Articulated robot cable

EXT-3D series

EXT-3D/CL3X/2517 300V
EXT-3D/CL3X/2586 600V

UL listing support

EXT-3D/CL3X/2517 300V LF

Certification	EXT-3D LF		
	UL CL3X	UL AWM	cUL AWM
Applicable standard	UL13	UL758	CSA C22.2 No.210
Official symbol	CL3X	UL STYLE 2517	CSA AWM ⅡA/B
Voltage rating	300V	300V	300V
Temperature rating	105℃	105℃	105℃
Conductor	UL13	UL758	CSA C22.2 No.210
Flame rating	VW-1	VW-1	FT1

EXT-3D/CL3X/2586 600V LF

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 ⅡA/B
Voltage rating	300V	600V	600V
Temperature rating	105℃	105℃	105℃
Conductor	UL13	UL758	CSA C22.2 No.210
Flame rating	VW-1	VW-1	FT1

High Flexibility

Flexible

It supports 3D movement and is ideal for moving parts of articulated robots! !!

◎Bending characteristics :

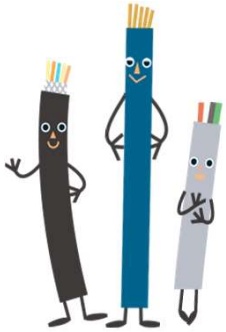
U-shaped folding test 20 million times

◎Use for cableveyor and wear-resistant parts

Specification

1. Adoption of highly elastic TPE resin insulator
2. UL listing (CL3X) is added to meet NFPA requirements.
3. Friction resistance is small, and the smoothness of the core surface during movement is improved.
4. Highly elastic material prevents linear buckling during movement.
5. IPA certification Class 1(ISO14644-1)

IPA Fraunhofer TESTED DEVICE Taiyo Cabletec Corp. CLEANSTAR 20210910 Report No. TA 2112-1286



