tekima®

Hazardous Locations solutions

www.tekima.com

HAZARDOUS LOCATIONS SOLUTIONS

tekima®

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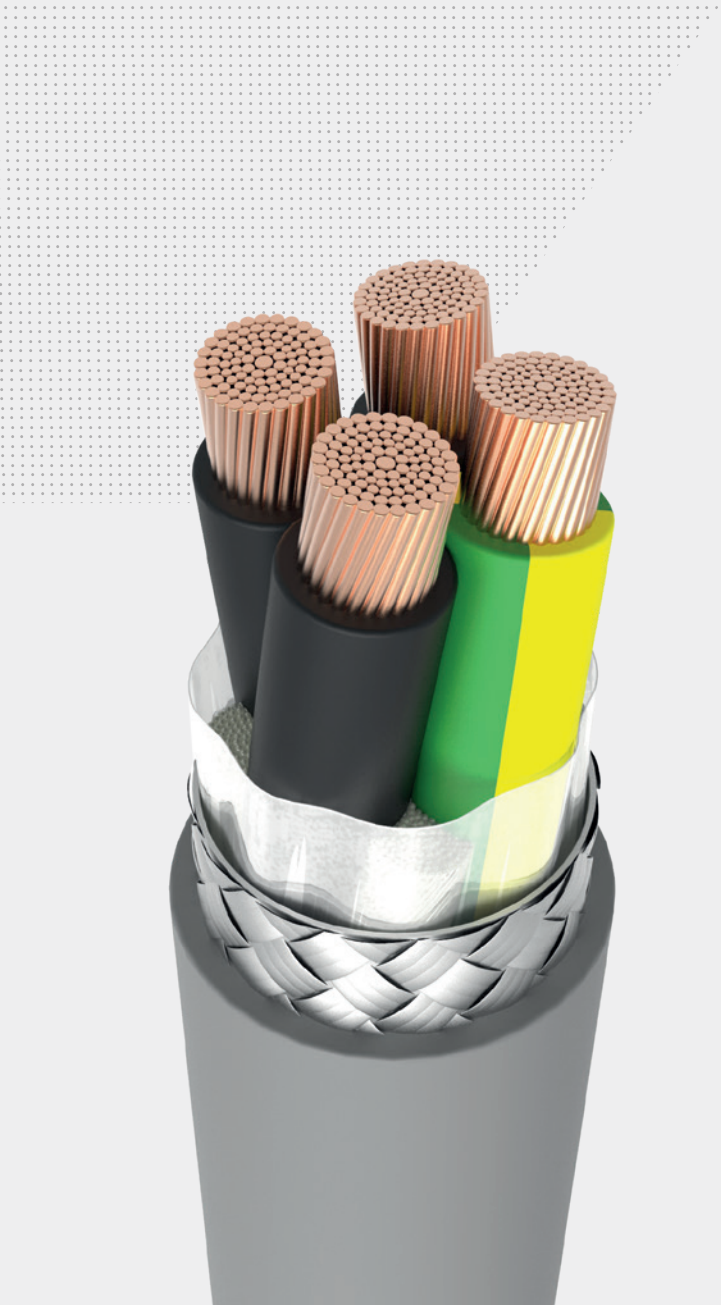
Tekima is able to offer certified cables, wiring systems, and accessories for installation in Hazardous Locations. Today, **we are the first European manufacturer** to have developed and UL-certified Tray Cable Exposed Run (TC-ER-HL) cables suitable for installations in Class I Division 1 Hazardous Locations.



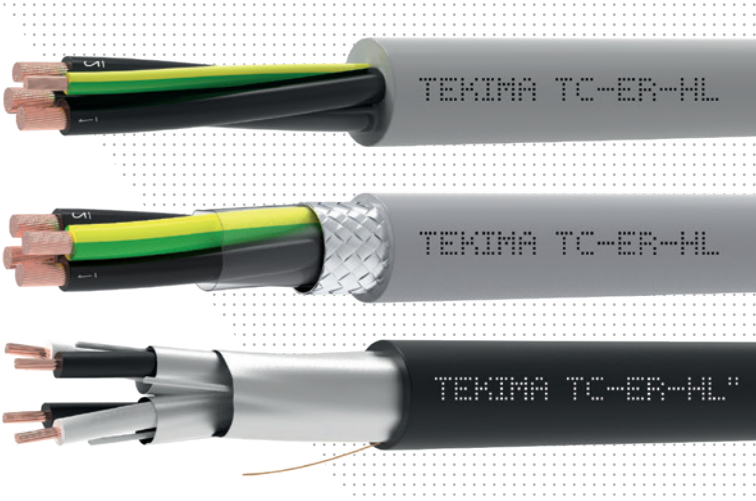
TC-ER-HL
High resistant cables without armour

Tekima TC-ER-HL cables are the **best alternative** to MC-HL (Metal Clad)

- **Faster, easier and safer** to install
- **Smaller diameters**, up to-19%
- Much more **flexible**, no armour required
- Extremely **low bending radii**, up to -53%
- **No special tools** for installation

A Fully Featured Cable

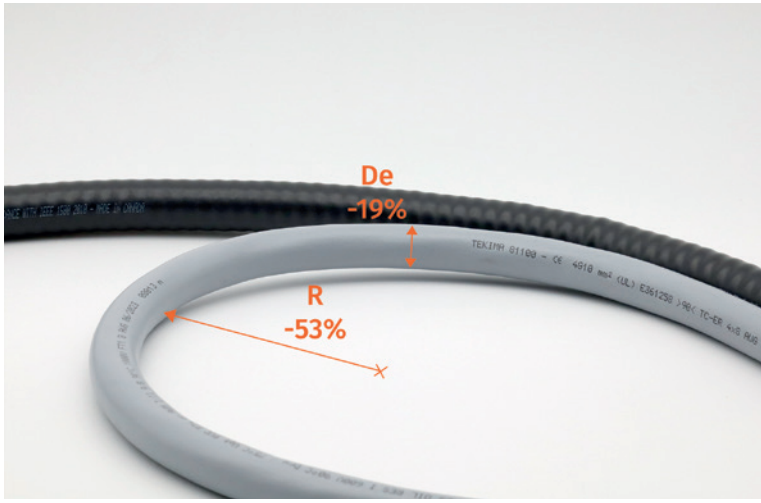
Tekima TC-ER-HL cables are **the best solution** for NFPA 70 (NEC) Class I Division 1 and Class I Division 2 applications and CSA C22.1 (CE Code) Zone 0, 1 and 2 systems



- Approved for **Europe, USA and Canada**
- Certified **UL Listed as TC-ER-HL** (File# E361258) for use in Class I Division 1 and Zone 1 and Class I Division 2 and Zone 2
- Certified **UL Listed as MTW** Machine Tool Wire (File# E361260)
- Certified **UL Listed as WTTC** Wind Turbine Tray Cable and **FMSC** Flexible Motor Supply Cable (File# E501778)
- Certified **UL Listed as CIC** Control and Instrumentation Cable (File# E361258)
- Certified **UL Recognized as AWM** Appliance Wire Material (File# E314444)
- Certified **Exposed Run**
- Certified **Sun Resistant**
- Certified **Direct Bural**
- Certified **Oil Res I and Oil Res II**
- Certified **ECOLAB**
- Voltage rating **up to 1000V**
- Temperature rating **+90°C**
- Durability **at -40°C temperature**
- **Flame resistant** FT1, FT3, IEEE 1202, IEC 60332-1-2, IEC 60332-3-24
- A full range of certified **cable glands** is available in different materials

High Flexibility and Reduced Size

Comparison between a TC-ER-HL cable and an MC-HL cable with a 4xAWG8 section. The TC-ER-HL cable ensures a 53% lower bending radius and features a 19% smaller outer diameter.



Where can our TC-ER-HL cables be used?

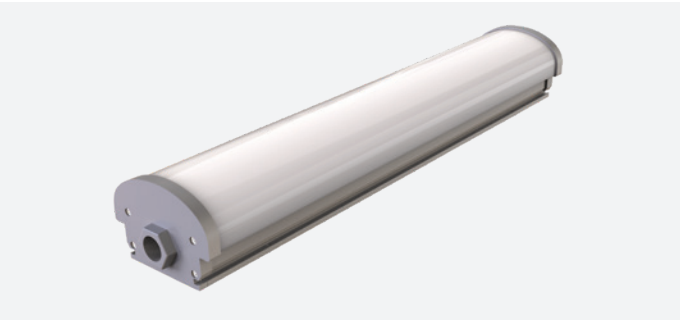
Tekima's TC-ER-HL cables are permitted in the highest-risk Hazardous Locations classified areas according to NFPA 70 (NEC) and CSA C22.1 (CE Code) without any protective tubing, provided they are installed with certified cable glands.

Class I Division 1 Chapter 501.10 (A)	Class I Division 2 Chapter 501.10 (B)
MI cable	MI cable
MC-HL	MC-HL
	ITC-HL
ITC-HL	**TC-ER-HL**
	Flexible Cords extra-hard usage
TC-ER-HL	PLTC, PLTC-ER
	ITC, ITC-ER
Flexible Cords extra-hard usage	MC
	TC, TC-ER

Other products useful in Hazardous Locations

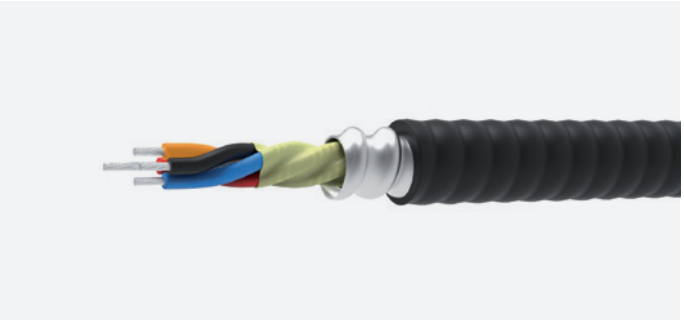
Conduits and Tubings

RMC and IMC versions up to 6” with a wide range of fittings, sealing compound fittings, junction boxes, ex-proof enclosures for NFPA 70 (NEC) and CSA C22.1 (CE Code) compliant applications.



LED luminaires for Haz Loc

With painted aluminum body and tempered glass diffuser, they are an excellent lighting solution for industrial applications in compliance with NFPA 70 (NEC) and CSA C22.1 (CE Code).



Cables Made in USA for Haz Loc

If your project specifications still require traditional solutions, MC-HL, and TECK90 compliant with NFPA 70 (NEC) and CSA C22.1 (CE Code) are available in our catalog.

Cable glands for Haz Loc

Chapter 501.10 of NFPA 70 (NEC) requires that cables be used with cable glands suitable for the classified area. Tekima can offer a complete and certified solution for use in Class I Division 1.

Safety Labels

They are made of plastic with an adhesive layer or aluminum and are manufactured in compliance with ANSI Z535, UL 969, and C22.2 No. 0.15 standards. Certified c(UR)us, they fully meet OSHA requirements.

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All Tekima's solutions for Hazardous Locations installation

SERIES 8110

Power and Control Tray Cable, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. They can be used for fixed and occasional and non-cyclical mobile use also in drag-chains up to 5 meters and for sizes from 0.5 mm² to 2.5 mm² with a maximum of 6 conductors without tensile stress. 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, sun resistant and can be used in the presence of humidity also buried (they are certified Direct Burial according UL 1277). 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 5
Insulation	TKblend®-R
Conductor distinction	Black numbered + yellow/green (beginning from 3 conductors)
Fillers	Central or side fillers, if any
Jacket	PVC compound, oil-resistant, RAL 7001 gray color or black 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 (AWM/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-HL (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, Type TW75 (≥14 AWG), cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | 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, Style 21179

Marking

TEKIMA 81100 – CE 4G2,5 mm² (UL) E361258 TC-ER-HL 4x14 AWG DIR BUR SUN RES OIL RES I OIL RES II 600V THHW 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC FT4 or AWM I/II A/B 90°C 1000V FT1 14 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV02X100_81100_□□**	2	18	1	7,9 (0.311)	87 (58)
CV02X150_81100_□□**	2	16	1,5	8,5 (0.335)	106 (71)
CV02X250_81100_□□**	2	14	2,5	9,3 (0.366)	137 (92)
CV03G100_81100_□□	3	18	1	8,3 (0.327)	102 (69)
CV03G150_81100_□□	3	16	1,5	9,0 (0.354)	127 (85)
CV03G250_81100_□□	3	14	2,5	9,8 (0.386)	166 (112)
CV03G400_81100_□□	3	12	4	11,2 (0.441)	231 (155)
CV03G600_81100_□□	3	10	6	12,5 (0.492)	310 (208)
CV03GB10_81100_□□	3	8	10	17,0 (0.669)	547 (368)
CV03GB16_81100_□□	3	6	16	20,7 (0.815)	838 (563)

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV03GB25_81100_□□	3	4	25	24,9 (0.980)	1253 (842)
CV03GB35_81100_□□	3	2	35	27,3 (1.075)	1594 (1071)
CV03GB50_81100_□□	3	1	50	36,6 (1.441)	2547 (1711)
CV04G100_81100_□□	4	18	1	9,1 (0.358)	125 (84)
CV04G150_81100_□□	4	16	1,5	9,8 (0.386)	155 (104)
CV04G250_81100_□□	4	14	2,5	10,7 (0.421)	205 (138)
CV04G400_81100_□□	4	12	4	12,3 (0.484)	290 (195)
CV04G600_81100_□□	4	10	6	14,4 (0.567)	410 (276)
CV04GB10_81100_□□	4	8	10	18,5 (0.728)	679 (456)
CV04GB16_81100_□□	4	6	16	23,7 (0.933)	1109 (745)
CV04GB25_81100_□□	4	4	25	27,2 (1.071)	1569 (1054)
CV04GB35_81100_□□	4	2	35	30,1 (1.185)	2041 (1371)
CV04GB50_81100_□□	4	1	50	36,6 (1.441)	2967 (1994)
CV04GW/1_81100_□□	4	1/0	53,5	38,2 (1,500)	3298 (2216)
CV04GB70_81100_□□	4	2/0	70	41,7 (1.642)	3971 (2668)
CV04GB95_81100_□□	4	3/0	95	46,7 (1.839)	5198 (3493)
CV04GL12_81100_□□	4	4/0	120	49,3 (1.941)	6169 (4145)
CV04GL15_81100_□□	4	250	150	54,9 (2.161)	7700 (5174)
CV04GX30_81100_□□	4	300	152	54,9 (2.161)	8087 (5434)
CV04GL18_81100_□□	4	350	185	59,2 (2.331)	9190 (6175)
CV04GL24_81100_□□	4	450	240	65,9 (2.594)	11735 (7886)
CV04GX50_81100_□□	4	500	254	71,9 (2.831)	13609 (9145)
CV05G100_81100_□□	5	18	1	9,9 (0.390)	150 (101)
CV05G150_81100_□□	5	16	1,5	10,7 (0.421)	187 (126)
CV05G250_81100_□□	5	14	2,5	11,8 (0.465)	251 (169)
CV05G400_81100_□□	5	12	4	14,3 (0.563)	379 (255)
CV05G600_81100_□□	5	10	6	15,8 (0.622)	501 (337)
CV05GB10_81100_□□	5	8	10	20,5 (0.807)	840 (564)
CV05GB16_81100_□□	5	6	16	26,1 (1.028)	1362 (915)
CV05GB25_81100_□□	5	4	25	30,3 (1.193)	1953 (1312)
CV05GB35_81100_□□	5	2	35	33,5 (1.319)	2539 (1706)
CV05GB50_81100_□□	5	1	50	40,8 (1.606)	3697 (2484)
CV05GB70_81100_□□	5	2/0	70	47,9 (1.886)	5106 (3431)
CV05GB95_81100_□□	5	3/0	95	51,9 (2.043)	6460 (4341)
CV05GL12_81100_□□	5	4/0	120	54,9 (2.161)	7683 (5163)
CV05GL18_81100_□□	5	350	185	65,8 (2,590)	11427 (7678)
CV07G100_81100_□□	7	18	1	10,8 (0.425)	185 (124)
CV07G150_81100_□□	7	16	1,5	11,7 (0.461)	234 (157)
CV07G250_81100_□□	7	14	2,5	12,8 (0.504)	315 (212)
CV07G400_81100_□□	7	12	4	15,6 (0.614)	480 (323)
CV09G100_81100_□□	9	18	1	13,9 (0.547)	290 (195)
CV09G150_81100_□□	9	16	1,5	n.a.	n.a.
CV12G100_81100_□□	12	18	1	14,7 (0.579)	335 (225)
CV12G150_81100_□□	12	16	1,5	15,9 (0.626)	421 (283)
CV12G250_81100_□□	12	14	2,5	17,5 (0.689)	568 (382)
CV12G400_81100_□□	12	12	4	20,1 (0.791)	806 (541)
CV18G100_81100_□□	18	18	1	17,1 (0.673)	466 (313)
CV18G150_81100_□□	18	16	1,5	18,6 (0.732)	594 (399)
CV18G250_81100_□□	18	14	2,5	20,5 (0.807)	807 (542)
CV25G100_81100_□□	25	18	1	19,5 (0.768)	617 (415)
CV25G150_81100_□□	25	16	1,5	22,3 (0.878)	847 (569)
CV33G150_81100_□□	33	16	1,5	25,2 (0.992)	1084 (728)
CV34G100_81100_□□	34	18	1	23,8 (0,937)	897 (603)

