

SERIES
8160

Power and Control Tray Cable, TC-ER/CIC/MTW/WTTC Nylon (THHN), Sun Res



Fixed application, unshielded



Use

Unshielded UL Listed cables built for the uses specified by ANSI/NFPA 79, by Art. 336, 392, 501 of ANSI/NFPA 70 "National Electrical Code" (NEC) and by CSA C22.1 (CE Code), also for applications in Hazardous Locations in Class I, Division 2. They can be used for fixed and occasional and non-cyclical mobile use. The cables identified with Type TC-ER (Exposed Run) can be installed in the industrial plants for the connections between the cable trays and the equipment without the employment of metal conduits or reinforced cables Type MC (Metal Clad Cable); this type of connection is called Open Wiring. The TC-ER / MTW type cables must comply with the impact resistance requirements required for MC type cables, they are oil resistant and sun resistant. These cables are also certified Flexible Motor Supply Cable for variable speed drives and Wind Turbine Tray Cable (WTTC) for wind turbine applications where they are able to withstand the torsional stresses due to the loop between the nacelle and the tower.

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	Black numbered + yellow/green (beginning from 3 conductors)
Fillers	Central or side fillers, if any
Jacket	PVC compound, oil-resistant, black color or, on request, RAL 7001 gray color. Metric marking.
Temperature range	+90°C (dry conditions), +75°C (wet conditions) -40°C (fixed); -5°C (not fixed)
Voltage rating	600 V (TC/CIC/MTW), 1000 V (WTTC), 600/1000 V (IEC)
Spark test	6000 V
Bending radius	4 x cable outer diameter (15 x cable outer diameter for non-cyclical mobile uses)
Torsion movements	±150° / 1 m
Standards of construction	UL/CSA approvals: (UL) Type TC-ER (18 AWG-1000 kcmil), MTW, WTTC; Sun Res, Oil Res I, Oil Res II, c(UL) TC-ER (18 AWG-1000 kcmil), CIC (18 AWG-4/0 AWG), Sun Res, Oil Res I, Oil Res II; 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 81600 – CE 4G2,08 mm² (UL) E361258 TC-ER 4x14 AWG SUN RES OIL RES I OIL RES II 600V THHN 90°C Dry / 75°C Wet FT4/IEEE 1202 -40°C or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW 600V c(UL) CONTROL CABLE CIC/TC-ER SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC/Nylon FT4 14 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG/kcmil]	Size [mm ²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV03GW18_81600_□□	3	18	0,823	7,3 (0.286)	77 (52)
CV03GW16_81600_□□	3	16	1,31	8,1 (0.317)	102 (69)
CV03GW14_81600_□□	3	14	2,08	9,1 (0.357)	138 (93)
CV03GW12_81600_□□	3	12	3,31	10,2 (0.400)	189 (127)
CV03GW10_81600_□□	3	10	5,26	11,9 (0.469)	277 (186)
CV03GW08_81600_□□	3	8	8,37	15,9 (0.624)	471 (316)
CV03GW06_81600_□□	3	6	13,3	18,0 (0.709)	664 (446)
CV03GW04_81600_□□	3	4	21,2	22,9 (0.902)	1050 (706)
CV03GW02_81600_□□	3	2	33,6	26,8 (1.056)	1552 (1043)
CV04GW18_81600_□□	4	18	0,823	7,9 (0.309)	92 (62)
CV04GW16_81600_□□	4	16	1,31	8,7 (0.343)	123 (83)
CV04GW14_81600_□□	4	14	2,08	9,9 (0.388)	170 (114)
CV04GW12_81600_□□	4	12	3,31	11,1 (0.437)	236 (159)
CV04GW10_81600_□□	4	10	5,26	13,1 (0.514)	348 (234)
CV04GW08_81600_□□	4	8	8,37	17,4 (0.684)	589 (396)
CV04GW06_81600_□□	4	6	13,3	19,8 (0.779)	836 (562)

