	59.0	2.50	3.2	71.5	0.0601	600	574	453	13504	300/D
	400	Compacted	2.0	1.8	66.0	3.15	3.5	80.5	0.0470	600	652	501	17500	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

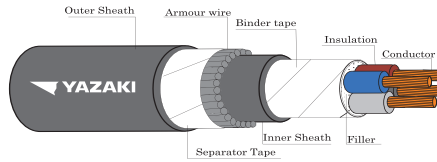
D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

B

FD-0.6/1KV-CV-SWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor	:	Non-compacted and compacted stranded annealed copper
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation color	:	Blue, Brown, Black, Grey
Filler	:	Non-hygroscopic material
Binder tape	:	Non-hygroscopic tape
Inner sheath	:	Black polyvinyl chloride (PVC)
Amor	:	Galvanized Steel Wires
Outer sheath	:	Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 1,200 Volts
Rated voltage	:	600 Volts between Line to Earth
	:	1,000 Volts between Line to Line
AC Testing voltage	:	3,500 Volts
Reference standard	:	IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor norminal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
4	1.5	Non-Compacted	0.7	1.2	11.0	1.25	1.8	18.0	12.1	2,500	24	26	569	500/D
	2.5	Non-Compacted	0.7	1.2	12.5	1.25	1.8	19.0	7.41	2,100	32	34	642	500/D
	4	Non-Compacted	0.7	1.2	13.5	1.25	1.8	20.5	4.61	1,700	42	44	754	500/D
	6	Non-Compacted	0.7	1.2	15.0	1.25	1.8	22.0	3.08	1,450	53	55	901	500/D
	10	Compacted	0.7	1.2	16.5	1.60	1.8	24.0	1.83	1,250	71	72	1232	500/D
	16	Compacted	0.7	1.2	19.0	1.60	1.8	26.0	1.150	1,000	94	93	1579	500/D
	25	Compacted	0.9	1.2	23.0	1.60	1.9	30.5	0.727	1,050	125	120	2143	500/D
	35	Compacted	0.9	1.2	25.5	1.60	2.0	33.5	0.524	900	154	145	2638	500/D
	50	Compacted	1.0	1.2	29.0	2.00	2.1	38.0	0.387	850	186	171	3578	500/D
	70	Compacted	1.1	1.2	33.5	2.00	2.3	43.0	0.268	800	233	208	4672	500/D
	95	Compacted	1.1	1.3	38.0	2.50	2.5	49.0	0.193	650	286	249	6404	500/D
	120	Compacted	1.2	1.4	42.5	2.50	2.6	53.5	0.153	650	332	283	7789	500/D
	150	Compacted	1.4	1.5	47.0	2.50	2.8	59.0	0.124	700	376	315	9280	500/D
	185	Compacted	1.6	1.6	53.0	2.50	3.0	65.0	0.0991	700	430	354	11228	500/D
	240	Compacted	1.7	1.7	59.5	2.50	3.2	72.0	0.0754	650	505	406	14070	300/D
	300	Compacted	1.8	1.8	65.5	3.15	3.5	80.0	0.0601	600	574	453	17934	300/D
	400	Compacted	2.0	2.0	73.5	3.15	3.8	89.0	0.0470	600	652	501	22103	300/D

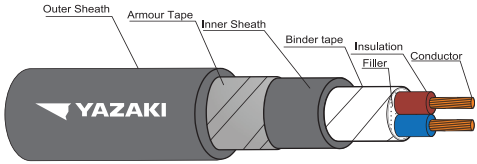
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-STA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor	:	Non-compacted and compacted stranded annealed copper
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation color	:	Blue, Brown
Filler	:	Non-hygroscopic material
Binder tape	:	Non-hygroscopic tape
Inner sheath	:	Black polyvinyl chloride (PVC)
Amor	:	Two galvanized flat steel tape
Outer sheath	:	Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 1,200 Volts
Rated voltage	:	600 Volts between Line to Earth
	:	1,000 Volts between Line to Line
AC Testing voltage	:	3,500 Volts
Reference standard	:	IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	1.5	Non-Compacted	0.7	1.2	10.0	0.2	1.8	15.0	12.1	2,500	28	33	330	500/D
	2.5	Non-Compacted	0.7	1.2	11.0	0.2	1.8	16.0	7.41	2,100	37	43	373	500/D
	4	Non-Compacted	0.7	1.2	12.0	0.2	1.8	17.0	4.61	1,700	48	56	434	500/D
	6	Non-Compacted	0.7	1.2	13.0	0.2	1.8	18.5	3.08	1,450	61	70	510	500/D
	10	Compacted	0.7	1.2	14.0	0.2	1.8	19.5	1.83	1,250	82	92	613	500/D
	16	Compacted	0.7	1.2	16.0	0.2	1.8	21.5	1.150	1,000	108	120	789	500/D
	25	Compacted	0.9	1.2	19.5	0.2	1.8	25.0	0.727	1,050	144	154	1084	500/D
	35	Compacted	0.9	1.2	21.5	0.2	1.8	27.0	0.524	900	176	185	1325	500/D
	50	Compacted	1.0	1.2	24.5	0.2	1.9	30.0	0.387	850	213	219	1682	500/D
	70	Compacted	1.1	1.2	28.5	0.2	2.0	34.0	0.268	800	267	268	2227	500/D
	95	Compacted	1.1	1.2	32.0	0.5	2.2	39.0	0.193	650	331	322	3132	500/D
	120	Compacted	1.2	1.2	35.5	0.5	2.3	42.5	0.153	650	383	366	3813	500/D
	150	Compacted	1.4	1.3	39.0	0.5	2.4	46.5	0.124	700	435	409	4569	500/D
	185	Compacted	1.6	1.4	44.0	0.5	2.6	51.5	0.0991	700	500	461	5580	500/D
	240	Compacted	1.7	1.5	49.5	0.5	2.8	58.0	0.0754	650	590	531	7088	500/D
	300	Compacted	1.8	1.6	54.5	0.5	2.9	63.0	0.0601	600	676	596	8597	500/D
	400	Compacted	2.0	1.7	61.0	0.5	3.2	70.5	0.0470	600	765	664	10729	500/D

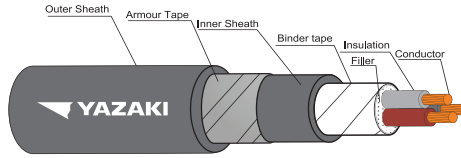
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4664	0.2614	0.0821	1.4688
	25	0.9271	0.2637	0.0829	0.9309
	35	0.6683	0.2567	0.0807	0.6733
	50	0.4936	0.2435	0.0765	0.4998
	70	0.3420	0.2395	0.0752	0.3506
	95	0.2465	0.2331	0.0732	0.2577
	120	0.1956	0.2289	0.0719	0.2091
	150	0.1587	0.2302	0.0723	0.1753
	185	0.1271	0.2326	0.0731	0.1476
	240	0.0971	0.2281	0.0717	0.1219
	300	0.0778	0.2260	0.0710	0.1068
	400	0.0615	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-STA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Two galvanized flat steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Non-Compacted	0.7	1.2	10.5	0.2	1.8	15.5	12.1	2,500	24	26	361	500/D
	2.5	Non-Compacted	0.7	1.2	11.5	0.2	1.8	17.0	7.41	2,100	32	34	414	500/D
	4	Non-Compacted	0.7	1.2	12.5	0.2	1.8	18.0	4.61	1,700	42	44	491	500/D
	6	Non-Compacted	0.7	1.2	14.0	0.2	1.8	19.0	3.08	1.450	53	55	589	500/D
	10	Compacted	0.7	1.2	15.0	0.2	1.8	20.5	1.83	1,250	71	72	731	500/D
	16	Compacted	0.7	1.2	17.0	0.2	1.8	22.5	1.150	1.000	94	93	963	500/D
	25	Compacted	0.9	1.2	21.0	0.2	1.8	26.0	0.727	1.050	125	120	1328	500/D
	35	Compacted	0.9	1.2	23.0	0.2	1.8	28.5	0.524	900	154	145	1667	500/D
3	50	Compacted	1.0	1.2	26.5	0.2	1.9	32.0	0.387	850	186	171	2136	500/D
	70	Compacted	1.1	1.2	30.5	0.2	2.1	36.5	0.268	800	233	208	2889	500/D
	95	Compacted	1.1	1.2	34.0	0.5	2.2	41.0	0.193	650	286	249	4038	500/D
	120	Compacted	1.2	1.3	38.0	0.5	2.4	45.5	0.153	650	332	283	4995	500/D
	150	Compacted	1.4	1.4	42.0	0.5	2.5	50.0	0.124	700	376	315	6033	500/D
	185	Compacted	1.6	1.5	47.5	0.5	2.7	55.5	0.0991	700	430	354	7400	500/D
	240	Compacted	1.7	1.6	53.5	0.5	2.9	62.0	0.0754	650	505	406	9443	300/D
	300	Compacted	1.8	1.7	59.0	0.5	3.1	68.0	0.0601	600	574	453	11570	300/D
	400	Compacted	2.0	1.8	66.0	0.5	3.3	75.5	0.0470	600	652	501	14417	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

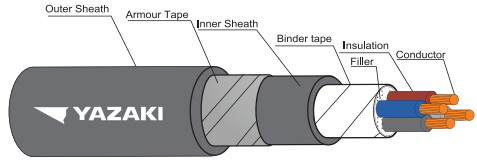
D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4664	0.2614	0.0821	1.4688
	25	0.9271	0.2637	0.0829	0.9309
	35	0.6683	0.2567	0.0807	0.6733
3	50	0.4936	0.2435	0.0765	0.4998
	70	0.3420	0.2395	0.0752	0.3506
	95	0.2465	0.2331	0.0732	0.2577
	120	0.1956	0.2289	0.0719	0.2091
	150	0.1587	0.2302	0.0723	0.1753
	185	0.1271	0.2326	0.0731	0.1476
	240	0.0971	0.2281	0.0717	0.1219
	300	0.0778	0.2260	0.0710	0.1068
	400	0.0615	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-STA

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Two galvanized flat steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Non-Compacted	0.7	1.2	11.0	0.2	1.8	16.5	12.1	2,500	24	28	402	500/D
	2.5	Non-Compacted	0.7	1.2	12.5	0.2	1.8	18.0	7.41	2,100	31	37	466	500/D
	4	Non-Compacted	0.7	1.2	13.5	0.2	1.8	19.0	4.61	1,700	41	48	562	500/D
	6	Non-Compacted	0.7	1.2	15.0	0.2	1.8	20.5	3.08	1,450	52	59	687	500/D
	10	Compacted	0.7	1.2	16.5	0.2	1.8	21.5	1.83	1,250	69	78	868	500/D
	16	Compacted	0.7	1.2	19.0	0.2	1.8	24.0	1.150	1.000	91	101	1163	500/D
	25	Compacted	0.9	1.2	23.0	0.2	1.8	28.5	0.727	1,050	122	130	1639	500/D
	35	Compacted	0.9	1.2	25.5	0.2	1.9	31.0	0.524	900	149	156	2078	500/D
4	50	Compacted	1.0	1.2	29.0	0.2	2.0	35.0	0.387	850	181	185	2682	500/D
	70	Compacted	1.1	1.2	33.5	0.5	2.2	40.5	0.268	800	227	226	3890	500/D
	95	Compacted	1.1	1.3	38.0	0.5	2.4	45.5	0.193	650	281	272	5119	500/D
	120	Compacted	1.2	1.4	42.5	0.5	2.5	50.0	0.153	650	325	309	6338	500/D
	150	Compacted	1.4	1.5	47.0	0.5	2.7	55.0	0.124	700	370	345	7709	500/D
	185	Compacted	1.6	1.6	53.0	0.5	2.9	61.0	0.0991	700	426	389	9451	500/D
	240	Compacted	1.7	1.7	59.5	0.5	3.1	68.5	0.0754	650	504	449	12105	500/D
	300	Compacted	1.8	1.8	65.5	0.5	3.3	75.0	0.0601	600	576	504	14849	500/D
	400	Compacted	2.0	2.0	73.5	0.5	3.6	83.5	0.0470	600	662	567	18636	500/D

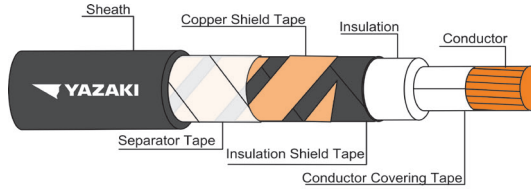
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
4	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-1

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic material

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,600 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

AC Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

APPLICATION

B

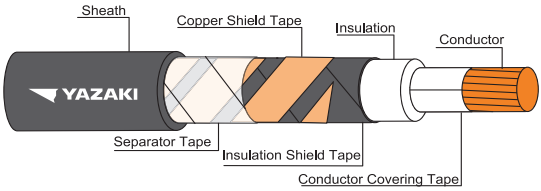
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of core	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard length per drum (m)
1	10	6	2.0	1.4	12.5	1.83	2,900	213	500
	16	6	2.0	1.4	13.5	1.15	2,450	280	500
	25	6	2.0	1.4	15.0	0.727	2,050	379	500
	35	6	2.0	1.4	16.0	0.524	1,800	479	500
	50	6	2.0	1.4	17.0	0.387	1,550	608	500
	70	12	2.0	1.5	19.0	0.268	1,350	827	500
	95	15	2.0	1.5	21.0	0.193	1,150	1087	500
	120	18	2.0	1.6	22.5	0.153	1,050	1351	500
	150	18	2.0	1.6	24.0	0.124	950	1621	500
	185	30	2.0	1.7	26.0	0.0991	850	1953	500
	240	34	2.0	1.8	28.5	0.0754	750	2556	500
	300	34	2.0	1.8	31.0	0.0601	700	3113	500
	400	53	2.0	2.0	34.0	0.0470	600	3961	500

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-1



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,600 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

AC Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1,

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

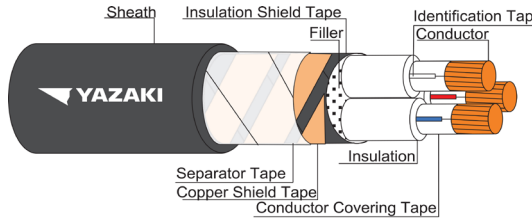
Number of core	Nominal cross sectional area (mm2)	Current rating in free air at 40°C (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
	10	100	81	79	88	82	79	76
	16	132	106	104	113	106	101	98
	25	173	140	136	145	136	129	125
	35	211	171	166	173	163	157	148
	50	255	207	201	205	192	185	175
	70	321	261	253	251	235	225	217
1	95	395	321	311	301	281	275	264
	120	457	373	362	342	319	312	299
	150	522	426	413	384	358	349	334
	185	601	492	476	434	403	393	376
	240	716	587	567	504	466	465	443
	300	827	678	654	571	525	524	498
	400	963	791	762	650	592	595	563

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm^2)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
	10	2.3335	2.3335	2.3335	0.6258	0.4872	0.4410	0.1966	0.1531	0.1385	2.3418	2.3385	2.3376
	16	1.4664	1.4664	1.4664	0.5945	0.4559	0.4096	0.1868	0.1432	0.1287	1.4782	1.4734	1.4720
	25	0.9271	0.9271	0.9271	0.5669	0.4283	0.3820	0.1781	0.1346	0.1200	0.9441	0.9368	0.9348
	35	0.6683	0.6683	0.6683	0.5492	0.4106	0.3644	0.1725	0.1290	0.1145	0.6902	0.6806	0.6780
	50	0.4936	0.4937	0.4937	0.5223	0.3836	0.3374	0.1641	0.1205	0.1060	0.5202	0.5082	0.5050
	70	0.3420	0.3421	0.3422	0.5093	0.3706	0.3244	0.1600	0.1164	0.1019	0.3776	0.3614	0.3571
1	95	0.2465	0.2466	0.2467	0.4940	0.3553	0.3091	0.1552	0.1116	0.0971	0.2913	0.2707	0.2651
	120	0.1956	0.1958	0.1959	0.4829	0.3443	0.2981	0.1517	0.1082	0.0937	0.2475	0.2237	0.2171
	150	0.1587	0.1590	0.1592	0.4749	0.3362	0.2900	0.1492	0.1056	0.0911	0.2178	0.1909	0.1834
	185	0.1271	0.1275	0.1277	0.4681	0.3295	0.2833	0.1471	0.1035	0.0890	0.1944	0.1642	0.1557
	240	0.0972	0.0976	0.0980	0.4595	0.3209	0.2747	0.1444	0.1008	0.0863	0.1740	0.1403	0.1306
	300	0.0779	0.0786	0.0791	0.4521	0.3135	0.2672	0.1420	0.0985	0.0839	0.1620	0.1260	0.1153
	400	0.0616	0.0624	0.0631	0.4478	0.3092	0.2630	0.1407	0.0971	0.0826	0.1536	0.1155	0.1040

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-1

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Filler : Non-hygroscopic material

Insulation shield : Semi-conductive tape

Core identification : White, Red, Blue

Shield : Copper tape

Separator tape : Non-hygroscopic material

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,600 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

AC Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

APPLICATION

B

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

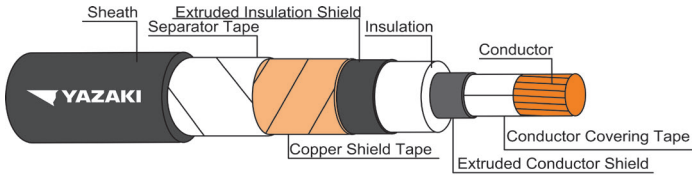
Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard length per drum (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
	10	6	2.0	1.8	24.5	1.83	2,900	73	80	63	659	500
	16	6	2.0	1.8	27.0	1.15	2,450	96	103	81	873	500
	25	6	2.0	1.8	29.5	0.727	2,050	126	133	105	1184	500
	35	6	2.0	1.9	32.0	0.524	1,800	154	159	126	1512	500
	50	6	2.0	2.0	35.0	0.387	1,550	186	188	151	1929	500
	70	12	2.0	2.1	38.5	0.268	1,350	233	230	185	2617	500
3	95	15	2.0	2.2	43.0	0.193	1,150	286	275	224	3447	500
	120	18	2.0	2.3	46.5	0.153	1,050	331	313	255	4279	500
	150	18	2.0	2.4	49.5	0.124	950	377	350	287	5145	500
	185	30	2.0	2.5	53.5	0.0991	850	434	395	327	6277	500
	240	34	2.0	2.7	59.0	0.0754	750	514	457	379	8089	500
	300	34	2.0	2.9	64.5	0.0601	700	589	513	432	9986	300
	400	53	2.0	3.1	70.5	0.0470	600	679	578	487	12561	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	10	2.3335	0.3685	0.1158	2.3364
	16	1.4665	0.3435	0.1079	1.4705
	25	0.9272	0.3222	0.1012	0.9327
	35	0.6684	0.3090	0.0971	0.6754
	50	0.4938	0.2868	0.0901	0.5020
	70	0.3423	0.2744	0.0862	0.3530
3	95	0.2469	0.2640	0.0829	0.2605
	120	0.1962	0.2546	0.0800	0.2119
	150	0.1595	0.2493	0.0783	0.1777
	185	0.1281	0.2440	0.0767	0.1493
	240	0.0985	0.2359	0.0741	0.1233
	300	0.0797	0.2331	0.0732	0.1082
	400	0.0638	0.2288	0.0719	0.0961

