

EXT-Type 3D Series

EXT-3D-SB/CL3X/2586 600V LF

Electronic equipment robot cable

Heat resistance	★★★★★
Oil resistance	★★★★★
Noise resistance	★★★
Flame resistance	★★★★★
Torsion resistance	★★★★★
Flexibility resistance	★★★★★
Cable carrier	★★★★★

*The characteristic is an aim.

▶▶▶ Meeting standard



Certification	EXT-3D LF		
	UL CL3X	UL AWM	cUL AWM
Applicable standard	UL13	UL758	CSA C22.2 No.210
Official symbol	CL3X	UL STYLE 2586	CSA AWM II/A/B
Voltage rating	300V	600V	600V
Temperature rating	105°C	105°C	105°C
Conductor	UL13	UL758	CSA C22.2 No.210
Flame rating	VW-1	VW-1	FT1

Application

- Appropriate wiring for multi-joint unit portion. (Twist test 20 million times or more.)
- Appropriate for drag chain wiring for high-speed moving. (Drag chain test 20 million times or more.)
- CL3X that is the listing standard is acquired and it corresponds to NFPA70,79.
- Sheilded Robot cable with UL and cUL at 600V, 105°C. (Category : AVL V2, AVL V8, QPTZ)

Construction table

No. of cores	Conductor			High elasticity TPE insulation		Overall diameter approx. (inch)	Approx. weight (lbs/1000ft) (kg/km)	Electrical Characteristics			Allowable ampacity (A)	
	Size (AWG)	Construction (Line/mm)	Outside diameter (mm)	Outside diameter (inch)	Overall diameter approx. (inch)			Conductor resistance (Ω/km20°C)	Insulation resistance (MΩ/km20°C)	Electrical strength (V/1min.)		
2C	18 (0.823mm ²)	168/0.08 (168/3.2mil)	1.31 (52mil)	0.075	1.91	0.244	6.2 40(60)	40(60)	less than 22.3	more than 100	2000	13
3C	16 (1.30mm ²)	266/0.08 (266/3.2mil)	1.64 (65mil)	0.088	2.24	0.256 0.276	6.5 7.0 54(80)	47(70)	less than 13.9	more than 100	2000	13
4C	14 (2.08mm ²)	420/0.08 (420/3.2mil)	2.07 (81mil)	0.109	2.77	0.272 0.283 0.307	6.9 7.2 7.8 50(75) 60(90) 74(110)	54(80)	less than 13.9	more than 100	2000	11
2C	18 (0.823mm ²)	168/0.08 (168/3.2mil)	1.31 (52mil)	0.075	1.91	0.311	7.9 67(100)	67(100)	less than 8.77	more than 100	2000	17
3C	16 (1.30mm ²)	266/0.08 (266/3.2mil)	1.64 (65mil)	0.088	2.24	0.346	8.8 91(135)	91(135)	less than 8.77	more than 100	2000	15
4C	14 (2.08mm ²)	420/0.08 (420/3.2mil)	2.07 (81mil)	0.109	2.77	0.374	9.5 111(165)	111(165)	less than 8.77	more than 100	2000	23

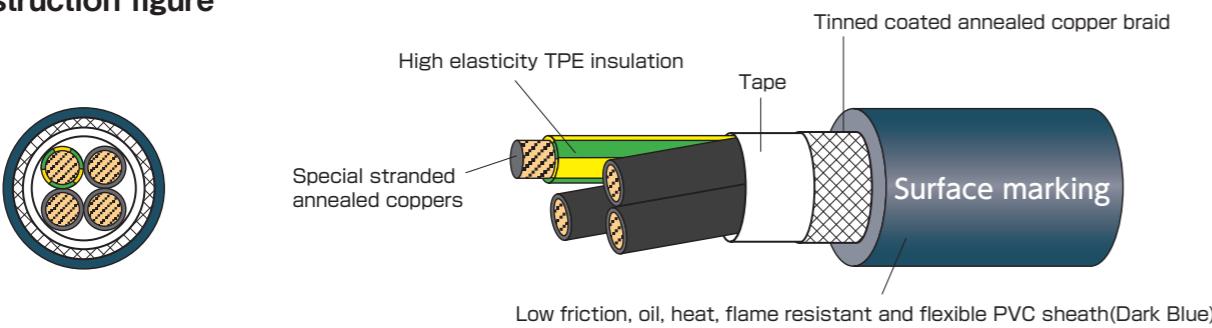
*3,4 core has the [Y/G] earth cable of an equal size.

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

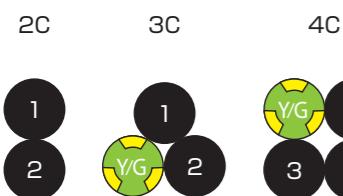
Feature

- Extremely fine conductor use.
- High bending elasticity and heat resistant TPE is used for insulation.
- Oil and heat resistant PVC used for sheath.
- Low friction material used for sheath.
- Flame resisting : UL VW-1, cUL FT1.
- IPA Certification (ISO14644-1 Air Cleanliness)
Uses materials equivalent to the Class 1 certified size.

Construction figure



Identification



*Y/G indicates green core with yellow stripe (30~50%).

Surface marking

TAIYO EXT-3D □ AWG LF R15 E242171 (UL) CL3X 105°C □ AWG or AWM 2586 105°C 600V VW-1 AWM II/A/B 105°C 600V FT1

*R15 indicates "Compliant with RoHS Directive 2011/65/EU and Directive (EU) 2015/863 (10 substances)".

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.

Allowable ampacity is calculated excluding grounding conductor.

Please multiply the following adjustment factors by the ambient temperature.

Note) Please refer to P.270 when you use this cable according to NFPA70 or NFPA79.

Adjustment factors (at ambient temperature)

Ambient temperature (°C)	30	40	50	60	70	80	90	100
Adjustment factors	1.00	0.93	0.86	0.77	0.68	0.58	0.45	0.26

Movement characteristic

*)1 Rotary bending	Bending	U-shaped turn-back	90° bending	Twist			*)2 Move bending
				Straight	Bending	Move	
A	A	S	A	S	A	C	C

Examination's time:
 S= More than 20 million times
 A= More than 10 million times
 B= More than 5 million times
 C= More than 3 million times
 D= More than 1 million times
 E= More than 0.5 million 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.

*)2 When overall diameter of the cable is 20mm or less.

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	A	B	B	B	B

*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.

Standard sales length

100m

(Sales by short length is available for large sizes. Please contact us which sizes are available.)