

SERIES
8160S

Tray Cable Instrumentation, TC-ER/CIC/MTW/WTTC

Nylon (THHN), Direct Burial, Sun Res

Fixed application, multiple triads, shielded



Use

Shielded UL Listed multiple pairs cables built for the uses specified by ANSI/NFPA 79, articles 336, 392, 501 of the ANSI/NFPA 70 "National Electrical Code" (NEC) and by CSA C22.1 (CE Code). They are cables suitable for use in Hazardous Locations in Class I, Division 2 and being certified Type TC-ER (Exposed Run) they can be installed in industrial plants for connections between cable trays and equipment without the use of conduits/tubings. These cables are oil resistant, sun resistant and can be used in the presence of humidity even buried (they are certified Direct Burial according to UL 1277); they are also certified Flexible Motor Supply Cable for variable speed drives and Wind Turbine Tray Cable (WTTC) for wind turbine applications.

Information. An additional UL certified cut-to-length service is carried out on request ("Processed Wire").

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, ASTM B3, ASTM B174
Insulation	PVC/Nylon (THHN)
Conductor distinction	Numbered black, white and red triads
Fillers	Central or side fillers, if any
Shield on triads	Aluminum/polyester, coverage 100% + Drain wire
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Jacket	PVC compound, oil-resistant, black color. Metric marking.
Temperature range	+75°C (wet cond.), +90°C (dry cond.), +105°C (AWM) -40°C (fixed); -5°C (not fixed)
Voltage rating	600 V (TC/CIC/MTW), 1000 V (AWM/WTTC), 600/1000 V (IEC)
Test voltage	6000 V
Bending radius	6 x cable outer diameter (fixed) 20 x cable outer diameter (not fixed)
Standards of construction	UL/CSA approvals: (UL) Type TC-ER (18 AWG-1000 kcmil), MTW, WTTC, Dir Bur, Sun Res, Oil Res I, Oil Res II, c(UL) TC-ER (18 AWG-1000 kcmil), CIC (18 AWG-4/0 AWG), Dir Bur, Sun Res, Oil Res; c(CSA)us AWM I/II A/B; Class 1, Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 Flame res.: FT4, IEEE 1202 Other: Low Voltage Directive (LVD) 2014/35/EU
Standards of use	NFPA 79, NFPA 70 (NEC), UL 508a, CSA C22.1 (CE Code), CSA C22.2 No.286

Marking

TEKIMA 8160S – CE (4X(3X0,823)) mm² (UL) E361258 TC-ER (4X(3X18)) AWG DIR BUR SUN RES OIL RES 600V THHN 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW 600V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES 600V 90°C Dry / 75°C Wet PVC/Nylon SHIELDED FT4 - CSA 608137 AWM I/II A/B 105°C 1000V FT1 18 AWG – (prod.reference) = (metric) =

Code	Number of conductors	Size [AWG]	Size [mm ²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV013W18_8160S_□□	1 X 3	0,823	18	8,4 (0.332)	102 (69)
CV023W18_8160S_□□	2 X 3	0,823	18	14,3 (0.561)	250 (168)
CV033W18_8160S_□□	3 X 3	0,823	18	15,0 (0.592)	295 (198)
CV043W18_8160S_□□	4 X 3	0,823	18	16,3 (0.643)	353 (237)
CV063W18_8160S_□□	6 X 3	0,823	18	19,3 (0.762)	500 (336)
CV083W18_8160S_□□	8 X 3	0,823	18	21,8 (0.860)	645 (433)
CV103W18_8160S_□□	10 X 3	0,823	18	25,3 (0.996)	817 (549)
CV123W18_8160S_□□	12 X 3	0,823	18	26,1 (1.027)	901 (605)
CV163W18_8160S_□□	16 X 3	0,823	18	28,7 (1.131)	1112 (747)
CV203W18_8160S_□□	20 X 3	0,823	18	31,2 (1.229)	1350 (907)
CV243W18_8160S_□□	24 X 3	0,823	18	35,3 (1.391)	1649 (1108)

Code	Number of conductors	Size [AWG]	Size [mm ²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV363W18_8160S_□□	36 X 3	0,823	18	40,3 (1.585)	2226 (1496)
CV503W18_8160S_□□	50 X 3	0,823	18	48,8 (1.921)	3163 (2126)
CV013W16_8160S_□□	1 X 3	1,31	16	9,2 (0.363)	127 (86)
CV023W16_8160S_□□	2 X 3	1,31	16	15,8 (0.623)	313 (210)
CV033W16_8160S_□□	3 X 3	1,31	16	16,7 (0.659)	376 (253)
CV043W16_8160S_□□	4 X 3	1,31	16	18,2 (0.717)	456 (306)
CV063W16_8160S_□□	6 X 3	1,31	16	22,7 (0.894)	699 (470)
CV083W16_8160S_□□	8 X 3	1,31	16	24,4 (0.961)	839 (564)
CV103W16_8160S_□□	10 X 3	1,31	16	28,4 (1.118)	1070 (719)
CV123W16_8160S_□□	12 X 3	1,31	16	29,3 (1.154)	1188 (798)
CV163W16_8160S_□□	16 X 3	1,31	16	32,6 (1.283)	1518 (1020)
CV203W16_8160S_□□	20 X 3	1,31	16	35,2 (1.386)	1803 (1211)
CV243W16_8160S_□□	24 X 3	1,31	16	40,0 (1.575)	2207 (1483)
CV363W16_8160S_□□	36 X 3	1,31	16	47,2 (1.860)	3167 (2128)
CV503W16_8160S_□□	50 X 3	1,31	16	55,3 (2.179)	4277 (2874)

Code composition



Number of triads	To be inserted
1, 2, ...	01, 02, ...

Color	To be inserted
Nero - Black	NE

Size	To be inserted
18, 16 AWG	W18, W16