** According to NFPA 70 (NEC) and CSA C22.1 (CEC) cables with 2 conductors are not Exposed Run (ER).

Code composition

CV	□□□	□□□	_81100_	□□

Number of conductors	To be inserted
2	02X
3, ..., 25	03G, ..., 25G

Size	To be inserted
1,00 mm^2, ..., 6,00 mm^2	100, ..., 600
10,0 mm^2, ..., 95,0 mm^2	B10, ..., B95
120 mm^2, ..., 185 mm^2	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

Color	To be inserted
Gray	GR
Black	NE

SERIES 811x

Power and Control Tray Cable, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

Fixed application, unshielded for 24V circuits

Use

Unshielded UL Listed cables with blue conductors used for 24 V DC circuits and which, having a voltage rating of 1000 V, can be installed in parallel with other power cables. They are 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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. They can be used for fixed and occasional and non-cyclical mobile use also in drag-chains up to 5 meters and for sizes from 0.5 mm² to 2.5 mm² with a maximum of 6 conductors without tensile stress. 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, sun resistant and can be used in the presence of humidity also buried (they are certified Direct Burial according UL 1277). 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 5
Insulation	TKblend®-R
Conductor distinction*	Blue with white numbers + yellow/green (beginning from 3 conductors). When 3 conductors or more the second conductor is blue/white neutral.
Fillers	Central or side fillers, if any
Jacket	PVC compound, oil-resistant, RAL 7001 gray color or black 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 (AWM/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-HL (18 AWG-1000 kcmil), MTW, WTTC, Dir Bur, Sun Res, Oil Res I, Oil Res II, Oil Res II, c(UL) TC-ER (18 AWG-1000 kcmil), CIC (18 AWG-4/0 AWG), Dir Bur, Sun Res, Oil Res, Type TW75 (≥14 AWG), cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | 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, Style 21179

* Upon request: Red, yellow or orange conductors with numbers + yellow/green (beginning from 3 conductors). When 3 conductors or more the second conductor is white.

Marking

TEKIMA 811B0 – CE 4G2,5 mm² (UL) E361258 TC-ER-HL 4x14 AWG DIR BUR SUN RES OIL RES I OIL RES II 600V THHW 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC FT4 or AWM I/II A/B 90°C 1000V FT1 14 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV02X100_811□ 0_□□**	2	18	1	7,9 (0.311)	87 (58)
CV02X150_811□ 0_□□**	2	16	1,5	8,5 (0.335)	106 (71)
CV02X250_811□ 0_□□**	2	14	2,5	9,3 (0.366)	137 (92)
CV03G100_811□ 0_□□	3	18	1	8,3 (0.327)	102 (69)
CV03G150_811□ 0_□□	3	16	1,5	9,0 (0.354)	127 (85)
CV03G250_811□ 0_□□	3	14	2,5	9,8 (0.386)	166 (112)
CV03G400_811□ 0_□□	3	12	4	11,2 (0.441)	231 (155)
CV03G600_811□ 0_□□	3	10	6	12,5 (0.492)	310 (208)
CV03GB10_811□ 0_□□	3	8	10	17,0 (0.669)	547 (368)
CV03GB16_811□ 0_□□	3	6	16	20,7 (0.815)	838 (563)
CV03GB35_811□ 0_□□	3	2	35	27,3 (1.075)	1594 (1071)
CV04G100_811□ 0_□□	4	18	1	9,1 (0.358)	125 (84)

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV04G150_811□ 0_□□	4	16	1,5	9,8 (0.386)	155 (104)
CV04G250_811□ 0_□□	4	14	2,5	10,7 (0.421)	205 (138)
CV04G400_811□ 0_□□	4	12	4	12,3 (0.484)	290 (195)
CV04G600_811□ 0_□□	4	10	6	14,4 (0.567)	410 (276)
CV04GB10_811□ 0_□□	4	8	10	18,5 (0.728)	679 (456)
CV04GB16_811□ 0_□□	4	6	16	23,7 (0.933)	1109 (745)
CV04GB25_811□ 0_□□	4	4	25	27,2 (1.071)	1569 (1054)
CV04GB35_811□ 0_□□	4	2	35	30,1 (1.185)	2041 (1371)
CV04GB50_811□ 0_□□	4	1	50	36,6 (1.441)	2967 (1994)
CV04GB70_811□ 0_□□	4	2/0	70	41,7 (1.642)	3971 (2668)
CV04GB95_811□ 0_□□	4	3/0	95	46,7 (1.839)	5198 (3493)
CV04GL12_811□ 0_□□	4	4/0	120	49,3 (1.941)	6169 (4145)
CV04GL15_811□ 0_□□	4	250	150	54,9 (2.161)	7700 (5174)
CV04GL18_811□ 0_□□	4	350	185	59,2 (2.331)	9190 (6175)
CV04GL24_811□ 0_□□	4	450	240	65,9 (2.594)	11735 (7886)
CV04GX50_811□ 0_□□	4	254	500	71,9 (2.831)	13609 (9145)
CV05G100_811□ 0_□□	5	18	1	9,9 (0.390)	150 (101)
CV05G150_811□ 0_□□	5	16	1,5	10,7 (0.421)	187 (126)
CV05G250_811□ 0_□□	5	14	2,5	11,8 (0.465)	251 (169)
CV05G400_811□ 0_□□	5	12	4	14,3 (0.563)	379 (255)
CV05G600_811□ 0_□□	5	10	6	15,8 (0.622)	501 (337)
CV05GB10_811□ 0_□□	5	8	10	20,5 (0.807)	840 (564)
CV05GB16_811□ 0_□□	5	6	16	26,1 (1.028)	1362 (915)
CV05GB25_811□ 0_□□	5	4	25	30,3 (1.193)	1953 (1312)
CV05GB35_811□ 0_□□	5	2	35	33,5 (1.319)	2539 (1706)
CV05GB50_811□ 0_□□	5	1	50	40,8 (1.606)	3697 (2484)
CV05GB70_811□ 0_□□	5	2/0	70	47,9 (1.886)	5106 (3431)
CV05GB95_811□ 0_□□	5	3/0	95	51,9 (2.043)	6460 (4341)
CV05GL12_811□ 0_□□	5	4/0	120	54,9 (2.161)	7683 (5163)
CV07G100_811□ 0_□□	7	18	1	10,8 (0.425)	185 (124)
CV07G150_811□ 0_□□	7	16	1,5	11,7 (0.461)	234 (157)
CV07G250_811□ 0_□□	7	14	2,5	12,8 (0.504)	315 (212)
CV07G400_811□ 0_□□	7	12	4	15,6 (0.614)	480 (323)
CV09G100_811□ 0_□□	9	18	1	13,9 (0.547)	290 (195)
CV09G150_811□ 0_□□	9	16	1,5	n.a.	n.a.
CV12G100_811□ 0_□□	12	18	1	14,7 (0.579)	335 (225)
CV12G150_811□ 0_□□	12	16	1,5	15,9 (0.626)	421 (283)
CV12G250_811□ 0_□□	12	14	2,5	17,5 (0.689)	568 (382)
CV12G400_811□ 0_□□	12	12	4	20,1 (0.791)	806 (541)
CV18G100_811□ 0_□□	18	18	1	17,1 (0.673)	466 (313)
CV18G150_811□ 0_□□	18	16	1,5	18,6 (0.732)	594 (399)
CV18G250_811□ 0_□□	18	14	2,5	20,5 (0.807)	807 (542)
CV25G100_811□ 0_□□	25	18	1	19,5 (0.768)	617 (415)
CV25G150_811□ 0_□□	25	16	1,5	22,3 (0.878)	847 (569)
CV33G150_811□ 0_□□	33	16	1,5	25,2 (0.992)	1084 (728)
CV34G100_811□ 0_□□	34	18	1	23,8 (0,937)	897 (603)

** According to NFPA 70 (NEC) and CSA C22.1 (CEC) cables with 2 conductors are not Exposed Run (ER).

Code composition

CV	□□□	□□□	_811	□	0_	□□

Number of conductors	To be inserted
2	02X
3, ..., 25	03G, ..., 25G

Size	To be inserted
1,00 mm², ..., 6,00 mm²	100, ..., 600
10,0 mm², ..., 95,0 mm²	B10, ..., B95
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

Conductors' color	To be inserted
Blue	B
Red	R
Yellow	Y
Orange	N

Color	To be inserted
Gray	GR
Black	NE

SERIES 8110S

Power and Control Tray Cable, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

Fixed application, shielded

Use

Shielded 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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. 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 MC type (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, sun resistant and can be used in the presence of humidity also buried (they are certified Direct Burial according UL 1277). These cables are also certified Flexible Motor Supply Cable for variable speed drives and Wind Turbine Tray Cable (WTTC) ffor 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 5
Insulation	TKblend®-R
Conductor distinction	Black numbered + yellow/green (beginning from 3 conductors)
Fillers	Central or side fillers, if any
Shield	Gray version: Tinned copper braid, nom. coverage 85% Black version: Aluminum/polyester + Tinned copper braid, nom. coverage 85%
Jacket	PVC compound, oil-resistant, RAL 7001 gray color or black 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 (AWM/WTTC), 600/1000 V (IEC)
Spark test	6000 V
Bending radius	6 x cable outer diameter (20 x cable outer diameter for non-cyclical mobile uses)
Torsion movements	±150° / 1 m
Standards of construction	UL/CSA approvals: (UL) Type TC-ER-HL (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, Type TW75 (≥14 AWG), cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | 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, Style 21179

Marking

TEKIMA 8110S – CE 4G2,5 mm² (UL) E361258 TC-ER-HL 4x14 AWG DIR BUR SUN RES OIL RES I OIL RES II 600V THHW 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC SHIELDED FT4 or AWM I/II A/B 90°C 1000V FT1 14 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV02X100_8110S_□□**	2	18	1	8,5 (0.335)	98 (66)
CV02X150_8110S_□□**	2	16	1,5	9,1 (0.358)	118 (79)
CV02X250_8110S_□□**	2	14	2,5	9,9 (0.390)	143 (96)
CV03G100_8110S_□□	3	18	1	8,9 (0.350)	120 (81)
CV03G150_8110S_□□	3	16	1,5	9,6 (0.378)	141 (95)
CV03G250_8110S_□□	3	14	2,5	10,4 (0.409)	181 (122)
CV03G400_8110S_□□	3	12	4	11,8 (0.465)	242 (163)
CV03G600_8110S_□□	3	10	6	13,9 (0.547)	354 (238)
CV03GB25_8110S_□□	3	4	25	25,6 (1.008)	1185 (796)

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV03GB50_8110S_□□	3	1	50	34,1 (1.343)	2190 (1472)
CV04G100_8110S_□□	4	18	1	9,7 (0.382)	142 (95)
CV04G150_8110S_□□	4	16	1,5	10,4 (0.409)	177 (119)
CV04G250_8110S_□□	4	14	2,5	11,3 (0.445)	228 (153)
CV04G400_8110S_□□	4	12	4	13,9 (0.547)	350 (235)
CV04G600_8110S_□□	4	10	6	15,2 (0.598)	450 (302)
CV04GB10_8110S_□□	4	8	10	19,3 (0.760)	718 (482)
CV04GB16_8110S_□□	4	6	16	24,7 (0.972)	1162 (781)
CV04GB25_8110S_□□	4	4	25	28,2 (1.110)	1616 (1086)
CV04GW03_8110S_□□	4	3	26,7	31,1 (1.224)	1904 (1279)
CV04GB35_8110S_□□	4	2	35	31,1 (1.224)	2059 (1384)
CV04GB50_8110S_□□	4	1	50	37,6 (1.480)	2938 (1974)
CV04GW/1_8110S_□□	4	1/0	53,5	39,2 (1.543)	3148 (2115)
CV04GB70_8110S_□□	4	2/0	70	44,2 (1.740)	4397 (2955)
CV04GB95_8110S_□□	4	3/0	95	47,7 (1.878)	5566 (3740)
CV04GL12_8110S_□□	4	4/0	120	50,3 (1.980)	6652 (4470)
CV04GL15_8110S_□□	4	250	150	55,9 (2.201)	7564 (5083)
CV04GX30_8110S_□□	4	300	152	58,1 (2.287)	7837 (5266)
CV04GL18_8110S_□□	4	350	185	60,0 (2.362)	8953 (6016)
CV04GX50_8110S_□□	4	500	254	73,1 (2.878)	12413 (8341)
CV05G100_8110S_□□	5	18	1	10,5 (0.413)	171 (115)
CV05G150_8110S_□□	5	16	1,5	11,3 (0.445)	210 (141)
CV05G250_8110S_□□	5	14	2,5	12,4 (0.488)	273 (183)
CV05G400_8110S_□□	5	12	4	15,1 (0.594)	418 (281)
CV05G600_8110S_□□	5	10	6	16,6 (0.654)	539 (362)
CV05GB10_8110S_□□	5	8	10	22,3 (0.878)	917 (616)
CV05GB16_8110S_□□	5	6	16	27,1 (1.067)	1398 (939)
CV05GB25_8110S_□□	5	4	25	31,1 (1.224)	2059 (1384)
CV07G100_8110S_□□	7	18	1	11,4 (0.449)	225 (151)
CV07G150_8110S_□□	7	16	1,5	12,3 (0.484)	278 (187)
CV07G250_8110S_□□	7	14	2,5	14,4 (0.567)	402 (270)
CV07G400_8110S_□□	7	12	4	16,4 (0.646)	557 (374)
CV09G150_8110S_□□	9	16	1,5	n.a.	n.a.
CV12G100_8110S_□□	12	18	1	15,5 (0.610)	365 (245)
CV12G150_8110S_□□	12	16	1,5	16,7 (0.657)	451 (303)
CV12G250_8110S_□□	12	14	2,5	18,3 (0.720)	593 (398)
CV18G100_8110S_□□	18	18	1	17,9 (0.705)	507 (341)
CV18G150_8110S_□□	18	16	1,5	19,4 (0.764)	632 (425)
CV18G250_8110S_□□	18	14	2,5	22,3 (0.878)	893 (600)
CV25G100_8110S_□□	25	18	1	20,3 (0.799)	638 (429)
CV25G150_8110S_□□	25	16	1,5	23,1 (0.909)	865 (581)
CV25G250_8110S_□□	25	14	2,5	25,4 (1.000)	1132 (761)
CV33G150_8110S_□□	33	16	1,5	26,0 (1.024)	1185 (796)

** According to NFPA 70 (NEC) and CSA C22.1 (CEC) cables with 2 conductors are not Exposed Run (ER).

Code composition

CV □□□ □□□ _8110S_ □□

Number of conductors	To be inserted
2	02X
3, ..., 25	03G, ..., 25G

Size	To be inserted
1,00 mm², ..., 6,00 mm²	100, ..., 600
10,0 mm², ..., 95,0 mm²	B10, ..., B95
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

Color	To be inserted
Gray	GR
Black	NE

SERIES 811xS

Power and Control Tray Cable, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

Fixed application, shielded for 24V circuits

Use

Shielded UL Listed cables with blue conductors used for 24 V DC circuits and which, having a voltage rating of 1000 V, can be installed in parallel with other power cables. They are 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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. 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 MC type (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, sun resistant and can be used in the presence of humidity also buried (they are certified Direct Burial according UL 1277). 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 5
Insulation	TKblend®-R
Conductor distinction*	Blue with white numbers + yellow/green (beginning from 3 conductors). When 3 conductors or more the second conductor is blue/white neutral.
Fillers	Central or side fillers, if any
Shield	Gray version: Tinned copper braid, nom. coverage 85% Black version: Aluminum/polyester + Tinned copper braid, nom. coverage 85%
Jacket	PVC compound, oil-resistant, RAL 7001 gray color or black 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 (AWM/WTTC), 600/1000 V (IEC)
Spark test	6000 V
Bending radius	6 x cable outer diameter (20 x cable outer diameter for non-cyclical mobile uses)
Torsion movements	±150° / 1 m
Standards of construction	UL/CSA approvals: (UL) Type TC-ER-HL (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, Type TW75 (≥14 AWG), cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | 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, Style 21179

* Upon request: Red, yellow or orange conductors with numbers + yellow/green (beginning from 3 conductors). When 3 conductors or more the second conductor is white.