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV04GW04_81600_□□	4	4	21,2	25,2 (0.991)	1320 (887)
CV04GW02_81600_□□	4	2	33,6	29,5 (1.162)	1966 (1321)
CV04GW/1_81600_□□	4	1/0	53,5	36,3 (1.429)	3020 (2029)
CV04GW/2_81600_□□	4	2/0	67,4	40,2 (1.582)	3778 (2539)
CV04GW/3_81600_□□	4	3/0	85,0	42,6 (1.677)	4533 (3046)
CV04GX25_81600_□□	4	250	127	53,9 (2.122)	6928 (4655)
CV04GX35_81600_□□	4	350	177	60,9 (2.398)	9262 (6224)
CV04GX50_81600_□□	4	500	253	67,7 (2.665)	12553 (8435)
CV05GW18_81600_□□	5	18	0,823	8,5 (0.334)	110 (74)
CV05GW16_81600_□□	5	16	1,31	9,4 (0.372)	149 (100)
CV05GW14_81600_□□	5	14	2,08	10,7 (0.422)	205 (138)
CV05GW12_81600_□□	5	12	3,31	12,1 (0.476)	285 (192)
CV05GW10_81600_□□	5	10	5,26	15,0 (0.592)	448 (301)
CV05GW08_81600_□□	5	8	8,37	19,0 (0.748)	714 (480)
CV05GW06_81600_□□	5	6	13,3	22,7 (0.895)	1063 (714)
CV05GW04_81600_□□	5	4	21,2	27,6 (1.086)	1607 (1080)
CV05GW02_81600_□□	5	2	33,6	32,4 (1.277)	2397 (1611)
CV07GW18_81600_□□	7	18	0,823	9,2 (0.364)	132 (89)
CV07GW16_81600_□□	7	16	1,31	10,3 (0.406)	181 (122)
CV07GW14_81600_□□	7	14	2,08	11,7 (0.462)	253 (170)
CV07GW12_81600_□□	7	12	3,31	13,3 (0.522)	356 (239)
CV07GW10_81600_□□	7	10	5,26	16,5 (0.648)	561 (377)
CV09GW18_81600_□□	9	18	0,823	10,8 (0.425)	180 (121)
CV12GW18_81600_□□	12	18	0,823	11,8 (0.465)	221 (149)
CV12GW16_81600_□□	12	16	1,31	14,1 (0.554)	329 (221)
CV12GW14_81600_□□	12	14	2,08	16,0 (0.631)	462 (310)
CV12GW12_81600_□□	12	12	3,31	18,1 (0.715)	649 (436)
CV12GW10_81600_□□	12	10	5,26	22,5 (0.887)	1022 (687)
CV16GW18_81600_□□	16	18	0,823	13,8 (0.542)	308 (207)
CV16GW16_81600_□□	16	16	1,31	15,5 (0.609)	423 (284)
CV18GW18_81600_□□	18	18	0,823	14,4 (0.569)	328 (220)
CV18GW16_81600_□□	18	16	1,31	16,2 (0.639)	455 (306)
CV18GW14_81600_□□	18	14	2,08	18,6 (0.732)	643 (432)
CV18GW12_81600_□□	18	12	3,31	22,2 (0.872)	961 (646)
CV18GW10_81600_□□	18	10	5,26	26,2 (1.032)	1439 (967)
CV19GW18_81600_□□	19	18	0,823	14,4 (0.569)	347 (233)
CV19GW16_81600_□□	19	16	1,31	16,2 (0.639)	481 (323)
CV25GW18_81600_□□	25	18	0,823	17,0 (0.670)	458 (308)
CV25GW16_81600_□□	25	16	1,31	19,2 (0.757)	638 (429)
CV25GW14_81600_□□	25	14	2,08	23,1 (0.911)	957 (643)
CV25GW12_81600_□□	25	12	3,31	26,3 (1.035)	1351 (908)
CV25GW10_81600_□□	25	10	5,26	31,3 (1.231)	2034 (1367)
CV34GW18_81600_□□	34	18	0,823	18,9 (0.743)	595 (400)
CV34GW16_81600_□□	34	16	1,31	22,4 (0.883)	883 (593)
CV41GW18_81600_□□	41	18	0,823	22,1 (0.871)	775 (521)
CV41GW16_81600_□□	41	16	1,31	25,0 (0.984)	1079 (725)
CV50GW18_81600_□□	50	18	0,823	23,1 (0.908)	909 (611)
CV50GW16_81600_□□	50	16	1,31	26,1 (1.027)	1270 (853)

Code composition

Number of conductors		To be inserted	Size		To be inserted	Color		To be inserted
2		02X	1,00 mm², ..., 6,00 mm²		100, ..., 600	Gray		GR
3, ..., 25		03G, ..., 25G	10,0 mm², ..., 95,0 mm²		B10, ..., B95	Black		NE
			120 mm², ..., 185 mm²		L12, ..., L18			
			1, 2, ..., 26 AWG		W01, W02, ..., W26			
			1/0, ..., 4/0 AWG		W/1, W/2, ..., W/4			
			250, 300, ..., 550 kcmil		X25, X30, ..., X55			