

Issue and revision record

REV. No.	Issue date	Item	Prepared by	Reviewed by	Approved by
-	March 21, 2025	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 3300V Flat Type Flexible Cable which is based on Japanese Electrical Facility Regulation and Manufacturer' s Standard.

2. Construction and Materials

2.1 Power units

2.1.1 Conductor

Conductor shall be stranded with 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 extruded layer 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

2.1.4 Outer semi-conductive layer

Outer semi-conductive layer shall consist of suitable semi-conductive fabric tape.

2.1.5 Braided shield

Braided shield 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 braided shield as shown in the attached fig.2.

2.1.7 Reinforcement

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

2.2 Assembly

Power units shall be assembled in parallel.

2.3 Sheath

Sheath shall consist of black polychloroprene 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

2.4 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 methods.

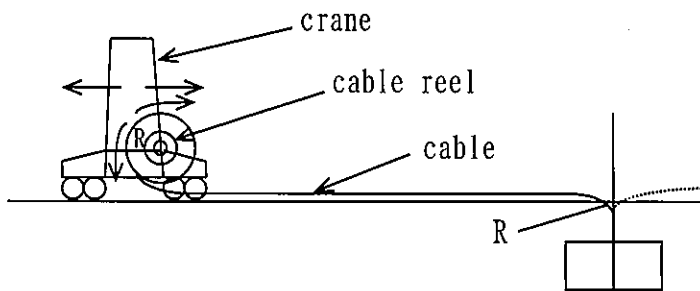
4. Inspection

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 table 1.	Every shipment
Withstand voltage test	JIS C 3005 4.6	To withstand AC 9000V for 10 min.	
Conductor resistance	JIS C 3005 4.4	Not more than the value in the table 2.	First shipment
Insulation resistance	JIS C 3005 4.7	Not less than the value in the table 2.	

5. Guide to use

This cable is designed for crane installation as shown below.



R : Permissible minimum bending radius.

Table 1 : Dimension
(Code : 3300V H-3PNCT)

Item		Unit	Specified Value	
No. of conductor		—	3	3
Conductor	Nominal cross-section area	mm ²	50	70
	Construction	No. /mm	19/16/0.45	19/19/0.5
	Approx. diameter	mm	10.4	12.6
Nominal thickness of insulation		mm	3.5	3.5
Approx. thickness of copper braid		mm	0.45	0.45
Nominal thickness of sheath		mm	5.3	5.6
Approx. diameter of completed cable		mm	30.5×69	33.5×77
Max. diameter of completed cable		mm	32.1×72.5	35.2×80.9
Approx. weight of completed cable		kg/km	3710	4810

Table 2 : Characteristic

Item		Unit	Specified Value	
Nominal cross-section area		mm ²	50	70
Conductor resistance (20°C)		Ω/km	0.411	0.277
Insulation resistance (20°C)		MΩ·km	500	400
Permissible minimum bending radius		mm	490	540
Permissible maximum pulling tension *		kN	5.8	8.1
Permissible maximum compression force **		kN/m	4.9	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

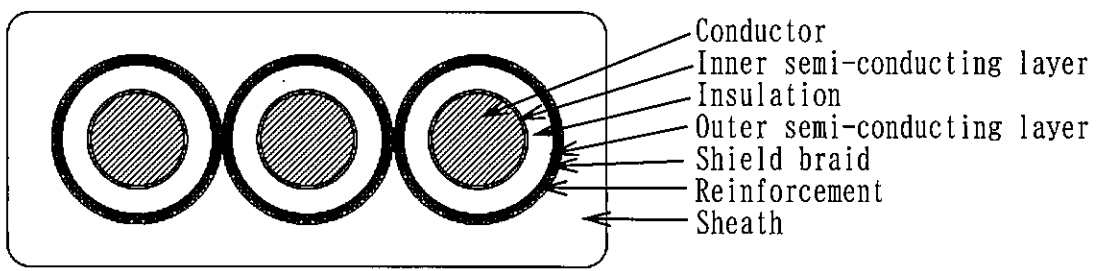
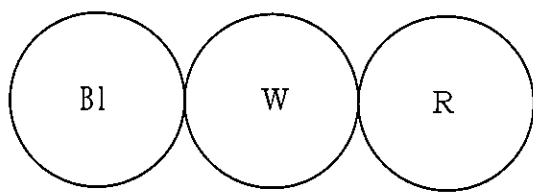


Fig. 1 Cable cross section (example: 3×70mm²)



Note) B1 : Blue
 W : White
 R : Red

Fig. 2 Core identification