"SUN"- san Brothers

Please check the back side for detailed specifications

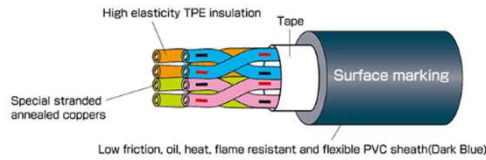
Taiyo Cabletec Corporation

Articulated robot cable

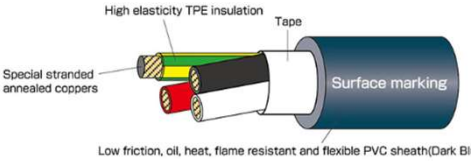
EXT-3D/CL3X/2517 300V LF

Construction figure

・24~20AWG

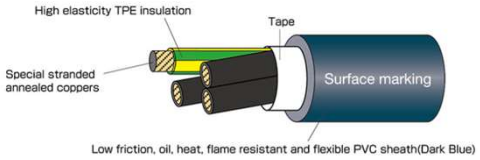


・18~14AWG



EXT-3D/CL3X/2586 600V LF

Construction figure



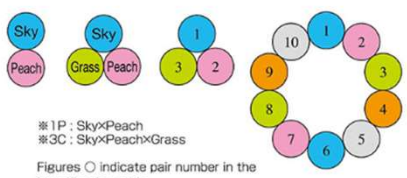
> EXT-3D/CL3X/2517 300V LF

Construction table

No. of cores No. of pairs	Conductor Size (AWG)	Conductor Construction (Line/mm)	Conductor Outside diameter (mm)	High elasticity TPE insulation Outside diameter (inch)	High elasticity TPE insulation Outside diameter (mm)	Low friction, oil, heat, flame resistant flexible PVC sheath Overall diameter approx.(inch)	Low friction, oil, heat, flame resistant flexible PVC 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)
1P						0.154	3.9	12(18)	less than 91.1			5.3
3C						0.157	4.0	15(22)	less than 89.3			4.4
2P						0.193	4.9	19(29)				4.2
3P						0.217	5.5	25(37)				3.6
4P	24 (0.204mil)	41/0.08 (41/3.2mil)	0.59 (23mil)	0.039	0.99	0.236	6.0	30(45)				3.2
5P						0.252	6.4	37(55)	less than 91.1	more than 100	2000	3.0
7P						0.295	7.5	47(70)				2.7
8P						0.315	8.0	50(75)				2.6
10P						0.370	9.4	71(105)				2.5
12P						0.413	10.5	84(125)				2.4
1P						0.165	4.2	15(22)	less than 57.6			6.9
3C						0.173	4.4	19(28)	less than 56.5			5.8
2P						0.213	5.4	26(38)				5.5
3P						0.240	6.1	32(48)				4.8
4P	22 (0.324mil)	65/0.08 (65/3.2mil)	0.75 (30mil)	0.045	1.15	0.260	6.6	37(55)		more than 100	2000	4.3
5P						0.283	7.2	47(70)	less than 57.6			4.0
7P						0.346	8.8	67(100)				3.6
8P						0.370	9.4	74(110)				3.5
10P						0.417	10.6	94(140)				3.3
12P						0.472	12.0	104(155)				3.2
1P						0.181	4.6	19(29)	less than 35.7			9.2
3C						0.189	4.8	24(35)	less than 35.0			7.8
2P						0.240	6.1	34(50)				7.4
3P						0.272	6.9	44(65)				6.4
4P	20 (0.518mil)	108/0.08 (108/3.2mil)	0.96 (38mil)	0.054	1.36	0.295	7.5	54(80)				5.8
5P						0.335	8.5	71(105)	less than 35.7	more than 100	2000	5.4
7P						0.390	9.9	94(140)				4.9
8P						0.421	10.7	108(160)				4.7
10P						0.484	12.3	138(205)				4.4
12P						0.547	13.9	168(250)				4.2
2C						0.224	5.7	30(44)				12
3C						0.236	6.0	37(55)				12
4C	18 (0.823mil)	168/0.08 (168/3.2mil)	1.31 (52mil)	0.075	1.91	0.256	6.5	44(65)				11
7C						0.339	8.6	77(115)	less than 22.3	more than 100	2000	8.8
9C						0.386	9.8	101(150)				8.1
11C						0.441	11.2	124(185)				7.6
13C						0.488	12.4	151(225)				7.3
3C	16 (1.30mil)	266/0.08 (266/3.2mil)	1.64 (65mil)	0.088	2.24	0.264	6.7	50(75)				17
4C						0.287	7.3	64(95)	less than 13.9	more than 100	2000	14
7C						0.382	9.7	108(160)				11
3C	14 (2.08mil)	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

・24~20AWG

1P 3C 3P 10P



※1P : Sky×Peach
※3C : Sky×Peach×Grass

Figures ○ indicate pair number in the identification table.

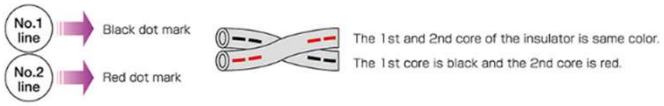
※A short point is 1mm, the length point is 2mm, the interval is 1mm, and the pitch is about 12mm.

●Identification table

Pair number	Color of insulator	Dot mark
1	Sky	
2	Peach	
3	Grass	
4	Orange	
5	Gray	
6	Sky	
7	Peach	
8	Grass	
9	Orange	
10	Gray	
11	Sky	
12	Peach	
13	Grass	
14	Orange	
15	Gray	

Pair number	Color of insulator	Dot mark
16	Sky	
17	Peach	
18	Grass	
19	Orange	
20	Gray	
21	Sky	Continuation
22	Peach	Continuation
23	Grass	Continuation
24	Orange	Continuation
25	Gray	Continuation
26	Sky	
27	Peach	
28	Grass	
29	Orange	
30	Gray	

●Example of pare



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Construction table

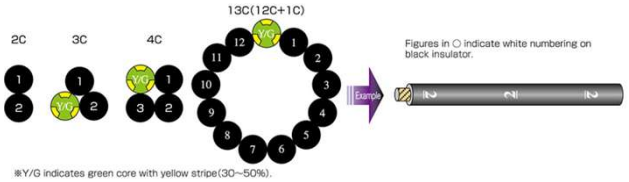
No. of cores	Conductor Size (AWG)	Conductor Construction (Line/mm)	Conductor Outside diameter (mm)	High elasticity TPE insulation Outside diameter (inch)	High elasticity TPE insulation Outside diameter (mm)	Low friction, oil, heat, flame resistant flexible PVC sheath Overall diameter approx.(inch)	Low friction, oil, heat, flame resistant flexible PVC 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						0.224	5.7	30(44)				12
3C						0.236	6.0	37(55)				12
4C	18 (0.823mil)	168/0.08 (168/3.2mil)	1.31 (52mil)	0.075	1.91	0.256	6.5	44(65)				11
6C+1C						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 (1.30mil)	266/0.08 (266/3.2mil)	1.64 (65mil)	0.088	2.24	0.287	7.3	64(95)				14
6C+1C						0.394	10.0	114(170)	less than 13.9	more than 100	2000	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 (2.08mil)	420/0.08 (420/3.2mil)	2.07 (81mil)	0.109	2.77	0.311	7.9	71(105)				23
4C						0.354	9.0	94(140)	less than 8.77	more than 100	2000	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.

Surface marking



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

TC Asia Pacific Holdings Ltd.

Osaka/Japan

⬅Contact Form