Marking

TEKIMA 811BS – CE 4G2,5 mm² (UL) E361258 TC-ER-HL 4x14 AWG DIR BUR SUN RES OIL RES I OIL RES II 600V THHW 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC SHIELDED FT4 or AWM I/II A/B 90°C 1000V FT1 14 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV02X100_811□S_□□**	2	18	1	8,5 (0.335)	98 (66)
CV02X150_811□S_□□**	2	16	1,5	9,1 (0.358)	118 (79)
CV02X250_811□S_□□**	2	14	2,5	9,9 (0.390)	143 (96)
CV03G100_811□S_□□	3	18	1	8,9 (0.350)	120 (81)
CV03G150_811□S_□□	3	16	1,5	9,6 (0.378)	141 (95)
CV03G250_811□S_□□	3	14	2,5	10,4 (0.409)	181 (122)

Code	Number of conductors	Size [AWG/kcmil]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV03G400_811□S_□□	3	12	4	11,8 (0.465)	242 (163)
CV03G600_811□S_□□	3	10	6	13,9 (0.547)	354 (238)
CV04G100_811□S_□□	4	18	1	9,7 (0.382)	142 (95)
CV04G150_811□S_□□	4	16	1,5	10,4 (0.409)	177 (119)
CV04G250_811□S_□□	4	14	2,5	11,3 (0.445)	228 (153)
CV04G400_811□S_□□	4	12	4	13,9 (0.547)	350 (235)
CV04G600_811□S_□□	4	10	6	15,2 (0.598)	450 (302)
CV04GB10_811□S_□□	4	8	10	19,3 (0.760)	718 (482)
CV04GB16_811□S_□□	4	6	16	24,7 (0.972)	1162 (781)
CV04GB25_811□S_□□	4	4	25	28,2 (1.110)	1616 (1086)
CV04GB35_811□S_□□	4	2	35	31,1 (1.224)	2059 (1384)
CV04GB50_811□S_□□	4	1	50	37,6 (1.480)	2938 (1974)
CV04GB70_811□S_□□	4	2/0	70	44,2 (1.740)	4397 (2955)
CV04GB95_811□S_□□	4	3/0	95	47,7 (1.878)	5566 (3740)
CV04GL12_811□S_□□	4	4/0	120	50,3 (1.980)	6652 (4470)
CV04GL15_811□S_□□	4	250	150	55,9 (2.201)	7564 (5083)
CV04GL18_811□S_□□	4	350	185	60,0 (2.362)	8953 (6016)
CV04GX50_811□S_□□	4	254	500	73,1 (2.878)	12413 (8341))
CV05G100_811□S_□□	5	18	1	10,5 (0.413)	171 (115)
CV05G150_811□S_□□	5	16	1,5	11,3 (0.445)	210 (141)
CV05G250_811□S_□□	5	14	2,5	12,4 (0.488)	273 (183)
CV05G400_811□S_□□	5	12	4	15,1 (0.594)	418 (281)
CV05G600_811□S_□□	5	10	6	16,6 (0.654)	539 (362)
CV05GB10_811□S_□□	5	8	10	22,3 (0.878)	917 (616)
CV05GB16_811□S_□□	5	6	16	27,1 (1.067)	1398 (939)
CV05GB25_811□S_□□	5	4	25	31,1 (1.224)	2059 (1384)
CV07G100_811□S_□□	7	18	1	11,4 (0.449)	225 (151)
CV07G150_811□S_□□	7	16	1,5	12,3 (0.484)	278 (187)
CV07G250_811□S_□□	7	14	2,5	14,4 (0.567)	402 (270)
CV07G400_811□S_□□	7	12	4	16,4 (0.646)	557 (374)
CV09G150_811□S_□□	9	16	1,5	n.a.	n.a.
CV12G100_811□S_□□	12	18	1	15,5 (0.610)	365 (245)
CV12G150_811□S_□□	12	16	1,5	16,7 (0.657)	451 (303)
CV12G250_811□S_□□	12	14	2,5	18,3 (0.720)	593 (398)
CV18G100_811□S_□□	18	18	1	17,9 (0.705)	507 (341)
CV18G150_811□S_□□	18	16	1,5	19,4 (0.764)	632 (425)
CV18G250_811□S_□□	18	14	2,5	22,3 (0.878)	893 (600)
CV25G100_811□S_□□	25	18	1	20,3 (0.799)	638 (429)
CV25G150_811□S_□□	25	16	1,5	23,1 (0.909)	865 (581)
CV25G250_811□S_□□	25	14	2,5	25,4 (1.000)	1132 (761)
CV33G150_811□S_□□	33	16	1,5	26,0 (1.024)	1185 (796)

** According to NFPA 70 (NEC) and CSA C22.1 (CEC) cables with 2 conductors are not Exposed Run (ER).

Code composition

CV	□□□	□□□	_811	□	S_	□□

Color	To be inserted
Gray	GR
Black	NE

Number of conductors	To be inserted
2	02X
3, ..., 25	03G, ..., 25G

Conductors' color	To be inserted
Blue	B
Red	R
Yellow	Y
Orange	N

Size	To be inserted
1,00 mm², ..., 6,00 mm²	100, ..., 600
10,0 mm², ..., 95,0 mm²	B10, ..., B95
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

SERIES 8110S

Tray Cable Instrumentation, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

Fixed application, multiple pairs, shielded

Use

Shielded UL Listed multiple pairs 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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. 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 MC type (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, sun resistant and can be used in the presence of humidity also buried (they are certified Direct Burial according UL 1277). These cables 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 5
Insulation	TKblend®-R
Conductor distinction	Numbered black and white pairs
Fillers	Central or side fillers, if any
Shield on pairs	Aluminum/polyester, coverage 100% + Drain wire
Shield	Aluminum/polyester, coverage 100% + Drain wire
Jacket	PVC compound, oil-resistant, black color. Rip cord. 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 (AWM/WTTC), 600/1000 V (IEC)
Spark test	6000 V
Bending radius	6 x cable outer diameter (20 x cable outer diameter for non-cyclical mobile uses)
Standards of construction	UL/CSA approvals: (UL) Type TC-ER-HL (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, Type TW75 (≥14 AWG), cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | 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, Style 21179

Marking

TEKIMA 8110S – CE (4X(2X1)) mm² (UL) E361258 TC-ER-HL (4X(2X16)) AWG DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW "FLEXING" 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC SHIELDED FT4 or AWM I/II A/B 90°C 1000V FT1 16 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV012100_8110S_NE**	1 X 2	18	1	7,8 (0.307)	80 (54)
CV022100_8110S_NE	2 X 2	18	1	10,5 (0.413)	150 (101)
CV032100_8110S_NE	3 X 2	18	1	n.a.	n.a.
CV042100_8110S_NE	4 X 2	18	1	12,3 (0.484)	231 (155)
CV062100_8110S_NE	6 X 2	18	1	16,7 (0.657)	370 (249)
CV082100_8110S_NE	8 X 2	18	1	18,0 (0.709)	496 (333)
CV102100_8110S_NE	10 X 2	18	1	20,0 (0.787)	517 (347)
CV122100_8110S_NE	12 X 2	18	1	22,7 (0.894)	656 (441)
CV162100_8110S_NE	16 X 2	18	1	25,6 (1.008)	850 (571)
CV202100_8110S_NE	20 X 2	18	1	28,1 (1.106)	1053 (708)

Code	Number of conductors	Size [AWG]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV242100_8110S_NE	24 X 2	18	1	30,4 (1.197)	1180 (793)
CV362100_8110S_NE	36 X 2	18	1	36,3 (1.429)	1713 (1151)
CV502100_8110S_NE	50 X 2	18	1	42,1 (1.657)	2265 (1522)
CV012150_8110S_NE	1 X 2	16	1,5	8,4 (0.331)	94 (63)
CV022150_8110S_NE	2 X 2	16	1,5	11,4 (0.449)	182 (122)
CV032150_8110S_NE	3 X 2	16	1,5	n.a.	n.a.
CV042150_8110S_NE	4 X 2	16	1,5	14,1 (0.555)	310 (208)
CV062150_8110S_NE	6 X 2	16	1,5	18,2 (0.717)	453 (304)
CV082150_8110S_NE	8 X 2	16	1,5	19,6 (0.772)	610 (410)
CV102150_8110S_NE	10 X 2	16	1,5	22,9 (0.902)	693 (466)
CV122150_8110S_NE	12 X 2	16	1,5	24,7 (0.972)	808 (543)
CV162150_8110S_NE	16 X 2	16	1,5	27,8 (1.094)	1051 (706)
CV202150_8110S_NE	20 X 2	16	1,5	30,7 (1.209)	1309 (880)
CV242150_8110S_NE	24 X 2	16	1,5	33,2 (1.307)	1471 (988)
CV362150_8110S_NE	36 X 2	16	1,5	39,7 (1.563)	2148 (1443)
CV502150_8110S_NE	50 X 2	16	1,5	47,6 (1.874)	3022 (2031)

** According to NFPA 70 (NEC) and CSA C22.1 (CEC) cables with 2 conductors are not Exposed Run (ER).

Code composition

CV □□ 2 □□□ _8110S_ □□

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

Size	To be inserted
1,0 mm², 1,5 mm²	100, 150

Color	To be inserted
Black	NE

SERIES 8110S

Tray Cable Instrumentation, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

Fixed application, multiple triads, shielded

Use

Shielded UL Listed multiple triads 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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. 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 MC type (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, sun resistant and can be used in the presence of humidity also buried (they are certified Direct Burial according UL 1277). These cables 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 5
Insulation	TKblend®-R
Conductor distinction	Numbered black,white and red triads
Fillers	Central or side fillers, if any
Shield on triads	Aluminum/polyester, coverage 100% + Drain wire
Shield	Aluminum/polyester, coverage 100% + Drain wire
Jacket	PVC compound, oil-resistant, black color. Rip cord. 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 (AWM/WTTC), 600/1000 V (IEC)
Spark test	6000 V
Bending radius	6 x cable outer diameter (20 x cable outer diameter for non-cyclical mobile uses)
Standards of construction	UL/CSA approvals: (UL) Type TC-ER-HL (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, Type TW75 (≥14 AWG), cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | 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, Style 21179

Marking

TEKIMA 8110S – CE (4X(3X1)) mm² (UL) E361258 TC-ER-HL (4X(3X16)) AWG DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW "FLEXING" 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC SHIELDED FT4 or AWM I/II A/B 90°C 1000V FT1 16 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV013100_8110S_NE**	1 X 3	18	1	8,3 (0.327)	99 (67)
CV023100_8110S_NE	2 X 3	18	1	14,8 (0.583)	233 (157)
CV043100_8110S_NE	4 X 3	18	1	17,2 (0.677)	355 (239)
CV063100_8110S_NE	6 X 3	18	1	20,8 (0.819)	480 (323)
CV083100_8110S_NE	8 X 3	18	1	25,6 (1.008)	687 (462)
CV103100_8110S_NE	10 X 3	18	1	27,6 (1.087)	791 (532)
CV123100_8110S_NE	12 X 3	18	1	28,5 (1.122)	907 (609)
CV163100_8110S_NE	16 X 3	18	1	31,5 (1.240)	1155 (776)
CV203100_8110S_NE	20 X 3	18	1	35,5 (1.398)	1421 (955)
CV243100_8110S_NE	24 X 3	18	1	38,6 (1.520)	1648 (1107)

Code	Number of conductors	Size [AWG]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV363100_8110S_NE	36 X 3	18	1	47,0 (1.850)	2533 (1702)
CV503100_8110S_NE	50 X 3	18	1	55,0 (2.165)	3383 (2273)
CV013150_8110S_NE	1 X 3	16	1,5	8,9 (0.350)	119 (80)
CV023150_8110S_NE	2 X 3	16	1,5	15,9 (0.626)	279 (187)
CV043150_8110S_NE	4 X 3	16	1,5	18,6 (0.732)	435 (292)
CV063150_8110S_NE	6 X 3	16	1,5	23,7 (0.933)	650 (437)
CV083150_8110S_NE	8 X 3	16	1,5	27,7 (1.091)	845 (568)
CV103150_8110S_NE	10 X 3	16	1,5	29,9 (1.177)	979 (658)
CV123150_8110S_NE	12 X 3	16	1,5	30,9 (1.217)	1129 (759)
CV163150_8110S_NE	16 X 3	16	1,5	34,3 (1.350)	1448 (973)
CV203150_8110S_NE	20 X 3	16	1,5	38,7 (1.524)	1788 (1201)
CV243150_8110S_NE	24 X 3	16	1,5	42,1 (1.657)	2080 (1398)
CV363150_8110S_NE	36 X 3	16	1,5	51,1 (2.012)	3187 (2142)
CV503150_8110S_NE	50 X 3	16	1,5	59,9 (2.358)	4278 (2875)

Code composition

CV □□ 3 □□□ _8110S_ □□

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

Size	To be inserted
1,0 mm², 1,5 mm²	100, 150

Color	To be inserted
Black	NE

SERIES 8410

Power and Control Tray Cable, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

Dynamic 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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. These TC-ER (Exposed Run) cables are used in power chains or moving machine parts for travel distances up to 15 m. They 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. These cables are oil resistant and are suitable to be used in dry, damp and wet interiors. These cables 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 6
Insulation	TKblend®-R
Conductor distinction	Black numbered + yellow/green (beginning from 3 conductors)
Fillers	Central or side fillers, if any
Taping	Nonwoven tape
Jacket	PVC compound, oil-resistant, RAL 7001 gray color or, on request, black 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 (AWM/WTTC), 600/1000 V (IEC)
	6000 V
Speed	180 m/min (unsupported chain), 120 m/min (sliding chain)
Acceleration	10 m/s² (≤10 mm²), 5 m/s² (>10 mm²)
Bending radius	7,5 x cable outer diameter (≤10 mm²), 10 x cable outer diameter (>10 mm²)
Standards of construction	UL/CSA approvals: (UL) Type TC-ER-HL (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 I, Oil Res II, cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | Other: Low Voltage Directive (LVD) 2014/35/EU
Standards of use	NFPA 79, NFPA 70 (NEC), CSA C22.1 (CE Code), CSA C22.2 No.286, Style 21179

Marking

TEKIMA 84100 – CE 4G2,5 mm² (UL) E361258 TC-ER-HL 4x14 AWG DIR BUR SUN RES OIL RES I OIL RES II 600V THHW 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR SUPPLY CABLE 1000V 90°C Dry or MTW 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC FT4 or AWM I/II A/B 90°C 1000V FT1 14 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV02X100_84100_□□**	2	18	1	8,0 (0.315)	90 (60)
CV02X150_84100_□□**	2	16	1,5	8,6 (0.339)	109 (73)
CV02X250_84100_□□**	2	14	2,5	9,4 (0.370)	141 (95)
CV03G100_84100_□□	3	18	1	8,7 (0.343)	111 (75)
CV03G150_84100_□□	3	16	1,5	9,4 (0.370)	136 (91)
CV03G250_84100_□□	3	14	2,5	10,3 (0.406)	179 (120)
CV03G400_84100_□□	3	12	4	11,7 (0.461)	247 (166)
CV03G600_84100_□□	3	10	6	13,9 (0.547)	358 (241)

Code	Number of conductors	Size [AWG]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV04G100_84100_□□	4	18	1	9,4 (0.370)	133 (89)
CV04G150_84100_□□	4	16	1,5	10,1 (0.398)	163 (110)
CV04G250_84100_□□	4	14	2,5	11,1 (0.437)	217 (146)
CV04G400_84100_□□	4	12	4	12,7 (0.500)	304 (204)
CV04G600_84100_□□	4	10	6	15,0 (0.591)	438 (294)
CV04GB10_84100_□□	4	8	10	19,3 (0.760)	727 (489)
CV04GB16_84100_□□	4	6	16	24,9 (0.980)	1185 (796)
CV04GB25_84100_□□	4	4	25	27,8 (1.094)	1465 (984)
CV04GB35_84100_□□	4	2	35	32,3 (1.272)	1465 (984)
CV05G100_84100_□□	5	18	1	10,3 (0.406)	161 (108)
CV05G150_84100_□□	5	16	1,5	11,1 (0.437)	199 (134)
CV05G250_84100_□□	5	14	2,5	12,2 (0.480)	265 (178)
CV05G400_84100_□□	5	12	4	14,7 (0.579)	398 (267)
CV05G600_84100_□□	5	10	6	16,5 (0.650)	537 (361)
CV05GB10_84100_□□	5	8	10	22,5 (0.886)	951 (639)
CV05GB16_84100_□□	5	6	16	27,6 (1.087)	1465 (984)
CV07G100_84100_□□	7	18	1	12,1 (0.476)	223 (150)
CV07G150_84100_□□	7	16	1,5	13,1 (0.516)	277 (186)
CV07G250_84100_□□	7	14	2,5	15,2 (0.598)	400 (269)
CV07G400_84100_□□	7	12	4	17,8 (0.701)	574 (386)
CV08G100_84100_□□	8	18	1	13,0 (0.512)	256 (172)
CV08G150_84100_□□	8	16	1,5	14,8 (0.583)	346 (233)
CV08G250_84100_□□	8	14	2,5	16,3 (0.642)	459 (308)
CV12G100_84100_□□	12	18	1	15,1 (0.594)	355 (239)
CV12G150_84100_□□	12	16	1,5	16,4 (0.646)	446 (300)
CV12G250_84100_□□	12	14	2,5	18,1 (0.713)	603 (405)
CV18G100_84100_□□	18	18	1	17,6 (0.693)	494 (332)
CV18G150_84100_□□	18	16	1,5	19,2 (0.756)	627 (421)
CV25G100_84100_□□	25	18	1	20,8 (0.819)	696 (468)
CV25G150_84100_□□	25	16	1,5	23,8 (0.937)	938 (630)

** According to NFPA 70 (NEC) and CSA C22.1 (CEC) cables with 2 conductors are not Exposed Run (ER).

Code composition

CV	□□□	□□□	_84100_	□□

Number of conductors	To be inserted
2	02X
3, ..., 25	03G, ..., 25G

Size	To be inserted
1,00 mm², ..., 6,00 mm²	100, ..., 600
10,0 mm², ..., 35,0 mm²	B10, ..., B35

Color	To be inserted
Gray	GR
Black	NE

SERIES 8410S

Power and Control Tray Cable, TC-ER-HL/CIC/MTW/WTTC/AWM Direct Burial, Sun Res, Hazardous Locations

Dynamic application, shielded

Use

Shielded 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). For applications in Hazardous Locations, the TC-ER version is suitable for use in Class I, Division 2 while the TC-ER-HL* version is suitable for use in Class I, Division 1. These TC-ER (Exposed Run) cables are used in power chains or moving machine parts for travel distances up to 15 m. They 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 MC type (Metal Clad Cable); this type of connection is called Open Wiring. These cables are oil resistant and are suitable to be used in dry, damp and wet interiors. These cables 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").

