SUNLIGHT 3DX LF

PVC insulated oil flexible cord for electronics wiring

Heat resistance	★★
Oil resistance	★★★★★
Noise resistance	★
Flame resistance	★★★★
Flexibility	★★★
non-migratory	★★★★★
Transport property	★★

※The characteristic is an aim.

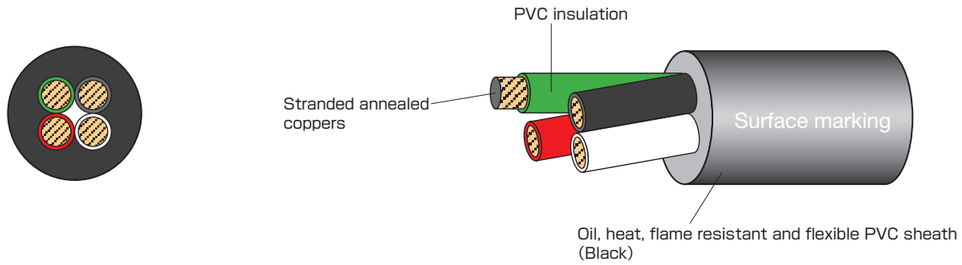
> Application

- AC 300V or less of the environmental type cable as machine tools,construction machinery, applications under harsh conditions, such as a robot power circuit.
- Oil, flexibility of use.
  Rated voltage:300V. Temp:60℃.

> Feature

- Oil, heat, flame retardant and soft PVC for sheath.
- Sheath material is non-migratory against ABS and PS resin.
- Chemical, water, abrasion, cold resistance PVC for sheath.
- Flame resisting : UL VW-1.
- 0.75mm²～5.5mm² cables conform to Electrical Appliance and Material Safety Law.
  (0.3, 0.5mm² cables used in less than 100V out of Electrical Appliance and Material Safety Law)

> Construction figure



※Cables with more than 8 cores : binder tape on cores.

> Surface marking

(1)0.3, 0.5mm² cables

SUNLIGHT 3DX(耐油 難燃 柔軟) 0.5mm² TAIYO CABLETEC ** LF R15

(2)0.75mm² or larger

SUNLIGHT 3DX(耐油 難燃 柔軟) 300V ○○mm²<PS> E ** TAIYO CABLETEC LF R15

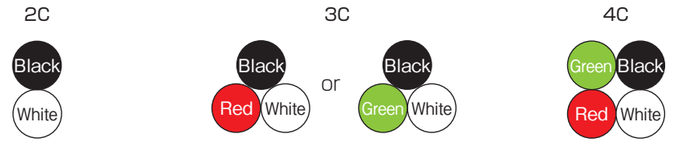
※R15 indicates "Compliant with RoHS Directive 2011/65/EU and Directive (EU) 2015/863 (10 substances)".

> > > Meeting standard

Certification	Electrical Appliance and Material Safety
Applicable standard	LawDepartmental order to determine a technical standard of the electrical equipment
Official symbol	VCTF
Voltage rating	300V
Temperature rating	60℃
Conductor	JIS C 3102
Flame rating	JIS C 3005-4.26.2-b)

> Identification

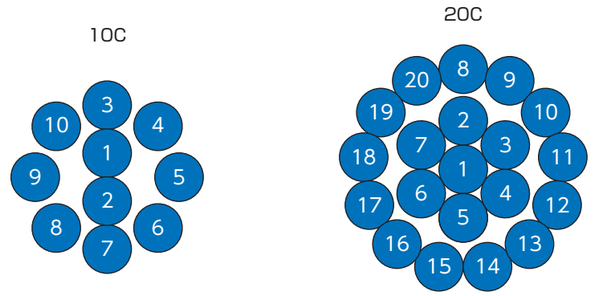
·2C～4C



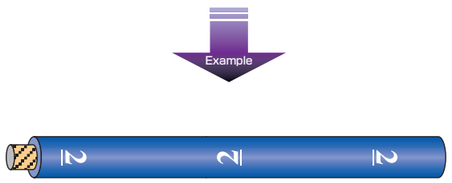
B×W×G

(Except 0.5mm²)

·5 cores or more is identified by numbering



Figures in ○ indicate white numbering on blue insulator.