3.6/6KV-CV

3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

TIS 2143-2546

CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Shield	:	Copper tape
Separator tape	:	Non-hygroscopic tape
Sheath	:	Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 7,200 Volts
Rated voltage	:	3,600 Volts between Line to Earth
	:	6,000 Volts between Line to Line
AC Testing voltage	:	12,500 Volts
Reference standard	:	IEC 60502-2, IEC 60228, IEC 60332-1 TIS 2143-2546
Remark	:	*Insulation shield shall be applied semi-conductive tape (for size < 25 mm²)

B

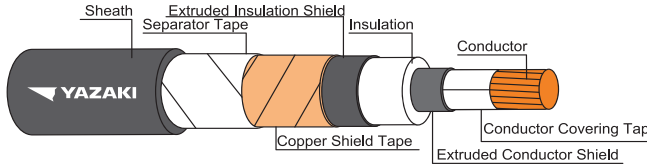
APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	10	6	2.5	1.4	15.0	1.83	2,850	267	500
	16	6	2.5	1.5	16.0	1.15	2,500	348	500
	25	6	2.5	1.5	18.5	0.727	2,150	479	500
	35	6	2.5	1.5	19.5	0.524	1,900	586	500
	50	6	2.5	1.6	21.0	0.387	1,700	731	500
	70	12	2.5	1.6	22.5	0.268	1,500	950	500
	95	15	2.5	1.7	24.5	0.193	1,300	1233	500
	120	18	2.5	1.7	26.0	0.153	1,200	1499	500
	150	18	2.5	1.8	27.5	0.124	1,100	1790	500
	185	30	2.5	1.8	29.5	0.0991	1,000	2124	500
	240	34	2.6	1.9	32.5	0.0754	900	2723	500
	300	34	2.8	2.0	35.0	0.0601	900	3361	500
	400	53	3.0	2.1	38.5	0.0470	850	4241	500
	500	53	3.2	2.2	42.5	0.0366	800	5380	500
	630	53	3.2	2.4	46.5	0.0283	700	6795	500
	800	53	3.2	2.5	50.5	0.0221	600	8400	500
	1000	53	3.2	2.7	56.0	0.0176	550	10849	300

3.6/6KV-CV

3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

TIS 2143-2546

CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Shield	:	Copper tape
Separatior tape	:	Non-hygroscopic material
Sheath	:	Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 7,200 Volts
Rated voltage	:	3,600 Volts between Line to Earth
	:	6,000 Volts between Line to Line
AC Testing voltage	:	12,500 Volts
Reference standard	:	IEC 60502-2, IEC 60228, IEC 60332-1 TIS 2143-2546
Remark	:	*Insulation shield shall be applied semi-conductive tape (for size < 25 mm²)

APPLICATION

B

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
	10	100	83	81	88	83	79	76
	16	132	109	107	114	107	103	100
	25	175	145	142	145	137	132	127
	35	213	177	172	174	164	157	152
	50	256	213	208	206	193	185	178
	70	321	267	259	252	236	230	221
	95	393	327	318	302	282	275	264
	120	455	379	368	343	320	311	299
1	150	518	432	419	385	359	356	340
	185	597	498	484	435	405	401	383
	240	710	594	575	505	469	464	443
	300	822	688	666	572	527	536	509
	400	960	804	777	652	597	610	577
	500	1126	943	908	744	675	707	666
	630	1308	1094	1048	847	756	802	750
	800	1504	1251	1191	952	835	921	856
	1000	1720	1422	1343	1058	909	1020	936

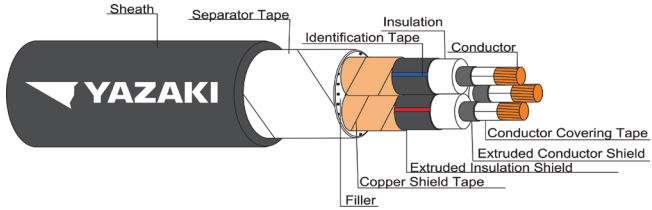
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	10	2.3335	2.3335	2.3335	0.6541	0.5155	0.4693	0.2055	0.1619	0.1474	2.3425	2.3391	2.3382
	16	1.4664	1.4664	1.4664	0.6260	0.4873	0.4411	0.1967	0.1531	0.1386	1.4795	1.4744	1.4729
	25	0.9271	0.9271	0.9271	0.6052	0.4665	0.4203	0.1901	0.1466	0.1320	0.9464	0.9386	0.9365
	35	0.6683	0.6683	0.6683	0.5863	0.4477	0.4015	0.1842	0.1406	0.1261	0.6932	0.6829	0.6801
	50	0.4936	0.4937	0.4937	0.5578	0.4191	0.3729	0.1752	0.1317	0.1171	0.5238	0.5110	0.5074
	70	0.3420	0.3421	0.3422	0.5377	0.3990	0.3528	0.1689	0.1253	0.1108	0.3814	0.3643	0.3597
	95	0.2465	0.2466	0.2467	0.5217	0.3831	0.3369	0.1639	0.1204	0.1058	0.2960	0.2744	0.2684
	120	0.1956	0.1958	0.1959	0.5072	0.3686	0.3223	0.1593	0.1158	0.1013	0.2523	0.2275	0.2205
1	150	0.1587	0.1590	0.1592	0.4992	0.3606	0.3144	0.1568	0.1133	0.0988	0.2231	0.1952	0.1874
	185	0.1271	0.1275	0.1277	0.4915	0.3529	0.3067	0.1544	0.1109	0.0964	0.2000	0.1690	0.1600
	240	0.0972	0.0976	0.0978	0.4821	0.3435	0.2973	0.1515	0.1079	0.0934	0.1800	0.1455	0.1352
	300	0.0779	0.0784	0.0788	0.4772	0.3386	0.2924	0.1499	0.1064	0.0919	0.1689	0.1321	0.1210
	400	0.0616	0.0622	0.0627	0.4719	0.3332	0.2870	0.1483	0.1047	0.0902	0.1605	0.1218	0.1098
	500	0.0487	0.0495	0.0502	0.4672	0.3286	0.2823	0.1468	0.1032	0.0887	0.1546	0.1145	0.1019
	630	0.0386	0.0397	0.0406	0.4599	0.3213	0.2751	0.1445	0.1009	0.0864	0.1495	0.1085	0.0955
	800	0.0313	0.0327	0.0339	0.4528	0.3142	0.2680	0.1423	0.0987	0.0842	0.1457	0.1040	0.0908
	1000	0.0262	0.0279	0.0293	0.4445	0.3059	0.2596	0.1396	0.0961	0.0816	0.1421	0.1001	0.0867

3.6/6KV-CV

3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 7,200 Volts

Rated voltage : 3,600 Volts between Line to Earth
: 6,000 Volts between Line to Line

AC Testing voltage : 12,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

Remark : *Insulation shield shall be applied semi-conductive tape (for size < 25 mm²)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard Length (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
3	10	6	2.5	2.0	29.5	1.83	2,850	81	85	65	801	500
	16	6	2.5	2.0	31.5	1.15	2,500	106	108	83	1108	500
	25	6	2.5	2.1	36.5	0.727	2,150	139	139	109	1548	500
	35	6	2.5	2.2	38.5	0.524	1,900	170	174	130	1900	500
	50	6	2.5	2.3	41.5	0.387	1,700	203	195	153	2361	500
	70	12	2.5	2.4	45.5	0.268	1,500	252	238	189	3088	500
	95	15	2.5	2.5	49.5	0.193	1,300	308	284	227	3979	500
	120	18	2.5	2.6	53.0	0.153	1,200	355	322	260	4850	500
	150	18	2.5	2.8	56.5	0.124	1,100	402	360	292	5773	500
	185	30	2.5	2.9	61.0	0.0991	1,000	461	406	329	6984	500
	240	34	2.6	3.1	67.5	0.0754	900	545	470	386	8920	300
	300	34	2.8	3.3	73.5	0.0601	900	625	529	434	10975	300
	400	53	3.0	3.5	80.5	0.0470	850	724	598	496	13719	300

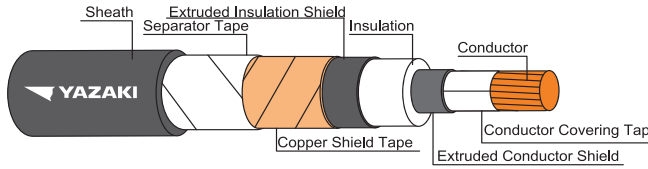
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	2.3335	0.4117	0.1293	2.3371
	16	1.4665	0.3827	0.1202	1.4714
	25	0.9272	0.3694	0.1161	0.9344
	35	0.6684	0.3529	0.1109	0.6775
	50	0.4938	0.3265	0.1026	0.5043
	70	0.3423	0.3102	0.0975	0.3559
	95	0.2469	0.2962	0.0931	0.2639
	120	0.1960	0.2843	0.0893	0.2154
	150	0.1593	0.2770	0.0870	0.1815
	185	0.1278	0.2721	0.0855	0.1538
	240	0.0981	0.2646	0.0831	0.1286
	300	0.0792	0.2606	0.0819	0.1139
	400	0.0632	0.2570	0.0807	0.1025

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

AC Testing voltage : 21,000 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

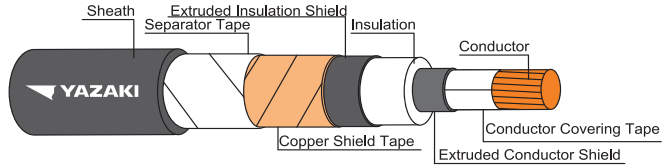
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	16	6	3.4	1.5	19.0	1.15	3,100	438	500
	25	6	3.4	1.6	20.5	0.727	2,700	557	500
	35	6	3.4	1.6	21.5	0.524	2,450	668	500
	50	6	3.4	1.7	23.0	0.387	2,200	819	500
	70	12	3.4	1.7	24.5	0.268	1,900	1044	500
	95	15	3.4	1.8	26.5	0.193	1,700	1335	500
	120	18	3.4	1.8	28.0	0.153	1,550	1607	500
	150	18	3.4	1.9	29.5	0.124	1,450	1904	500
	185	30	3.4	1.9	31.5	0.0991	1,300	2246	500
	240	34	3.4	2.0	34.0	0.0754	1,150	2846	500
	300	34	3.4	2.1	36.5	0.0601	1,050	3471	500
	400	53	3.4	2.2	39.5	0.0470	950	4336	500
	500	53	3.4	2.3	43.0	0.0366	850	5458	500
	630	53	3.4	2.4	47.0	0.0283	750	6860	500
	800	53	3.4	2.5	51.0	0.0221	650	8472	500
	1000	53	3.4	2.6	56.5	0.0176	600	11010	300

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

AC Testing voltage : 21,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

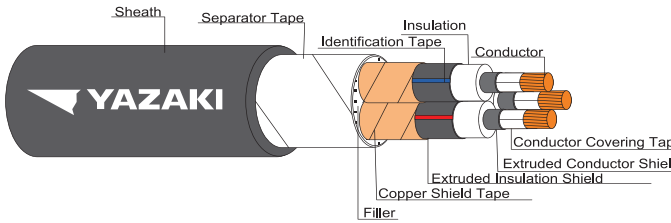
Number of core	Nominal cross sectional area (mm²)	Current rating in free air at 40°C (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
1	16	135	114	112	114	107	103	100
	25	177	150	146	146	137	132	127
	35	216	182	177	174	164	160	154
	50	260	219	213	206	193	189	181
	70	324	273	265	252	236	230	221
	95	397	334	325	302	282	274	263
	120	459	386	375	343	321	317	304
	150	521	439	426	385	359	355	340
	185	601	506	492	435	405	401	383
	240	713	601	583	506	469	464	442
	300	820	692	670	572	528	536	509
	400	954	804	777	652	597	609	576
	500	1116	939	905	744	675	706	665
	630	1299	1090	1045	847	756	802	750
	800	1494	1247	1188	952	835	920	855
	1000	1708	1417	1340	1058	909	1019	935

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
	(mm²)	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
1	16	1.4664	1.4664	1.4664	0.6597	0.5210	0.4748	0.2073	0.1637	0.1492	1.4810	1.4755	1.4740
	25	0.9271	0.9271	0.9271	0.6295	0.4908	0.4446	0.1978	0.1542	0.1397	0.9480	0.9398	0.9376
	35	0.6683	0.6683	0.6683	0.6093	0.4707	0.4244	0.1914	0.1479	0.1333	0.6952	0.6845	0.6815
	50	0.4936	0.4937	0.4937	0.5792	0.4406	0.3944	0.1820	0.1384	0.1239	0.5261	0.5127	0.5090
	70	0.3420	0.3421	0.3422	0.5576	0.4190	0.3728	0.1752	0.1316	0.1171	0.3843	0.3666	0.3617
	95	0.2465	0.2466	0.2467	0.5401	0.4015	0.3553	0.1697	0.1261	0.1116	0.2993	0.2770	0.2708
	120	0.1956	0.1958	0.1959	0.5245	0.3859	0.3397	0.1648	0.1212	0.1067	0.2558	0.2303	0.2231
	150	0.1587	0.1590	0.1590	0.5156	0.3770	0.3307	0.1620	0.1184	0.1039	0.2268	0.1983	0.1899
	185	0.1271	0.1273	0.1275	0.5068	0.3681	0.3219	0.1592	0.1156	0.1011	0.2037	0.1720	0.1627
	240	0.0972	0.0974	0.0978	0.4955	0.3569	0.3107	0.1557	0.1121	0.0976	0.1835	0.1485	0.1382
	300	0.0779	0.0784	0.0788	0.4868	0.3482	0.3020	0.1529	0.1094	0.0949	0.1716	0.1346	0.1233
	400	0.0616	0.0622	0.0627	0.4781	0.3394	0.2932	0.1502	0.1066	0.0921	0.1623	0.1234	0.1114
	500	0.0487	0.0495	0.0502	0.4709	0.3323	0.2861	0.1479	0.1044	0.0899	0.1557	0.1155	0.1029
	630	0.0386	0.0397	0.0406	0.4625	0.3239	0.2776	0.1453	0.1018	0.0872	0.1503	0.1092	0.0962
	800	0.0313	0.0327	0.0339	0.4552	0.3166	0.2703	0.1430	0.0995	0.0849	0.1464	0.1047	0.0914
	1000	0.0262	0.0279	0.0293	0.4466	0.3080	0.2618	0.1403	0.0968	0.0822	0.1427	0.1007	0.0873

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

AC Testing voltage : 21,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard length per drum (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
3	16	6	3.4	2.2	38.0	1.15	3,100	109	108	86	1454	500
	25	6	3.4	2.2	40.5	0.727	2,700	142	139	110	1821	500
	35	6	3.4	2.3	43.0	0.524	2,450	173	166	132	2186	500
	50	6	3.4	2.4	46.0	0.387	2,200	207	196	156	2664	500
	70	12	3.4	2.6	49.5	0.268	1,900	257	239	191	3432	500
	95	15	3.4	2.7	54.0	0.193	1,700	313	285	231	4347	500
	120	18	3.4	2.8	57.5	0.153	1,550	360	323	262	5239	500
	150	18	3.4	2.9	60.5	0.124	1,450	407	361	293	6172	500
	185	30	3.4	3.0	65.0	0.0991	1,300	467	408	335	7425	300
	240	34	3.4	3.2	71.0	0.0754	1,150	549	471	388	9350	300
	300	34	3.4	3.3	76.0	0.0601	1,050	628	529	441	11312	300
	400	53	3.4	3.5	82.0	0.0470	950	721	597	497	13990	300

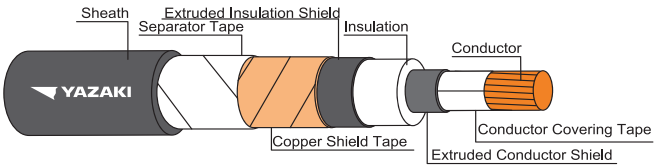
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	16	1.4665	0.4267	0.1341	1.4726
	25	0.9272	0.3977	0.1249	0.9356
	35	0.6684	0.3803	0.1195	0.6790
	50	0.4938	0.3511	0.1103	0.5060
	70	0.3421	0.3327	0.1045	0.3577
	95	0.2467	0.3167	0.0995	0.2660
	120	0.1960	0.3034	0.0953	0.2179
	150	0.1593	0.2950	0.0927	0.1843
	185	0.1278	0.2886	0.0907	0.1567
	240	0.0981	0.2782	0.0874	0.1314
	300	0.0790	0.2705	0.0850	0.1160
	400	0.0632	0.2630	0.0826	0.1040

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
: 15,000 Volts between Line to Line

AC Testing voltage : 30,500 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

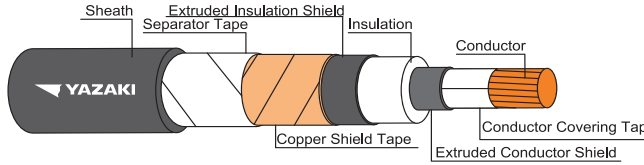
Number of core	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard length per drum (m)
1	25	6	4.5	1.6	22.5	0.727	3,300	635	500
	35	6	4.5	1.7	23.5	0.524	3,000	758	500
	50	6	4.5	1.7	25.0	0.387	2,700	905	500
	70	12	4.5	1.8	27.0	0.268	2,400	1146	500
	95	15	4.5	1.8	28.5	0.193	2,100	1432	500
	120	18	4.5	1.9	30.5	0.153	1,950	1722	500
	150	18	4.5	1.9	31.5	0.124	1,800	2012	500
	185	30	4.5	2.0	34.0	0.0991	1,650	2374	500
	240	34	4.5	2.1	36.5	0.0754	1,500	2984	500
	300	34	4.5	2.1	39.0	0.0601	1,350	3602	500
	400	53	4.5	2.2	41.5	0.0470	1,200	4476	500
	500	53	4.5	2.3	45.5	0.0366	1,100	5611	500
	630	53	4.5	2.4	49.0	0.0283	950	7025	500
	800	53	4.5	2.6	53.5	0.0221	850	8672	500
	1000	53	4.5	2.7	59.0	0.0176	750	11150	300