* Important. The TC-ER-HL version for installations in Hazardous Locations Class I, Division 1 is upon specific request.

Technical data

Characteristics	Value/property
Conductor	Flexible copper strand, class 6
Insulation	TKblend®-R
Conductor distinction	Black numbered + yellow/green (beginning from 3 conductors)
Fillers	Central or side fillers, if any
Inner taping	Nonwoven tape
Shield	Gray version: Tinned copper braid, nom. coverage 85% Black version: Aluminum/polyester + Tinned copper braid, nom. coverage 85%
Outer taping	Nonwoven tape
Jacket	PVC compound, oil-resistant, RAL 7001 gray color or, on request, black 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 (AWM/WTTC), 600/1000 V (IEC)
Spark test	6000 V
Speed	180 m/min (unsupported chain), 120 m/min (sliding chain)
Accelerazione Acceleration	10 m/s^2 (≤10 mm^2), 5 m/s^2 (>10 mm^2)
Bending radius	7,5 x cable outer diameter (≤10 mm^2), 10 x cable outer diameter (>10 mm^2)
Standards of construction	UL/CSA approvals: (UL) Type TC-ER-HL (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 I, Oil Res II, cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1* or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09 | Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24 | UV res.: UNI EN ISO 4892-3 (gray), UNI EN ISO 4892-2 (black) | Other: Low Voltage Directive (LVD) 2014/35/EU
Standards of use	NFPA 79, NFPA 70 (NEC), CSA C22.1 (CE Code), CSA C22.2 No.286, Style 21179

Marking

TEKIMA 8410S – CE 4G2,5 mm^2 (UL) E361258 TC-ER-HL 4x14 AWG DIR BUR SUN RES OIL RES I OIL RES II 600V THHW 90°C Dry / 75°C Wet FT4/IEEE 1202 or WTTC or FLEXIBLE MOTOR
SUPPLY CABLE 1000V 90°C Dry or MTW 600V or AWM 21179 90°C 1000V c(UL) CONTROL CABLE CIC/TC-ER DIR BUR SUN RES OIL RES I OIL RES II 600V 90°C Dry / 75°C Wet PVC SHIELDED FT4 or AWM I/II A/B 90°C 1000V FT1 14 AWG – (prod.reference) = (metric) =

Coding and dimensions

Code	Number of conductors	Size [AWG]	Size [mm²]	Diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV02X100_8410S_□□**	2	18	1	8,6 (0.339)	103 (69)
CV02X150_8410S_□□**	2	16	1,5	9,2 (0.362)	119 (80)
CV02X250_8410S_□□**	2	14	2,5	10,0 (0.394)	149 (100)
CV03G100_8410S_□□	3	18	1	9,3 (0.366)	121 (81)
CV03G150_8410S_□□	3	16	1,5	10,0 (0.394)	147 (99)
CV03G250_8410S_□□	3	14	2,5	10,9 (0.429)	189 (127)
CV03G400_8410S_□□	3	12	4	12,3 (0.484)	250 (168)
CV03G600_8410S_□□	3	10	6	14,7 (0.579)	372 (250)
CV04G100_8410S_□□	4	18	1	10,0 (0.394)	148 (99)
CV04G150_8410S_□□	4	16	1,5	10,7 (0.421)	182 (122)
CV04G250_8410S_□□	4	14	2,5	11,7 (0.461)	235 (158)
CV04G400_8410S_□□	4	12	4	13,5 (0.531)	335 (225)
CV04G600_8410S_□□	4	10	6	15,8 (0.622)	470 (316)
CV04GB10_8410S_□□	4	8	10	20,1 (0.791)	736 (495)
CV04GB16_8410S_□□	4	6	16	25,7 (1.012)	1169 (786)
CV04GB25_8410S_□□	4	4	25	28,6 (1.126)	1580 (1062)
CV04GB35_8410S_□□	4	2	35	33,3 (1.311)	2167 (1456)
CV05G100_8410S_□□	5	18	1	10,9 (0.429)	176 (118)
CV05G150_8410S_□□	5	16	1,5	11,7 (0.461)	214 (144)
CV05G250_8410S_□□	5	14	2,5	12,8 (0.504)	273 (183)
CV05G400_8410S_□□	5	12	4	15,5 (0.610)	417 (280)
CV05G600_8410S_□□	5	10	6	17,3 (0.681)	557 (374)
CV05GB10_8410S_□□	5	8	10	23,3 (0.917)	941 (632)
CV05GB16_8410S_□□	5	6	16	28,4 (1.118)	1402 (942)
CV07G100_8410S_□□	7	18	1	12,7 (0.500)	230 (155)
CV07G150_8410S_□□	7	16	1,5	13,9 (0.547)	300 (202)
CV07G250_8410S_□□	7	14	2,5	16,0 (0.630)	421 (283)
CV08G100_8410S_□□	8	18	1	13,8 (0.543)	279 (187)
CV08G150_8410S_□□	8	16	1,5	15,6 (0.614)	369 (248)
CV08G250_8410S_□□	8	14	2,5	17,1 (0.673)	477 (321)
CV12G100_8410S_□□	12	18	1	15,9 (0.626)	380 (255)
CV12G150_8410S_□□	12	16	1,5	17,2 (0.677)	467 (314)
CV12G250_8410S_□□	12	14	2,5	18,9 (0.744)	614 (413)
CV18G100_8410S_□□	18	18	1	18,4 (0.724)	513 (345)
CV18G150_8410S_□□	18	16	1,5	20,0 (0.787)	636 (427)
CV25G100_8410S_□□	25	18	1	21,6 (0.850)	676 (454)
CV25G150_8410S_□□	25	16	1,5	24,6 (0.969)	908 (610)

** According to NFPA 70 (NEC) and CSA C22.1 (CEC) cables with 2 conductors are not Exposed Run (ER).

Code composition

CV | □□□ | □□□ | _8410S_ | □□

Number of conductors	To be inserted
2	02X
3, ..., 25	03G, ..., 25G

Size	To be inserted
1,00 mm², ..., 6,00 mm²	100, ..., 600
10,0 mm², ..., 35,0 mm²	B10, ..., B35

Color	To be inserted
Gray	GR
Black	NE

Cable glands for unarmoured cables for Hazardous Locations

For use in Class/Division, Class/Zone and Atex Hazardous Locations – “UL/CSA Listed”

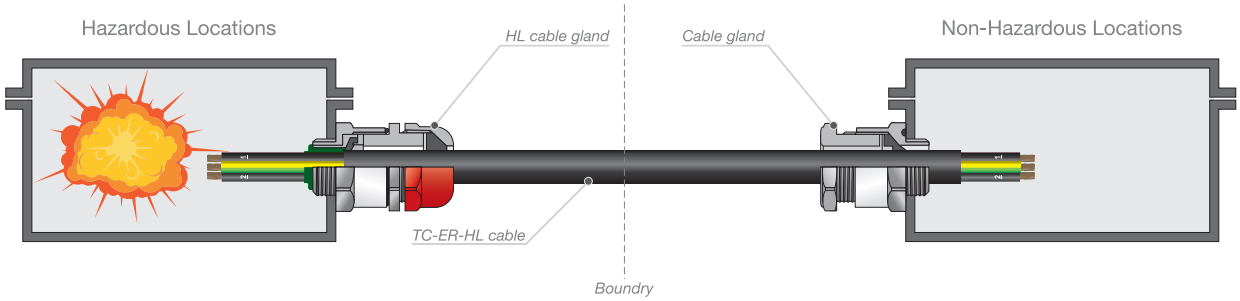
Use

These barrier cable glands are designed for use with unarmored cables used in environments where there is a risk of explosion due to the presence of flammable gases, vapors, or combustible dusts. These cable glands play a crucial role in maintaining the integrity of the enclosure by preventing the ingress of hazardous substances and preventing potential explosions from propagating outside the hazardous area. They are made of nickel-plated brass or AISI 316 stainless steel and are available on request in brass or aluminum. The barrier is created through a special two-component liquid resin that completely seals the conductors inside the cable gland body. They are certified by c(UL)us, c(CSA)us, IECEx, and ATEX.

Technical data

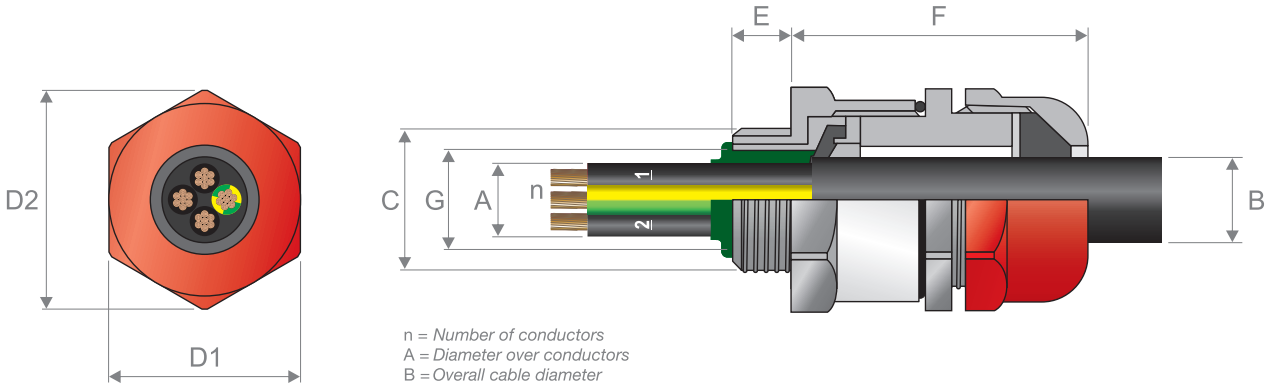
Characteristics	Value/property
Material	Nickel-plated brass or AISI 316 stainless steel, brass or aluminum available upon request.
Sealing type	Explosion proof, RapidEx liquid resin barrier seal on conductors and watertight seal on outer sheath of cable.
Compatible cables	Unarmored cables including TC-ER-HL, Extra Hard Usage Cords, TC-ER, TC and unarmored Type P/Marine Shipboard Cable where permitted by the NFPA70 (NEC) and/or CSA C22.1 (CE Code).
Temperature range	-60°C, +85°C
Storage temperature of resin	+5 °C, +25 °C
Protection class(1)	NEMA Type 4X IP66, IP67, IP68(2)
Standards of construction	BS 6121-1, EN/IEC 62444, ISO 965-1, ISO 965-3, ASME B1.20.1; EN/IEC 60079-0, -1, -7, -15, -31; CSA C22.2 No 0, 18, 25, 30, 94, 174; CSA C22.2 No 60079-0, -1, -7, -15, -31; UL 50, UL 514B, UL 2225, UL 60079-0, -1, -7, -15, ANSI/ISA 60079-31
Standards of use	ATEX: Ⓔx II 2G, Ex db IIC Gb, Ex eb IIC Gb; Ⓔx II 1D Ex ta IIIC Da; Ⓔx II 3G, Ex nR IIC Gc ; Ⓔx I M2 Ex db I Mb(3), Ex eb I Mb(3) IECEx: Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da, Ex db I Mb(3), Ex eb I Mb(3) (CSA)us(4): Class I, Div 1 and 2, Groups A, B, C, and D; Class II, Div 1 and 2, Groups E, F, and G; Class III, Div 1 and 2; Type 4X; Oil Resistance II; Class I, Zone 1, AEx d IIC Gb, AEx e IIC Gb; Class I, Zone 2, AEx nR IIC Gc; Class I, Zone 20, AEx ta IIIC Da c(CSA)(4): Class I, Div 1 and 2, Groups A, B, C, and D; Class II, Div 1and 2, Groups E, F and G; Class III, Div 1 and 2; Type 4X; Oil Resistance II; Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da c(UL)us(4): Class I, Div 1 and 2, Groups A, B, C, and D; Class II, Div 1 and 2, Groups F and G Others: 2014/34/UE ATEX

(1) Only if installed with original accessories.
(2) IP68 tested at 30 meters for 12 hours.
(3) Aluminum version is not permitted in Group I mining applications.
(4) Where the cable type is permitted by the National Electrical Code (NEC) and/or Canadian Electrical Code (CE Code).



