

UE/STO(N)/TC LF

For tray cable, race way and electronic equipment power supply code

Heat resistance ★★★★★
Oil resistance ★★★★★
Noise resistance ★
Flame resistance ★★★★★
Flexibility ★★★
non-migratory ★★★★★
Transport property★★★
※The characteristic is an aim.

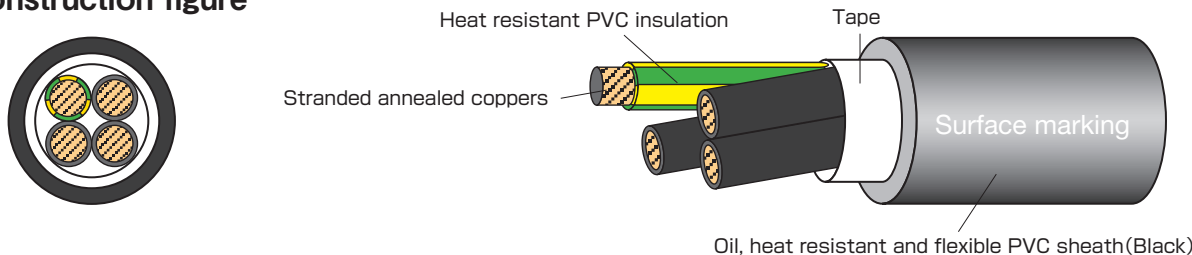
➤ Application

- Multi cable for North America and EU.
- Electric equipment cable with UL and cUL at 600V, 105°C.
(Category QP0R, ZJCZ, ZKHZ, ZJCZ7)
- Obtaining UL Listed STO, TC and MTW, this cable compliants to NFPA 70 and 79.
- CE marking (TÜV recognition product).
(Certificate of TÜV No.J50004167)

➤ Feature

- Heat resistant PVC material is used to insulation.
- Oil, heat resistant and Flexible PVC sheath material is used.
- It passes Vertical-Tray Flame Test of UL.

➤ Construction figure



➤ Surface marking

(1) 2cores of 18AWG~10AWG cables

E209288(UL) TC 90°C DRY 75°C WET or MTW FLEXING VW-1 or STO 105°C 600V VW-1 Line number×□□AWG
c(UL) STO 105°C 600V Line number×□□AWG(○□mm²) FT1 TAIYO △ CE 05VV-F 300/500V <PS>E ** LF R15

(2) 3 cores or more of 18AWG~10AWG cables

E209288(UL) TC-ER 90°C DRY 75°C WET or MTW FLEXING VW-1 or STO 105°C 600V VW-1 Line number×□□AWG
c(UL) STO 105°C 600V Line number×□□AWG(○□mm²) FT1 TAIYO △ CE 05VV-F 300/500V <PS>E ** LF R15

(3) 2cores of 8AWG~2AWG cables

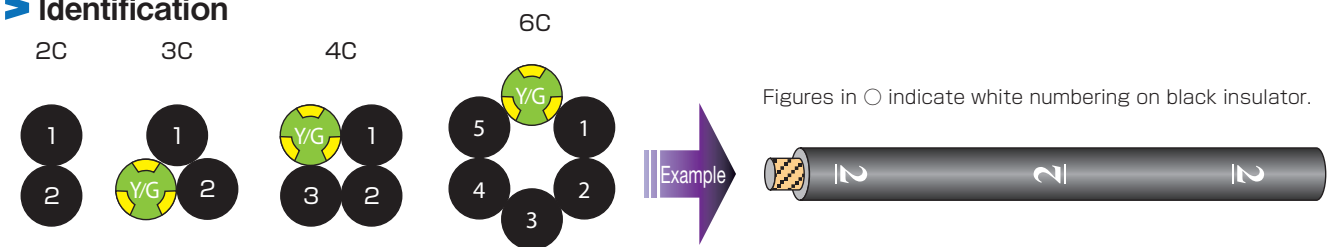
E209288(UL) TC 90°C DRY 75°C WET or MTW VW-1 or STO 105°C 600V VW-1 Line number×□□AWG
c(UL) STO 105°C 600V Line number×□□AWG(○□mm²) FT1 TAIYO △ CE 05VV-F 300/500V <PS>E ** LF R15

(4) 3 cores or more of 8AWG~2AWG cables

E209288(UL) TC-ER 90°C DRY 75°C WET or MTW VW-1 or STO 105°C 600V VW-1 Line number×□□AWG
c(UL) STO 105°C 600V Line number×□□AWG(○□mm²) FT1 TAIYO △ CE 05VV-F 300/500V <PS>E ** LF R15

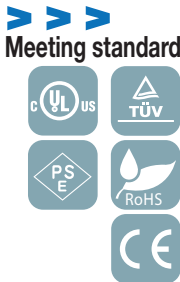
※R15 indicates "Compliant with RoHS Directive 2011/65/EU and Directive (EU) 2015/863 (10 substances)".