B

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
: 15,000 Volts between Line to Line

AC Testing voltage : 30,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
	25	177	151	148	146	137	134	129
	35	215	184	179	174	164	160	154
	50	258	220	215	206	194	188	181
	70	322	275	268	252	236	234	224
	95	394	336	327	301	283	279	268
	120	454	388	377	343	321	317	303
	150	517	441	429	385	360	354	339
1	185	595	508	494	435	406	400	382
	240	705	602	584	506	470	474	451
	300	805	688	667	572	529	534	508
	400	935	798	773	652	599	608	575
	500	1093	932	900	744	677	705	664
	630	1272	1081	1039	847	760	800	748
	800	1460	1235	1181	953	840	918	853
	1000	1669	1403	1331	1059	916	1016	932

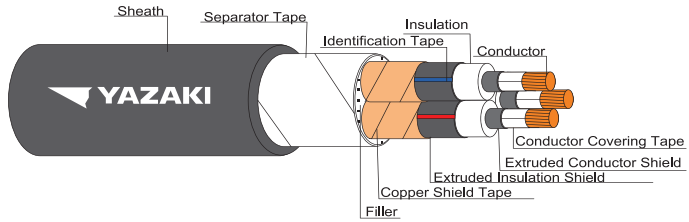
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	25	0.9271	0.9271	0.9271	0.6511	0.5125	0.4663	0.2045	0.1610	0.1465	0.9494	0.9410	0.9386
	35	0.6683	0.6683	0.6683	0.6316	0.4930	0.4467	0.1984	0.1549	0.1403	0.6971	0.6860	0.6829
	50	0.4936	0.4937	0.4937	0.5986	0.4600	0.4138	0.1881	0.1445	0.1300	0.5282	0.5144	0.5105
	70	0.3420	0.3421	0.3422	0.5773	0.4387	0.3925	0.1814	0.1378	0.1233	0.3871	0.3688	0.3637
	95	0.2465	0.2466	0.2467	0.5569	0.4183	0.3721	0.1750	0.1314	0.1169	0.3023	0.2794	0.2730
	120	0.1956	0.1958	0.1957	0.5418	0.4032	0.3570	0.1702	0.1267	0.1122	0.2593	0.2332	0.2256
	150	0.1587	0.1588	0.1590	0.5307	0.3921	0.3459	0.1667	0.1232	0.1087	0.2302	0.2010	0.1926
1	185	0.1271	0.1273	0.1275	0.5227	0.3841	0.3379	0.1642	0.1207	0.1062	0.2077	0.1754	0.1659
	240	0.0972	0.0974	0.0976	0.5097	0.3711	0.3249	0.1601	0.1166	0.1021	0.1873	0.1519	0.1412
	300	0.0779	0.0782	0.0785	0.4991	0.3604	0.3142	0.1568	0.1132	0.0987	0.1751	0.1376	0.1261
	400	0.0616	0.0620	0.0624	0.4895	0.3508	0.3046	0.1538	0.1102	0.0957	0.1657	0.1264	0.1142
	500	0.0487	0.0494	0.0500	0.4814	0.3427	0.2965	0.1512	0.1077	0.0931	0.1589	0.1185	0.1057
	630	0.0386	0.0396	0.0404	0.4721	0.3335	0.2872	0.1483	0.1048	0.0902	0.1533	0.1120	0.0989
	800	0.0313	0.0325	0.0335	0.4648	0.3262	0.2799	0.1460	0.1025	0.0879	0.1493	0.1075	0.0941
	1000	0.0262	0.0277	0.0289	0.4553	0.3167	0.2704	0.1430	0.0995	0.0849	0.1454	0.1033	0.0897

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
: 15,000 Volts between Line to Line

AC Testing voltage : 30,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

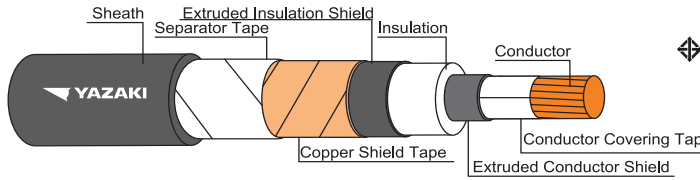
Number of core	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard Length per drum (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
3	25	6	4.5	2.4	45.5	0.727	3,300	142	137	112	2136	500
	35	6	4.5	2.5	48.0	0.524	3,000	173	165	134	2531	500
	50	6	4.5	2.6	51.0	0.387	2,700	208	195	159	3026	500
	70	12	4.5	2.7	54.5	0.268	2,400	258	238	194	3795	500
	95	15	4.5	2.8	59.0	0.193	2,100	314	284	232	4744	500
	120	18	4.5	2.9	62.5	0.153	1,950	362	323	267	5658	500
	150	18	4.5	3.1	66.0	0.124	1,800	409	361	299	6665	500
	185	30	4.5	3.2	70.5	0.0991	1,650	468	407	337	7909	300
	240	34	4.5	3.4	76.0	0.0754	1,500	551	470	393	9883	300
	300	34	4.5	3.5	81.0	0.0601	1,350	629	529	443	11893	300
	400	53	4.5	3.7	87.0	0.0470	1,200	722	598	505	14605	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	25	0.9272	0.4248	0.1335	0.9368
	35	0.6684	0.4057	0.1275	0.6804
	50	0.4938	0.3749	0.1178	0.5077
	70	0.3421	0.3546	0.1114	0.3598
	95	0.2467	0.3369	0.1058	0.2684
	120	0.1958	0.3223	0.1013	0.2204
	150	0.1591	0.3129	0.0983	0.1870
	185	0.1276	0.3053	0.0959	0.1596
	240	0.0978	0.2935	0.0922	0.1344
	300	0.0788	0.2848	0.0895	0.1192
	400	0.0628	0.2762	0.0868	0.1071

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

TIS 2143-2546

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

AC Testing voltage : 42,000 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1 TIS 2143-2546

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

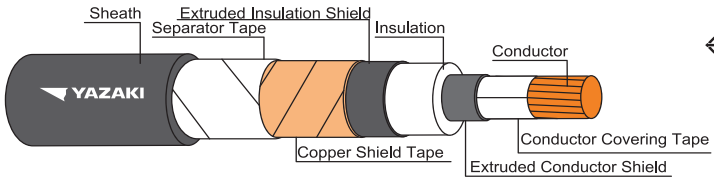
Number of core	Norminal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	35	6	5.5	1.8	26.0	0.524	3,460	849	500
	50	6	5.5	1.8	27.0	0.387	3,130	1000	500
	70	12	5.5	1.8	29.0	0.268	2,790	1236	500
	95	15	5.5	1.9	31.0	0.193	2,500	1540	500
	120	18	5.5	2.0	32.5	0.153	2,290	1835	500
	150	18	5.5	2.0	34.0	0.124	2,130	2130	500
	185	30	5.5	2.1	36.0	0.0991	1,970	2499	500
	240	34	5.5	2.1	38.5	0.0754	1,770	3102	500
	300	34	5.5	2.2	41.0	0.0601	1,620	3744	500
	400	53	5.5	2.3	44.0	0.0470	1,480	4627	500
	500	53	5.5	2.4	47.5	0.0366	1,320	5775	500
	630	53	5.5	2.5	51.5	0.0283	1,190	7202	500
	800	53	5.5	2.6	55.5	0.0221	1,070	8841	500
	1000	53	5.5	2.8	61.0	0.0176	940	11361	300

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2

TIS 2143-2546



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

AC Testing voltage : 42,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1
TIS 2143-2546

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectionalarea (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
1	35	210	183	179	174	164	160	154
	50	253	219	214	206	194	192	184
	70	315	273	266	252	237	233	224
	95	385	333	325	302	283	279	267
	120	445	385	375	343	321	316	303
	150	506	438	426	385	360	354	338
	185	581	503	490	435	406	408	389
	240	689	595	579	506	470	473	450
	300	792	684	665	572	529	533	507
	400	920	794	770	653	600	618	585
	500	1066	920	890	744	678	703	662
	630	1241	1067	1028	848	762	816	764
	800	1423	1221	1169	954	844	916	851
	1000	1628	1385	1318	1060	920	1043	963

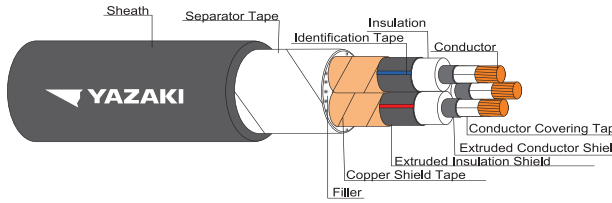
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	35	0.6683	0.6683	0.6683	0.6493	0.5107	0.4645	0.2040	0.1604	0.1459	0.6987	0.6873	0.6840
	50	0.4936	0.4937	0.4937	0.6155	0.4769	0.4307	0.1934	0.1498	0.1353	0.5301	0.5159	0.5119
	70	0.3420	0.3421	0.3420	0.5918	0.4531	0.4069	0.1859	0.1423	0.1278	0.3893	0.3705	0.3651
	95	0.2465	0.2466	0.2467	0.5718	0.4332	0.3870	0.1796	0.1361	0.1216	0.3050	0.2817	0.2750
	120	0.1956	0.1956	0.1957	0.5565	0.4179	0.3716	0.1748	0.1313	0.1167	0.2623	0.2356	0.2279
	150	0.1587	0.1588	0.1590	0.5448	0.4061	0.3599	0.1712	0.1276	0.1131	0.2334	0.2037	0.1951
	185	0.1271	0.1273	0.1275	0.5353	0.3967	0.3505	0.1682	0.1246	0.1101	0.2108	0.1781	0.1685
	240	0.0972	0.0974	0.0976	0.5204	0.3818	0.3355	0.1635	0.1199	0.1054	0.1902	0.1545	0.1436
	300	0.0779	0.0782	0.0785	0.5101	0.3715	0.3253	0.1603	0.1167	0.1022	0.1782	0.1405	0.1289
	400	0.0614	0.0620	0.0624	0.4998	0.3612	0.3150	0.1570	0.1135	0.0990	0.1686	0.1293	0.1170
	500	0.0487	0.0494	0.0498	0.4908	0.3522	0.3060	0.1542	0.1106	0.0961	0.1617	0.1212	0.1083
	630	0.0386	0.0396	0.0402	0.4909	0.3422	0.2960	0.1542	0.1075	0.0930	0.1590	0.1146	0.1013
	800	0.0313	0.0325	0.0333	0.4722	0.3335	0.2873	0.1483	0.1048	0.0903	0.1516	0.1097	0.0962
	1000	0.0262	0.0277	0.0287	0.4626	0.3240	0.2778	0.1453	0.1018	0.0873	0.1477	0.1055	0.0919

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

AC Testing voltage : 42,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Maximum Current Rating			Cable weight approx.	Standard Length per drum
								In air at 40°C	Direct burial at 30°C	Underground duct at 30°C		
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(kg/km)	(m)
3	35	6	5.5	2.7	52.5	0.524	3,460	169	161	136	2865	500
	50	6	5.5	2.8	56.0	0.387	3,130	204	191	160	3382	500
	70	12	5.5	2.9	59.5	0.268	2,790	254	234	195	4178	500
	95	15	5.5	3.0	64.0	0.193	2,500	311	281	236	5167	500
	120	18	5.5	3.1	67.5	0.153	2,290	358	319	268	6109	500
	150	18	5.5	3.2	70.5	0.124	2,130	405	358	300	7093	300
	185	30	5.5	3.3	75.0	0.0991	1,970	463	404	342	8376	300
	240	34	5.5	3.5	80.5	0.0754	1,770	546	468	395	10379	300
	300	34	5.5	3.7	86.0	0.0601	1,620	622	526	448	12449	300
	400	53	5.5	3.9	92.0	0.0470	1,480	715	595	506	15203	200

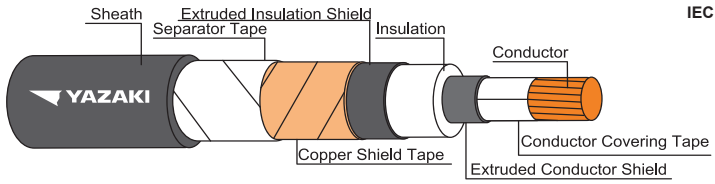
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area	A.C. Resistance	Inductance	Reactance	Impedance
		R	L	XL	Z
	(mm^2)	(Ω/km)	(mH/km)	(Ω/km)	(Ω/km)
3	35	0.6684	0.4254	0.1336	0.6816
	50	0.4938	0.3935	0.1236	0.5090
	70	0.3421	0.3720	0.1169	0.3615
	95	0.2467	0.3530	0.1109	0.2705
	120	0.1958	0.3375	0.1060	0.2227
	150	0.1591	0.3273	0.1028	0.1894
	185	0.1276	0.3187	0.1001	0.1622
	240	0.0978	0.3059	0.0961	0.1371
	300	0.0788	0.2964	0.0931	0.1220
	400	0.0628	0.2870	0.0902	0.1099

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

AC Testing voltage : 63,000 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

APPLICATION

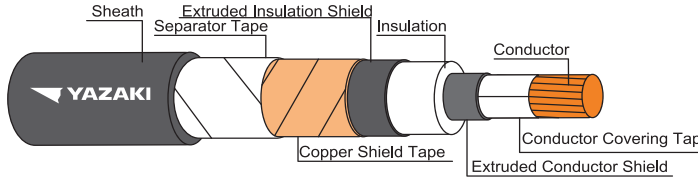
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard length per drum (m)
	50	6	8.0	2.0	32.5	0.387	4,010	1264	500
	70	12	8.0	2.0	34.5	0.268	3,620	1513	500
	95	15	8.0	2.1	36.5	0.193	3,260	1834	500
	120	18	8.0	2.1	38.0	0.153	3,020	2128	500
	150	18	8.0	2.2	39.5	0.124	2,820	2450	500
	185	30	8.0	2.2	41.5	0.0991	2,620	2820	500
1	240	34	8.0	2.3	44.0	0.0754	2,370	3460	500
	300	34	8.0	2.4	46.5	0.0601	2,190	4122	500
	400	53	8.0	2.5	49.0	0.0470	2,000	5029	500
	500	53	8.0	2.6	53.0	0.0366	1,800	6208	500
	630	53	8.0	2.7	57.0	0.0283	1,630	7667	500
	800	53	8.0	2.8	61.0	0.0221	1,480	9338	300
	1000	53	8.0	3.0	67.0	0.0176	1,300	11922	300

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

AC Testing voltage : 63,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

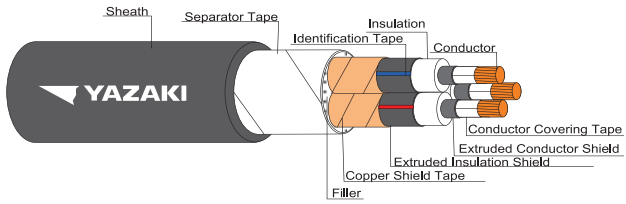
Number of core	Norminal cross sectional area (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
1	50	256	226	221	206	194	191	183
	70	319	281	275	252	237	237	228
	95	390	343	335	302	283	284	271
	120	450	395	385	343	322	322	308
	150	510	448	437	385	360	360	344
	185	586	514	501	390	364	364	347
	240	693	607	591	506	471	479	456
	300	796	696	678	572	530	541	513
	400	923	807	784	652	602	615	582
	500	1076	939	910	745	681	714	672
	630	1251	1088	1051	849	767	811	759
	800	1437	1243	1195	955	851	935	871
	1000	1640	1411	1348	1062	930	1036	956

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	50	0.4936	0.4937	0.4937	0.6525	0.5139	0.4676	0.2050	0.1614	0.1469	0.5345	0.5194	0.5151
	70	0.3420	0.3421	0.3420	0.6268	0.4882	0.4420	0.1969	0.1534	0.1389	0.3946	0.3749	0.3691
	95	0.2465	0.2466	0.2465	0.6048	0.4661	0.4199	0.1900	0.1464	0.1319	0.3112	0.2868	0.2796
	120	0.1956	0.1956	0.1957	0.5862	0.4475	0.4013	0.1842	0.1406	0.1261	0.2687	0.2409	0.2328
	150	0.1587	0.1588	0.1588	0.5743	0.4357	0.3895	0.1804	0.1369	0.1224	0.2403	0.2097	0.2005
	185	0.1271	0.1273	0.1273	0.5622	0.4236	0.3774	0.1766	0.1331	0.1186	0.2176	0.1842	0.1740
	240	0.0972	0.0974	0.0974	0.5466	0.4080	0.3618	0.1717	0.1282	0.1137	0.1973	0.1610	0.1497
	300	0.0779	0.0782	0.0783	0.5349	0.3963	0.3501	0.1680	0.1245	0.1100	0.1852	0.1470	0.1350
	400	0.0614	0.0618	0.0621	0.5231	0.3845	0.3383	0.1643	0.1208	0.1063	0.1754	0.1357	0.1231
	500	0.0487	0.0491	0.0491	0.5124	0.3738	0.3275	0.1610	0.1174	0.1029	0.1682	0.1273	0.1140
	630	0.0386	0.0392	0.0398	0.5009	0.3622	0.3160	0.1574	0.1138	0.0993	0.1620	0.1204	0.1070
	800	0.0313	0.0321	0.0329	0.4908	0.3522	0.3059	0.1542	0.1106	0.0961	0.1573	0.1152	0.1016
	1000	0.0262	0.0272	0.0282	0.4802	0.3415	0.2953	0.1509	0.1073	0.0928	0.1531	0.1107	0.0970

