Halogen-free moving cable

CLEANSTAR MV 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.

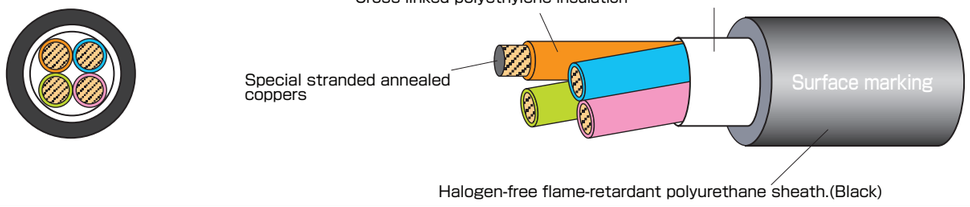
Application

- 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℃.

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.

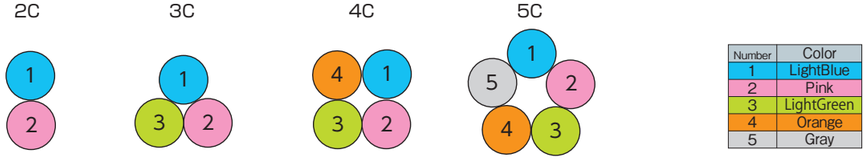
Construction figure



Surface marking

CL-STR MV HF TAIYO E67647 AWM 21815 80℃ 300V AWM ⅡA/B 80℃ 300V FT2

Identification



Number	Color
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 ⅡA/B
Voltage rating	300V	300V
Temperature rating	80℃	80℃
Conductor	UL 758	CSA C22.2 No.210
Flame rating	Horizonal	FT2

Meeting standard

Construction table

No. of cores	Conductor Size (AWG)	Conductor Construction (Line/mm)	Conductor Outside diameter (mm)	Cross-linked(XLPE) polyethylene insulation Outside diameter (inch)	Cross-linked(XLPE) polyethylene insulation Outside diameter (mm)	Halogen-free flame-retardant polyurethane(TPU) sheath Overall diameter approx. (inch)	Halogen-free flame-retardant polyurethane(TPU) sheath Overall diameter approx. (mm)	Approx.weight (lbs/1000ft) (kg/km)	Electrical Characteristics Conductor resistance (Ω/km20℃)	Electrical Characteristics Insulation resistance (MΩkm20℃)	Electrical Characteristics Electrical strength (V/1min.)	Allowable ampacity (A)
2C	26 (0.128㎟)	30/0.08 (30/3.2mil)	0.51 (20.1mil)	0.040	1.01	0.161	4.1	12(18)	less than 137	more than 100	2000	3.6
3C						0.169	4.3	14(21)				3.1
4C						0.181	4.6	17(26)				2.7
5C						0.189	4.8	19(29)				2.5
2C	24 (0.205㎟)	41/0.08 (41/3.2mil)	0.59 (23.23mil)	0.043	1.09	0.169	4.3	14(21)	less than 102	more than 100	2000	4.3
3C						0.177	4.5	16(24)				3.6
4C						0.189	4.8	19(28)				3.3
5C						0.201	5.1	24(35)				3.0
2C	22 (0.326㎟)	65/0.08 (65/3.2mil)	0.75 (29.53mil)	0.049	1.25	0.181	4.6	17(26)	less than 64.4	more than 100	2000	5.7
3C						0.189	4.8	20(30)				4.8
4C						0.201	5.1	24(35)				4.2
5C						0.217	5.5	27(40)				3.9

※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℃.

·Allowable ampacity is calculated based on JCS0168.

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

●Adjustment factors(at ambient temperature)

Ambient temperature(℃)	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.

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