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> Construction table

No. of cores	Conductor			PVC insulation		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℃)	Insulation resistance (MΩkm20℃)	Electrical strength (V/1min.)	
2C	0.3㎟	12/0.18 (12/7.1mil)	0.7 (27mil)	0.015	1.5	0.181	4.6	22(32)	less than 62.9	more than 5	2000	3.0
3C						0.189	4.8	26(38)				3.0
4C						0.205	5.2	31(46)				3.0
○ 5C						0.224	5.7	37(55)				3.0
6C						0.240	6.1	44(65)				3.0
○ 7C						0.240	6.1	47(70)				3.0
○ 8C						0.268	6.8	50(75)				3.0
10C						0.307	7.8	64(95)				3.0
○ 12C						0.323	8.2	77(115)				3.0
○ 16C						0.358	9.1	97(145)				3.0
○ 20C						0.386	9.8	114(170)				2.9
○ 30C						0.465	11.8	171(255)				2.6
2C	0.5㎟	20/0.18 (20/7.1mil)	0.9 (35mil)	0.075	1.9	0.228	5.8	30(44)	less than 37.8	more than 5	1000	5.0
3C						0.240	6.1	34(50)				5.0
4C						0.260	6.6	40(60)				5.0
5C						0.280	7.1	47(70)				5.0
6C						0.303	7.7	57(85)				5.0
7C						0.303	7.7	60(90)				5.0
8C						0.335	8.5	67(100)				5.0
10C						0.386	9.8	81(120)				5.0
12C						0.398	10.1	94(140)				4.9
16C						0.437	11.1	118(175)				4.4
20C						0.472	12.0	141(210)				4.1
24C						0.543	13.8	175(260)				4.0
30C						0.575	14.6	208(310)				3.6
36C						0.618	15.7	245(365)				3.4
40C						0.650	16.5	272(405)				3.3
50C						0.713	18.1	336(500)				3.1
○60C						0.783	19.9	400(595)				2.9
2C	0.75㎟	30/0.18 (30/7.1mil)	1.1 (43mil)	0.091	2.3	0.260	6.6	40(60)	less than 25.1	more than 5	1000	7.0
3C						0.276	7.0	47(70)				7.0
4C						0.299	7.6	57(85)				7.0
5C						0.323	8.2	67(100)				7.0
6C						0.350	8.9	77(115)				7.0
7C						0.350	8.9	84(125)				7.0
8C						0.386	9.8	91(135)				7.0
10C						0.449	11.4	114(170)				6.9
12C						0.465	11.8	131(195)				6.4
16C						0.512	13.0	165(245)				5.8
20C						0.563	14.3	205(305)				5.4
24C						0.646	16.4	252(375)				5.2
30C						0.685	17.4	299(445)				4.8
36C						0.744	18.9	360(535)				4.5
40C						0.772	19.6	393(585)				4.3
○50C						0.858	21.8	494(735)				4.0
2C	1.25㎟	50/0.18 (50/7.1mil)	1.5 (59mil)	0.106	2.7	0.291	7.4	54(80)	less than 15.1	more than 5	1000	12
3C						0.307	7.8	64(95)				12
4C						0.335	8.5	77(115)				12
5C						0.366	9.3	94(140)				11
6C						0.398	10.1	108(160)				11
7C						0.398	10.1	118(175)				10
8C						0.437	11.1	128(190)				9.8
10C						0.512	13.0	158(235)				9.4
12C						0.535	13.6	188(280)				8.7
16C						0.594	15.1	238(355)				7.9
20C						0.654	16.6	299(445)				7.3
24C						0.748	19.0	370(550)				7.0
30C						0.791	20.1	437(650)				6.5
36C						0.862	21.9	521(775)				6.1
○40C						0.894	22.7	571(850)				5.9
○50C						0.992	25.2	712(1060)				5.4

No. of cores	Conductor			PVC insulation		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℃)	Insulation resistance (MΩkm20℃)	Electrical strength (V/1min.)	
2C	2.0㎟	37/0.26 (37/10.2mil)	1.8 (71mil)	0.118	3.0	0.315	8.0	67(100)	less than 9.79	more than 5	1000	17
3C						0.335	8.5	84(125)				17
4C						0.362	9.2	101(150)				15
5C						0.398	10.1	121(180)				14
6C						0.433	11.0	144(215)				14
7C						0.433	11.0	158(235)				13
8C						0.476	12.1	168(250)				12
10C						0.567	14.4	215(320)				12
12C						0.587	14.9	252(375)				11
16C						0.657	16.7	326(485)				10
20C						0.713	18.1	400(595)				9.4
○24C						0.819	20.8	497(740)				9.1
○30C						0.874	22.2	598(890)				8.3

Note:Six times(x6~) of overall diameter is needed when you bend cables, and more diameter is needed when you bend cables repeatedly by cable reel, curtain, etc.
○:Indicates Make-to-order products.

> 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 correction coefficient by the ambient temperature.

●Adjustment factors(at ambient temperature)

Ambient temperature(℃)	30	35	40	45	50	55	60	70	80	90	100
Adjustment factors	1.00	0.91	0.82	0.71	0.58	0.41	—	—	—	—	—

> 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
(Sale by cutting short length is available Min.5 cores.)

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