

# SPECIFICATION


For

## MEA TYPE B (0080) (0.6/1KV-VV)

0.6/1(1.2)kV PVC Insulated

PVC Sheathed Power Cable

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

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Rev.	Date	Description
0	31/7/2023	Issued specification
1	31/10/2024	- Add size 1.5 mm <sup>2</sup> - Cancel size 150-240 mm <sup>2</sup>

APP. \_\_\_\_\_

( )

CUSTOMER

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.

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### **1. Scope**

This specification covers 1000V copper conductor polyvinyl chloride (PVC) insulated polyvinyl chloride (PVC) sheathed power cable.

The cable shall be in accordance with TIS 2143-2546.

(Same IEC 60502-1 : 2021) and MEA's specification No. S-012/2556.

### **2. Conductor**

The conductor shall be solid and non-compacted concentric stranded uncoated annealed copper conductor in accordance with IEC 60228 : 2004, Class 1 and 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/A) compound meet the requirements of IEC 60502-1 : 2021.

The average thickness of the insulation shall be not less than that given in Table 1.

The minimum thickness shall not fall below 90% of the nominal value in Table 1 by more than 0.1 mm.

The color of insulation shall be black.

### **4. Sheath**

The sheath shall be polyvinyl chloride (PVC/ST1) compound meet the requirements of IEC 60502-1 : 2021.

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

The minimum thickness shall not fall below 80% of the nominal value in Table 1 by more than 0.2 mm.

The color of the sheath shall be black.

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## **5. Marking on Cable**

The surface of sheath shall be marked legibly and durably in Thai language, at the interval of about 50 cm., as follow

“MEA TYPE B ขนาด ก. ตร.มม. 0.6/1kV สัญญาเลขที่ ข. : ค.”

โดยที่ ก. = พื้นที่หน้าตัดระบุของตัวนำ

ข. = เลขที่สัญญา

ค. = ชื่อผู้ผลิตหรือสัญลักษณ์

For size  $\geq 10 \text{ mm}^2$

Length marking shall be made on the outer sheath trough whole length started from “0” with 1 meter increment

## **6. Test and Properties**

The cable shall be meet the requirements in Table 1 and Table 2, when tested in accordance with TIS 2143-2546 (Same IEC 60502-1 : 2021), IEC 60228 : 2004 and MEA’s specification No. S-012/2556.

## **7. Packing**

The cable 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. Designation "MEA TYPE B (0080)


(0.6/1KV-VV)"

2. Number of core and size of conductor

3. Cable length

4. Net and gross weight

5. Year of manufacture

6. Manufacturer's name and/or trade mark "  **YAZAKI** "

7. Rolling direction of reel and cable end position

8. Drum number

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### **Test and Inspection**

#### **Routine Test**

Maximum conductor resistance, Ohm/km ..... specified in Table 1

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 1

\* 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.

#### **Definition concerning the tests**

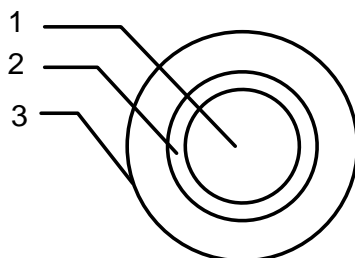
**Routine tests:** Tests made by the manufacturer on each manufactured length of cable to check that each length meets the specified requirements.

**Sample tests:** Tests made by the manufacturer on samples of completed cable or components taken from a completed cable, at a specified frequency, so as to verify that the finished product meets the specified requirements.

**Type tests:** Tests made before supplying, on a general commercial basis, a type of cable covered by this standard, in order to demonstrate satisfactory performance characteristics to meet the intended application.

**DESIGNATION : MEA TYPE B (0080)****(0.6/1KV-VV)****SPEC NO. TYSS 8512 S****PAGE No. 4 OF 5****REV No. 1****Cable structure**

Cross-sectional (Not scale)



No.	Structure	Material
1	Conductor	Solid and stranded annealed copper
2	Insulation	Polyvinyl chloride (PVC/A)
3	Sheath	Polyvinyl chloride (PVC/ST1)

**Application:** Use for installation in open tray, conduit, underground duct trench or direct burial in ground, at wet or dry location. Maximum conductor temperature of 70 °C for normal operation and 160 °C for short circuit conditions.

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**Table 1**

No. of core	Size  (mm <sup>2</sup> )	Conductor  (wires/type)	Conductor diameter approx.  (mm)	Insulation thickness nominal  (mm)	Sheath thickness nominal  (mm)	Overall diameter approx.  (mm)	Conductor resistance at 20°C maximum (Ohm/km)	Weight of cable approx. (kg/km)	Standard packing length (m)
1	1.5	Solid	1.38	0.8	1.4	6.5	12.1	53	500
1	2.5	Solid	1.78	0.8	1.4	7.0	7.41	66	500
1	4	7/Non-compacted	2.25	1.0	1.4	8.0	4.61	97	500
1	6	7/Non-compacted	3.12	1.0	1.4	9.0	3.08	122	500
1	10	7/Non-compacted	4.10	1.0	1.4	9.5	1.83	170	500
1	16	7/Non-compacted	5.10	1.0	1.4	10.5	1.15	237	500
1	25	7/Non-compacted	6.42	1.2	1.4	12.5	0.727	337	500
1	35	19/Non-compacted	7.65	1.2	1.4	13.5	0.524	453	500
1	50	19/Non-compacted	8.73	1.4	1.4	15.0	0.387	577	500
1	70	19/Non-compacted	10.70	1.4	1.5	17.5	0.268	824	500
1	95	19/Non-compacted	12.60	1.6	1.6	20.0	0.193	1125	500
1	120	37/Non-compacted	14.21	1.6	1.6	22.0	0.153	1382	500