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

AC Testing voltage : 63,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Maximum Current Rating			Cable weight approx.	Standard Length per drum
								In air at 40°C	Direct burial at 30°C	Under-ground duct at 30°C		
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(kg/km)	(m)
3	50	6	8.0	3.2	67.5	0.387	4,010	205	190	164	4418	500
	70	12	8.0	3.3	71.5	0.268	3,620	262	236	199	5270	300
	95	15	8.0	3.4	75.5	0.193	3,260	320	284	240	6308	300
	120	18	8.0	3.5	79.0	0.153	3,020	368	323	273	7313	300
	150	18	8.0	3.6	82.0	0.124	2,820	417	362	305	8338	300
	185	30	8.0	3.7	86.5	0.0991	2,620	477	409	347	9691	300
	240	34	8.0	3.9	92.5	0.0754	2,370	561	473	401	11798	300
	300	34	8.0	4.0	97.5	0.0601	2,190	640	533	455	13923	200

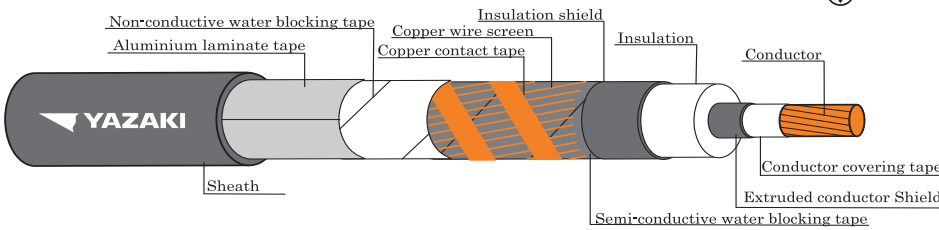
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area	A.C. Resistance	Inductance	Reactance	Impedance
	(mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3	50	0.4938	0.4336	0.1362	0.5122
	70	0.3421	0.4097	0.1287	0.3655
	95	0.2467	0.3883	0.1220	0.2752
	120	0.1958	0.3710	0.1166	0.2279
	150	0.1589	0.3593	0.1129	0.1949
	185	0.1274	0.3488	0.1096	0.1680
	240	0.0976	0.3340	0.1049	0.1433
	300	0.0785	0.3228	0.1014	0.1282
	400	0.0624	0.3117	0.0979	0.1161

69KV-CE

69kV 90°C CROSS-LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATHED POWER CABLE

TIS 2202-2547



CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Tape on Conductor	:	Semi-Conductive tape
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Water blocking tape	:	Non-conductive water blocking tape
Metallic screen	:	Copper wire screen with copper contact tape
Synthetic water blocking and cushioning tape	:	Non-conductive water blocking tape
Radial water barrier	:	Aluminium laminate tape
Sheath	:	Black polyethylene (PE/ST7)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
AC Testing voltage	:	90,000 Volts
Reference standard	:	TIS 2202-2547, TIS 2427-2552 IEC 60228

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Conductor diameter approx. (mm)	Conductor shield thickness nominal (mm)	Insulation thickness nominal (mm)	Insulation shield thickness nominal (mm)	Copper wire area nominal (mm²)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	400/95	53	23.5	1.5	11.0	1.5	95	3.5	67.5	0.0470	7000	500
	500/95	53	26.7	1.5	11.0	1.5	95	3.5	71.0	0.0366	8200	500
	630/95	53	30.3	1.5	11.0	1.5	95	3.5	74.5	0.0283	10000	500
	800/95	53	34.1	1.5	11.0	1.5	95	3.5	78.5	0.0221	11500	500
	800/120	53	34.1	1.5	11.0	1.5	120	3.5	78.5	0.0221	11500	500

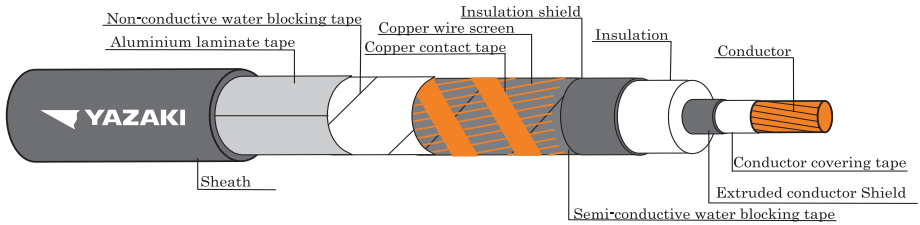
Number of core	Nominal cross sectional area (mm²)	Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)		A.C. Resistance R (Ω/km)		Inductance L (mH/km)		Reactance XL (Ω/km)		Impedance Z (Ω/km)	
		Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil
1	400/95	873	611	644	607	0.0613	0.0617	0.5835	0.3987	0.1833	0.1253	0.1933	0.1396
	500/95	1001	695	732	688	0.0485	0.0490	0.5679	0.3831	0.1784	0.1204	0.1849	0.1299
	630/95	1145	788	832	778	0.0384	0.0392	0.5543	0.3694	0.1741	0.1161	0.1783	0.1225
	800/95	1295	881	951	885	0.0311	0.0321	0.5411	0.3563	0.1700	0.1119	0.1728	0.1164
	800/120	1295	881	951	885	0.0311	0.0321	0.5411	0.3563	0.1700	0.1119	0.1728	0.1164

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

115KV-CE

115kV 90°C CROSS-LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATHED POWER CABLE

TIS 2202-2547



CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Tape on Conductor	:	Semi-Conductive tape
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive tape Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Water blocking tape	:	Semi-conductive water blocking tape
Metallic screen	:	Copper wire screen with copper contact tape
Synthetic water blocking and cushioning tape	:	Non-conductive water blocking tape
Radial water barrier	:	Aluminium laminate tape
Sheath	:	Black polyethylene (PE/ST7)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
AC Testing voltage	:	160,000 Volts
Reference standard	:	TIS 2202-2547, TIS 2427-2552 IEC 60228

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

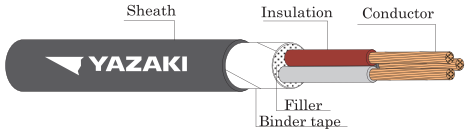
Number of core	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Conductor diameter approx. (mm)	Conductor shield thickness nominal (mm)	Insulation thickness nominal (mm)	Insulation shield thickness nominal (mm)	Copper wire area nominal (mm²)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	400/95	53	23.5	1.5	16.0	1.5	95	3.5	77.0	0.0470	8000	500
	500/95	53	26.7	1.5	16.0	1.5	95	3.6	80.5	0.0366	9000	500
	630/95	53	30.3	1.5	16.0	1.5	95	3.6	84.0	0.0283	11000	500
	800/95	53	34.1	1.5	16.0	1.5	95	3.7	87.5	0.0221	12500	500
	800/120	53	34.1	1.5	16.0	1.5	120	3.7	87.5	0.0221	12600	500

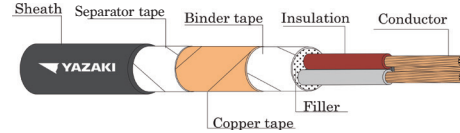
Number of core	Nominal cross sectional area (mm²)	Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)		A.C. Resistance R (Ω/km)		Inductance L (mH/km)		Reactance XL (Ω/km)		Impedance Z (Ω/km)	
		Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil
1	400/95	850	607	646	608	0.0613	0.0617	0.6128	0.4279	0.1925	0.1344	0.2020	0.1479
	500/95	975	691	735	690	0.0485	0.0490	0.5958	0.4110	0.1872	0.1291	0.1934	0.1381
	630/95	1117	785	848	793	0.0384	0.0390	0.5805	0.3956	0.1824	0.1243	0.1864	0.1303
	800/95	1264	879	954	887	0.0311	0.0318	0.5665	0.3817	0.1780	0.1199	0.1807	0.1241
	800/120	1264	879	954	887	0.0311	0.0318	0.5665	0.3817	0.1780	0.1199	0.1807	0.1241

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE





CABLE STRUCTURE

Conductor : Flexible annealed copper

Insulation : Polyvinyl chloride (PVC)

Insulation color
2 Cores : Blue and Brown
3 Cores : Brown, Black, Grey
4 Cores : Blue, Brown, Black, Grey
More than 4 Cores :
Black with marking numbers, colored white, printed continuously throungout the whole length of insulated wires for the porpose of core identification.

Filler : Non-hygroscopic material

Binder tape and Separator tape : Non-hygroscopic tape

Shield (for CVV-S cable) : Copper tape

Sheath : Black polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage no exceeding 600 Volts

AC Testing voltage : 2,000 Volts

Reference standard : THAI YAZAKI STANDARD

B

APPLICATION

For supervisory electrical equipment, station control circuits, outdoor, suitable installation in the dry or wet cable trenches.

Number of core	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
2	0.5	Flexible	0.6	1.2	9.0	39.0	0.0130	80	300/D
	0.75	Flexible	0.6	1.2	9.5	26.0	0.0114	89	300/D
	1	Flexible	0.6	1.2	9.5	19.5	0.0104	100	300/D
	1.5	Flexible	0.6	1.2	10.0	13.3	0.0089	112	300/D
	2.5	Flexible	0.7	1.2	11.5	7.98	0.0081	154	300/D
	4	Flexible	0.8	1.2	13.0	4.95	0.0076	212	300/D
	6	Flexible	0.8	1.4	15.0	3.30	0.0061	293	300/D
3	0.5	Flexible	0.6	1.2	9.0	39.0	0.0130	91	300/D
	0.75	Flexible	0.6	1.2	9.5	26.0	0.0114	103	300/D
	1	Flexible	0.6	1.2	10.0	19.5	0.0104	115	300/D
	1.5	Flexible	0.6	1.2	10.5	13.3	0.0089	132	300/D
	2.5	Flexible	0.7	1.2	11.5	7.98	0.0081	184	300/D
	4	Flexible	0.8	1.4	14.0	4.95	0.0076	274	300/D
	6	Flexible	0.8	1.4	15.5	3.30	0.0061	370	300/D
4	0.5	Flexible	0.6	1.2	10.0	39.0	0.0130	101	300/D
	0.75	Flexible	0.6	1.2	10.5	26.0	0.0114	117	300/D
	1	Flexible	0.6	1.2	10.5	19.5	0.0104	138	300/D
	1.5	Flexible	0.6	1.2	11.0	13.3	0.0089	159	300/D
	2.5	Flexible	0.7	1.2	12.5	7.98	0.0081	223	300/D
	4	Flexible	0.8	1.4	15.0	4.95	0.0076	334	300/D
	6	Flexible	0.8	1.4	17.0	3.30	0.0061	462	300/D
5	0.5	Flexible	0.6	1.2	10.5	39.0	0.0130	118	300/D
	0.75	Flexible	0.6	1.2	11.0	26.0	0.0114	138	300/D
	1	Flexible	0.6	1.2	11.5	19.5	0.0104	158	300/D
	1.5	Flexible	0.6	1.2	12.0	13.3	0.0089	189	300/D
	2.5	Flexible	0.7	1.4	14.0	7.98	0.0081	280	300/D
	4	Flexible	0.8	1.4	16.5	4.95	0.0076	402	300/D
	6	Flexible	0.8	1.4	18.5	3.30	0.0061	557	300/D

D = Packing in drum

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of core	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.2	11.5	39.0	0.0130	134	300/D
	0.75	Flexible	0.6	1.2	12.0	26.0	0.0114	158	300/D
	1	Flexible	0.6	1.2	12.0	19.5	0.0104	182	300/D
6	1.5	Flexible	0.6	1.2	13.0	13.3	0.0089	214	300/D
	2.5	Flexible	0.7	1.4	15.0	7.98	0.0081	326	300/D
	4	Flexible	0.8	1.4	18.0	4.95	0.0076	473	300/D
	6	Flexible	0.8	1.4	20.5	3.30	0.0061	658	300/D
	0.5	Flexible	0.6	1.2	11.5	39.0	0.0130	142	300/D
	0.75	Flexible	0.6	1.2	12.0	26.0	0.0114	168	300/D
	1	Flexible	0.6	1.2	12.0	19.5	0.0104	194	300/D
7	1.5	Flexible	0.6	1.2	13.0	13.3	0.0089	229	300/D
	2.5	Flexible	0.7	1.4	15.0	7.98	0.0081	351	300/D
	4	Flexible	0.8	1.4	18.0	4.95	0.0076	513	300/D
	6	Flexible	0.8	1.4	20.5	3.30	0.0061	718	300/D
	0.5	Flexible	0.6	1.2	12.0	39.0	0.0130	161	300/D
	0.75	Flexible	0.6	1.2	12.5	26.0	0.0114	191	300/D
	1	Flexible	0.6	1.2	13.0	19.5	0.0104	223	300/D
8	1.5	Flexible	0.6	1.4	14.5	13.3	0.0089	276	300/D
	2.5	Flexible	0.7	1.4	16.5	7.98	0.0081	405	300/D
	4	Flexible	0.8	1.4	19.5	4.95	0.0076	594	300/D
	6	Flexible	0.8	1.4	22.0	3.30	0.0061	826	300/D
	0.5	Flexible	0.6	1.2	12.5	39.0	0.0130	174	300/D
	0.75	Flexible	0.6	1.2	13.5	26.0	0.0114	207	300/D
	1	Flexible	0.6	1.4	14.0	19.5	0.0104	254	300/D
9	1.5	Flexible	0.6	1.4	15.5	13.3	0.0089	300	300/D
	2.5	Flexible	0.7	1.4	17.5	7.98	0.0081	454	300/D
	4	Flexible	0.8	1.4	20.5	4.95	0.0076	663	300/D
	6	Flexible	0.8	1.4	23.5	3.30	0.0061	935	300/D
	0.5	Flexible	0.6	1.2	13.5	39.0	0.0130	191	300/D
	0.75	Flexible	0.6	1.4	14.5	26.0	0.0114	249	300/D
	1	Flexible	0.6	1.4	15.0	19.5	0.0104	288	300/D
10	1.5	Flexible	0.6	1.4	16.5	13.3	0.0089	340	300/D
	2.5	Flexible	0.7	1.4	18.5	7.98	0.0081	500	300/D
	4	Flexible	0.8	1.4	22.0	4.95	0.0076	732	300/D
	6	Flexible	0.8	1.8	26.5	3.30	0.0061	1102	300/D
	0.5	Flexible	0.6	1.2	13.5	39.0	0.0130	200	300/D
	0.75	Flexible	0.6	1.4	14.5	26.0	0.0114	253	300/D
	1	Flexible	0.6	1.4	15.0	19.5	0.0104	295	300/D
11	1.5	Flexible	0.6	1.4	16.5	13.3	0.0089	351	300/D
	2.5	Flexible	0.7	1.4	18.5	7.98	0.0081	525	300/D
	4	Flexible	0.8	1.4	22.0	4.95	0.0076	767	300/D
	6	Flexible	0.8	1.8	26.5	3.30	0.0061	1155	300/D
	0.5	Flexible	0.6	1.4	14.5	39.0	0.0130	227	300/D
	0.75	Flexible	0.6	1.4	15.0	26.0	0.0114	270	300/D
	1	Flexible	0.6	1.4	15.5	19.5	0.0104	323	300/D
12	1.5	Flexible	0.6	1.4	17.0	13.3	0.0089	382	300/D
	2.5	Flexible	0.7	1.4	19.5	7.98	0.0081	568	300/D
	4	Flexible	0.8	1.4	23.0	4.95	0.0076	855	300/D
	6	Flexible	0.8	1.8	27.5	3.30	0.0061	1256	300/D
	0.5	Flexible	0.6	1.4	15.0	39.0	0.0130	247	300/D
	0.75	Flexible	0.6	1.4	16.0	26.0	0.0114	294	300/D
	1	Flexible	0.6	1.4	16.5	19.5	0.0104	343	300/D
13	1.5	Flexible	0.6	1.4	17.5	13.3	0.0089	405	300/D
	2.5	Flexible	0.7	1.4	20.0	7.98	0.0081	603	300/D
	4	Flexible	0.8	1.4	24.0	4.95	0.0076	915	300/D
	6	Flexible	0.8	1.8	28.5	3.30	0.0061	1344	300/D
	0.5	Flexible	0.6	1.4	15.0	39.0	0.0130	247	300/D
	0.75	Flexible	0.6	1.4	16.0	26.0	0.0114	297	300/D
	1	Flexible	0.6	1.4	16.5	19.5	0.0104	349	300/D
14	1.5	Flexible	0.6	1.4	17.5	13.3	0.0089	416	300/D
	2.5	Flexible	0.7	1.4	20.0	7.98	0.0081	626	300/D
	4	Flexible	0.8	1.4	24.0	4.95	0.0076	939	300/D
	6	Flexible	0.8	1.8	28.5	3.30	0.0061	1394	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of core	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	260	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	317	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	372	300/D
15	1.5	Flexible	0.6	1.4	18.0	13.3	0.0089	444	300/D
	2.5	Flexible	0.7	1.4	21.0	7.98	0.0081	672	300/D
	4	Flexible	0.8	1.8	26.0	4.95	0.0076	1061	300/D
	6	Flexible	0.8	1.8	29.5	3.30	0.0061	1503	300/D
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	273	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	329	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	387	300/D
16	1.5	Flexible	0.6	1.4	18.5	13.3	0.0089	464	300/D
	2.5	Flexible	0.7	1.4	21.0	7.98	0.0081	702	300/D
	4	Flexible	0.8	1.8	26.5	4.95	0.0076	1108	300/D
	6	Flexible	0.8	1.8	30.0	3.30	0.0061	1570	300/D
	0.5	Flexible	0.6	1.4	16.5	39.0	0.0130	291	300/D
	0.75	Flexible	0.6	1.4	17.5	26.0	0.0114	362	300/D
	1	Flexible	0.6	1.4	18.0	19.5	0.0104	424	300/D
17	1.5	Flexible	0.6	1.4	19.5	13.3	0.0089	505	300/D
	2.5	Flexible	0.7	1.4	22.5	7.98	0.0081	771	300/D
	4	Flexible	0.8	1.8	27.5	4.95	0.0076	1202	300/D
	6	Flexible	0.8	1.8	31.5	3.30	0.0061	1707	300/D
	0.5	Flexible	0.6	1.4	16.5	39.0	0.0130	300	300/D
	0.75	Flexible	0.6	1.4	17.5	26.0	0.0114	363	300/D
	1	Flexible	0.6	1.4	18.0	19.5	0.0104	428	300/D
18	1.5	Flexible	0.6	1.4	19.5	13.3	0.0089	514	300/D
	2.5	Flexible	0.7	1.4	22.5	7.98	0.0081	780	300/D
	4	Flexible	0.8	1.8	27.5	4.95	0.0076	1219	300/D
	6	Flexible	0.8	1.8	31.5	3.30	0.0061	1727	300/D
	0.5	Flexible	0.6	1.4	16.5	39.0	0.0130	307	300/D
	0.75	Flexible	0.6	1.4	17.5	26.0	0.0114	372	300/D
	1	Flexible	0.6	1.4	18.0	19.5	0.0104	440	300/D
19	1.5	Flexible	0.6	1.4	19.5	13.3	0.0089	529	300/D
	2.5	Flexible	0.7	1.4	22.5	7.98	0.0081	805	300/D
	4	Flexible	0.8	1.8	27.5	4.95	0.0076	1258	300/D
	6	Flexible	0.8	1.8	31.5	3.30	0.0061	1785	300/D
	0.5	Flexible	0.6	1.4	16.5	39.0	0.0130	319	300/D
	0.75	Flexible	0.6	1.4	17.5	26.0	0.0114	387	300/D
	1	Flexible	0.6	1.4	18.0	19.5	0.0104	458	300/D
20	1.5	Flexible	0.6	1.4	20.0	13.3	0.0089	553	300/D
	2.5	Flexible	0.7	1.4	23.0	7.98	0.0081	847	300/D
	4	Flexible	0.8	1.8	28.5	4.95	0.0076	1330	300/D
	6	Flexible	0.8	1.8	32.5	3.30	0.0061	1888	300/D
	0.5	Flexible	0.6	1.4	17.0	39.0	0.0130	333	300/D
	0.75	Flexible	0.6	1.4	18.0	26.0	0.0114	405	300/D
	1	Flexible	0.6	1.4	18.5	19.5	0.0104	480	300/D
21	1.5	Flexible	0.6	1.4	20.0	13.3	0.0089	579	300/D
	2.5	Flexible	0.7	1.4	23.5	7.98	0.0081	883	300/D
	4	Flexible	0.8	1.8	29.0	4.95	0.0076	1385	300/D
	6	Flexible	0.8	1.8	33.5	3.30	0.0061	1967	300/D
	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	353	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	430	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	511	300/D
22	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	615	300/D
	2.5	Flexible	0.7	1.8	25.5	7.98	0.0081	990	300/D
	4	Flexible	0.8	1.8	30.5	4.95	0.0076	1467	300/D
	6	Flexible	0.8	1.8	35.0	3.30	0.0061	2085	300/D
	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	360	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	439	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	522	300/D
23	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	630	300/D
	2.5	Flexible	0.7	1.8	25.5	7.98	0.0081	1017	300/D
	4	Flexible	0.8	1.8	30.5	4.95	0.0076	1512	300/D
	6	Flexible	0.8	1.8	35.0	3.30	0.0061	2154	300/D