Coding and dimensions

Cable gland



n = *Number of conductors*
A = *Diameter over conductors*
B = *Overall cable diameter*

Code	Material	Thread	Cable's size [mm (inch)]				Sizes [mm (inch)]					Weight [g (oz)]
			n	A	B		D1	D2	E	F	G	
			Max	Max	Min	Max						
PC810_M020X010ON	ON	M20 X 1.5	21	8,6 (0,339)	3,1 (0,122)	8,6 (0,339)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	53,1 (2,091)	8,6 (0,339)	200 (7,05)
PC810_M020X020ON	ON	M20 X 1.5	21	11,7 (0,461)	6,1 (0,240)	11,7 (0,461)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	53,1 (2,091)	11,7 (0,461)	200 (7,05)
PC810_M020X030ON	ON	M20 X 1.5	21	12,6 (0,496)	6,5 (0,256)	14,0 (0,551)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	54,2 (2,134)	12,9 (0,508)	200 (7,05)
PC810_M020X040ON	ON	M20 X 1.5	21	12,6 (0,496)	10,0 (0,394)	15,9 (0,626)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	54,2 (2,134)	12,9 (0,508)	200 (7,05)
PC810_M025X010ON	ON	M25 X 1.5	30	17,5 (0,689)	11,1 (0,437)	20,0 (0,787)	36,0 (1,417)	39,6 (1,559)	15,0 (0,591)	60,0 (2,362)	17,9 (0,705)	330 (11,64)
PC810_M032X010ON	ON	M32 X 1.5	50	23,6 (0,929)	17,0 (0,669)	26,3 (1,035)	41,0 (1,614)	45,1 (1,776)	15,0 (0,591)	61,1 (2,406)	23,9 (0,941)	590 (20,81)
PC810_M032X020ON	ON	M32 X 1.5	50	23,6 (0,929)	20,0 (0,787)	27,4 (1,079)	41,0 (1,614)	45,1 (1,776)	15,0 (0,591)	61,1 (2,406)	23,9 (0,941)	590 (20,81)
PC810_M040X010ON	ON	M40 X 1.5	59	30,0 (1,181)	22,0 (0,866)	32,1 (1,264)	50,0 (1,969)	55,0 (2,165)	15,0 (0,591)	62,4 (2,457)	30,3 (1,193)	560 (19,75)
PC810_M050X010ON	ON	M50 X 1.5	89	36,6 (1,441)	29,5 (1,161)	38,2 (1,504)	55,0 (2,165)	60,5 (2,382)	15,0 (0,591)	65,2 (2,567)	36,9 (1,453)	660 (23,28)
PC810_M050X020ON	ON	M50 X 1.5	89	41,0 (1,614)	35,6 (1,402)	44,0 (1,732)	60,0 (2,362)	66,0 (2,598)	15,0 (0,591)	67,6 (2,661)	41,3 (1,626)	730 (25,75)
PC810_M063X010ON	ON	M63 X 1.5	115	47,9 (1,886)	40,1 (1,579)	49,9 (1,965)	70,0 (2,756)	77,0 (3,031)	15,0 (0,591)	71,1 (2,799)	48,4 (1,906)	1.070 (37,74)
PC810_M063X020ON	ON	M63 X 1.5	115	53,7 (2,114)	47,2 (1,858)	55,9 (2,201)	75,0 (2,953)	82,5 (3,248)	15,0 (0,591)	70,4 (2,772)	54,0 (2,126)	1.060 (37,39)
PC810_M075X010ON	ON	M75 X 1.5	140	59,9 (2,358)	52,8 (2,079)	61,9 (2,437)	80,0 (3,150)	88,0 (3,465)	15,0 (0,591)	75,3 (2,965)	60,2 (2,370)	1.300 (45,86)
PC810_M075X020ON	ON	M75 X 1.5	140	64,3 (2,531)	59,1 (2,327)	67,9 (2,673)	85,0 (3,346)	93,5 (3,681)	15,0 (0,591)	74,9 (2,949)	64,2 (2,528)	1.300 (45,86)
PC810_M090X010ON	ON	M90 X 2.0	140	75,3 (2,965)	66,6 (2,622)	79,4 (3,126)	108,0 (4,252)	118,8 (4,677)	20,0 (0,787)	94,8 (3,732)	75,6 (2,976)	3.020 (106,53)

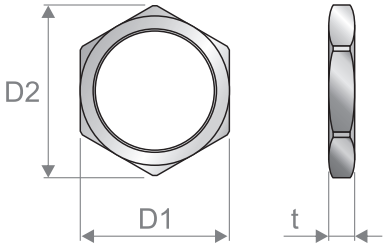
Code	Material	Thread	Cable's size [mm (inch)]				Sizes [mm (inch)]					Weight [g (oz)]
			n	A	B		D1	D2	E	F	G	
			Max	Max	Min	Max						
PC810_M100X010ON	ON	M100 X 2.0	200	83,6 (3,291)	76,0 (2,992)	90,9 (3,579)	123,0 (4,843)	135,3 (5,327)	20,0 (0,787)	86,3 (3,398)	85,9 (3,382)	4.000 (141,10)
PC810_N050X010ON	ON	NPT 1/2"	21	8,6 (0,339)	3,1 (0,122)	8,6 (0,339)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	53,1 (2,091)	8,6 (0,339)	200 (7,05)
PC810_N050X020ON	ON	NPT 1/2"	21	11,7 (0,461)	6,1 (0,240)	11,7 (0,461)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	53,1 (2,091)	11,7 (0,461)	200 (7,05)
PC810_N050X030ON	ON	NPT 1/2"	21	12,6 (0,496)	6,5 (0,256)	14,0 (0,551)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	54,2 (2,134)	12,9 (0,508)	200 (7,05)
PC810_N050X040ON	ON	NPT 1/2"	21	12,6 (0,496)	10,0 (0,394)	15,9 (0,626)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	54,2 (2,134)	12,9 (0,508)	200 (7,05)
PC810_N075X010ON	ON	NPT 3/4"	30	17,5 (0,689)	11,1 (0,437)	20,0 (0,787)	36,0 (1,417)	39,6 (1,559)	20,2 (0,795)	60,0 (2,362)	17,9 (0,705)	330 (11,64)
PC810_N100X010ON	ON	NPT 1"	50	23,6 (0,929)	17,0 (0,669)	26,3 (1,035)	41,0 (1,614)	45,1 (1,776)	25,0 (0,984)	61,1 (2,406)	23,9 (0,941)	590 (20,81)
PC810_N100X020ON	ON	NPT 1"	50	23,6 (0,929)	20,0 (0,787)	27,4 (1,079)	41,0 (1,614)	45,1 (1,776)	25,0 (0,984)	61,1 (2,406)	23,9 (0,941)	590 (20,81)
PC810_N125X010ON	ON	NPT 1"1/4	59	30,0 (1,181)	22,0 (0,866)	32,1 (1,264)	50,0 (1,969)	55,0 (2,165)	25,6 (1,008)	62,4 (2,457)	30,3 (1,193)	560 (19,75)
PC810_N150X010ON	ON	NPT 1"1/2	89	36,6 (1,441)	29,5 (1,161)	38,2 (1,504)	55,0 (2,165)	60,5 (2,382)	26,1 (1,028)	65,2 (2,567)	36,9 (1,453)	660 (23,28)
PC810_N200X010ON	ON	NPT 2"	89	41,0 (1,614)	35,6 (1,402)	44,0 (1,732)	60,0 (2,362)	66,0 (2,598)	26,9 (1,059)	67,6 (2,661)	41,3 (1,626)	730 (25,75)
PC810_N200X020ON	ON	NPT 2"	115	47,9 (1,886)	40,1 (1,579)	49,9 (1,965)	70,0 (2,756)	77,0 (3,031)	26,9 (1,059)	71,1 (2,799)	48,4 (1,906)	1.070 (37,74)
PC810_N250X010ON	ON	NPT 2"1/2	115	53,7 (2,114)	47,2 (1,858)	55,9 (2,201)	75,0 (2,953)	82,5 (3,248)	39,9 (1,571)	70,4 (2,772)	54,0 (2,126)	1.060 (37,39)
PC810_N250X020ON	ON	NPT 2"1/2	140	59,9 (2,358)	52,8 (2,079)	61,9 (2,437)	80,0 (3,150)	88,0 (3,465)	39,9 (1,571)	75,3 (2,965)	60,2 (2,370)	1.300 (45,86)
PC810_N300X010ON	ON	NPT 3"	140	64,3 (2,531)	59,1 (2,327)	67,9 (2,673)	85,0 (3,346)	93,5 (3,681)	41,5 (1,634)	74,9 (2,949)	64,2 (2,528)	1.300 (45,86)
PC810_N350X010ON	ON	NPT 3"1/2	140	75,3 (2,965)	66,6 (2,622)	79,4 (3,126)	108,0 (4,252)	118,8 (4,677)	42,8 (1,685)	94,8 (3,732)	75,6 (2,976)	3.020 (106,53)
PC810_N350X020ON	ON	NPT 3"1/2	200	83,6 (3,291)	76,0 (2,992)	90,9 (3,579)	123,0 (4,843)	135,3 (5,327)	42,8 (1,685)	86,3 (3,398)	85,9 (3,382)	4.000 (141,10)
PC810_M020X010AI	AI	M20 X 1.5	21	8,6 (0,339)	3,1 (0,122)	8,6 (0,339)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	53,1 (2,091)	8,6 (0,339)	188 (6,63)
PC810_M020X020AI	AI	M20 X 1.5	21	11,7 (0,461)	6,1 (0,240)	11,7 (0,461)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	53,1 (2,091)	11,7 (0,461)	188 (6,63)
PC810_M020X030AI	AI	M20 X 1.5	21	12,6 (0,496)	6,5 (0,256)	14,0 (0,551)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	54,2 (2,134)	12,9 (0,508)	188 (6,63)
PC810_M020X040AI	AI	M20 X 1.5	21	12,6 (0,496)	10,0 (0,394)	15,9 (0,626)	30,0 (1,181)	33,0 (1,299)	15,0 (0,591)	54,2 (2,134)	12,9 (0,508)	188 (6,63)
PC810_M025X010AI	AI	M25 X 1.5	30	17,5 (0,689)	11,1 (0,437)	20,0 (0,787)	36,0 (1,417)	39,6 (1,559)	15,0 (0,591)	60,0 (2,362)	17,9 (0,705)	310 (10,94)
PC810_M032X010AI	AI	M32 X 1.5	50	23,6 (0,929)	17,0 (0,669)	26,3 (1,035)	41,0 (1,614)	45,1 (1,776)	15,0 (0,591)	61,1 (2,406)	23,9 (0,941)	555 (19,56)
PC810_M032X020AI	AI	M32 X 1.5	50	23,6 (0,929)	20,0 (0,787)	27,4 (1,079)	41,0 (1,614)	45,1 (1,776)	15,0 (0,591)	61,1 (2,406)	23,9 (0,941)	555 (19,56)
PC810_M040X010AI	AI	M40 X 1.5	59	30,0 (1,181)	22,0 (0,866)	32,1 (1,264)	50,0 (1,969)	55,0 (2,165)	15,0 (0,591)	62,4 (2,457)	30,3 (1,193)	526 (18,57)
PC810_M050X010AI	AI	M50 X 1.5	89	36,6 (1,441)	29,5 (1,161)	38,2 (1,504)	55,0 (2,165)	60,5 (2,382)	15,0 (0,591)	65,2 (2,567)	36,9 (1,453)	620 (21,88)
PC810_M050X020AI	AI	M50 X 1.5	89	41,0 (1,614)	35,6 (1,402)	44,0 (1,732)	60,0 (2,362)	66,0 (2,598)	15,0 (0,591)	67,6 (2,661)	41,3 (1,626)	686 (24,21)
PC810_M063X010AI	AI	M63 X 1.5	115	47,9 (1,886)	40,1 (1,579)	49,9 (1,965)	70,0 (2,756)	77,0 (3,031)	15,0 (0,591)	71,1 (2,799)	48,4 (1,906)	1.006 (35,48)
PC810_M063X020AI	AI	M63 X 1.5	115	53,7 (2,114)	47,2 (1,858)	55,9 (2,201)	75,0 (2,953)	82,5 (3,248)	15,0 (0,591)	70,4 (2,772)	54,0 (2,126)	996 (35,15)
PC810_M075X010AI	AI	M75 X 1.5	140	59,9 (2,358)	52,8 (2,079)	61,9 (2,437)	80,0 (3,150)	88,0 (3,465)	15,0 (0,591)	75,3 (2,965)	60,2 (2,370)	1.222 (43,10)
PC810_M075X020AI	AI	M75 X 1.5	140	64,3 (2,531)	59,1 (2,327)	67,9 (2,673)	85,0 (3,346)	93,5 (3,681)	15,0 (0,591)	74,9 (2,949)	64,2 (2,528)	1.222 (43,10)

Code	Material	Thread	Cable's size [mm (inch)]				Sizes [mm (inch)]					Weight [g (oz)]
			n	A	B		D1	D2	E	F	G	
			Max	Max	Min	Max						
PC810_M090X010AI	AI	M90 X 2.0	140	75,3 (2,965)	66,6 (2,622)	79,4 (3,126)	108,0 (4,252)	118,8 (4,677)	20,0 (0,787)	94,8 (3,732)	75,6 (2,976)	2.839 (100,14)
PC810_M100X010AI	AI	M100 X 2.0	200	83,6 (3,291)	76,0 (2,992)	90,9 (3,579)	123,0 (4,843)	135,3 (5,327)	20,0 (0,787)	86,3 (3,398)	85,9 (3,382)	3.760 (132,63)
PC810_N050X010AI	AI	NPT 1/2"	21	8,6 (0,339)	3,1 (0,122)	8,6 (0,339)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	53,1 (2,091)	8,6 (0,339)	188 (6,63)
PC810_N050X020AI	AI	NPT 1/2"	21	11,7 (0,461)	6,1 (0,240)	11,7 (0,461)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	53,1 (2,091)	11,7 (0,461)	188 (6,63)
PC810_N050X030AI	AI	NPT 1/2"	21	12,6 (0,496)	6,5 (0,256)	14,0 (0,551)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	54,2 (2,134)	12,9 (0,508)	188 (6,63)
PC810_N050X040AI	AI	NPT 1/2"	21	12,6 (0,496)	10,0 (0,394)	15,9 (0,626)	30,0 (1,181)	33,0 (1,299)	19,9 (0,783)	54,2 (2,134)	12,9 (0,508)	188 (6,63)
PC810_N075X010AI	AI	NPT 3/4"	30	17,5 (0,689)	11,1 (0,437)	20,0 (0,787)	36,0 (1,417)	39,6 (1,559)	20,2 (0,795)	60,0 (2,362)	17,9 (0,705)	310 (10,94)
PC810_N100X010AI	AI	NPT 1"	50	23,6 (0,929)	17,0 (0,669)	26,3 (1,035)	41,0 (1,614)	45,1 (1,776)	25,0 (0,984)	61,1 (2,406)	23,9 (0,941)	555 (19,56)
PC810_N100X020AI	AI	NPT 1"	50	23,6 (0,929)	20,0 (0,787)	27,4 (1,079)	41,0 (1,614)	45,1 (1,776)	25,0 (0,984)	61,1 (2,406)	23,9 (0,941)	555 (19,56)
PC810_N125X010AI	AI	NPT 1"1/4	59	30,0 (1,181)	22,0 (0,866)	32,1 (1,264)	50,0 (1,969)	55,0 (2,165)	25,6 (1,008)	62,4 (2,457)	30,3 (1,193)	526 (18,57)
PC810_N150X010AI	AI	NPT 1"1/2	89	36,6 (1,441)	29,5 (1,161)	38,2 (1,504)	55,0 (2,165)	60,5 (2,382)	26,1 (1,028)	65,2 (2,567)	36,9 (1,453)	620 (21,88)
PC810_N200X010AI	AI	NPT 2"	89	41,0 (1,614)	35,6 (1,402)	44,0 (1,732)	60,0 (2,362)	66,0 (2,598)	26,9 (1,059)	67,6 (2,661)	41,3 (1,626)	686 (24,21)
PC810_N200X020AI	AI	NPT 2"	115	47,9 (1,886)	40,1 (1,579)	49,9 (1,965)	70,0 (2,756)	77,0 (3,031)	26,9 (1,059)	71,1 (2,799)	48,4 (1,906)	1.006 (35,48)
PC810_N250X010AI	AI	NPT 2"1/2	115	53,7 (2,114)	47,2 (1,858)	55,9 (2,201)	75,0 (2,953)	82,5 (3,248)	39,9 (1,571)	70,4 (2,772)	54,0 (2,126)	996 (35,15)
PC810_N250X020AI	AI	NPT 2"1/2	140	59,9 (2,358)	52,8 (2,079)	61,9 (2,437)	80,0 (3,150)	88,0 (3,465)	39,9 (1,571)	75,3 (2,965)	60,2 (2,370)	1.222 (43,10)
PC810_N300X010AI	AI	NPT 3"	140	64,3 (2,531)	59,1 (2,327)	67,9 (2,673)	85,0 (3,346)	93,5 (3,681)	41,5 (1,634)	74,9 (2,949)	64,2 (2,528)	1.222 (43,10)
PC810_N350X010AI	AI	NPT 3"1/2	140	75,3 (2,965)	66,6 (2,622)	79,4 (3,126)	108,0 (4,252)	118,8 (4,677)	42,8 (1,685)	94,8 (3,732)	75,6 (2,976)	2.839 (100,14)
PC810_N350X020AI	AI	NPT 3"1/2	200	83,6 (3,291)	76,0 (2,992)	90,9 (3,579)	123,0 (4,843)	135,3 (5,327)	42,8 (1,685)	86,3 (3,398)	85,9 (3,382)	3.760 (132,63)

Materials' description: ON = Nickel-plated brass, AI = AISI 316 stainless steel

- The cable glands are supplied complete with a resin pack.
- Locknuts and sealing gaskets are not included, provided separately.
- Yellow brass and aluminum versions are available upon specific request and for a minimum quantity.
- Reduced NPT threads are available upon specific request and for a minimum quantity. Due to the production tolerances to which electrical cables are subject, it is recommended to choose the correct cable gland by measuring the minimum and maximum diameter of the cable to be installed.

