

Halogen-free moving cable

CLEANSTAR MV-SB 300V BK HF

Cleanroom compatible low dust robot cable.

- Heat resistance ★★★★★
 - Oil resistance ★★★★★
 - Noise resistance ★★★★★
 - Flame resistance ★★★★★
 - Flexibility resistance ★★★★★
 - Drag chain ★★★★★
- ※The characteristic is an aim.

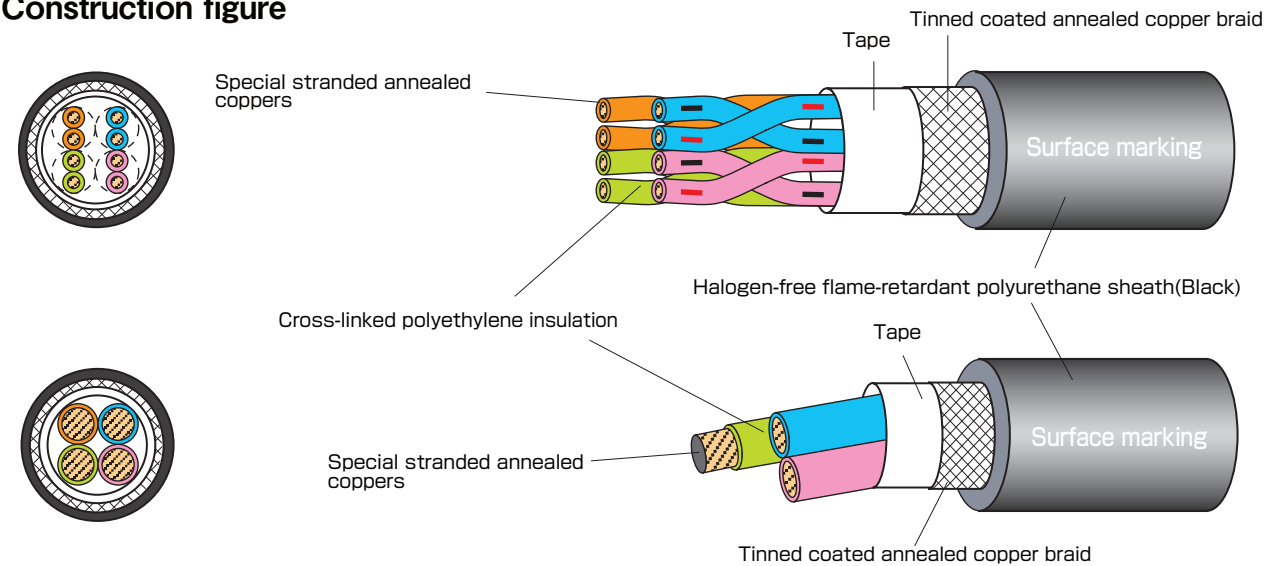
> Application

- Appropriate for cable chain wiring for high-speed moving.
- Drag chain test 20 million times or more.
- Corresponds to halogen-free requirement.
- Robot cable with UL and cUL at 300V 80°C.
(Category : AVL2,AVLV8)

> Feature

- Extremely fine conductor use.
- Cross-linked polyethylene used for insulation.
- Halogen-free flame-retardant polyurethane (TPU)used for sheath.
- Flame resisting : UL, cUL FT2.(Horizontal flame tes)
- IPA Certification (ISO14644-1 Air Cleanliness)
Uses materials equivalent to the Class 1 certified size.

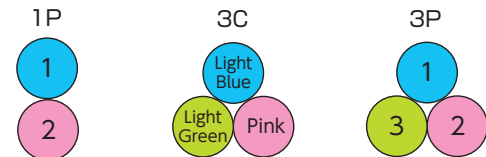
> Construction figure



> Surface marking



> Identification



●Identification table

No	Color	Dot mark
1	LightBlue	—
2	Pink	—
3	LightGreen	—
4	Orange	—
5	Gray	—

> Standard sales length

100m

>>> Meeting standard



> Construction table

No. of cores	Conductor			Cross-linked(XLPE) polyethylene insulation		Halogen-free flame-retardant polyurethane(TPU) sheath		Approx.weight (lbs/1000ft) (kg/km)	Electrical Characteristics			Allowable ampacity (A)
	Size (AWG)	Construction (Line/mm)	Outside diameter (mm)	Outside diameter (inch)	Outside diameter (mm)	Overall diameter approx. (inch)	Overall diameter approx. (mm)		Conductor resistance (Ω/km20°C)	Insulation resistance (MΩkm20°C)	Electrical strength (V/1min.)	
1P						0.185	4.7	18(27)	less than 140			3.2
3C						0.193	4.9	20(30)	less than 137			3.0
2P	26	30/0.08	0.51	0.040	1.01	0.228	5.8	30(45)		more than 100	2000	2.6
3P	(0.128mm)	(30/3.2mil)	(20.1mil)			0.252	6.4	37(55)	less than 140			2.3
4P						0.268	6.8	40(60)				2.1
5P						0.295	7.5	50(75)				4.5
1P						0.193	4.9	19(29)	less than 102			3.8
3C						0.201	5.1	24(35)	less than 100			3.5
2P	24	41/0.08	0.59	0.043	1.09	0.240	6.1	34(50)		more than 100	2000	3.0
3P	(0.205mm)	(41/3.2mil)	(23.23mil)			0.264	6.7	40(60)	less than 102			2.7
4P						0.291	7.4	47(70)				2.5
5P						0.311	7.9	57(85)				5.9
1P						0.205	5.2	24(35)	less than 64.4			4.9
3C						0.213	5.4	27(40)	less than 63.1			4.6
2P	22	65/0.08	0.75	0.049	1.25	0.256	6.5	40(60)		more than 100	2000	4.0
3P	(0.326mm)	(65/32mil)	(29.53mil)			0.295	7.5	50(75)	less than 64.4			3.6
4P						0.315	8.0	60(90)				3.3
5P						0.339	8.6	71(105)				3.2

※The test of 2000V/5 minute besides the withstand voltage test on above mentioned UL standard and the CSA standard is applied.

> Allowable ampacity

·The allowable ampacity of this catalog is a value at one in the air construction and the ambient temperature 30°C.

·Allowable ampacity is calculated based on JCS0168.

·Please multiply the following adjustment factors by the ambient temperature.

●Adjustment factors(at ambient temperature)

Ambient temperature(°C)	30	40	50	60	70	80	90	100
Adjustment factors	1.00	0.89	0.77	0.63	0.45	—	—	—

> Movement characteristic

*) 1 Rotary bending	Bending	U-shaped turn-back	90°bending
B	B	A	B

Examination's time:

S=More than 20 million times C=More than 3 million times
A=More than 10 million times D=More than 1 million times
B=More than 5 million times E=More than 0.5million times

*) 1 It is C when overall diameter of the cable is 20mm or more, and D when overall diameter of the cable is 30mm or more.

※The longevity of the cable inside a drag chain is dependent on the travel distance.
Please consult our Sales Department when wiring a travel distance of 5m or greater.

> Oil resistance

Insulating oil	Lubricating oil	Cutting oil I	Cutting oil II	Hydraulic oil	Grease
A	C	B	B	C	C

※A~C in the table indicate the characteristics below.

A:There is no problem on practical use at all.

B:Deterioration slightly no problem almost on practical use.

C:It is sometimes deteriorated to some degree, and not possible to use it.