D = Packing in drum

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of core	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.4	18.5	39.0	0.0130	379	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	461	300/D
	1	Flexible	0.6	1.4	20.5	19.5	0.0104	546	300/D
24	1.5	Flexible	0.6	1.4	22.0	13.3	0.0089	660	300/D
	2.5	Flexible	0.7	1.8	26.5	7.98	0.0081	1062	300/D
	4	Flexible	0.8	1.8	32.0	4.95	0.0076	1579	300/D
	6	Flexible	0.8	2.2	37.5	3.30	0.0061	2316	300/D
	0.5	Flexible	0.6	1.4	18.5	39.0	0.0130	388	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	473	300/D
	1	Flexible	0.6	1.4	20.5	19.5	0.0104	560	300/D
25	1.5	Flexible	0.6	1.4	22.0	13.3	0.0089	679	300/D
	2.5	Flexible	0.7	1.8	26.5	7.98	0.0081	1093	300/D
	4	Flexible	0.8	1.8	32.0	4.95	0.0076	1628	300/D
	6	Flexible	0.8	2.2	37.5	3.30	0.0061	2389	300/D
	0.5	Flexible	0.6	1.4	18.5	39.0	0.0130	397	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	485	300/D
	1	Flexible	0.6	1.4	20.5	19.5	0.0104	576	300/D
26	1.5	Flexible	0.6	1.4	22.0	13.3	0.0089	699	300/D
	2.5	Flexible	0.7	1.8	26.5	7.98	0.0081	1124	300/D
	4	Flexible	0.8	1.8	32.0	4.95	0.0076	1678	300/D
	6	Flexible	0.8	2.2	37.5	3.30	0.0061	2465	300/D
	0.5	Flexible	0.6	1.4	19.0	39.0	0.0130	407	300/D
	0.75	Flexible	0.6	1.4	20.5	26.0	0.0114	497	300/D
	1	Flexible	0.6	1.4	21.0	19.5	0.0104	592	300/D
27	1.5	Flexible	0.6	1.4	22.5	13.3	0.0089	717	300/D
	2.5	Flexible	0.7	1.8	27.5	7.98	0.0081	1153	300/D
	4	Flexible	0.8	1.8	33.0	4.95	0.0076	1725	300/D
	6	Flexible	0.8	2.2	38.5	3.30	0.0061	2531	300/D
	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	432	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	529	300/D
	1	Flexible	0.6	1.4	21.5	19.5	0.0104	629	300/D
28	1.5	Flexible	0.6	1.4	23.5	13.3	0.0089	778	300/D
	2.5	Flexible	0.7	1.8	28.5	7.98	0.0081	1228	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1835	300/D
	6	Flexible	0.8	2.2	40.0	3.30	0.0061	2690	300/D
	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	430	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	528	300/D
	1	Flexible	0.6	1.4	21.5	19.5	0.0104	628	300/D
29	1.5	Flexible	0.6	1.4	23.5	13.3	0.0089	777	300/D
	2.5	Flexible	0.7	1.8	28.5	7.98	0.0081	1229	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1841	300/D
	6	Flexible	0.8	2.2	40.0	3.30	0.0061	2704	300/D
	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	440	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	540	300/D
	1	Flexible	0.6	1.4	21.5	19.5	0.0104	644	300/D
30	1.5	Flexible	0.6	1.4	23.5	13.3	0.0089	796	300/D
	2.5	Flexible	0.7	1.8	28.5	7.98	0.0081	1260	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1892	300/D
	6	Flexible	0.8	2.2	40.0	3.30	0.0061	2779	300/D
	0.5	Flexible	0.6	1.4	20.5	39.0	0.0130	468	300/D
	0.75	Flexible	0.6	1.4	21.5	26.0	0.0114	574	300/D
	1	Flexible	0.6	1.4	22.5	19.5	0.0104	686	300/D
31	1.5	Flexible	0.6	1.4	24.5	13.3	0.0089	846	300/D
	2.5	Flexible	0.7	1.8	29.5	7.98	0.0081	1338	300/D
	4	Flexible	0.8	1.8	35.0	4.95	0.0076	2006	300/D
	6	Flexible	0.8	2.2	41.5	3.30	0.0061	2945	300/D
	0.5	Flexible	0.6	1.4	20.5	39.0	0.0130	465	300/D
	0.75	Flexible	0.6	1.4	21.5	26.0	0.0114	573	300/D
	1	Flexible	0.6	1.4	22.5	19.5	0.0104	685	300/D
32	1.5	Flexible	0.6	1.4	24.5	13.3	0.0089	845	300/D
	2.5	Flexible	0.7	1.8	29.5	7.98	0.0081	1339	300/D
	4	Flexible	0.8	1.8	35.0	4.95	0.0076	2012	300/D
	6	Flexible	0.8	2.2	41.5	3.30	0.0061	2958	300/D

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
33	0.5	Flexible	0.6	1.4	20.5	39.0	0.0130	475	300/D
	0.75	Flexible	0.6	1.4	21.5	26.0	0.0114	585	300/D
	1	Flexible	0.6	1.4	22.5	19.5	0.0104	700	300/D
	1.5	Flexible	0.6	1.4	24.5	13.3	0.0089	865	300/D
	2.5	Flexible	0.7	1.8	29.5	7.98	0.0081	1370	300/D
	4	Flexible	0.8	1.8	35.0	4.95	0.0076	2063	300/D
	6	Flexible	0.8	2.2	41.5	3.30	0.0061	3034	300/D
34	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	504	300/D
	0.75	Flexible	0.6	1.4	22.5	26.0	0.0114	619	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	752	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	964	300/D
	2.5	Flexible	0.7	1.8	30.5	7.98	0.0081	1449	300/D
	4	Flexible	0.8	2.2	37.5	4.95	0.0076	2241	300/D
35	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	501	300/D
	0.75	Flexible	0.6	1.4	22.5	26.0	0.0114	617	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	752	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	964	300/D
	2.5	Flexible	0.7	1.8	30.5	7.98	0.0081	1449	300/D
	4	Flexible	0.8	2.2	37.5	4.95	0.0076	2248	300/D
36	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	511	300/D
	0.75	Flexible	0.6	1.4	22.5	26.0	0.0114	629	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	767	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	983	300/D
	2.5	Flexible	0.7	1.8	30.5	7.98	0.0081	1481	300/D
	4	Flexible	0.8	2.2	37.5	4.95	0.0076	2298	300/D
37	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	518	300/D
	0.75	Flexible	0.6	1.4	22.5	26.0	0.0114	640	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	780	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	1000	300/D
	2.5	Flexible	0.7	1.8	30.5	7.98	0.0081	1507	300/D
	4	Flexible	0.8	2.2	37.5	4.95	0.0076	2341	300/D
38	0.5	Flexible	0.6	1.4	21.5	39.0	0.0130	535	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	661	300/D
	1	Flexible	0.6	1.4	23.5	19.5	0.0104	804	300/D
	1.5	Flexible	0.6	1.8	26.5	13.3	0.0089	1032	300/D
	2.5	Flexible	0.7	1.8	31.0	7.98	0.0081	1556	300/D
	4	Flexible	0.8	2.2	38.0	4.95	0.0076	2418	300/D
39	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	547	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	675	300/D
	1	Flexible	0.6	1.4	24.0	19.5	0.0104	823	300/D
	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1056	300/D
	2.5	Flexible	0.7	1.8	31.5	7.98	0.0081	1593	300/D
	4	Flexible	0.8	2.2	39.0	4.95	0.0076	2475	300/D
40	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	554	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	685	300/D
	1	Flexible	0.6	1.4	24.0	19.5	0.0104	836	300/D
	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1072	300/D
	2.5	Flexible	0.7	1.8	31.5	7.98	0.0081	1619	300/D
	4	Flexible	0.8	2.2	39.0	4.95	0.0076	2520	300/D
41	0.5	Flexible	0.6	1.4	22.5	39.0	0.0130	575	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	723	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	918	300/D
	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1112	300/D
	2.5	Flexible	0.7	1.8	32.5	7.98	0.0081	1677	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2604	300/D

B

D = Packing in drum

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
42	0.5	Flexible	0.6	1.4	22.5	39.0	0.0130	584	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	736	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	933	300/D
	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1130	300/D
	2.5	Flexible	0.7	1.8	32.5	7.98	0.0081	1708	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2654	300/D
43	0.5	Flexible	0.6	1.4	22.5	39.0	0.0130	591	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	745	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	945	300/D
	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1146	300/D
	2.5	Flexible	0.7	1.8	32.5	7.98	0.0081	1736	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2701	300/D
44	0.5	Flexible	0.6	1.4	23.5	39.0	0.0130	609	300/D
	0.75	Flexible	0.6	1.8	26.0	26.0	0.0114	816	300/D
	1	Flexible	0.6	1.8	26.5	19.5	0.0104	970	300/D
	1.5	Flexible	0.6	1.8	29.0	13.3	0.0089	1178	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1782	300/D
45	0.5	Flexible	0.6	1.4	23.5	39.0	0.0130	618	300/D
	0.75	Flexible	0.6	1.8	26.0	26.0	0.0114	828	300/D
	1	Flexible	0.6	1.8	26.5	19.5	0.0104	986	300/D
	1.5	Flexible	0.6	1.8	29.0	13.3	0.0089	1197	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1813	300/D
46	0.5	Flexible	0.6	1.4	23.5	39.0	0.0130	628	300/D
	0.75	Flexible	0.6	1.8	26.0	26.0	0.0114	841	300/D
	1	Flexible	0.6	1.8	26.5	19.5	0.0104	1001	300/D
	1.5	Flexible	0.6	1.8	29.0	13.3	0.0089	1217	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1844	300/D
47	0.5	Flexible	0.6	1.4	23.5	39.0	0.0130	637	300/D
	0.75	Flexible	0.6	1.8	26.0	26.0	0.0114	853	300/D
	1	Flexible	0.6	1.8	26.5	19.5	0.0104	1016	300/D
	1.5	Flexible	0.6	1.8	29.0	13.3	0.0089	1236	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1876	300/D
48	0.5	Flexible	0.6	1.4	24.0	39.0	0.0130	659	300/D
	0.75	Flexible	0.6	1.8	26.5	26.0	0.0114	866	300/D
	1	Flexible	0.6	1.8	27.0	19.5	0.0104	1034	300/D
	1.5	Flexible	0.6	1.8	29.5	13.3	0.0089	1256	300/D
	2.5	Flexible	0.7	1.8	34.5	7.98	0.0081	1905	300/D

B

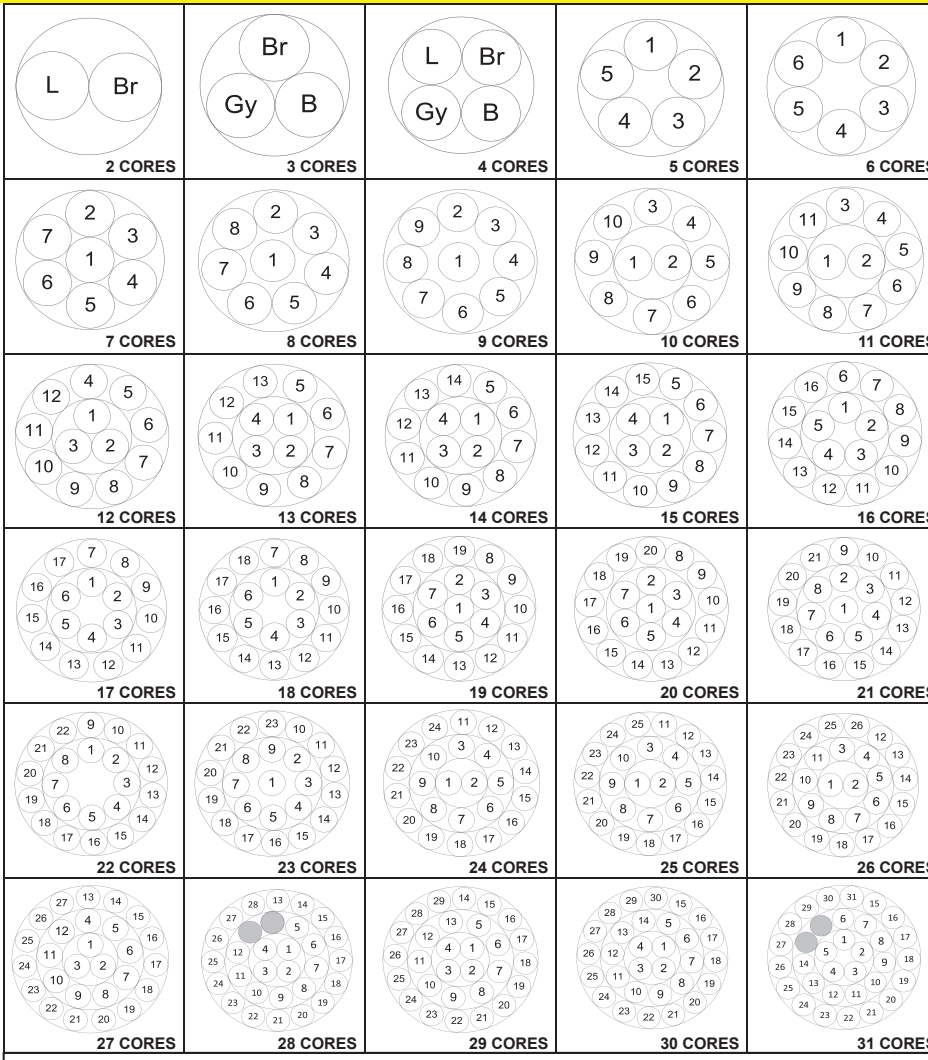
D = Packing in drum

This table show only flexible stranded condutor. If you want to have solid or concentric conductor type, please contact with our sales department for CW-S: The overall diameter of cable and cable weight shall be change a little bit more.
“Remark : Special protection can be produce.

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

ARRANGEMENT OF CORES FOR CW or CW-S



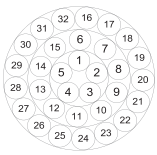
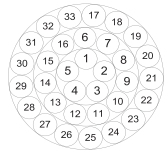
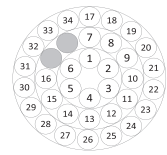
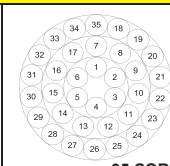
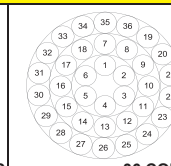
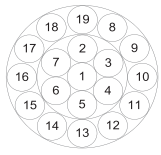
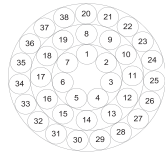
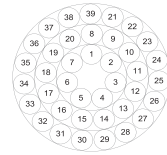
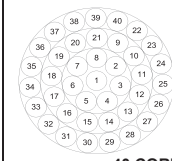
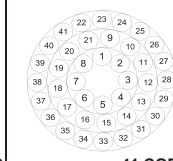
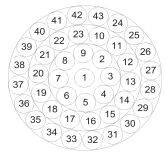
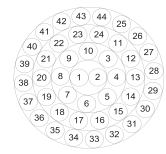
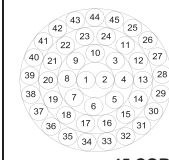
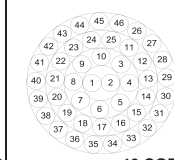
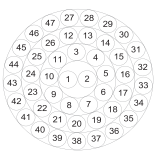
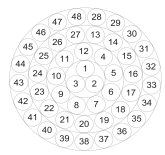
NOTE : Fillers are necessary to fill the cable a substantially circular cross section.
(If the stranded cores be circle enough, fillers shall not be necessary)

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

ARRANGEMENT OF CORES FOR CW or CW-S

 32 CORES	 33 CORES	 34 CORES	 35 CORES	 36 CORES
 37 CORES	 38 CORES	 39 CORES	 40 CORES	 41 CORES
 42 CORES	 43 CORES	 44 CORES	 45 CORES	 46 CORES
 47 CORES	 48 CORES			

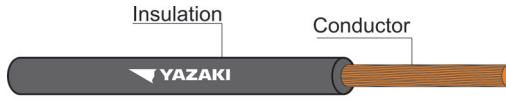
NOTE : Fillers are necessary to fill the cable a substantially circular cross section.
(If the stranded cores be circle enough, fillers shall not be necessary)

B

T-AV

60°C LOW VOLTAGE FLEXIBLE CONDUCTOR PVC INSULATED FOR AUTOMOBILE

TIS 118-2522



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC)

Insulation color : Black

TECHNICAL DATA

Classification : Maximum conductor temperature 60°C

AC Testing voltage : 1,000 Volts

Reference standard : TIS 118-2522

Remark :
Nowadays the wires are produced according to two kinds of Standard. But such the Ministerial Regulations shall come into force upon their publication in Government Gazette, the production must be in the way of THAI INDUSTRIAL STANDARD.

