SPECIFICATION

FOR

0.6/1KV FLEXIBLE CABLE
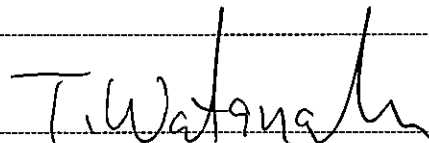
Code : 0.6/1KV F-RE-PNCT-RF 7×25mm^2＋15×4mm^2

Quantity

Your Ref. No.

Our Ref. No.

Signed by   T. Watanabe

TAKANOBU WATANABE

Manager

Engineering Dept. I
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Proterial, Ltd.

Issue and revision record

Rev. No	Issue date	Item	Prepared by	Reviewed by	Approved by
-	March 27, 2025	First issue	*K. Yamane* K.Yamane	*N. Ono* N.Ono	*T.Watanabe* T.Watanabe

1. Scope

This specification covers 0.6/1kV Flexible Cable, which is based on Manufacturer's Standard.

2. Construction and Materials

2.1 Power conductors($7 \times 25mm^2$)

2.1.1 Conductor

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

2.1.2 Insulation

Insulation shall consist of ethylene propylene rubber compound.
Nominal thickness shall be shown in the attached table 1.
    Ave. thick : not less than 90% of the nominal thickness
    Min. thick : not less than 80% of the nominal thickness

2.1.3 Core identification

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

2.2 Control conductors unit($15 \times 4mm^2$)

2.2.1 Conductor

Conductor shall be stranded flexible conductor consisting of tinned annealed copper wires and tinned annealed steel wires.

2.2.2 Insulation

Insulation shall consist of ethylene propylene rubber compound.
Nominal thickness shall be shown in the attached table 1.
    Ave. thick : not less than 90% of the nominal thickness
    Min. thick : not less than 80% of the nominal thickness

2.2.3 Proofed tape

Rubber filled textile tape may be applied over the insulation at manufacture's discretion , if necessary.

2.2.4 Core identification

The core identification shall be made by the number printed on the proofed tape as shown in the attached figures.(Fig.2)

2.2.5 Cabling of cores(unit)

Each insulated conductors shall be cabled together with suitable filler and binder tape.

2.3 Cabling of cores and unit

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

2.4 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

2.5 Reinforcing layer

Reinforcement consisting of suitable yarn braid shall be applied in the middle of the sheath.

2.6 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.

Supply end (fixed)
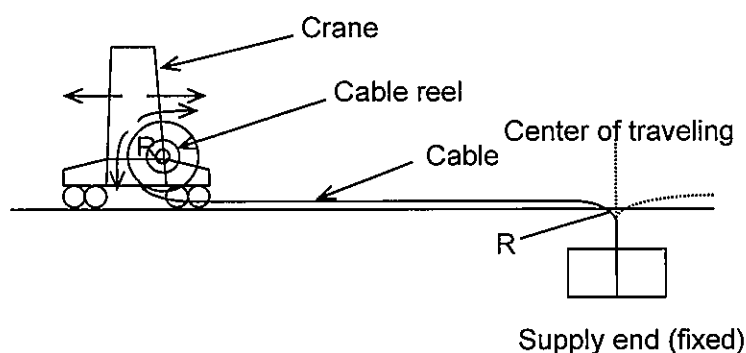
R : Permissible minimum bending radius

Table 1 : Dimensions

(Code : 0.6/1KV F-RE-PNCT-RF 7×25mm² + 15×4 mm²)

Item		Unit	Specified value	
Conductor	No. of conductor	-	7	15
	Size	mm²	25	4
	Construction	No./mm	7/28/0.4TA	3/0.32TST +56/0.3TA
	Approx. diameter	mm	7.4	2.7
Nominal thickness of insulation		mm	1.2	1.0
Nominal thickness of sheath		mm	4.8	
Approx. diameter of completed cable		mm	63	
Maximum diameter of completed cable		mm	66.2	
Approx. weight of completed cable		kg/km	5720	

