

EXT-3D/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

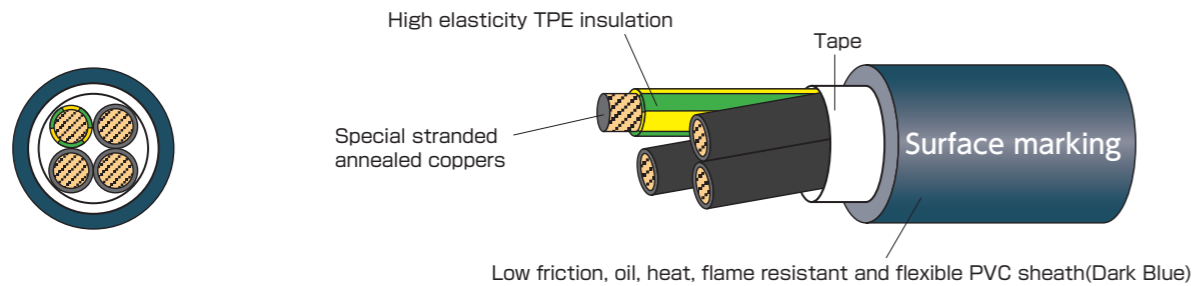
> Application

- Appropriate wiring for multi-joint unit portion. (Twist test 20 million times or more.)
- Appropriate for cable chain wiring for high-speed moving. (Cable chain test 20 million times or more.)
- CL3X that is the listing standard is acquired and it corresponds to NFPA70,79.
- Robot cable with UL and cUL at 600V, 105°C. (Category : AVLV2, AVLV8, QPTZ)

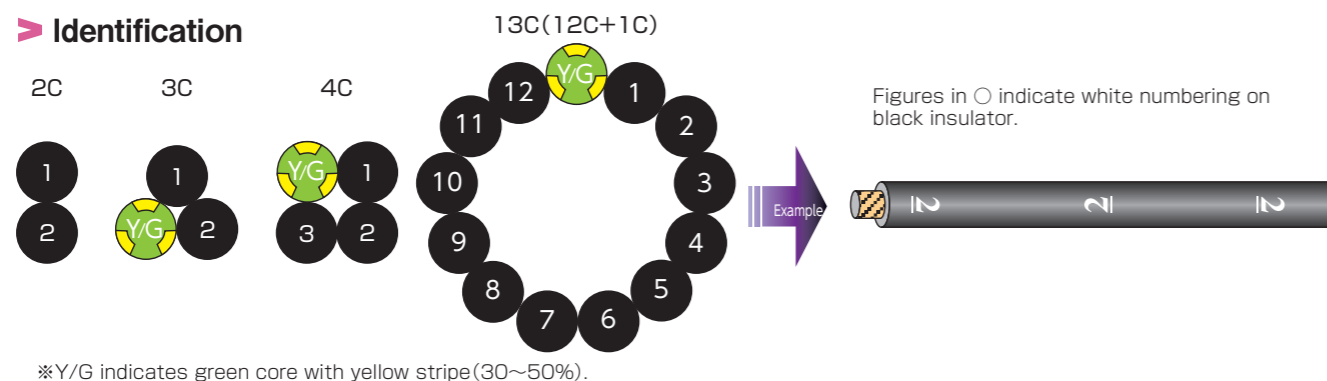
> Feature

- 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 (ISO 14644-1 Air Cleanliness)
Uses materials equivalent to the Class 1 certified size.

> Construction figure



> Identification



> 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)".

> Construction table

No. of cores	Conductor			High elasticity TPE insulation		Low friction, oil, heat, flame resistant flexible PVC 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.)	
2C						0.224	5.7	30(44)				12
3C						0.236	6.0	37(55)				12
4C						0.256	6.5	44(65)				11
6C+1C	18 (0.823mm)	168/0.08 (168/3.2mil)	1.31 (52mil)	0.075	1.91	0.354	9.0	94(140)	less than 22.3	more than 100	2000	9.0
8C+1C						0.402	10.2	118(175)				8.2
10C+1C						0.453	11.5	141(210)				7.7
12C+1C						0.500	12.7	165(245)				7.3
2C						0.252	6.4	40(60)				17
3C						0.264	6.7	50(75)				17
4C	16 (1.30mm)	266/0.08 (266/3.2mil)	1.64 (65mil)	0.088	2.24	0.287	7.3	64(95)	less than 13.9	more than 100	2000	14
6C+1C						0.394	10.0	114(170)				11
10C+1C						0.508	12.9	178(265)				10
12C+1C						0.571	14.5	218(325)				9.8
2C						0.291	7.4	54(80)				23
3C	14 (2.08mm)	420/0.08 (420/3.2mil)	2.07 (81mil)	0.109	2.77	0.311	7.9	71(105)	less than 8.77	more than 100	2000	23
4C						0.354	9.0	94(140)				20
6C+1C						0.461	11.7	161(240)				16

※Core number mark "+1C" has the [Y/G] earth cable of 14AWG size.
 ※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.

> 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.278 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 Bending	Bend	U-shaped turn-back	90° bending	Twist		*) 2 Move bending
				Straight	Bending	
A	A	S	A	S	A	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

- *) 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 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	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.)