

No. SP24-31-0933  
Date Aug. 30, 2024

# SPECIFICATION

FOR

3300V FLAT TYPE TRAILING CABLE

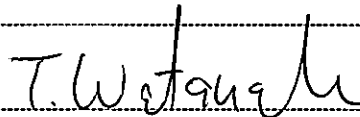
Code : 3300V F-H-3PNCT  $3 \times 120\text{mm}^2 + 2 \times 35\text{mm}^2$

*Quantity*

*Your Ref. No.*

*Our Ref. No.*

*Signed by*

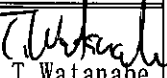


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Issue and revision record

REV. No.	Issue date	Item	Prepared by	Reviewed by	Approved by
-	Aug. 30, 2024	FIRST ISSUE	<i>K. Yamane</i> K. Yamane	<i>N. Ono</i> N. Ono	 T. Watanabe

## 1. Scope

This specification covers 3300V Flat Type Trailing Cable, which is reference to Japanese Electrical Facility Regulation and Manufacturer's Standard.

## 2. Construction and Materials

### 2.1 Power conductor

#### 2.1.1 Conductor

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

#### 2.1.2 Inner semi-conductive layer

A suitable semi-conductive tape shall be applied over the conductor. The thickness of the semi-conductive tape shall be included in a part of the insulation thickness.

#### 2.1.3 Insulation

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

#### 2.1.4 Outer semi-conductive layer

A suitable semi-conductive tape shall be applied over the insulation.

#### 2.1.5 Shield braid

Shield braid shall consist of tinned annealed copper wires.

#### 2.1.6 Core identification

The core identification shall be made by the color of the tape which is applied under the shield braid.

#### 2.1.7 Reinforcement

Reinforcement consisting of suitable fabric tape shall be applied over the shield braid.

### 2.2 Earth conductor

#### 2.2.1 Conductor

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

#### 2.2.2 Insulation

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

### 2.2.3 Tape

Rubber filled textile tape shall be applied over the insulation.

### 2.3 Assembly

The power and earth conductors shall be assembled in parallel.

### 2.4 Sheath

Sheath shall consist of black polychloroprene compound.

Nominal thickness shall be shown in the attached table.

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

Min. thick. : not less than 80% of the nominal thickness

### 2.5 Dimension

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

## 3. Marking

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

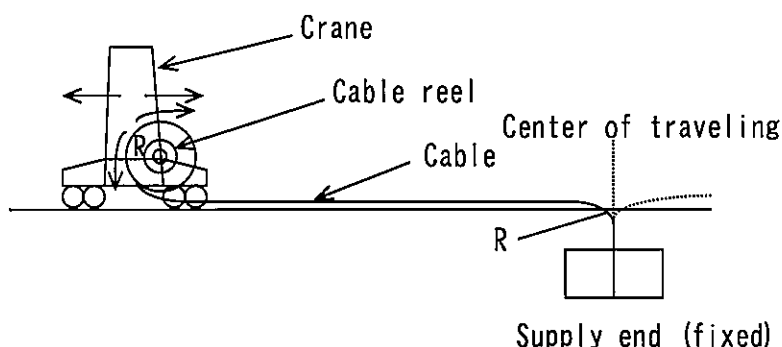
## 4. Inspection

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	Power conductor : To withstand AC 9000V for 10 min. Earth conductor : To withstand AC 3000V for 1 min.	
Conductor resistance	JIS C 3005 4.4	Not more than the value in the attached table 2	First shipment
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 : 3300V F-H-3PNCT 3×120mm<sup>2</sup>+2×35mm<sup>2</sup>)

Item		Unit	Value	
Type of core		—	Power	Earth
No. of cores		—	3	2
Conductor	Nominal cross-section area	mm <sup>2</sup>	120	35
	Construction	No. /mm	19/32/0.5	7/39/0.4
	Approx. diameter	mm	16.3	8.7
Nominal thickness of insulation		mm	3.5 *	1.6
Approx. thickness of shield braid		mm	0.45	—
Nominal thickness of sheath		mm	6.9	
Approx. dimension of completed cable		mm	40×116	
Maximum dimension of completed cable		mm	42×121.8	
Approx. weight of completed cable		kg/km	9050	

\* : This value includes thickness of inner semi-conductive tape.

