

No. SP23-31-0868

Date July 3, 2023

# SPECIFICATION

FOR

0.6/1kV ETHYLENE PROPYLENE RUBBER INSULATED  
POLYCHLOROPRENE SHEATHED FLEXIBLE CABLE

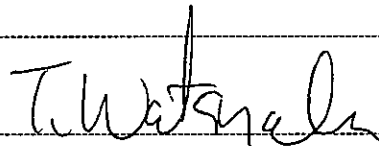
Code : 0.6/1KV F-RE-PNCTB 4×50mm<sup>2</sup>+12×4mm<sup>2</sup>

*Quantity*

*Your Ref. No.*

*Our Ref. No.*

*Signed by*



TAKANOBU WATANABE

Manager

*Engineering Dept. I*  
*Electric Wire & Cable Business Unit*

# Proterial, Ltd.

Issue and revision record

Rev. No	Issue date	Item	Prepared by	Reviewed by	Approved by
-	July 3, 2023	First issue	<i>K. Yamane</i> K.Yamane	<i>N. Ono</i> N.Ono	<i>T. Watanabe</i> T.Watanabe

## 1. Scope

This specification covers 0.6/1kV Ethylene Propylene Rubber Insulated Polychloroprene Sheathed Flexible Cable, which is based on VDE 0250 Part 814, Japanese Electrical Facility Regulation and Manufacturer's Standard.

## 2. Construction and Materials

### 2.1 Conductor

Conductor shall be stranded flexible conductor consisting of tinned annealed copper wires. Suitable separator tape shall be applied over the conductor.

### 2.2 Insulation

Insulation shall consist of ethylene propylene rubber compound. Nominal thickness shall be shown in the attached table 1.

Ave. thick. : not less than the nominal thickness

Min. thick. : not less than 90%-0.1mm of the nominal thickness

### 2.3 Core identification

The core identification shall be made by the color of insulation or the color of insulation surface as shown in the attached figures.(Fig.2)

### 2.4 Cabling of cores

Each insulated conductors shall be cabled together with tension member and suitable filler.

### 2.5 Sheath

Sheath shall consist of black polychloroprene rubber compound. Nominal thickness shall be shown in the attached table 1.

Ave. thick. : not less than 90% of the nominal thickness

Min. thick. : not less than 85% of the nominal thickness

### 2.6 Tape

Glass tape shall be applied over the sheath.

### 2.7 Armour

Armour braid consisting of stainless steel wires shall be applied over the glass tape.

### 2.8 Dimension

The dimension of the cable shall be in accordance with the attached table 1.

## 3. Marking

Manufacturer's name and year of manufacture shall be marked by suitable method.

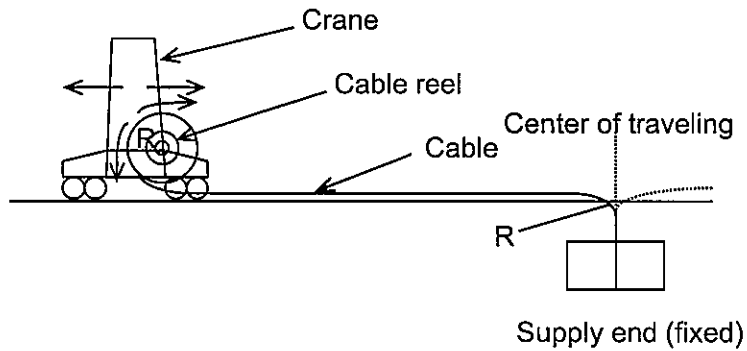
4. Inspection

Inspection shall be made on the following items prior to shipment.

Properties	Standard to comply with	Requirements	Test interval
Construction and dimensions	JIS C 3005 4.3	To comply with clause 2 and the attached Table 1	Every shipment
Withstand voltage test	JIS C 3005 4.6	To withstand AC 2500V for 5 min.	First shipment
Conductor resistance	JIS C 3005 4.4	Not more than the value in the attached Table 2	
Insulation resistance	JIS C 3005 4.7	Not less than the value in the attached Table 2	

5. Guide to use

This cable is designed for crane installation of reel system (traveling) as shown below.



R : Permissible minimum bending radius

Table 1 : Dimensions

(Code : 0.6/1KV F-RE-PNCTB 4×50mm<sup>2</sup>+12×4mm<sup>2</sup> )

Item		Unit	Specified value	
Conductor	No. of conductor	-	4	12
	Size	mm <sup>2</sup>	50	4
	Construction	No./mm	19/21/0.4	55/0.3
	Approx. diameter	mm	10.6	2.6
Nominal thickness of insulation		mm	1.6	1.0
Approx. diameter of tension member		mm	7.0	
Nominal thickness of sheath		mm	5.1	
Approx. thickness of glass tape		mm	1.6	
Approx. thickness of armour		mm	0.8	
Approx. diameter of completed cable		mm	60	
Maximum diameter of completed cable		mm	63.0	
Approx. weight of completed cable		kg/km	5700	

Table 2 : Characteristic

Item	Unit	Specified value	
Size	-	50	4
Max. conductor resistance(20°C)	Ω/km	0.393	5.09
Min. insulation resistance(20°C)	MΩ · km	200	400
Permissible minimum bending radius	mm	600	
Permissible maximum pulling tension *	kN	11.3	
Permissible maximum compression force **	kN/m	4.9	

\* In any case, pulling tension and compression force must not exceed these value.  
For safety, regular pulling tension should be 1/3 of the permissible maximum value.  
It is necessary to determine the pulling tension considering the compression force.