APPLICATION

For Automobile

B

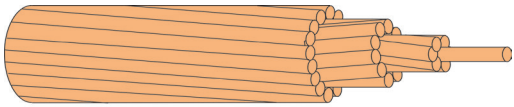
Nominal cross sectional area (mm^2)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Continuous current rating in free airat 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	16/0.20	0.95	0.6	2.2	37.1	11	9	100/C
0.5	7/0.30	0.95	0.6	2.2	37.1	11	9	100/C
0.75	24/0.20	1.15	0.6	2.4	24.7	14	11	100/C
0.85	12/0.30	1.20	0.6	2.4	22.0	15	12	100/C
1	32/0.20	1.30	0.6	2.6	18.5	16	14	100/C
1.25	40/0.20	1.50	0.6	2.7	14.8	19	17	100/C
1.25	18/0.30	1.50	0.6	2.7	14.7	19	17	100/C
1.5	30/0.25	1.60	0.6	2.8	12.7	20	19	100/C
2	28/0.30	1.90	0.6	3.1	9.42	25	24	100/C
2.5	50/0.25	2.10	0.7	3.5	7.60	28	30	100/C
3	44/0.30	2.30	0.7	3.7	6.00	32	37	100/C
4	56/0.30	2.60	0.8	4.2	4.71	38	47	100/C
5	70/0.30	3.0	0.8	4.6	3.77	44	57	100/C
6	84/0.30	3.2	0.9	5.0	3.14	49	69	100/C
8	63/0.40	3.7	0.9	5.5	2.31	59	88	100/C
10	84/0.40	4.2	1.1	6.4	1.82	69	114	100/C
16	126/0.40	5.8	1.1	8.0	1.16	95	173	100/C
25	196/0.60	7.0	1.4	9.8	0.770	123	261	100/C
35	280/0.40	8.5	1.4	11.3	0.524	158	366	100/C
50	399/0.40	10.9	1.6	14.1	0.357	207	537	500/D
70	361/0.50	12.6	2.0	16.6	0.268	250	727	500/D
95	475/0.50	14.1	2.0	18.1	0.193	305	971	500/D

C : Packing in Coil
D : Packing in Drum

FHC

HARD DRAWN COPPER STRANDED CONDUCTOR

TIS 64-2517



CABLE STRUCTURE

Conductor : Hard drawn copper wires, concentric stranded conductor

TECHNICAL DATA

Reference standard : TIS 64-2517

APPLICATION

For grounding wire

Nominal cross sectional area (mm²)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Breaking strength (kgf)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
10	7/1.35	4.05	1.80548	438	90	90	2000/D
16	7/1.70	5.10	1.13857	694	125	143	2000/D
25	7/2.14	6.42	0.71851	1,076	160	226	2000/D
35	7/2.52	7.56	0.51815	1,459	200	314	2000/D
50	7/3.02	9.06	0.35896	2,095	250	451	2000/D
50	19/1.78	8.90	0.38252	2,021	250	427	2000/D
70	19/2.14	10.70	0.26466	2,921	310	617	2000/D
95	19/2.52	12.60	0.19183	3,961	380	855	2000/D
120	19/2.85	14.25	0.14922	5,067	440	1094	1000/D
150	37/2.25	15.75	0.12384	6,289	510	1330	1000/D
185	37/2.52	17.64	0.09813	7,713	585	1668	1000/D
240	61/2.25	20.25	0.07528	10,369	700	2205	500/D
300	61/2.52	22.68	0.06002	12,717	800	2766	500/D
400	61/2.85	25.65	0.04692	16,266	900	3538	500/D
500	61/3.20	28.80	0.03703	20,506	1110	4460	500/D

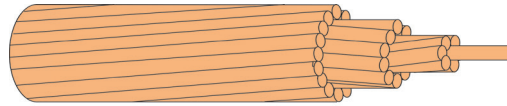
C: Packing in Coil
D: Packing in Drum

B

FAC

ANNEALED COPPER STRANDED CONDUCTOR

IEC 60228



CABLE STRUCTURE

Conductor : Annealed copper wires, concentric stranded conductor

TECHNICAL DATA

Reference standard : IEC 60228 (Same as TIS 2427-2552)

B

APPLICATION

Conductor for insulated cables and wires, grounded electrical system.

Nominal cross sectional area (mm^2)	Conductor type	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length (m)
1	Non-compacted	7/0.43	1.29	18.1	9	2000/D
1.5	Non-compacted	7/0.53	1.59	12.1	14	2000/D
2.5	Non-compacted	7/0.67	2.01	7.41	22	2000/D
4	Non-compacted	7/0.85	2.55	4.61	36	2000/D
6	Non-compacted	7/1.04	3.12	3.08	55	2000/D
10	Non-compacted	7/1.33	4.10	1.83	90	2000/D
16	Non-compacted	7/1.70	5.10	1.15	150	2000/D
25	Non-compacted	7/2.14	6.26	0.727	220	2000/D
35	Non-compacted	19/1.53	7.65	0.524	320	2000/D
50	Non-compacted	19/1.75	8.73	0.387	410	2000/D
70	Non-compacted	19/2.14	10.70	0.268	620	2000/D
95	Non-compacted	19/2.52	12.60	0.193	850	2000/D
120	Non-compacted	37/2.03	14.21	0.153	1080	1000/D
150	Non-compacted	37/2.25	15.75	0.124	1330	1000/D
185	Non-compacted	37/2.52	17.64	0.0991	1670	1000/D
240	Non-compacted	61/2.25	20.25	0.0754	2200	500/D
300	Non-compacted	61/2.52	22.68	0.0601	2750	500/D
400	Non-compacted	61/2.85	25.65	0.0470	3520	500/D
500	Non-compacted	61/3.20	28.80	0.0366	4440	500/D

D : Packing in Drum

Aluminium Conductor Cables

Building Wires and Cables

Low Voltage Power Cables

High Voltage Power Cables

Bare Conductor

THWA

750V 70°C ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 293-2541

CABLE STRUCTURE

Conductor : Solid and Stranded hard drawn aluminium wires

Insulation : Black polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70 °C
: Circuit voltage not exceeding 750 Volts

AC Testing voltage : 2,500 Volts
Reference standard : TIS 293-2541, Table 1

APPLICATION

For low voltage overhead distribution line

Nominal cross sectional area (mm²)	Number and diameter of wires (No.\mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
10	1/3.49	1.1	6.0	3.08	0.0078	1,562	52	51	100/C
10	7/1.32	1.1	6.5	3.08	0.0070	1,769	52	57	100/C
16	1/4.43	1.1	7.0	1.91	0.0064	2,445	70	72	100/C
16	7/1.68	1.1	8.0	1.91	0.0058	2,781	70	82	100/C
25	7/2.12	1.3	9.5	1.20	0.0055	4,241	95	126	100/C
35	7/2.49	1.3	10.5	0.868	0.0048	5,703	117	162	100/C
50	7/2.90	1.5	12.5	0.641	0.0047	7,423	143	220	100/C
50	19/1.76	1.5	12.5	0.641	0.0047	8,114	143	214	100/C
70	19/2.12	1.5	14.5	0.443	0.0040	11,487	185	289	100/C
95	19/2.49	1.7	16.5	0.320	0.0038	15,470	226	394	100/C
120	19/2.80	1.7	18.0	0.253	0.0035	18,810	264	478	500/D
120	37/2.01	1.7	18.0	0.253	0.0034	20,114	264	475	500/D
150	37/2.23	1.9	20.0	0.206	0.0035	24,704	302	587	500/D
185	37/2.50	2.1	22.5	0.164	0.0034	30,187	352	729	500/D
240	61/2.23	2.3	25.5	0.125	0.0033	38,568	421	941	500/D
300	61/2.49	2.5	28.5	0.100	0.0032	46,901	487	1166	500/D
400	61/2.82	2.7	31.5	0.0778	0.0031	57,948	574	1469	500/D
500	61/3.20	3.1	36.0	0.0605	0.0031	73,194	675	1902	500/D

C : Packing in coil
D : Packing in drum

Nominal cross sectional area (mm²)	Number and diameter of wires (No.\mm)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
10	1/3.49	3.7006	0.4819	0.1514	3.7037
10	7/1.32	3.7006	0.4868	0.1529	3.7038
16	1/4.43	2.2949	0.4650	0.1461	2.2996
16	7/1.68	2.2949	0.4698	0.1476	2.2996
25	7/2.12	1.4419	0.4637	0.1457	1.4492
35	7/2.49	1.0430	0.4539	0.1426	1.0527
50	7/2.90	0.7703	0.4553	0.1430	0.7835
50	19/1.76	0.7703	0.4459	0.1401	0.7829
70	19/2.12	0.5325	0.4359	0.1370	0.5498
95	19/2.49	0.3847	0.4340	0.1363	0.4082
120	19/2.80	0.3043	0.4280	0.1345	0.3327
120	37/2.01	0.3043	0.4255	0.1337	0.3324
150	37/2.23	0.2479	0.4258	0.1338	0.2817
185	37/2.50	0.1976	0.4248	0.1334	0.2384
240	61/2.23	0.1509	0.4150	0.1304	0.1994
300	61/2.49	0.1210	0.4201	0.1320	0.1791
400	61/2.82	0.0946	0.4175	0.1311	0.1617
500	61/3.20	0.0741	0.4184	0.1314	0.1509

C

750V 70°C COMPACTED ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 293-2541

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium wires

Insulation : Black Polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 750 Volts

AC Testing voltage : 2,500 Volts
Reference standard : TIS 293-2541, Table 2

APPLICATION

For low voltage overhead distribution line

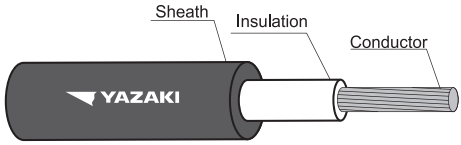
Nominal cross sectional area (mm²)	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
10	Compacted	3.72	1.1	6.5	3.08	0.0084	1,768	52	55	100/C
16	Compacted	4.69	1.1	7.5	1.91	0.0068	2,734	69	80	100/C
25	Compacted	5.90	1.3	9.0	1.20	0.0064	4,120	93	120	100/C
35	Compacted	6.95	1.3	10.0	0.868	0.0056	5,591	115	160	100/C
50	Compacted	8.01	1.5	12.0	0.641	0.0059	7,313	141	210	100/C
70	Compacted	9.73	1.5	13.5	0.443	0.0050	10,420	178	280	100/C
95	Compacted	11.40	1.7	15.5	0.320	0.0047	14,098	220	380	100/C
120	Compacted	12.95	1.7	17.0	0.253	0.0042	18,518	258	460	100/C
150	Compacted	14.27	1.9	19.0	0.206	0.0042	22,457	294	560	500/D
185	Compacted	15.98	2.1	21.0	0.164	0.0042	28,974	342	710	500/D
240	Compacted	18.47	2.3	24.0	0.125	0.0040	37,506	410	920	500/D
300	Compacted	20.68	2.5	26.5	0.100	0.0038	45,642	475	1140	500/D
400	Compacted	23.39	2.7	29.5	0.0778	0.0036	56,992	560	1440	500/D
500	Compacted	26.67	3.1	34.0	0.0605	0.0037	72,195	659	1870	500/D

C : Packing in coil
D : Packing in drum

Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
10	3.7006	0.4930	0.1549	3.7039
16	2.2949	0.4734	0.1487	2.2997
25	1.4419	0.4676	0.1469	1.4493
35	1.0430	0.4584	0.1440	1.0529
50	0.7703	0.4617	0.1451	0.7838
70	0.5325	0.4414	0.1387	0.5502
95	0.3847	0.4377	0.1375	0.4086
120	0.3043	0.4321	0.1358	0.3332
150	0.2479	0.4319	0.1357	0.2826
185	0.1976	0.4290	0.1348	0.2392
240	0.1509	0.4261	0.1339	0.2017
300	0.1210	0.4244	0.1333	0.1801
400	0.0946	0.4206	0.1321	0.1625
500	0.0741	0.4217	0.1325	0.1518

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard length
								Spaced	Touching	Trefoil			
	(mm²)		(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
1	10	Compacted	0.7	1.4	8.5	308	1,250	72	55	54	64	83	500/D
	16	Compacted	0.7	1.4	9.5	1.91	1,000	95	74	72	82	109	500/D
	25	Compacted	0.9	1.4	11.5	1.20	1,050	128	100	97	107	153	500/D
	35	Compacted	0.9	1.4	12.5	0.868	900	156	122	119	128	191	500/D
	50	Compacted	1.0	1.4	13.5	0.641	850	189	149	145	151	240	500/D
	70	Compacted	1.1	1.4	15.5	0.443	800	240	190	184	185	318	500/D
	95	Compacted	1.1	1.5	17.5	0.320	650	295	236	228	221	417	500/D
	120	Compacted	1.2	1.6	19.5	0.253	650	345	277	268	252	521	500/D
	150	Compacted	1.4	1.8	21.5	0.206	700	393	317	308	282	643	500/D
	185	Compacted	1.6	2.1	24.5	0.164	700	458	371	360	321	824	500/D
	240	Compacted	1.7	2.3	28.0	0.125	650	548	446	432	373	1058	500/D
	300	Compacted	1.8	2.4	30.5	0.100	600	633	518	501	420	1285	500/D
	400	Compacted	2.0	2.7	34.0	0.0778	600	745	612	591	481	1644	500/D
	500	Compacted	2.2	3.0	38.5	0.0605	600	878	724	698	550	2107	500/D

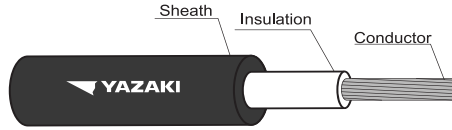
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

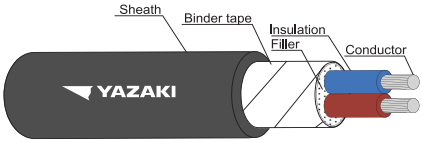
APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	10	3.9489	3.9489	3.9489	0.5529	0.4143	0.3681	0.1737	0.1302	0.1156	3.9527	3.9510	3.9506
	16	2.4488	2.4489	2.4489	0.5267	0.3881	0.3419	0.1655	0.1219	0.1074	2.4544	2.4519	2.4512
	25	1.5386	1.5386	1.5386	0.5141	0.3755	0.3292	0.1615	0.1180	0.1034	1.5470	1.5431	1.5421
	35	1.1129	1.1130	1.1130	0.5002	0.3616	0.3154	0.1571	0.1136	0.0991	1.1240	1.1188	1.1174
	50	0.8219	0.8220	0.8220	0.4921	0.3535	0.3072	0.1546	0.1110	0.0965	0.8364	0.8295	0.8277
	70	0.5681	0.5682	0.5683	0.4707	0.3321	0.2859	0.1479	0.1043	0.0898	0.5871	0.5777	0.5753
	95	0.4105	0.4106	0.4107	0.4635	0.3248	0.2786	0.1456	0.1020	0.0875	0.4356	0.4231	0.4199
	120	0.3247	0.3248	0.3250	0.4576	0.3190	0.2728	0.1438	0.1002	0.0857	0.3551	0.3399	0.3361
	150	0.2645	0.2647	0.2648	0.4571	0.3185	0.2723	0.1436	0.1001	0.0855	0.3010	0.2830	0.2783
	185	0.2107	0.2110	0.2112	0.4526	0.3139	0.2677	0.1422	0.0986	0.0841	0.2542	0.2329	0.2273
	240	0.1609	0.1612	0.1615	0.4470	0.3083	0.2621	0.1404	0.0969	0.0823	0.2135	0.1881	0.1813
	300	0.1290	0.1294	0.1298	0.4432	0.3046	0.2584	0.1392	0.0957	0.0812	0.1898	0.1610	0.1531
	400	0.1008	0.1013	0.1018	0.4394	0.3008	0.2546	0.1381	0.0945	0.0800	0.1709	0.1386	0.1295
	500	0.0789	0.0796	0.0802	0.4365	0.2979	0.2517	0.1371	0.0936	0.0791	0.1582	0.1229	0.1126

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

IEC 60332-3 Category C FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2	10	Compacted	0.7	1.9	16.0	3.08	1,250	61	77	222	500/D
	16	Compacted	0.7	2.1	18.5	1.91	1,000	82	100	308	500/D
	25	Compacted	0.9	2.9	23.5	1.20	1,050	110	130	522	500/D
	35	Compacted	0.9	3.0	26.0	0.868	900	134	154	643	500/D
	50	Compacted	1.0	3.2	29.0	0.641	850	164	180	820	500/D
	70	Compacted	1.1	3.6	33.5	0.443	800	208	220	1117	500/D
	95	Compacted	1.1	4.0	38.0	0.320	650	254	365	1446	500/D
	120	Compacted	1.2	4.0	41.5	0.253	650	296	300	1735	500/D
	150	Compacted	1.4	4.0	45.0	0.206	700	338	335	2042	500/D
	185	Compacted	1.6	4.0	49.5	0.164	700	392	380	2468	500/D
	240	Compacted	1.7	4.0	55.0	0.125	650	464	440	3053	500/D
	300	Compacted	1.8	4.0	60.0	0.100	600	531	496	3635	500/D
	400	Compacted	2.0	4.0	66.5	0.0778	600	619	565	4476	500/D