Table 2 : Characteristic

Item		Unit	Value	
Type of core		—	Power	Earth
Nominal cross-section area		—	120	35
Conductor resistance at 20°C		Ω/km	0.164	0.565
Insulation resistance at 20°C		MΩ·km	300	300
Permissible minimum bending radius		mm	640	
Permissible maximum pulling tension **		kN	14.0	
Permissible maximum compression force ***		kN/m	4.9	

\*\* : In any case, pulling tension and compression force must not exceed this 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

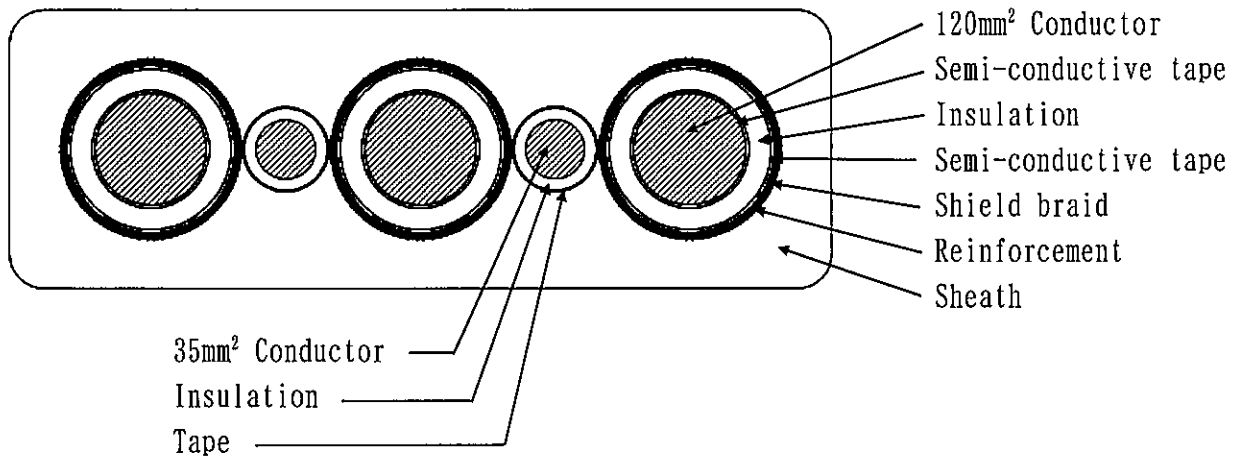


Fig.1 Cable cross section

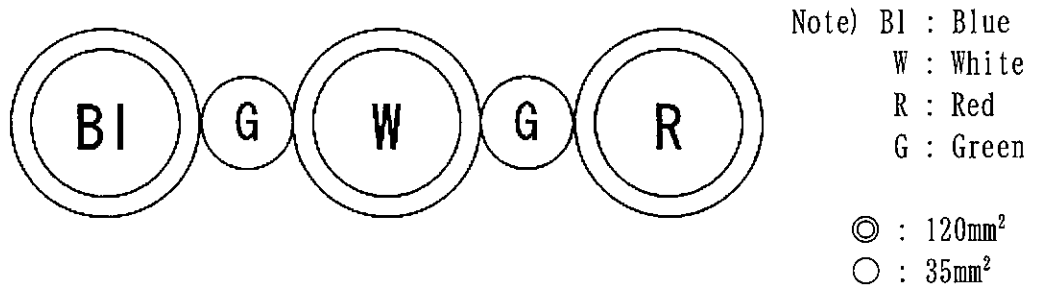


Fig.2 Core identification