\*\* Compression force = Pulling tension / Bending radius

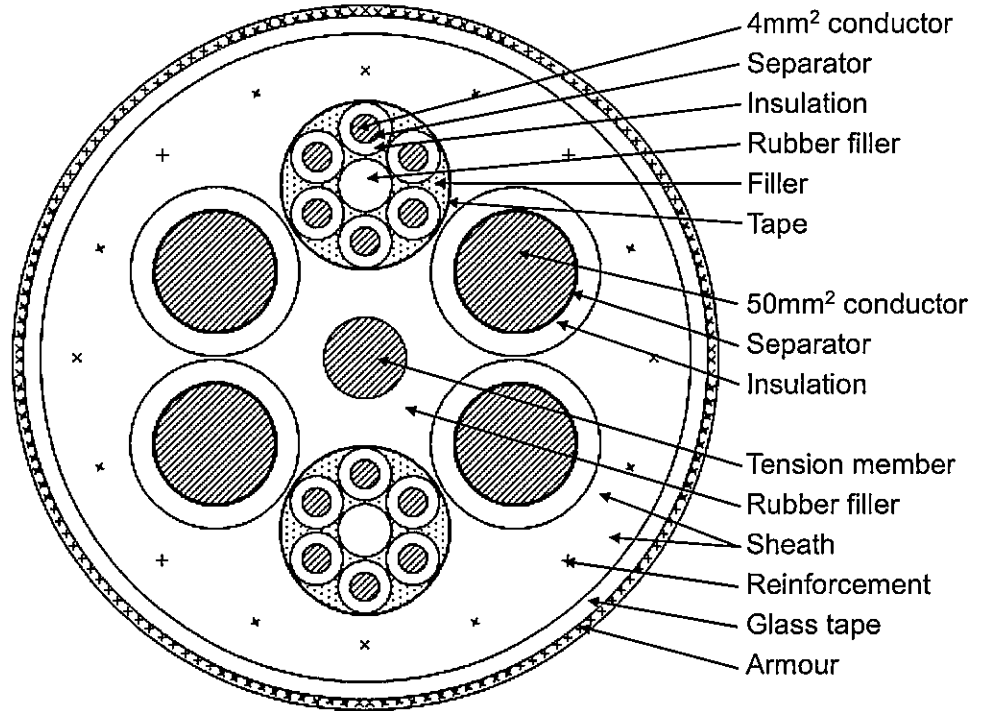


Figure 1. Cable cross section

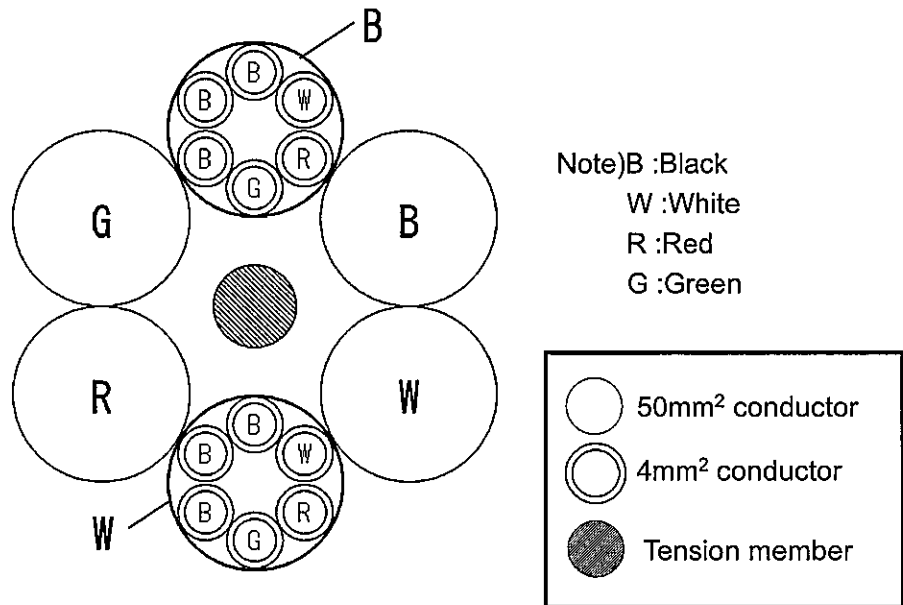


Figure 2. Core identification