Lock nut

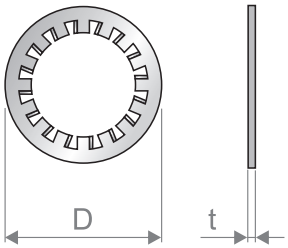


Code	Material	Thread	Sizes [mm (inch)]			Weight [g (oz)]
			t	D1	D2	
PC81G_M020X010ON	ON	M20 X 1.5	3,2 (0,126)	24,0 (0,945)	27,7 (1,091)	7 (0,25)
PC81G_M025X010ON	ON	M25 X 1.5	3,2 (0,126)	30,0 (1,181)	34,6 (1,362)	12 (0,42)
PC81G_M032X010ON	ON	M32 X 1.5	3,2 (0,126)	36,0 (1,417)	41,6 (1,638)	13 (0,46)
PC81G_M040X010ON	ON	M40 X 1.5	4,8 (0,189)	46,0 (1,811)	53,1 (2,091)	26 (0,92)
PC81G_M050X010ON	ON	M50 X 1.5	6,3 (0,248)	55,0 (2,165)	63,5 (2,500)	54 (1,90)
PC81G_M063X010ON	ON	M63 X 1.5	6,3 (0,248)	70,0 (2,756)	80,8 (3,181)	64 (2,26)
PC81G_M075X010ON	ON	M75 X 1.5	6,3 (0,248)	84,0 (3,307)	97,0 (3,819)	100 (3,53)
PC81G_M090X010ON	ON	M90 X 2.0	9,5 (0,374)	106,0 (4,173)	122,4 (4,819)	264 (9,31)
PC81G_M100X010ON	ON	M100 X 2.0	9,5 (0,374)	123,0 (4,843)	142,0 (5,591)	445 (15,70)
PC81G_N050X010ON	ON	NPT 1/2"	4,8 (0,189)	27,0 (1,063)	31,2 (1,228)	7 (0,25)
PC81G_N075X010ON	ON	NPT 3/4"	4,8 (0,189)	33,0 (1,299)	38,1 (1,500)	12 (0,42)
PC81G_N100X010ON	ON	NPT 1"	4,8 (0,189)	41,0 (1,614)	47,3 (1,862)	13 (0,46)
PC81G_N125X010ON	ON	NPT 1"1/4	4,8 (0,189)	50,0 (1,969)	57,7 (2,272)	26 (0,92)
PC81G_N150X010ON	ON	NPT 1"1/2	5,0 (0,197)	60,0 (2,362)	69,3 (2,728)	54 (1,90)
PC81G_N200X010ON	ON	NPT 2"	5,0 (0,197)	75,0 (2,953)	88,6 (3,488)	64 (2,26)
PC81G_N250X010ON	ON	NPT 2"1/2	10,0 (0,394)	84,0 (3,307)	97,0 (3,819)	100 (3,53)
PC81G_N300X010ON	ON	NPT 3"	10,0 (0,394)	100,0 (3,937)	115,5 (4,547)	264 (9,31)
PC81G_N350X010ON	ON	NPT 3"1/2	11,2 (0,441)	114,3 (4,500)	132,0 (5,197)	350 (12,35)
PC81G_M020X010AI	AI	M20 X 1.5	3,2 (0,126)	24,0 (0,945)	27,7 (1,091)	5 (0,17)
PC81G_M025X010AI	AI	M25 X 1.5	3,2 (0,126)	30,0 (1,181)	34,6 (1,362)	7 (0,25)
PC81G_M032X010AI	AI	M32 X 1.5	3,2 (0,126)	36,0 (1,417)	41,6 (1,638)	34 (1,21)
PC81G_M040X010AI	AI	M40 X 1.5	4,8 (0,189)	46,0 (1,811)	53,1 (2,091)	20 (0,71)
PC81G_M050X010AI	AI	M50 X 1.5	6,3 (0,248)	55,0 (2,165)	63,5 (2,500)	29 (1,03)
PC81G_M063X010AI	AI	M63 X 1.5	6,3 (0,248)	70,0 (2,756)	80,8 (3,181)	64 (2,26)
PC81G_M075X010AI	AI	M75 X 1.5	6,3 (0,248)	84,0 (3,307)	97,0 (3,819)	100 (3,53)
PC81G_M090X010AI	AI	M90 X 2.0	9,5 (0,374)	106,0 (4,173)	122,4 (4,819)	267 (9,41)
PC81G_M100X010AI	AI	M100 X 2.0	9,5 (0,374)	123,0 (4,843)	142,0 (5,591)	379 (13,37)
PC81G_N050X010AI	AI	NPT 1/2"	4,8 (0,189)	27,0 (1,063)	31,2 (1,228)	10 (0,35)
PC81G_N075X010AI	AI	NPT 3/4"	4,8 (0,189)	33,0 (1,299)	38,1 (1,500)	12 (0,42)
PC81G_N100X010AI	AI	NPT 1"	4,8 (0,189)	41,0 (1,614)	47,3 (1,862)	26 (0,90)
PC81G_N125X010AI	AI	NPT 1"1/4	4,8 (0,189)	50,0 (1,969)	57,7 (2,272)	37 (1,31)
PC81G_N150X010AI	AI	NPT 1"1/2	5,0 (0,197)	60,0 (2,362)	69,3 (2,728)	47 (1,66)
PC81G_N200X010AI	AI	NPT 2"	5,0 (0,197)	75,0 (2,953)	88,6 (3,488)	43 (1,50)
PC81G_N250X010AI	AI	NPT 2"1/2	10,0 (0,394)	84,0 (3,307)	97,0 (3,819)	177 (6,24)
PC81G_N300X010AI	AI	NPT 3"	10,0 (0,394)	100,0 (3,937)	115,5 (4,547)	685 (24,18)
PC81G_N350X010AI	AI	NPT 3"1/2	11,2 (0,441)	114,3 (4,500)	132,0 (5,197)	339 (11,94)

Materials' description: ON = Nickel-plated brass, AI = AISI 316 stainless steel

Note. Yellow brass and aluminum versions are available upon specific request and for a minimum quantity.

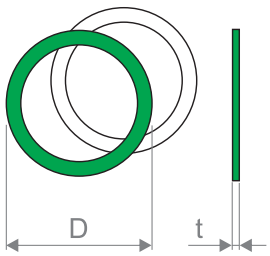
Serrated washer



Code	Material	Cable gland size	Sizes [mm (inch)]		Weight [g (oz)]
			t	D	
PC81D_M020X010AI	AI	M20	3,9 (0,154)	32,5 (1,280)	4 (0,14)
PC81D_M025X010AI	AI	M25	3,9 (0,154)	40,0 (1,575)	8 (0,28)
PC81D_M032X010AI	AI	M32	3,9 (0,154)	43,5 (1,713)	9 (0,32)
PC81D_M040X010AI	AI	M40	3,9 (0,154)	64,5 (2,539)	22 (0,78)
PC81D_M050X010AI	AI	M50	3,9 (0,154)	80,0 (3,150)	30 (1,06)
PC81D_M063X010AI	AI	M63	3,9 (0,154)	100,0 (3,937)	50 (1,76)
PC81D_M075X010AI	AI	M75	4,1 (0,161)	112,0 (4,409)	65 (2,29)
PC81D_M090X010AI	AI	M90	4,1 (0,161)	135,0 (5,315)	90 (3,17)
PC81D_M100X010AI	AI	M100	4,1 (0,161)	145,0 (5,709)	150 (5,29)
PC81D_N050X010AI	AI	NPT 1/2"	3,9 (0,154)	32,5 (1,280)	5 (0,18)
PC81D_N075X010AI	AI	NPT 3/4"	3,9 (0,154)	40,0 (1,575)	12 (0,42)
PC81D_N100X010AI	AI	NPT 1"	3,9 (0,154)	43,5 (1,713)	5 (0,18)
PC81D_N125X010AI	AI	NPT 1"1/4	3,9 (0,154)	64,5 (2,539)	20 (0,71)
PC81D_N150X010AI	AI	NPT 1"1/2	3,9 (0,154)	80,0 (3,150)	45 (1,59)
PC81D_N200X010AI	AI	NPT 2"	3,9 (0,154)	100,0 (3,937)	60 (2,12)
PC81D_N250X010AI	AI	NPT 2"1/2	3,9 (0,154)	112,0 (4,409)	100 (3,53)
PC81D_N300X010AI	AI	NPT 3"	4,1 (0,161)	135,0 (5,315)	60 (2,12)
PC81D_N350X010AI	AI	NPT 3"1/2	4,1 (0,161)	145,0 (5,709)	60 (2,12)

Materials' description: AI = AISI 316 stainless steel

Sealing gasket

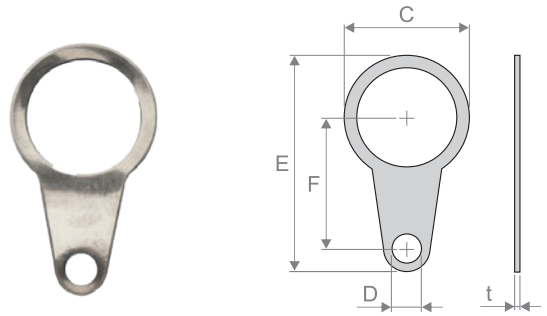


Code	Material	Cable gland size	Sizes [mm (inch)]		Weight [g (oz)]
			t	D	
PC81S_M020X010BI	BI	M20	2,0 (0,079)	28,3 (1,114)	1 (0,04)
PC81S_M025X010BI	BI	M25	2,0 (0,079)	34,5 (1,356)	3 (0,11)
PC81S_M032X010BI	BI	M32	2,0 (0,079)	44,2 (1,740)	4 (0,13)
PC81S_M040X010BI	BI	M40	2,0 (0,079)	52,8 (2,079)	3 (0,09)
PC81S_M050X010BI	BI	M50	2,0 (0,079)	64,8 (2,551)	3 (0,09)
PC81S_M063X010BI	BI	M63	2,0 (0,079)	77,9 (3,067)	5 (0,19)
PC81S_M075X010BI	BI	M75	2,0 (0,079)	95,9 (3,776)	8 (0,29)
PC81S_M090X010BI	BI	M90	2,0 (0,079)	110,6 (4,354)	9 (0,30)
PC81S_M100X010BI	BI	M100	2,0 (0,079)	120,7 (4,752)	14 (0,49)
PC81S_N050X010VE	VE	NPT 1/2"	2,0 (0,079)	29,7 (1,167)	1 (0,05)
PC81S_N075X010VE	VE	NPT 3/4"	2,0 (0,079)	34,4 (1,354)	3 (0,11)
PC81S_N100X010VE	VE	NPT 1"	2,0 (0,079)	44,4 (1,748)	4 (0,13)

Code	Material	Cable gland size	Sizes [mm (inch)]		Weight [g (oz)]
			t	D	
PC81S_N125X010VE	VE	NPT 1"1/4	2,0 (0,079)	55,9 (2,201)	4 (0,13)
PC81S_N150X010VE	VE	NPT 1"1/2	2,0 (0,079)	64,8 (2,551)	5 (0,18)
PC81S_N200X010VE	VE	NPT 2"	2,0 (0,079)	77,6 (3,055)	5 (0,18)
PC81S_N250X010VE	VE	NPT 2"1/2	2,0 (0,079)	95,9 (3,776)	8 (0,28)
PC81S_N300X010VE	VE	NPT 3"	2,0 (0,079)	110,6 (4,354)	12 (0,42)
PC81S_N350X010VE	VE	NPT 3"1/2	2,0 (0,079)	120,7 (4,752)	14 (0,49)

Materials' description: BI = White color Nylon, VE = Green color Nylon

Earth tag



Code	Material	Cable gland size	Short circuit symm fault current for 1 sec [kA]	Sizes [mm (inch)]					Weight [g (oz)]
				t	C	D	E	F	
PC81T_M020X010ON	ON	M20	3,06	1,3 (0,050)	27,2 (1,070)	M6	52,3 (2,060)	33,0 (1,300)	8 (0,28)
PC81T_M025X010ON	ON	M25	4,06	1,5 (0,060)	35,1 (1,380)	M6	59,2 (2,330)	35,6 (1,400)	10 (0,35)
PC81T_M032X010ON	ON	M32	5,4	1,5 (0,060)	45,2 (1,780)	M12	77,0 (3,030)	43,2 (1,700)	16 (0,56)
PC81T_M040X010ON	ON	M40	7,2	1,5 (0,060)	53,6 (2,110)	M13	88,6 (3,490)	45,5 (1,790)	21 (0,74)
PC81T_M050X010ON	ON	M50	10,4	1,5 (0,060)	65,3 (2,570)	M13	111,3 (4,380)	58,2 (2,290)	37 (1,31)
PC81T_M063X010ON	ON	M63	10,4	1,5 (0,060)	82,6 (3,250)	M13	128,8 (5,070)	66,8 (2,630)	48 (1,69)
PC81T_M075X010ON	ON	M75	10,4	1,5 (0,060)	95,5 (3,760)	M13	141,5 (5,570)	72,9 (2,870)	54 (1,90)
PC81T_M090X010ON	ON	M90	10,4	2,0 (0,080)	114,3 (4,500)	M13	161,0 (6,340)	85,1 (3,350)	55 (1,94)
PC81T_M100X010ON	ON	M100	10,4	2,0 (0,080)	125,0 (4,920)	M13	194,8 (7,670)	118,1 (4,650)	200 (7,05)
PC81T_N050X010ON	ON	NPT 1/2"	3,06	1,3 (0,050)	27,2 (1,070)	M6	52,8 (2,080)	33,0 (1,300)	8 (0,28)
PC81T_N075X010ON	ON	NPT 3/4"	4,06	1,5 (0,060)	35,1 (1,380)	M6	59,2 (2,330)	35,6 (1,400)	10 (0,35)
PC81T_N100X010ON	ON	NPT 1"	5,4	1,5 (0,060)	45,2 (1,780)	M12	77,0 (3,030)	43,2 (1,700)	16 (0,56)
PC81T_N125X010ON	ON	NPT 1"1/4	7,2	1,5 (0,060)	53,6 (2,110)	M13	88,6 (3,490)	45,5 (1,790)	21 (0,74)
PC81T_N150X010ON	ON	NPT 1"1/2	10,4	1,5 (0,060)	65,3 (2,570)	M13	111,3 (4,380)	58,2 (2,290)	37 (1,31)
PC81T_N200X010ON	ON	NPT 2"	10,4	1,5 (0,060)	82,6 (3,250)	M13	128,8 (5,070)	66,8 (2,630)	48 (1,69)
PC81T_N250X010ON	ON	NPT 2"1/2	10,4	1,5 (0,060)	95,5 (3,760)	M13	141,5 (5,570)	72,9 (2,870)	54 (1,90)
PC81T_N300X010ON	ON	NPT 3"	10,4	2,0 (0,080)	114,0 (4,490)	M13	161,0 (6,340)	85,1 (3,350)	90 (3,17)
PC81T_N350X010ON	ON	NPT 3"1/2	10,4	2,0 (0,080)	125,0 (4,920)	M13	194,8 (7,670)	103,1 (4,060)	65 (2,29)
PC81T_M020X010AI	AI	M20	3,06	1,3 (0,050)	27,2 (1,070)	M6	52,3 (2,060)	33,0 (1,300)	8 (0,28)

Code	Material	Cable gland size	Short circuit symm fault current for 1 sec [kA]	Sizes [mm (inch)]					Weight [g (oz)]
				t	C	D	E	F	
PC81T_M025X010AI	AI	M25	4,06	1,5 (0,060)	35,1 (1,380)	M6	59,2 (2,330)	35,6 (1,400)	10 (0,35)
PC81T_M032X010AI	AI	M32	5,4	1,5 (0,060)	45,2 (1,780)	M12	77,0 (3,030)	43,2 (1,700)	16 (0,56)
PC81T_M040X010AI	AI	M40	7,2	1,5 (0,060)	53,6 (2,110)	M13	88,6 (3,490)	45,5 (1,790)	21 (0,74)
PC81T_M050X010AI	AI	M50	10,4	1,5 (0,060)	65,3 (2,570)	M13	111,3 (4,380)	58,2 (2,290)	37 (1,31)
PC81T_M063X010AI	AI	M63	10,4	1,5 (0,060)	82,6 (3,250)	M13	128,8 (5,070)	66,8 (2,630)	48 (1,69)
PC81T_M075X010AI	AI	M75	10,4	1,5 (0,060)	95,5 (3,760)	M13	141,5 (5,570)	72,9 (2,870)	51 (1,80)
PC81T_M090X010AI	AI	M90	10,4	2,0 (0,080)	114,3 (4,500)	M13	161,0 (6,340)	85,1 (3,350)	55 (1,94)
PC81T_M100X010AI	AI	M100	10,4	2,0 (0,080)	125,0 (4,920)	M13	194,8 (7,670)	118,1 (4,650)	200 (7,05)
PC81T_N050X010AI	AI	NPT 1/2"	3,06	1,3 (0,050)	27,2 (1,070)	M6	52,8 (2,080)	33,0 (1,300)	8 (0,28)
PC81T_N075X010AI	AI	NPT 3/4"	4,06	1,5 (0,060)	35,1 (1,380)	M6	59,2 (2,330)	35,6 (1,400)	10 (0,35)
PC81T_N100X010AI	AI	NPT 1"	5,4	1,5 (0,060)	45,2 (1,780)	M12	77,0 (3,030)	43,2 (1,700)	200 (7,05)
PC81T_N125X010AI	AI	NPT 1"1/4	7,2	1,5 (0,060)	53,6 (2,110)	M13	88,6 (3,490)	45,5 (1,790)	26 (0,92)
PC81T_N150X010AI	AI	NPT 1"1/2	10,4	1,5 (0,060)	65,3 (2,570)	M13	111,3 (4,380)	58,2 (2,290)	38 (1,34)
PC81T_N200X010AI	AI	NPT 2"	10,4	1,5 (0,060)	82,6 (3,250)	M13	128,8 (5,070)	66,8 (2,630)	48 (1,69)
PC81T_N250X010AI	AI	NPT 2"1/2	10,4	1,5 (0,060)	95,5 (3,760)	M13	141,5 (5,570)	72,9 (2,870)	51 (1,80)
PC81T_N300X010AI	AI	NPT 3"	10,4	2,0 (0,080)	114,0 (4,490)	M13	161,0 (6,340)	85,1 (3,350)	60 (2,12)
PC81T_N350X010AI	AI	NPT 3"1/2	10,4	2,0 (0,080)	125,0 (4,920)	M13	194,8 (7,670)	103,1 (4,060)	65 (2,29)

Materials' description: ON = Nickel-plated brass, AI = AISI 316 stainless steel

Note. Yellow brass and aluminum versions are available upon specific request and for a minimum quantity.

