

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 ★★★★★
 - Cable carrier ★★★★★
- ※The characteristic is an aim.

Meeting standard



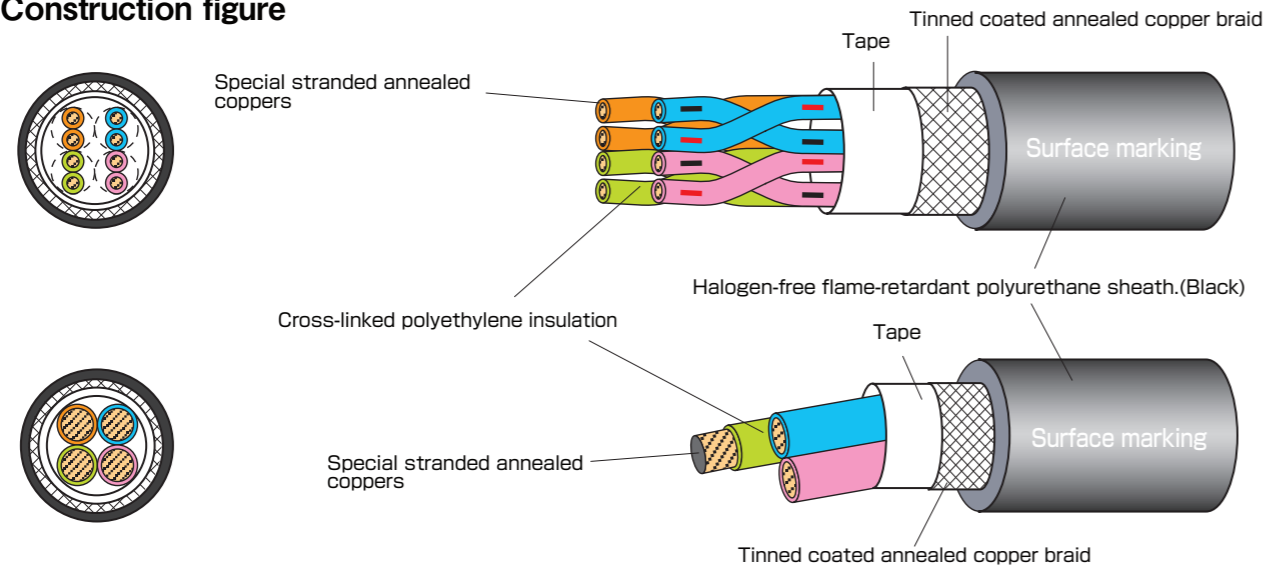
Application

- Appropriate for cable chain wiring for high-speed moving.
- Cable 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)

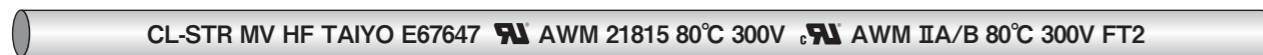
Feature

- 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.

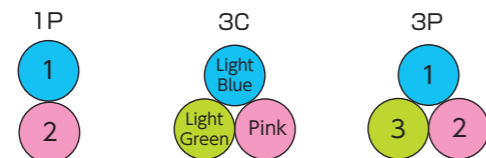
Construction figure



Surface marking



Identification



●Identification table

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

Standard sales length

100m

Certification	UL AWM	cUL AWM
Applicable standard	UL 758	CSA C22.2 No.210
Official symbol	UL STYLE 21815	CSA AWM II A/B
Voltage rating	300V	300V
Temperature rating	80°C	80°C
Conductor	UL 758	CSA C22.2 No.210
Flame rating	Horizontal	FT2

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						0.181	4.6	18(27)	~140			3.2
3C						0.189	4.8	20(30)	~137			3.0
2P	26	30/0.08	0.51	0.040	1.01	0.224	5.7	30(45)		100~	2000	2.6
3P	(0.128mil)	(30/3.2mil)	(20.1mil)			0.248	6.3	37(55)	~140			2.3
4P						0.264	6.7	40(60)				2.1
5P						0.291	7.4	50(75)				4.5
1P						0.189	4.8	19(29)	~102			3.8
3C						0.197	5.0	24(35)	~100			3.5
2P	24	41/0.08	0.59	0.043	1.09	0.236	6.0	34(50)		100~	2000	3.0
3P	(0.205mil)	(41/3.2mil)	(23.23mil)			0.260	6.6	40(60)	~102			2.7
4P						0.287	7.3	47(70)				2.5
5P						0.307	7.8	57(85)				5.9
1P						0.201	5.1	24(35)	~64.4			4.9
3C						0.209	5.3	27(40)	~63.1			4.6
2P	22	65/0.08	0.75	0.049	1.25	0.252	6.4	40(60)		100~	2000	4.0
3P	(0.326mil)	(65/32mil)	(29.53mil)			0.291	7.4	50(75)	~64.4			3.6
4P						0.311	7.9	60(90)				3.3
5P						0.335	8.5	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 cable bearing 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.