

SPECIFICATION**For****0.6/1KV-THW**

0.6/1(1.2)kV 70°C PVC Insulated Single Core

(0.6/1(1.2)kV, Cu/PVC)

BY



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CUSTOMER

Rev.	Date	Description
0	8/6/2021	Issued specification
1	26/7/2021	Add size 1 x 800, 1000 mm ²
2	22/12/2022	Add size 1 x 1 mm ²
3	12/3/2024	Update specification
4	28/3/2024	Update specification

Customer Document	Rev.

Remark:

This document is based on the Customer Document for the structure and properties of electric wire and cable only. If there are different points, will be shown in deviation table.

1. Scope

This specification covers 1000V copper conductor polyvinyl chloride (PVC) insulated single core.

Maximum conductor temperature shall be 70°C.

The wire shall be based on IEC 60227-3 : 1997, Table 1 and comply with IEC 60364-1 : 2001.

The rated voltage refer IEC 60502-1 by comply insulation thickness as IEC 60502-1 Class 6.2

(IEC 60364-1 : Electrical installations of buildings

Part 1 : Fundamental principles, assessment of general characteristics, definitions)

2. Conductor

The conductor shall be non-compacted concentric stranded uncoated annealed copper conductor in accordance with IEC 60228 : 2004, Class 2.

The direction of lay shall be left-hand (S) lay in the outermost layer.

3. Insulation

The insulation shall be polyvinyl chloride (PVC/C) compound meet the requirements of IEC 60227-3 : 1997 and thickness refer to IEC 60502-1 : 2021.


The average thickness of the insulation shall be not less than that given in Table 2.

The minimum thickness shall not fall below 90% of the nominal value in Table 2 by more than 0.1 mm.

The color of the insulation shall be black or blue or brown or grey or red or yellow or green or green/yellow.

4. Marking on Cable

The marking items shall be marked with suitable means throughout the length of cable.

1. Manufacturer's name and/or trade mark "  YAZAKI..... : TYE"
2. Year of manufacture
3. Rated voltage "0.6/1KV"
4. Type of conductor "CU"
5. Type of insulation "PVC"
6. Number of core and size of conductor
7. The continuous reel length marking (in figure) shall be made on the insulation at every 1 meter (For size $\geq 16 \text{ mm}^2$)

5. Test and Properties

The cable shall meet the requirements in Table 1 and Table 2, when tested in accordance with IEC 60227-3 : 1997, IEC 60502-1 and IEC 60228 : 2004.

Remark: Except black color insulation; For longer life of cable should be avoid exposure to direct solar radiation it necessary, cover is required.

6. Packing

The finished wire shall be placed on non-returnable wooden reels

The reels shall be covered with suitable covering to provide the cable with physical protection during transportation and during ordinary storage and handling operations.

Each reel shall be clearly marked as follows.


1. Rated voltage and designation "0.6/1KV-THW"
2. Number of core and size of conductor
3. Cable length
4. Net and gross weight
5. Month and year of manufacture
6. Rolling direction of reel
7. Manufacturer's name and/or trade mark "  **YAZAKI** "

Table 1

Routine Test

Maximum conductor resistance, Ohm/km specified in Table 2

AC test voltage for 5 minutes, kV.....3.5

The number of length to be tested shall be decided by agreement between the purchasers (or its representative) and the manufacturer or shall be 10% of the number of lengths in the contract.

Sample Test

*Construction specified in Table 2

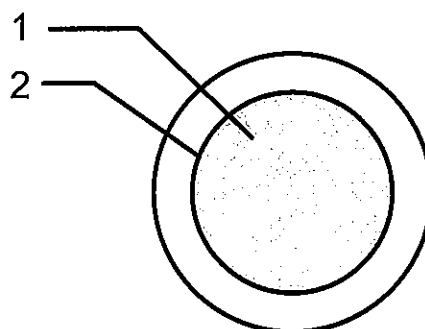
*The test shall be made on one length from each manufacturing series of the same size of cable, but shall be limited to not more than 10% of the number of lengths in the contract, as specified in IEC 60502-1 : 2021.

Table 2

Nominal size (mm ²)	Conductor (wires/type)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Weight approx. (kg/km)	Standard length (m)
1	7/Non-compacted	1.29	0.8	3.5	18.1	20	500
1.5	7/Non-compacted	1.59	0.8	3.5	12.1	25	500
2.5	7/Non-compacted	2.01	0.8	4.0	7.41	35	500
4	7/Non-compacted	2.55	1.0	5.0	4.61	55	500
6	7/Non-compacted	3.12	1.0	5.5	3.08	80	500
10	7/Non-compacted	4.10	1.0	6.5	1.83	120	500
16	7/Non-compacted	5.10	1.0	7.5	1.15	180	500
25	7/Non-compacted	6.26	1.2	9.0	0.727	270	500
35	19/Non-compacted	7.65	1.2	10.5	0.524	380	500
50	19/Non-compacted	8.73	1.4	12.0	0.387	490	500
70	19/Non-compacted	10.70	1.4	14.0	0.268	710	500
95	19/Non-compacted	12.60	1.6	16.5	0.193	990	500
120	37/Non-compacted	14.21	1.6	18.0	0.153	1230	500
150	37/ Non-compacted	15.75	1.8	20.0	0.124	1510	500
185	37/Non-compacted	17.64	2.0	22.5	0.0991	1890	500
240	61/Non-compacted	20.25	2.2	25.5	0.0754	2470	500
300	61/Non-compacted	22.68	2.4	28.5	0.0601	3090	500
400	61/ Non-compacted	25.65	2.6	31.5	0.0470	3930	500
500	61/ Non-compacted	28.80	2.8	35.0	0.0366	4930	500
630	127/ Non-compacted	32.76	2.8	39.0	0.0283	6280	500
800	127/ Non-compacted	37.05	2.8	43.5	0.0221	7960	500
1000	127/ Non-compacted	41.60	3.0	48.5	0.0176	10000	500

Cable structure

Cross-sectional (Not scale)



No.	Structure	Material
1	Conductor	Stranded annealed copper
2	Insulation	Polyvinyl chloride (PVC/C)

Application: Building wiring for installation on insulator or in raceway dry location, Maximum conductor temperature of 70°C for normal operation and 160°C for short circuit conditions.