Shroud

Selection table for the shroud according to the chosen cable gland.

Cable gland	Shroud code
PC810_M020X010□□	PC81C_06
PC810_M020X020□□	PC81C_06
PC810_M020X030□□	PC81C_06
PC810_M020X040□□	PC81C_06
PC810_M025X010□□	PC81C_09
PC810_M032X010□□	PC81C_10
PC810_M032X020□□	PC81C_10
PC810_M040X010□□	PC81C_13
PC810_M050X010□□	PC81C_15
PC810_M050X020□□	PC81C_18
PC810_M063X010□□	PC81C_21
PC810_M063X020□□	PC81C_23
PC810_M075X010□□	PC81C_25
PC810_M075X020□□	PC81C_27
PC810_M090X010□□	PC81C_31
PC810_M100X010□□	PC81C_33LSF
PC810_N050X010□□	PC81C_06
PC810_N050X020□□	PC81C_06
PC810_N050X030□□	PC81C_06
PC810_N050X040□□	PC81C_06
PC810_N075X010□□	PC81C_09
PC810_N100X010□□	PC81C_10
PC810_N100X020□□	PC81C_10
PC810_N125X010□□	PC81C_13
PC810_N150X010□□	PC81C_15
PC810_N200X010□□	PC81C_18
PC810_N200X020□□	PC81C_21
PC810_N250X010□□	PC81C_23
PC810_N250X020□□	PC81C_25
PC810_N300X010□□	PC81C_27
PC810_N350X010□□	PC81C_31
PC810_N350X020□□	PC81C_33LSF

Code composition

PC	□□□	_	□	□□□	X	□□□	□□

Family	To be inserted
Cable gland	810
Lock nut	81G
Serrated washer	81D
Sealing gasket	81S
Earth tag	81T
Shroud	81C

Version	To be inserted
Metric	M
NPT	N

Thread	To be inserted
M20, M25, …, M100	020, 025, …, 100
NPT 1/2", 3/4", …, 4"	050, 075, …, 400

Material	To be inserted
Brass	OT
Nickel-plated brass	ON
AISI 316 stainless steel	AI
Aluminum	AL
White nylon	BI
Green nylon	VE

Diameter range
Code depending on the cable range.

SERIES 8200

Metal-Clad Cable, MC-HL

Armored and unshielded

Use

UL Listed armored and unshielded cables intended for the uses specified by article 330 of ANSI/NFPA 70 “National Electrical Code” (NEC) and suitable for use in Class I, Division 1, Hazardous Locations. These armored cables are manufactured specifically to meet the particular industrial requirements, where durability, impact and corrosion resistance, but also flexibility and easy employment are needed.

Information. Please ask the sales department for the possibility of an additional UL certified cut-to-size service ("Processed Wire").

Technical data

According to NEC, MC-HL cables can be used as follows[1]:

(1) For services, feeders and branch circuits.
(2) For power, lighting, control and signal circuits.
(3) Indoors or outdoors.
(4) Exposed or concealed.
(5) To be direct buried where identified for such use.
(6) In cable tray where identified for such use.
(7) In any raceways.
(8) As aerial cable on a messenger.
(9) In hazardous (classified) locations as permitted.
(10) In dry locations and embedded in plaster finish on brick or other masonry except in damp or wet locations.
(11) In wet locations where any of the following conditions are met:
  a. The metallic covering is impervious to moisture.
  b. A lead sheath or moisture-impervious jacket is provided under the metal covering.
  c. The insulated conductors under the metallic covering are listed for use in wet locations.
(12) Where single-conductor cables are used, all phase conductors and, where used, the neutral conductor shall be grouped together to minimize induced voltage on the sheath.

Characteristics	Value/property
Conductor	Copper strand
Insulation	XLPE
Conductor distinction	ICEA Method 1, table E-2 (see appendix) for sizes 14 AWG ÷ 10 AWG ICEA Method 4 for sizes 8 AWG ÷ 4/0 AWG
Ground wire	Bare copper
Taping	Synthetic material
Armor	Aluminium corrugated armor
Jacket	PVC
Temperature range	+90°C
Voltage rating	600 V
Bending radius	12 x cable outer diameter
Construction reference standards	UL approvals: (UL) Type MC-HL (Hazardous Locations), Class 1, Div. 1 NEC Art. 330, 501; UL 1569, UL 2225
Standards of use	NFPA 70 (NEC)

Coding and dimensions

Code	Number of conductors*	Size [AWG]	Ground wire size [AWG]	Cord diameter [mm (inch)]	Armour diameter [mm (inch)]	Jacket diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV03XW14_82000_NE	3	14	3x18	9,9 (0.390)	14,1 (0.555)	16,8 (0.661)	298 (200)
CV03XW12_82000_NE	3	12	3x16	8,6 (0.340)	14,1 (0.555)	16,8 (0.661)	336 (226)
CV03XW10_82000_NE	3	10	3x14	11,4 (0.450)	15,8 (0.620)	18,4 (0.724)	464 (312)
CV04XW14_82000_NE	4	14	14	8,8 (0.345)	13,3 (0.522)	15,9 (0.627)	302 (203)
CV05XW14_82000_NE	5	14	14	9,7 (0.380)	13,5 (0.532)	16,1 (0.634)	333 (224)
CV07XW14_82000_NE	7	14	14	10,9 (0.430)	15,3 (0.602)	18,0 (0.710)	427 (287)
CV12XW14_82000_NE	12	14	14	14,2 (0.560)	20,0 (0.788)	22,7 (0.893)	632 (425)

* Ground wire not included

Code composition

CV	□□	X	□□□	_82000_NE

Number of conductors	To be inserted
3, ..., 12	03, ..., 12

Size	To be inserted
10, 12, 14	W10, W12, W14

SERIES 8200S

Metal-Clad Cable, MC-HL

Multiple pair cables, armored and shielded

Use

UL Listed armored and shielded cables intended for the uses specified by article 330 of ANSI/NFPA 70 “National Electrical Code” (NEC) and suitable for use in Class I, Division 1, Hazardous Locations. These armored cables are specifically made to meet particular industrial needs, where durability, impact and corrosion resistant, but also flexibility and easy use are needed.

Information. Please ask the sales department for the possibility of an additional UL certified cut-to-size service ("Processed Wire").

Technical data

According to NEC, MC-HL cables can used as follows[1]:

(1) For services, feeders and branch circuits.
(2) For power, lighting, control and signal circuits.
(3) Indoors or outdoors.
(4) Exposed or concealed.
(5) To be direct buried where identified for such use.
(6) In cable tray where identified for such use.
(7) In any raceways.
(8) As aerial cable on a messenger.
(9) In hazardous (classified) locations as permitted.
(10) In dry locations and embedded in plaster finish on brick or other masonry except in damp or wet locations.
(11) In wet locations where any of the following conditions are met:
a. The metallic covering is impervious to moisture.
b. A lead sheath or moisture-impervious jacket is provided under the metal covering.
c. The insulated conductors under the metallic covering are listed for use in wet locations.
(12) Where single-conductor cables are used, all phase conductors and, where used, the neutral conductor shall be grouped together to minimize induced voltage on the sheath.

Characteristics	Value/property
Conductor	Copper strand
Insulation	PVC/Nylon
Conductor distinction	Numbered, black/white pairs
Shield	Aluminium tape on pairs and total, complete with drain wire
Internal jacket	PVC
Armor	Corrugated aluminium armor
External jacket	PVC, black color
Temperature range	+90°C
Voltage rating	600 V
Bending radius	12 x cable outer diameter
Standards of construction	UL approvals: (UL) Type MC-HL (Hazardous Locations), Class 1, Div. 1 NEC Art. 330, 501; UL 1569, UL 2225
Standards of use	NFPA 70 (NEC)

Coding and dimensions

Code	Number of conductors	Size [AWG]	Cord diameter [mm (inch)]	Internal jacket diameter [mm (inch)]	Armour diameter [mm (inch)]	Jacket diameter [mm (inch)]	Weight [kg/km (lb/mft)]
CV02XW16_8200S_NE	1x2	16	5,2 (0.204)	7,2 (0.285)	12,2 (0.482)	14,8 (0.584)	238 (160)
CV04XW16_8200S_NE	2x2	16	10,8 (0.424)	12,9 (0.506)	19,1 (0.752)	21,7 (0.856)	366 (246)
CV08XW16_8200S_NE	4x2	16	12,2 (0.482)	14,8 (0.584)	20,2 (0.797)	22,9 (0.901)	469 (315)
CV16XW16_8200S_NE	8x2	16	16,1 (0.635)	18,8 (0.740)	24,6 (0.968)	27,2 (1.072)	839 (564)
CV24XW16_8200S_NE	12x2	16	20,2 (0.797)	22,9 (0.900)	30,2 (1.190)	32,9 (1.294)	1133 (761)

Code composition

CV	□□	X	□□□	_8200S_NE

Number of conductors	To be inserted
1x2, ..., 12x2	02, ..., 24

Size	To be inserted
16	W16

SERIES 8250

Metal-Clad Cable, Teck 90-HL

Armored and unshielded

Use

CSA armored and unshielded cables built for uses specified by the Canadian Electrical Code (CEC) and suitable for use in Class I, Division 1, Hazardous Locations. These armored cables are specifically made to meet particular industrial needs, where durability, impact and corrosion resistant, but also flexibility and easy use are needed.

Information. Please ask the sales department for the possibility of an additional UL certified cut-to-size service ("Processed Wire").

Technical data

Characteristics	Value/property
Conductor	Copper strand
Insulation	XLPE
Conductor distinction	See following table
Ground wire	Bare copper
Internal jacket	PVC
Armor	Corrugated aluminium armor
External jacket	PVC
Temperature range	+90°C
Voltage rating	600 V
Bending radius	12 x cable outer diameter
Standards of construction	CSA approvals: (CSA) Type Teck90-HL (Hazardous Locations), Class 1, Div. 2 CSA C22.1 (CE Code), CSA C22.2 No.131
Standards of use	CSA C22.1 (CE Code), CSA C22.2 No.131

Coding and dimensions

Code	Number of conductors*	Size [AWG]	Ground wire size [AWG]	Internal jacket diameter [mm (inch)]	Armour diameter [mm (inch)]	Jacket diameter [mm (inch)]	Weight [kg/km (lb/mft)]	Colors of conductors
CV03XW14_82500_NE	3	14	14	9,9 (0.390)	14,7 (0.580)	16,8 (0.660)	331 (222)	Black, red, blu
CV03XW12_82500_NE	3	12	14	10,9 (0.430)	15,8 (0.620)	17,8 (0.700)	390 (262)	Black, red, blu
CV03XW10_82500_NE	3	10	12	12,7 (0.500)	17,8 (0.700)	19,1 (0.750)	488 (328)	Black, red, blu
CV03XW08_82500_NE	3	8	10	16,0 (0.630)	21,1 (0.830)	22,9 (0.900)	703 (472)	Black, red, blu
CV05XW14_82500_NE	5	14	14	11,9 (0.470)	16,8 (0.660)	18,8 (0.740)	424 (285)	White + black numbered
CV07XW14_82500_NE	7	14	14	13,0 (0.510)	17,8 (0.700)	19,8 (0.780)	494 (332)	White + black numbered
CV12XW14_82500_NE	12	14	14	17,5 (0.690)	24,1 (0.950)	24,6 (0.970)	822 (552)	White + black numbered

* Ground wire not included

Code composition

CV	□□	X	□□□	_82500_NE

Number of conductors	To be inserted
2, ..., 25	02, ..., 25

Size	To be inserted
8, 10, ..., 18 AWG	W08, W10, ..., W18

Cable glands for MC-HL and Teck90-HL armoured cables

For use in Class/Division Hazardous Locations – “UL/CSA Listed”

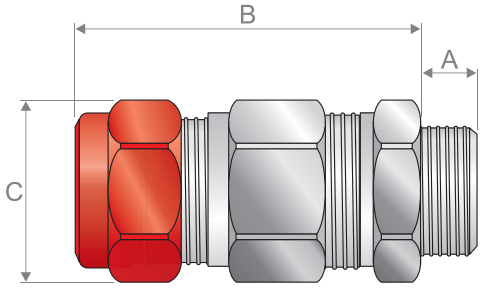
Use

These fittings are used to connect type MC-HL and Teck 90-HL armored cables and are suitable for use in locations Class I, Division 1, Hazardous Locations. Their construction permits the earthing of the cable armor and either vertical and horizontal installation. They are supplied complete with sealing compound.

Technical data

Characteristics	Value/property
Material	Aluminum (as standard product) or brass
Grounding continuity	Stainless steel copper-plated spring provides grounding continuity of cable armour (MC cables)
Sealing type	Explosion proof, compound sealing on conductors and watertight seal on outer sheath of cable.
Temperature range	-25°C, +60°C
Protection class	NEMA 4, IP 56

Coding and dimensions



Code	Version	Thread	Dimensions [mm]			Min/max external armor diameter		Min/max jacket diameter		Quantity of resin [g]
			A	B	C	[inch]	[mm]	[inch]	[mm]	
ANTMCX050□□	NPT	1/2"	19,1	66,7	34,9	0,440÷0,650	11,2÷16,5	0,490÷0,781	12,4÷19,8	7
ANTMCX075□□	NPT	3/4"	19,8	73,0	41,3	0,600÷0,850	15,2÷21,6	0,650÷1,000	16,5÷25,4	14
ANTMCX100□□	NPT	1"	23,8	79,4	50,8	0,800÷1,120	20,3÷28,4	0,850÷1,313	21,6÷33,4	20
ANTMCX125□□	NPT	1"1/4	24,6	79,4	61,9	1,100÷1,400	27,9÷35,6	1,150÷1,625	29,2÷41,3	43
ANTMCX150□□	NPT	1"1/2	24,6	85,7	69,9	1,330÷1,610	33,8÷40,9	1,380÷1,781	35,1÷45,2	52
ANTMCX200□□	NPT	2"	25,4	135,0	88,9	1,570÷2,060	39,9÷52,3	1,630÷2,313	41,4÷58,8	128
ANTMCX250□□	NPT	2"1/2	36,5	154,0	101,6	1,930÷2,470	49,0÷62,7	1,990÷2,719	50,5÷69,1	245
ANTMCX300□□	NPT	3"	36,5	154,0	123,8	2,450÷3,020	62,2÷76,7	2,525÷3,281	64,1÷83,3	447
ANTMCX350□□	NPT	3"1/2	41,3	196,9	136,5	2,950÷3,520	74,9÷89,4	3,025÷3,781	76,8÷96,0	724
ANTMCX400□□	NPT	4"	41,3	211,2	149,2	3,500÷4,020	88,9÷102,1	3,585÷4,281	91,1÷108,7	1.104

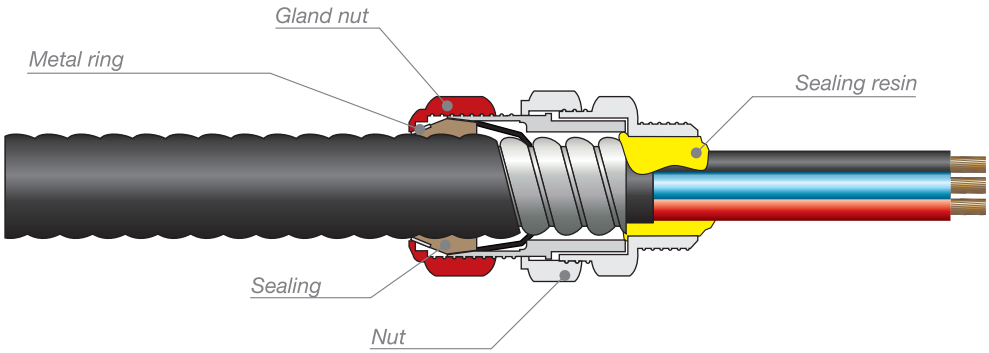
Code composition

ANTMCX... □□

Fitting material	To be inserted
Aluminium	A
Brass	NB

Mounting

Fittings for MC-HL and Teck90-HL cables guarantee an optimal sealing thanks to a sealing resin which is wound round the cord and round the single conductors during the installation. The anchoring of the fitting to the armor is carried out by means of a metal ring which blocks it mechanically, while the sealing on the external jacket of the cable is obtained through a seal inside the gland nut. The following table is a cross-reference permitting to find out the code of the fitting according to the type of cable to be used.