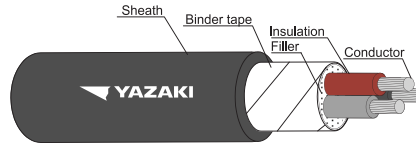
Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape
Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
	10	Compacted	0.7	2.0	17.0	3.08	1,250	51	65	271	500/D
	16	Compacted	0.7	2.2	19.5	1.91	1,000	68	84	378	500/D
	25	Compacted	0.9	2.6	24.0	1.20	1,050	91	110	566	500/D
	35	Compacted	0.9	2.7	26.5	0.868	900	113	130	701	500/D
	50	Compacted	1.0	2.8	29.5	0.641	850	136	154	891	500/D
	70	Compacted	1.1	3.0	34.5	0.443	800	172	188	1203	500/D
3	95	Compacted	1.1	3.3	38.5	0.320	650	210	225	1569	500/D
	120	Compacted	1.2	3.8	43.5	0.253	650	248	255	2010	500/D
	150	Compacted	1.4	4.0	47.5	0.206	700	283	285	2435	500/D
	185	Compacted	1.6	4.0	52.5	0.164	700	329	325	2948	500/D
	240	Compacted	1.7	4.0	58.5	0.125	650	389	375	3673	500/D
	300	Compacted	1.8	4.0	64.0	0.100	600	446	420	4407	500/D
	400	Compacted	2.0	4.0	71.0	0.078	600	519	480	5446	500/D

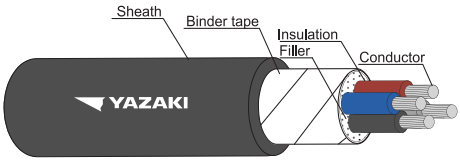
Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
3	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape
Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)		Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
4	10	Compacted	0.7	2.3	19.0	3.08	1,250	51	65	352	500/D
	16	Compacted	0.7	2.5	21.5	1.91	1,000	68	84	486	500/D
	25	Compacted	0.9	3.0	27.0	1.20	1,050	91	110	750	500/D
	35	Compacted	0.9	3.2	30.0	0.868	900	113	130	948	500/D
	50	Compacted	1.0	3.4	33.5	0.641	850	136	154	1211	500/D
	70	Compacted	1.1	3.7	39.0	0.443	800	172	188	1636	500/D
	95	Compacted	1.1	4.0	43.5	0.320	650	210	225	2128	500/D
	120	Compacted	1.2	4.0	48.0	0.253	650	248	255	2589	500/D
	150	Compacted	1.4	4.0	52.0	0.206	700	283	285	3080	500/D
	185	Compacted	1.6	4.0	58.0	0.164	700	329	325	3751	500/D
	240	Compacted	1.7	4.0	64.5	0.125	650	389	375	4700	500/D
	300	Compacted	1.8	4.0	70.5	0.100	600	446	420	5662	500/D
	400	Compacted	2.0	4.0	78.0	0.0778	600	519	480	7041	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

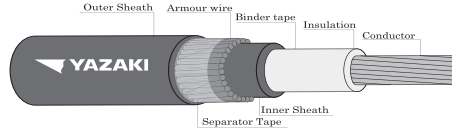
D : Packing in drum

C

YAZAKI

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Natural (Translucent)

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Aluminium wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A) Spaced	Touching	Trefoil	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
1	10	Compacted	0.7	1.2	8.5	1.25	1.8	15.0	3.08	1,250	80	66	64	96	264	500/D
	16	Compacted	0.7	1.2	9.0	1.25	1.8	16.0	1.91	1,000	105	86	84	125	305	500/D
	25	Compacted	0.9	1.2	11.0	1.25	1.8	17.5	1.20	1,050	139	114	111	161	376	500/D
	35	Compacted	0.9	1.2	12.0	1.25	1.8	18.5	0.868	900	169	139	135	194	433	500/D
	50	Compacted	1.0	1.2	13.5	1.25	1.8	20.0	0.641	850	202	167	162	229	503	500/D
	70	Compacted	1.1	1.2	15.0	1.25	1.8	22.0	0.443	800	253	209	203	281	615	500/D
	95	Compacted	1.1	1.2	17.0	1.60	1.8	24.0	0.320	650	312	258	251	339	779	500/D
	120	Compacted	1.2	1.2	18.5	1.60	1.8	26.0	0.253	650	362	300	291	387	904	500/D
	150	Compacted	1.4	1.2	20.5	1.60	1.8	27.5	0.206	700	410	341	331	432	1035	500/D
	185	Compacted	1.6	1.2	22.5	2.00	1.9	31.0	0.164	700	479	400	388	492	1314	500/D
	240	Compacted	1.7	1.2	25.5	2.00	2.0	34.0	0.125	650	569	476	461	573	1588	500/D
	300	Compacted	1.8	1.2	27.5	2.00	2.1	37.0	0.100	600	655	550	532	648	1874	500/D
	400	Compacted	2.0	1.2	31.0	2.00	2.2	40.0	0.0778	600	766	644	624	741	2264	500/D
	500	Compacted	2.2	1.2	34.5	2.00	2.3	44.0	0.0605	600	897	756	731	848	2744	500/D

Number of core	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km) Space	Touching	Trefoil	Inductance L (mH/km) Space	Touching	Trefoil	Reactance XL (Ω/km) Space	Touching	Trefoil	Impedance Z (Ω/km) Space	Touching	Trefoil
1	10	3.9489	3.9489	3.9489	0.6639	0.5252	0.4790	0.2086	0.1650	0.1505	3.9544	3.9523	3.9518
	16	2.4488	2.4488	2.4489	0.6293	0.4907	0.4445	0.1977	0.1542	0.1396	2.4568	2.4537	2.4528
	25	1.5386	1.5386	1.5386	0.6040	0.4654	0.4191	0.1897	0.1462	0.1317	1.5502	1.5455	1.5442
	35	1.1129	1.1130	1.1130	0.5835	0.4449	0.3986	0.1833	0.1398	0.1252	1.1279	1.1217	1.1200
	50	0.8219	0.8220	0.8220	0.5687	0.4301	0.3838	0.1787	0.1351	0.1206	0.8411	0.8330	0.8308
	70	0.5681	0.5682	0.5682	0.5393	0.4007	0.3544	0.1694	0.1259	0.1114	0.5929	0.5819	0.5790
	95	0.4105	0.4106	0.4106	0.5278	0.3891	0.3429	0.1658	0.1223	0.1077	0.4427	0.4284	0.4245
	120	0.3247	0.3247	0.3248	0.5167	0.3781	0.3319	0.1623	0.1188	0.1043	0.3630	0.3458	0.3411
	150	0.2645	0.2646	0.2647	0.5101	0.3715	0.3252	0.1602	0.1167	0.1022	0.3092	0.2892	0.2837
	185	0.2107	0.2108	0.2110	0.5082	0.3695	0.3233	0.1596	0.1161	0.1016	0.2644	0.2407	0.2341
	240	0.1608	0.1610	0.1612	0.4960	0.3573	0.3111	0.1558	0.1123	0.0977	0.2239	0.1963	0.1885
	300	0.1289	0.1292	0.1294	0.4894	0.3507	0.3045	0.1537	0.1102	0.0957	0.2007	0.1698	0.1609
	400	0.1007	0.1011	0.1014	0.4836	0.3450	0.2987	0.1519	0.1084	0.0939	0.1823	0.1482	0.1381
	500	0.0788	0.0793	0.0797	0.4760	0.3373	0.2911	0.1495	0.1060	0.0915	0.1690	0.1324	0.1213

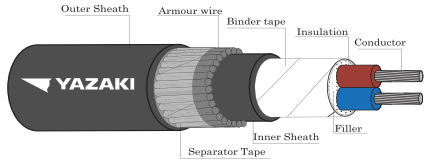
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

YAZAKI

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

FT1 Category C FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2	10	Compacted	0.7	1.2	14.5	1.25	1.8	21.0	3.08	1,250	64	72	696	500/D
	16	Compacted	0.7	1.2	16.0	1.60	1.8	23.5	1.91	1,000	86	94	963	500/D
	25	Compacted	0.9	1.2	19.5	1.60	1.8	27.0	1.20	1,050	114	121	1206	500/D
	35	Compacted	0.9	1.2	22.0	1.60	1.9	29.5	0.868	900	141	146	1395	500/D
	50	Compacted	1.0	1.2	24.5	1.60	1.9	32.0	0.641	850	169	172	1629	500/D
	70	Compacted	1.1	1.2	28.5	2.00	2.1	37.5	0.443	800	213	211	2280	500/D
	95	Compacted	1.1	1.2	31.5	2.00	2.2	41.0	0.320	650	260	252	2673	500/D
	120	Compacted	1.2	1.2	35.0	2.00	2.4	45.0	0.253	650	302	286	3122	500/D
	150	Compacted	1.4	1.3	39.0	2.50	2.5	50.0	0.206	700	344	320	4037	500/D
	185	Compacted	1.6	1.4	43.5	2.50	2.7	55.0	0.164	700	396	362	4773	500/D
	240	Compacted	1.7	1.5	49.5	2.50	2.9	61.5	0.125	650	469	419	5736	500/D
	300	Compacted	1.8	1.6	54.5	2.50	3.1	67.0	0.100	600	537	472	6676	500/D
	400	Compacted	2.0	1.7	61.0	2.50	3.3	74.0	0.0778	600	622	536	7711	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2274	0.0714	0.1242

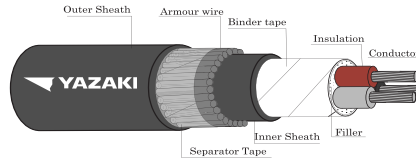
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

YAZAKI

0.6/1 kV 90 °C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
3	10	Compacted	0.7	1.2	15.0	1.25	1.8	22.0	3.08	1,250	55	61	761	500/D
	16	Compacted	0.7	1.2	17.0	1.60	1.8	24.5	1.91	1,000	73	79	1061	500/D
	25	Compacted	0.9	1.2	21.0	1.60	1.8	28.5	1.20	1,050	97	102	1317	500/D
	35	Compacted	0.9	1.2	23.5	1.60	1.9	31.0	0.868	900	120	123	1562	500/D
	50	Compacted	1.0	1.2	26.0	2.00	2.0	35.0	0.641	850	144	145	2073	500/D
	70	Compacted	1.1	1.2	30.5	2.00	2.2	39.5	0.443	800	181	177	2586	500/D
	95	Compacted	1.1	1.2	33.5	2.00	2.3	43.0	0.320	650	221	212	3054	500/D
	120	Compacted	1.2	1.3	38.0	2.50	2.5	49.0	0.253	650	258	242	4062	500/D
	150	Compacted	1.4	1.4	42.0	2.50	2.6	53.0	0.206	700	292	269	4679	500/D
	185	Compacted	1.6	1.5	47.0	2.50	2.8	59.0	0.164	700	336	304	5554	500/D
	240	Compacted	1.7	1.6	53.5	2.50	3.0	65.5	0.125	650	397	351	6689	500/D
	300	Compacted	1.8	1.7	58.5	2.50	3.2	71.5	0.100	600	454	394	7848	300/D
	400	Compacted	2.0	1.8	66.0	3.15	3.5	80.5	0.0778	600	524	444	10320	200/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

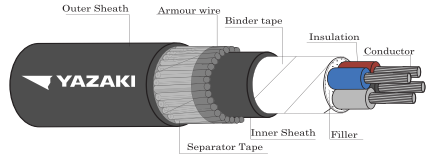
D : Packing in drum

C

YAZAKI

0.6/1 kV 90 °C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
4	10	Compacted	0.7	1.2	16.5	1.60	1.8	24.0	3.08	1,250	55	61	989	500/D
	16	Compacted	0.7	1.2	19.0	1.60	1.8	26.0	1.91	1,000	73	79	1195	500/D
	25	Compacted	0.9	1.2	23.0	1.60	1.9	30.5	1.20	1,050	97	102	1536	500/D
	35	Compacted	0.9	1.2	25.5	1.60	2.0	33.5	0.868	900	120	123	1805	500/D
	50	Compacted	1.0	1.2	29.0	2.00	2.1	38.0	0.641	850	144	145	2405	500/D
	70	Compacted	1.1	1.2	33.5	2.00	2.3	43.0	0.443	800	181	177	3019	500/D
	95	Compacted	1.1	1.3	37.5	2.50	2.5	48.5	0.320	650	221	212	4084	500/D
	120	Compacted	1.2	1.4	42.0	2.50	2.6	53.5	0.253	650	258	242	4789	500/D
	150	Compacted	1.4	1.5	46.5	2.50	2.8	58.5	0.206	700	292	269	5610	500/D
	185	Compacted	1.6	1.6	52.5	2.50	3.0	64.5	0.164	700	336	304	6633	500/D
	240	Compacted	1.7	1.7	59.5	2.50	3.2	72.0	0.125	650	397	351	8063	300/D
	300	Compacted	1.8	1.8	65.5	3.15	3.5	80.0	0.100	600	454	394	10383	300/D
	400	Compacted	2.0	2.0	73.5	3.15	3.8	89.0	0.0778	600	524	444	12521	200/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

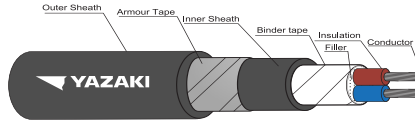
D : Packing in drum

C

YAZAKI

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1 IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2	10	Compacted	0.7	1.2	14.5	0.2	1.8	19.5	3.08	1,250	63	71	492	500/D
	16	Compacted	0.7	1.2	16.0	0.2	1.8	21.5	1.91	1,000	84	93	597	500/D
	25	Compacted	0.9	1.2	19.5	0.2	1.8	25.0	1.20	1,050	111	120	780	500/D
	35	Compacted	0.9	1.2	22.0	0.2	1.8	27.0	0.868	900	136	144	911	500/D
	50	Compacted	1.0	1.2	24.5	0.2	1.9	30.0	0.641	850	164	170	1106	500/D
	70	Compacted	1.1	1.2	28.5	0.2	2.0	34.0	0.443	800	207	208	1402	500/D
	95	Compacted	1.1	1.2	31.5	0.5	2.1	38.5	0.320	650	256	250	1936	500/D
	120	Compacted	1.2	1.2	35.0	0.5	2.3	42.5	0.253	650	297	285	2319	500/D
	150	Compacted	1.4	1.3	39.0	0.5	2.4	46.0	0.206	700	337	318	2726	500/D
	185	Compacted	1.6	1.4	43.5	0.5	2.6	51.5	0.164	700	388	359	3300	500/D
	240	Compacted	1.7	1.5	49.5	0.5	2.8	57.5	0.125	650	461	417	4082	500/D
	300	Compacted	1.8	1.6	54.5	0.5	2.9	63.0	0.100	600	530	470	4821	500/D
	400	Compacted	2.0	1.7	61.0	0.5	3.2	70.5	0.0778	600	615	535	5943	500/D

C

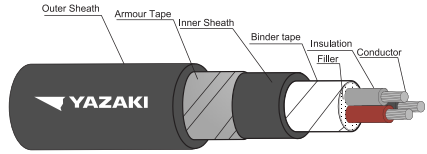
Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2274	0.0714	0.1242

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

YAZAKI

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE



IEC 60502-1

FR-C
Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
3	10	Compacted	0.7	1.2	15.0	0.2	1.8	20.5	3.08	1,250	53	60	549	500/D
	16	Compacted	0.7	1.2	17.0	0.2	1.8	22.5	1.91	1.000	71	78	675	500/D
	25	Compacted	0.9	1.2	21.0	0.2	1.8	26.0	1.20	1,050	95	101	873	500/D
	35	Compacted	0.9	1.2	23.5	0.2	1.8	28.5	0.868	900	116	121	1030	500/D
	50	Compacted	1.0	1.2	26.0	0.2	1.9	31.5	0.641	850	140	143	1260	500/D
	70	Compacted	1.1	1.2	30.5	0.2	2.1	36.5	0.443	800	176	176	1620	500/D
	95	Compacted	1.1	1.2	33.5	0.5	2.2	40.5	0.320	650	217	211	2248	500/D
	120	Compacted	1.2	1.3	38.0	0.5	2.4	45.5	0.253	650	252	240	2728	500/D
	150	Compacted	1.4	1.4	42.0	0.5	2.5	49.5	0.206	700	287	268	3212	500/D
	185	Compacted	1.6	1.5	47.0	0.5	2.7	55.0	0.164	700	331	304	3903	500/D
	240	Compacted	1.7	1.6	53.5	0.5	2.9	61.5	0.125	650	393	352	4832	500/D
	300	Compacted	1.8	1.7	58.5	0.5	3.1	67.5	0.100	600	451	397	5789	500/D
	400	Compacted	2.0	1.8	66.0	0.5	3.3	75.5	0.0778	600	525	453	7087	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

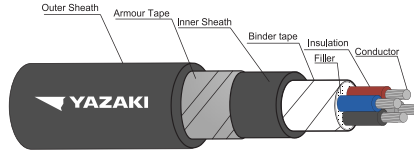
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
4	10	Compacted	0.7	1.2	16.5	0.2	1.8	22.0	3.08	1,250	53	60	625	500/D
	16	Compacted	0.7	1.2	19.0	0.2	1.8	24.0	1.91	1,000	71	78	779	500/D
	25	Compacted	0.9	1.2	23.0	0.2	1.8	28.5	1.20	1,050	95	101	1032	500/D
	35	Compacted	0.9	1.2	25.5	0.2	1.9	31.0	0.868	900	116	121	1248	500/D
	50	Compacted	1.0	1.2	29.0	0.2	2.0	34.5	0.641	850	140	143	1531	500/D
	70	Compacted	1.1	1.2	33.5	0.5	2.2	40.5	0.443	800	176	176	2237	500/D
	95	Compacted	1.1	1.3	37.5	0.5	2.4	45.0	0.320	650	217	211	2790	500/D
	120	Compacted	1.2	1.4	42.0	0.5	2.5	49.5	0.253	650	252	240	3374	500/D
	150	Compacted	1.4	1.5	46.5	0.5	2.7	54.5	0.206	700	287	268	4030	500/D
	185	Compacted	1.6	1.6	52.5	0.5	2.9	61.0	0.164	700	331	304	4893	500/D
	240	Compacted	1.7	1.7	59.5	0.5	3.1	68.5	0.125	650	393	352	6094	500/D
	300	Compacted	1.8	1.8	65.5	0.5	3.3	75.0	0.100	600	451	397	7293	300/D
	400	Compacted	2.0	2.0	73.5	0.5	3.6	83.5	0.0778	600	525	453	9054	300/D

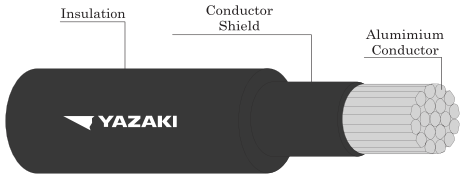
Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

24KV 90°C PARTIAL INSULATED CABLE

ICEA S-66-524
ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compundoss-linked

Insulation : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

AC Testing voltage : 11,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line.