➤ Identification



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

Certification	UL STO	cUL STO	UL TC	TÜV.CE marking	UL MTW	Electrical Appliance and Material Safety Law (18~10AWG)	Electrical Appliance and Material Safety Law (8~2AWG)
Applicable standard	UL 62	CSA C22.2 No.49	UL 1277	EN50525-2-11	UL 1063	Departmental order to determine a technical standard of the electrical equipment	Departmental order to determine a technical standard of the electrical equipment
Official symbol	STO	STO	TC	Equivalent of H05VV-F	MTW	Vinyl cab tire cord	Vinyl cab tire cord
Voltage rating	600V	600V	600V	300/500V	600V	300V	600V
Temperature rating	105°C	105°C	DRY90°C WET75°C	70°C	DRY90°C WET60°C	60°C	60°C
Conductor	UL 62	CSA C22.2 No.49	UL 1277	EN60228	UL 1063	JIS C 3102	JIS C 3102
Flame rating	VW-1	FT1	Vertical-Tray Flame Test	EN50264-2-1	VW-1	JIS C 3005 4.26.2 b)	JIS C 3005 4.26.2 b)



➤ Construction table

No. of cores	Conductor			Heat resistant PVC insulation		Oil, heat - resistant flexible - PVC sheath		Approx. weight (lbs/1000ft) (kg/km)
	Size (AWG)	Construction (Line/mm)	Outside diameter (mm)	Outside diameter (inch)	Outside diameter (mm)	Overall diameter approx. (inch)	Overall diameter approx. (mm)	
2C	18 (0.824mm)	33/0.18 (33/7.1mil)	1.2 (47mil)	0.114	2.9	0.366	9.3	64(95)
3C						0.382	9.7	77(115)
4C						0.413	10.5	90(135)
6C						0.528	13.4	147(220)
2C	16 (1.31mm)	53/0.18 (53/7.1mil)	1.5 (59mil)	0.126	3.2	0.390	9.9	77(115)
3C						0.413	10.5	90(135)
4C						0.445	11.3	110(165)
6C						0.563	14.3	174(260)
2C	14 (2.08mm)	41/0.254 (41/10mil)	1.9 (75mil)	0.173	4.4	0.531	13.5	137(205)
3C						0.559	14.2	160(240)
4C						0.602	15.3	194(290)
6C						0.736	18.7	287(430)
2C	12 (3.31mm)	65/0.254 (65/10mil)	2.4 (94mil)	0.193	4.9	0.602	15.3	184(275)
3C						0.634	16.1	220(330)
4C						0.681	17.3	267(400)
6C						0.657	16.7	230(345)
2C	10 (5.26mm)	104/0.254 (104/10mil)	3.1 (122mil)	0.220	5.6	0.693	17.6	284(425)
3C						0.748	19.0	350(525)
4C						0.878	22.3	487(730)
6C						0.898	22.8	464(695)
2C	8 (8.37mm)	7/24/0.254 (7/24/10mil)	4.2 (165mil)	0.299	7.6	1.004	25.5	600(900)
3C						1.020	25.9	647(970)
4C						1.142	29.0	834(1250)
6C						1.165	29.6	894(1340)
2C	6 (13.3mm)	7/39/0.254 (7/39/10mil)	5.3 (209mil)	0.343	8.7	1.295	32.9	1154(1730)
3C						1.366	34.7	1267(1900)
4C						1.520	38.6	1627(2440)
6C						1.520	38.6	1627(2440)

※Partial conductor construction is changed from production in August 2022.

For details, please contact our sales representative or the place of purchase.

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

➤ Allowable ampacity

·Allowable current of this catalog NFPA70 Table 400.5(A)(1) STO ambient temperature 30°C.

·For the current correction factor, please refer to the P270.

·For please confirm the NFPA70(National Electrical cord) and NFPA79(Electrical Standard for Industrial Machinery) more use.

➤ Electrical property

Size (AWG)	Conductor resistance (Ω/km20°C)	Insulation resistance (MΩ.km20°C)	*1 Electrical strength (V/1min.)	*2 Allowable ampacity (A)		
				a	b	c
18	less than 22.1	more than 60	2000	7	10	5.6
16	less than 13.7	more than 60	2000	10	13	8
14	less than 8.64	more than 60	3000	15	18	12
12	less than 5.42	more than 50	3000	20	25	—
10	less than 3.42	more than 50	3000	25	30	20
8	less than 2.14	more than 50	4000	35	40	—
6	less than 1.34	more than 50	4000	45	55	—
4	less than 0.848	more than 50	4000	60	70	—
2	less than 0.533	more than 40	4000	80	95	—

*1 The examination of 2000V/5 minute besides the withstand voltage test on the UL standard and the CSA standard that has been described to the top is applied.

*2 Allowable ampacity By National Electrical Code(NEC)

a:Apply to 3-conductor cords and other multiconductor cords connected to utilization equipment so that only 3 conductors are current-carrying.

b:Apply to 2-conductor cords and other multiconductor cords connected to utilization equipment so that only 2 conductors are current-carrying.

c:Apply to 5-conductor cords and other multiconductor cords connected to utilization equipment so that only 5 conductors are current-carrying.

➤ Standard sales length

100m

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