TST : Tinned steel wire

TA   : Tinned annealed copper wire

Table 2 : Characteristic

Item	Unit	Specified value	
Size	-	25	4
Max. conductor resistance(20℃)	Ω/km	0.795	5.09
Min. insulation resistance(20℃)	MΩ・km	300	400
Permissible minimum bending radius	mm	630	
Permissible maximum pulling tension *	kN	6.8	
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.
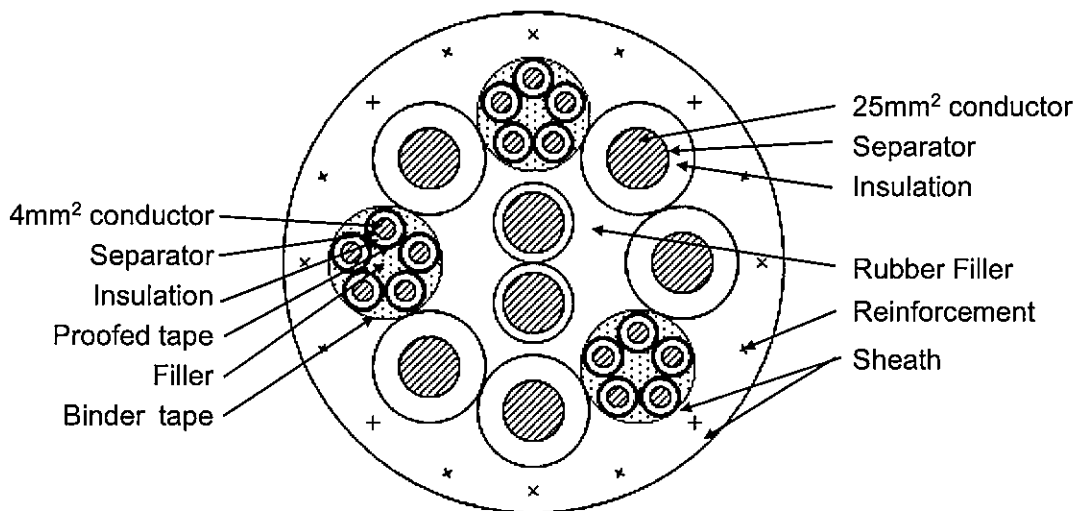** Compresstion force = Pulling tension ╱ Bending radius

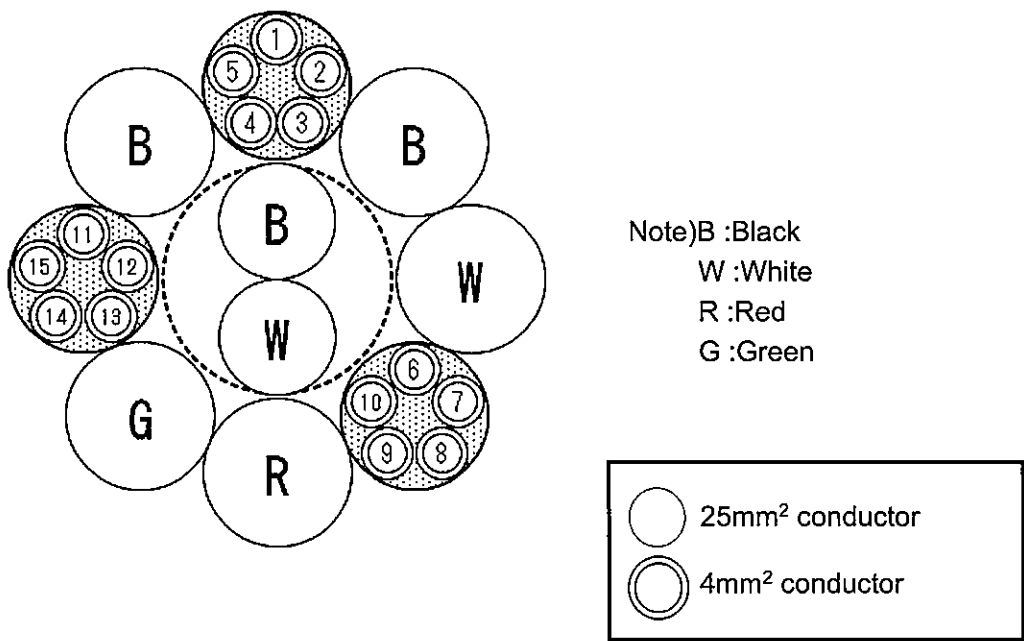Figure 1. Cable cross section

Note)B :Black
    W :White
    R :Red
    G :Green

Figure 2. Core identification