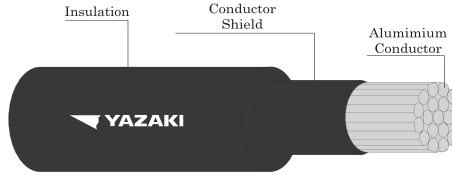
Nominal cross sectional area (mm²)	Number of wire minimum (No.)	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	6	7.05	1.8	12.0	0.868	900	5,591	140	170	1000/D
50	6	8.11	2.2	14.0	0.641	880	7,313	170	220	1000/D
70	12	9.73	2.1	15.0	0.443	800	10,420	215	290	1000/D
95	15	11.43	2.5	18.0	0.320	750	14,098	270	400	1000/D
120	15	13.05	2.6	19.5	0.253	700	18,518	310	490	1000/D
150	15	14.37	2.6	21.0	0.206	650	22,457	355	550	1000/D
185	30	16.08	2.55	23.0	0.164	600	28,974	410	700	1000/D

D : Packing in drum

C

33KV 90°C PARTIAL INSULATED CABLE

ICEA S-66-524
ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 33,000 Volts

AC Testing voltage : 17,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line.

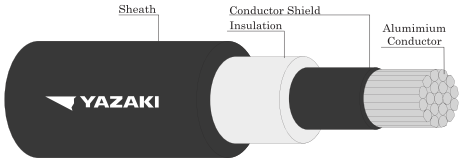
Nominal cross sectional area (mm²)	Number of wire minimum (No.)	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	6	7.05	3.0	14.5	0.868	1,350	5,591	145	220	1000/D
50	6	8.11	3.2	16.5	0.641	1,300	7,313	175	280	1000/D
70	12	9.73	3.2	18.0	0.443	1,200	10,420	220	350	1000/D
95	15	11.43	3.5	20.0	0.320	1,100	14,098	270	460	1000/D
120	15	13.05	3.6	22.0	0.253	1,000	18,518	315	550	1000/D
150	15	14.37	3.6	23.0	0.206	950	22,457	360	650	1000/D
185	30	16.08	3.9	26.0	0.164	900	28,974	415	800	1000/D

D : Packing in drum

C

15KV 90°C SPACED AERIAL CABLE

ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 15,000 Volts

AC Testing voltage : 27,000 Volts

Reference standard : ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line.

Nominal cross sectional area (mm²)	Conductor type	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	Compacted	6.95	1.91	1.91	16.5	0.868	1,750	5,591	164	255	500/D
50	Compacted	8.01	1.91	1.91	18.0	0.641	1,550	7,313	198	305	500/D
70	Compacted	9.73	1.91	1.91	19.5	0.443	1,400	10,420	250	385	500/D
95	Compacted	11.40	1.91	1.91	21.5	0.320	1,250	14,098	306	477	500/D
120	Compacted	12.95	1.91	1.91	23.0	0.253	1,150	18,518	355	570	500/D
150	Compacted	14.27	1.91	1.91	24.0	0.206	1,050	22,457	405	662	500/D
185	Compacted	15.98	1.91	1.91	26.0	0.164	980	28,974	468	792	500/D
240	Compacted	18.47	1.91	1.91	28.5	0.125	850	37,506	560	988	500/D

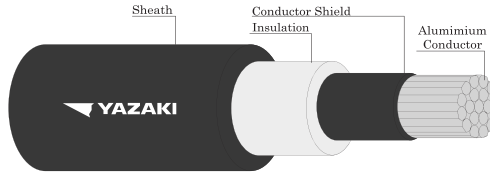
D : Packing in drum

C

25KV-CC (T1)

25KV 90°C SPACED AERIAL CABLE

ICEA S-93-639
TIS 2341-2564



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 25,000 Volts

AC Testing voltage : 38,000 Volts

Reference standard : ICEA S-93-639, TIS 2341-2564

APPLICATION

For aerial power transmission and distribution line.

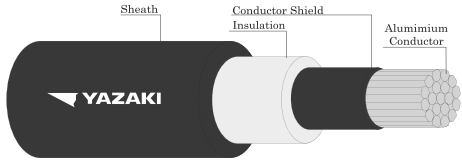
Nominal cross sectional area (mm^2)	Conductor type	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	Compacted	6.6 - 7.5	3.18	3.18	19.9 - 21.5	0.868	2,500	5,591	165	390	500/D
50	Compacted	7.7 - 8.6	3.18	3.18	22.0 - 24.0	0.641	2,250	7,313	199	440	500/D
70	Compacted	9.3 - 10.2	3.18	3.18	23.0 - 25.0	0.443	2,050	10,420	250	550	500/D
95	Compacted	11.0 - 12.0	3.18	3.18	25.0 - 27.0	0.320	1,850	14,098	305	650	500/D
120	Compacted	12.5 - 13.5	3.18	3.18	26.5 - 28.7	0.253	1,700	18,518	353	750	500/D
150	Compacted	13.9 - 15.0	3.18	3.18	28.0 - 30.2	0.206	1,600	22,457	402	850	500/D
185	Compacted	15.5 - 16.8	3.18	3.18	29.4 - 31.7	0.164	1,450	28,974	464	1000	500/D
240	Compacted	17.8 - 19.2	3.18	3.18	32.1 - 34.4	0.125	1,300	37,506	553	1200	500/D

D : Packing in drum

C

35KV 90°C SPACED AERIAL CABLE

ICEA S-93-639
TIS 2341-2564



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 35,000 Volts

AC Testing voltage : 49,000 Volts

Reference standard : ICEA S-93-639, TIS 2341-2564

APPLICATION

For aerial power transmission and distribution line.

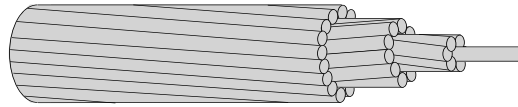
Nominal cross sectional area (mm²)	Conductor type	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
50	Compacted	7.7 - 8.6	4.45	3.18	26	0.641	2,500	7,313	24.2 - 26.4	550	500/D
70	Compacted	9.3 - 10.2	4.45	3.18	27	0.443	2,300	10,420	25.6 - 27.8	650	500/D
95	Compacted	11.0 - 12.0	4.45	3.18	29	0.320	2,100	14,098	27.3 - 29.5	750	500/D
120	Compacted	12.5 - 13.5	4.45	3.18	31	0.253	1,950	18,518	28.8 - 31.0	850	500/D
150	Compacted	13.9 - 15.0	4.45	3.18	32	0.206	1,800	22,457	30.2 - 32.5	950	500/D
185	Compacted	15.5 - 16.8	4.45	3.18	34	0.164	1,690	28,974	32.0 - 34.4	1100	500/D
240	Compacted	17.8 - 19.2	4.45	3.18	36	0.125	1,500	37,506	34.0 - 36.8	1300	500/D

D : Packing in drum

C

ALL ALUMINIUM STRANDED CONDUCTOR

TIS 85-2548



CABLE STRUCTURE

Conductor : Concentric stranded hard drawn aluminium wires

TECHNICAL DATA

Reference standard : TIS 85-2548

APPLICATION

For overhead transmission and distrubution line.

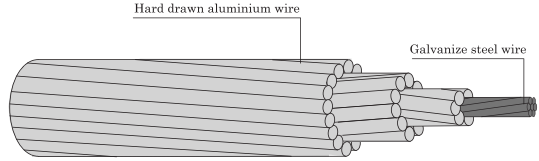
Nominal cross sectional area (mm²)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Breaking strength (kgf)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
10	7/1.35	4.05	2.8633	199	-	27	3000/D
16	7/1.71	5.13	1.7896	310	110	44	3000/D
25	7/2.13	6.42	1.1453	459	145	69	3000/D
35	7/2.52	7.56	0.8200	585	180	95	3000/D
40	7/2.70	8.10	0.7158	694	-	109	3000/D
50	7/3.02	9.06	0.5710	805	225	137	3000/D
50	19/1.83	9.15	0.5758	890	225	140	3000/D
63	7/3.39	10.17	0.4545	1060	-	173	3000/D
70	19/2.15	10.75	0.4171	1205	270	189	3000/D
95	19/2.52	12.60	0.3036	1585	340	259	3000/D
100	19/2.59	12.95	0.2877	1733	-	274	3000/D
120	19/2.85	14.25	0.2374	1980	390	332	3000/D
125	19/2.89	14.45	0.2302	2167	-	341	3000/D
150	37/2.25	15.75	0.1960	2570	455	404	3000/D
160	19/3.27	16.35	0.1798	2692	-	437	3000/D
185	37/2.52	17.64	0.1563	3085	550	507	3000/D
200	19/3.66	18.30	0.1439	3262	-	547	3000/D
240	61/2.25	20.25	0.1192	4015	625	670	3000/D
250	19/4.09	20.45	0.1151	4078	-	683	3000/D
300	61/2.52	22.68	0.0950	4820	710	841	3000/D
315	37/3.29	23.03	0.0916	5298	-	864	3000/D
400	61/2.85	25.65	0.0743	6025	855	1075	3000/D
450	37/3.94	27.58	0.0641	3740	-	1240	3000/D
500	61/3.25	29.25	0.0571	7695	990	1399	3000/D
560	37/4.39	30.73	0.0515	9134	-	1539	2000/D
625	91/2.96	32.56	0.0463	9694	1140	1735	2000/D
630	61/3.63	32.60	0.0458	10276	-	1745	2000/D
710	61/3.85	34.60	0.0407	11580	-	1963	2000/D

D : Packing in drum

ACSR

ALL ALUMINIUM CONDUCTOR STEEL REINFORCED

TIS 85-2548



CABLE STRUCTURE

Conductor : Hard drawn aluminium wire

Steel Core : Galvanized steel (Zinc coated), solid and concentric stranded

TECHNICAL DATA

Reference standard : TIS 85-2548

APPLICATION

For overhead transmission and distrubution line.

Nominal cross sectional area (mm2)	Alumimium Number and approx. diameter of wires (No./mm)	Steel wire Number and approx. diameter of wires (No./mm)	Overall conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Breaking strength (kgf)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
16/2.67	6/1.84	1/1.84	5.53	1.7934	620	-	65	4000/D
25/4.17	6/2.30	1/2.30	6.91	1.1478	931	-	100	4000/D
35/6.00	6/2.70	1/2.70	8.10	0.8352	1265	145	138	3000/D
40/6.67	6/2.91	1/2.91	8.47	0.7174	1468	-	161	3000/D
50/8.00	6/3.20	1/3.20	9.60	0.5946	1716	170	195	3000/D
50/30.0	12/2.33	7/2.33	11.70	0.5644	4380	170	376	3000/D
63/10.5	6/3.66	1/3.66	11.00	0.4555	2205	-	255	3000/D
70/12.0	26/1.85	7/1.44	11.70	0.4131	2676	290	283	3000/D
95/15.0	26/2.15	7/1.67	13.60	0.3058	3565	350	382	3000/D
95/55.0	12/3.20	7/3.20	16.00	0.2992	7965	350	710	3000/D
100/16.7	6/4.61	1/4.61	13.80	0.2869	3500	-	405	3000/D
120/20.0	26/2.44	7/1.90	15.50	0.2374	4555	410	493	2000/D
120/70.0	12/3.60	7/3.60	18.00	0.2364	10034	410	899	2000/D
125/6.94	18/2.97	1/2.97	14.90	0.2304	2974	-	397	2000/D
125/20.4	26/2.47	7/1.92	15.70	0.2310	4658	-	504	2000/D
125/30.0	30/2.33	7/2.33	16.10	0.2259	5759	425	590	2000/D
150/25.0	26/2.70	7/2.10	17.10	0.1939	5513	470	603	2000/D
160/8.89	18/3.36	1/3.36	16.80	0.1800	3688	-	508	2000/D
160/26.1	26/2.80	7/2.18	17.70	0.1805	5881	-	649	2000/D
170/40.0	30/2.70	7/2.70	18.90	0.1682	7675	520	793	1500/D
185/30.0	26/3.00	7/2.33	19.00	0.1571	6618	535	744	1500/D
200/11.1	18/3.76	1/3.76	18.80	0.1440	4508	-	637	1500/D
200/32.6	26/3.13	7/2.43	19.80	0.1444	7149	-	810	1500/D
210/35.0	26/3.20	7/2.49	20.30	0.1381	7489	590	848	1500/D
210/50.0	30/3.00	7/3.00	21.00	0.1383	9390	610	979	1500/D
230/30.0	24/3.50	7/2.33	21.00	0.1250	7313	630	874	1500/D
240/40.0	26/3.45	7/2.68	21.90	0.1188	8640	645	984	1500/D
250/24.6	22/3.80	7/2.11	21.60	0.1154	7005	-	882	1500/D
250/40.7	26/3.50	7/2.72	22.20	0.1155	8937	-	1013	1500/D
265/35.0	24/3.74	7/2.49	22.40	0.1095	8307	680	998	1500/D
300/50.0	26/3.86	7/3.00	24.50	0.0949	10702	740	1233	1000/D
305/40.0	54/2.68	7/2.68	24.10	0.0949	9942	740	1158	1000/D
315/21.8	45/2.99	7/1.99	23.90	0.0917	8056	-	1052	1000/D
315/51.3	26/3.93	7/3.05	24.90	0.0917	10890	-	1277	1000/D
380/50.0	54/3.00	7/3.00	27.00	0.0758	12312	840	1451	1000/D
400/27.7	45/3.36	7/2.24	26.90	0.0722	10027	-	1322	1000/D
400/51.9	54/3.07	7/3.07	27.60	0.0723	12543	-	1519	1000/D
435/55.0	54/3.20	7/3.20	28.80	0.0666	13673	900	1651	1000/D
450/31.1	45/3.57	7/2.38	28.50	0.0642	10956	-	1493	1000/D
450/58.3	54/3.26	7/3.26	29.30	0.0643	14110	-	1713	1000/D
490/65.0	54/3.40	7/3.40	30.60	0.0590	15343	960	1864	1000/D
500/34.6	45/3.76	7/2.51	30.10	0.0578	12173	-	1656	1000/D
500/64.8	54/3.43	7/3.43	30.90	0.0578	15678	-	1897	1000/D
550/70.0	54/3.60	7/3.60	32.40	0.0526	17096	1020	2089	500/D
560/38.7	45/3.98	7/2.65	31.80	0.0516	13633	-	1854	500/D
560/70.9	54/3.63	19/2.18	32.70	0.0516	17594	-	2112	500/D
630/43.6	45/4.22	7/2.81	33.80	0.0459	15337	-	2085	500/D
630/79.8	54/3.85	19/2.31	34.70	0.0459	19549	-	2384	500/D
680/85.0	54/4.00	19/2.40	36.00	0.0426	21040	1150	2564	500/D
710/49.1	45/4.48	7/2.99	35.90	0.0407	17285	-	2352	500/D
710/89.9	54/4.09	19/2.45	36.80	0.0407	22031	-	2678	500/D

D : Packing in drum

C

Electrical Insulation Tape

D

VTA

TIS 386-2531

RoHS PVC PLASTIC ELECTRICAL INSULATION TAPE

SCOPE :

This specification covers RoHS PVC plastic electrical insulation tape to be used in electrical service at temperature 0 ~ 80°C.

The tape shall be used for insulation of jointed splices of cables and wires. The tape must have good insulation properties, heat, weather, flame retardant and RoHS materials for environment, suitable for tropical country.

STANDARD :

The RoHS PVC plastic electrical insulation tape shall be manufactured and tested in accordance with TIS 386-2531.

Dimension

1) Thickness	(mm)	0.125 ± 0.025, 0.18 ± 0.025
2) Width	(mm)	19 ± 1.0
3) Length	(m)	10 + 1.0 - 0

PROPERTY AND REQUIREMENTS			PACKING	
1) Electrolytic corrosion after 24h			The RoHS PVC plastic electrical insulation tape	
at 27 ± 2°C and 93 ± 2% relative humidity		(Ω) ≥ 10^{11}	shall be packing in paper core Cellophane and	
2) Penetration at elevated temperature		(°C) ≥ 50	shrinkage wrapped.	
3) Flammability		non-ignitable or		
		self-extinguishing	1) Dimension of each roll	
4) Thermal endurance		no-crack	: Diameter (cm)	5.8
5) Tensile strength	(N/10 mm width/mm thick.)	≥ 150	Width (cm)	1.9
6) Adhesion to steel	(N/10 mm width/mm thick.)	≥ 1.8	2) Weight of each roll (approx.)	
7) Adhesion to backing	(N/10 mm width/mm thick.)	≥ 1.8	: Net (kg)	0.036
8) Shear adhesion after immersion in water		(N) ≥ 18.0	Gross (kg)	0.037
9) Electric strength			3) Number of roll in each package (Rolls)	10
- after 24 hour at 27 ± 2°C			4) Number of package in one case (Package)	10
and 65 ± 5% relative humidity		(kV/mm) ≥ 40	5) Dimension of each case : WxLxH (cm)	12.5x30x19.5
- after 24 hour at 27 ± 2°C			6) Gross weight of each case (approx.) (kg)	4
and 93 ± 2% relative humidity		(kV/mm) ≥ 35		

D

Memo

Thai-Yazaki Electric Wire Co., Ltd

Head Office/Sale Office:

21st Floor, O-NES Tower, 6 Sukhumvit Soi 6, Klongtoey Sub-District,
Klongtoey District, Bangkok, 10110 Thailand
Tel: 0-26532550 Fax: 0-26532613
Tax Identification No.0105505001539

Factory:

283 Moo 1, Suksawad Road, Bangplakot, Prasamut Chedi, Samuthprakarn,THAILAND
Tel: +66(0) 2463-0058

Website: www.thaiyazaki-electricwire.co.th
https:/ /www.facebook.com/ThaiYazakiElectricWire

Website

Facebook