Threaded Electrical Rigid Metal Conduit Type RMC and IMC

Threaded Raceway

Use

Threaded electrical conduits type RMC (Rigid Metal Conduit) designed according to Art. 344 ANSI/NFPA 70 “National Electrical Code” (NEC) and type IMC (Intermediate Metal Conduit) designed according to Art. 342 ANSI/NFPA 70 “National Electrical Code” (NEC). These conduits are used for high mechanical protection and routing of conductors and cables. They reduce electromagnetic field exposure, shields against electromagnetic interference and they are suitable for use as an equipment grounding conductor according to Art. 250.118 ANSI/NFPA 70 “National Electrical Code” (NEC). Conduits and elbows are connected by means of normal couplings or 3-piece couplings that allow joining two lengths of conduits, when neither can be rotated

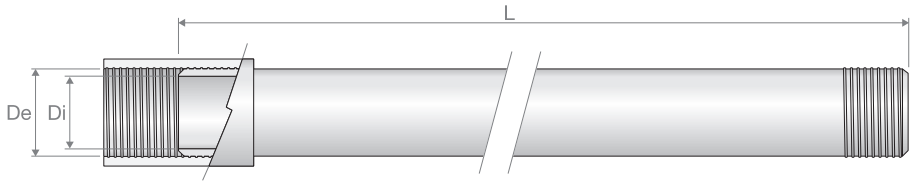
Technical data

Characteristics	Value/property
Type	Threaded tubes to be used with threaded fittings type RMC/IMC. They are compatible with set screw fittings type EMT and conduit bodies.
Material	Galvanized steel for RMC* conduits and fittings, galvanized steel with a clear protective coating on the outside diameter for IMC conduits.
Color	Metallic
Standards of construction	Type RMC: ANSI C80.1, UL 6, CSA C22.2 N.45.1 Type IMC: ANSI C80.6, UL 1242
Standards of use	NEC: Art. 344 Rigid Metal Conduit (RMC), Art. 250.118 (2) for RMC NEC: Art. 342 Intermediate Metal Conduit (IMC), Art. 250.118 (3) for IMC NEC: Art. 501.10 (A) (1) and (B) (1) Class I Div. 1 & 2, Art. 502.10 (B) (1) Class II Div. 2, Art. 503.10 (A) (1) and (B) Class III Div. 1 & 2

* Upon specific request, we can provide conduits and fittings made of aluminum, AISI 304 and AISI 316 stainless steel.

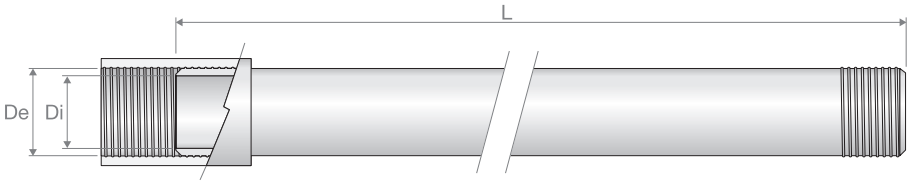
Coding and dimensions

RMC Threaded Conduit



Code	Version	Size	Nominal size [mm]	Dimensions [mm]		Length [ft (m)]	Internal cross section [mm²]	Weight per length [kg]
				Di	De	L		
CFRM01_05AZ	NPT	1/2"	15	16,1	21,3	10 (3,05)	204	3,72
CFRM01_07AZ	NPT	3/4"	20	21,2	26,7	10 (3,05)	353	4,94
CFRM01_10AZ	NPT	1"	25	27,0	33,4	10 (3,05)	573	7,30
CFRM01_12AZ	NPT	1"1/4	32	35,4	41,2	10 (3,05)	984	9,89
CFRM01_15AZ	NPT	1"1/2	40	41,2	48,3	10 (3,05)	1333	11,93
CFRM01_20AZ	NPT	2"	50	52,9	60,3	10 (3,05)	2198	15,88
CFRM01_25AZ	NPT	2"1/2	65	63,2	73,0	10 (3,05)	3137	25,36
CFRM01_30AZ	NPT	3"	80	78,5	88,9	10 (3,05)	4840	32,98
CFRM01_35AZ	NPT	3"1/2	90	90,7	101,6	10 (3,05)	6461	39,92
CFRM01_40AZ	NPT	4"	100	102,9	114,3	10 (3,05)	8316	46,72
CFRM01_50AZ	NPT	5"	125	128,9	141,3	10 (3,05)	13050	63,5
CFRM01_60AZ	NPT	6"	150	154,8	168,3	10 (3,05)	18821	83,46

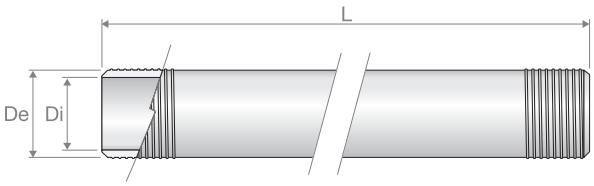
IMC Threaded Conduit



Code	Version	Size	Nominal size [mm]	Dimensions [mm]		Length [ft (m)]	Internal cross section [mm²]	Weight per length [kg]
				Di	De	L		
CFIM01_05AZ	NPT	1/2"	15	16,8	20,7	10 (3,05)	222	2,81
CFIM01_07AZ	NPT	3/4"	20	21,9	26,1	10 (3,05)	377	3,81
CFIM01_10AZ	NPT	1"	25	28,1	32,8	10 (3,05)	620	5,39
CFIM01_12AZ	NPT	1"1/4	32	36,8	41,6	10 (3,05)	1064	7,61
CFIM01_15AZ	NPT	1"1/2	40	42,7	47,8	10 (3,05)	1432	8,80
CFIM01_20AZ	NPT	2"	50	54,6	59,9	10 (3,05)	2341	11,61
CFIM01_25AZ	NPT	2"1/2	65	64,9	72,6	10 (3,05)	3308	20,00
CFIM01_30AZ	NPT	3"	80	80,7	88,3	10 (3,05)	5115	24,63
CFIM01_35AZ	NPT	3"1/2	90	93,2	100,9	10 (3,05)	6822	28,53
CFIM01_40AZ	NPT	4"	100	105,4	113,4	10 (3,05)	8725	317,5

Note. Product not certified for Canadian market.

RMC Threaded Nipple

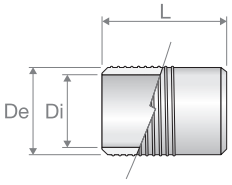


Code	Version	Size	Nominal size [mm]	Dimensions [mm]		Length [inch (mm)]	Weight [kg]
				Di	De	L	
CFRM03_05_15AZ	NPT	1/2"	15	16,1	21,3	1"1/2 (38)	0,04
CFRM03_07_15AZ	NPT	3/4"	20	21,2	26,7	1"1/2 (38)	0,04
CFRM03_05_20AZ	NPT	1/2"	15	16,1	21,3	2" (51)	0,05
CFRM03_07_20AZ	NPT	3/4"	20	21,2	26,7	2" (51)	0,06
CFRM03_10_20AZ	NPT	1"	25	27	33,4	2" (51)	0,1
CFRM03_12_20AZ	NPT	1"1/4	32	35,4	42,2	2" (51)	0,13
CFRM03_15_20AZ	NPT	1"1/2	40	41,2	48,3	2" (51)	0,15
CFRM03_05_25AZ	NPT	1/2"	15	16,1	21,3	2"1/2 (64)	0,07
CFRM03_07_25AZ	NPT	3/4"	20	21,2	26,7	2"1/2 (64)	0,09
CFRM03_10_25AZ	NPT	1"	25	27	33,4	2"1/2 (64)	0,13
CFRM03_12_25AZ	NPT	1"1/4	32	35,4	42,2	2"1/2 (64)	0,17
CFRM03_15_25AZ	NPT	1"1/2	40	41,2	48,3	2"1/2 (64)	0,2
CFRM03_20_25AZ	NPT	2"	50	52,9	60,3	2"1/2 (64)	0,27
CFRM03_05_30AZ	NPT	1/2"	15	16,1	21,3	3" (76)	0,09
CFRM03_07_30AZ	NPT	3/4"	20	21,2	26,7	3" (76)	0,11
CFRM03_10_30AZ	NPT	1"	25	27	33,4	3" (76)	0,16
CFRM03_12_30AZ	NPT	1"1/4	32	35,4	42,2	3" (76)	0,21
CFRM03_15_30AZ	NPT	1"1/2	40	41,2	48,3	3" (76)	0,25
CFRM03_20_30AZ	NPT	2"	50	52,9	60,3	3" (76)	0,33

Code	Version	Size	Nominal size [mm]	Dimensions [mm]		Length [inch (mm)]	Weight [kg]
				Di	De	L	
CFRM03_25_30AZ	NPT	2"1/2	65	63,2	73	3" (76)	0,45
CFRM03_30_30AZ	NPT	3"	80	78,5	88,9	3" (76)	0,59
CFRM03_05_35AZ	NPT	1/2"	15	16,1	21,3	3"1/2 (89)	0,1
CFRM03_07_35AZ	NPT	3/4"	20	21,2	26,7	3"1/2 (89)	0,13
CFRM03_10_35AZ	NPT	1"	25	27	33,4	3"1/2 (89)	0,2
CFRM03_12_35AZ	NPT	1"1/4	32	35,4	42,2	3"1/2 (89)	0,25
CFRM03_15_35AZ	NPT	1"1/2	40	41,2	48,3	3"1/2 (89)	0,31
CFRM03_20_35AZ	NPT	2"	50	52,9	60,3	3"1/2 (89)	0,4
CFRM03_25_35AZ	NPT	2"1/2	65	63,2	73	3"1/2 (89)	0,54
CFRM03_30_35AZ	NPT	3"	80	78,5	88,9	3"1/2 (89)	0,71
CFRM03_05_40AZ	NPT	1/2"	15	16,1	21,3	4" (102)	0,12
CFRM03_07_40AZ	NPT	3/4"	20	21,2	26,7	4" (102)	0,15
CFRM03_10_40AZ	NPT	1"	25	27	33,4	4" (102)	0,22
CFRM03_12_40AZ	NPT	1"1/4	32	35,4	42,2	4" (102)	0,3
CFRM03_15_40AZ	NPT	1"1/2	40	41,2	48,3	4" (102)	0,36
CFRM03_20_40AZ	NPT	2"	50	52,9	60,3	4" (102)	0,47
CFRM03_25_40AZ	NPT	2"1/2	65	63,2	73	4" (102)	0,68
CFRM03_30_40AZ	NPT	3"	80	78,5	88,9	4" (102)	0,91
CFRM03_35_40AZ	NPT	3"1/2	90	90,7	101,6	4" (102)	1,09
CFRM03_40_40AZ	NPT	4"	100	102,9	114,3	4" (102)	1,29
CFRM03_05_50AZ	NPT	1/2"	15	16,1	21,3	5" (127)	0,15
CFRM03_07_50AZ	NPT	3/4"	20	21,2	26,7	5" (127)	0,2
CFRM03_10_50AZ	NPT	1"	25	27	33,4	5" (127)	0,29
CFRM03_12_50AZ	NPT	1"1/4	32	35,4	42,2	5" (127)	0,38
CFRM03_15_50AZ	NPT	1"1/2	40	41,2	48,3	5" (127)	0,47
CFRM03_20_50AZ	NPT	2"	50	52,9	60,3	5" (127)	0,6
CFRM03_25_50AZ	NPT	2"1/2	65	63,2	73	5" (127)	0,89
CFRM03_30_50AZ	NPT	3"	80	78,5	88,9	5" (127)	1,18
CFRM03_35_50AZ	NPT	3"1/2	90	90,7	101,6	5" (127)	1,45
CFRM03_40_50AZ	NPT	4"	100	102,9	114,3	5" (127)	1,72
CFRM03_50_50AZ	NPT	5"	125	128,9	141,3	5" (127)	2,18
CFRM03_60_50AZ	NPT	6"	150	154,8	168,3	5" (127)	2,99
CFRM03_05_60AZ	NPT	1/2"	15	16,1	21,3	6" (152)	0,18
CFRM03_07_60AZ	NPT	3/4"	20	21,2	26,7	6" (152)	0,24
CFRM03_10_60AZ	NPT	1"	25	27	33,4	6" (152)	0,35
CFRM03_12_60AZ	NPT	1"1/4	32	35,4	42,2	6" (152)	0,45
CFRM03_15_60AZ	NPT	1"1/2	40	41,2	48,3	6" (152)	0,55
CFRM03_20_60AZ	NPT	2"	50	52,9	60,3	6" (152)	0,73
CFRM03_25_60AZ	NPT	2"1/2	65	63,2	73	6" (152)	1,09
CFRM03_30_60AZ	NPT	3"	80	78,5	88,9	6" (152)	1,36
CFRM03_35_60AZ	NPT	3"1/2	90	90,7	101,6	6" (152)	1,69
CFRM03_40_60AZ	NPT	4"	100	102,9	114,3	6" (152)	2
CFRM03_50_60AZ	NPT	5"	125	128,9	141,3	6" (152)	2,72
CFRM03_60_60AZ	NPT	6"	150	154,8	168,3	6" (152)	3,72
CFRM03_05_80AZ	NPT	1/2"	15	16,1	21,3	8" (203)	0,24
CFRM03_07_80AZ	NPT	3/4"	20	21,2	26,7	8" (203)	0,33
CFRM03_10_80AZ	NPT	1"	25	27	33,4	8" (203)	0,49

Code	Version	Size	Nominal size [mm]	Dimensions [mm]		Length [inch (mm)]	Weight [kg]
				Di	De	L	
CFRM03_12_80AZ	NPT	1"1/4	32	35,4	42,2	8" (203)	0,62
CFRM03_15_80AZ	NPT	1"1/2	40	41,2	48,3	8" (203)	0,77
CFRM03_20_80AZ	NPT	2"	50	52,9	60,3	8" (203)	1
CFRM03_25_80AZ	NPT	2"1/2	65	63,2	73	8" (203)	1,49
CFRM03_30_80AZ	NPT	3"	80	78,5	88,9	8" (203)	1,86
CFRM03_35_80AZ	NPT	3"1/2	90	90,7	101,6	8" (203)	2,31
CFRM03_40_80AZ	NPT	4"	100	102,9	114,3	8" (203)	2,72
CFRM03_50_80AZ	NPT	5"	125	128,9	141,3	8" (203)	3,74
CFRM03_60_80AZ	NPT	6"	150	154,8	168,3	8" (203)	5,1
CFRM03_05_100AZ	NPT	1/2"	15	16,1	21,3	10" (254)	0,31
CFRM03_07_100AZ	NPT	3/4"	20	21,2	26,7	10" (254)	0,4
CFRM03_10_100AZ	NPT	1"	25	27	33,4	10" (254)	0,63
CFRM03_12_100AZ	NPT	1"1/4	32	35,4	42,2	10" (254)	0,8
CFRM03_15_100AZ	NPT	1"1/2	40	41,2	48,3	10" (254)	0,98
CFRM03_20_100AZ	NPT	2"	50	52,9	60,3	10" (254)	1,29
CFRM03_25_100AZ	NPT	2"1/2	65	63,2	73	10" (254)	1,91
CFRM03_30_100AZ	NPT	3"	80	78,5	88,9	10" (254)	2,39
CFRM03_35_100AZ	NPT	3"1/2	90	90,7	101,6	10" (254)	2,97
CFRM03_40_100AZ	NPT	4"	100	102,9	114,3	10" (254)	3,51
CFRM03_50_100AZ	NPT	5"	125	128,9	141,3	10" (254)	4,78
CFRM03_60_100AZ	NPT	6"	150	154,8	168,3	10" (254)	6,53
CFRM03_05_120AZ	NPT	1/2"	15	16,1	21,3	12" (305)	0,37
CFRM03_07_120AZ	NPT	3/4"	20	21,2	26,7	12" (305)	0,49
CFRM03_10_120AZ	NPT	1"	25	27	33,4	12" (305)	0,75
CFRM03_12_120AZ	NPT	1"1/4	32	35,4	42,2	12" (305)	0,98
CFRM03_15_120AZ	NPT	1"1/2	40	41,2	48,3	12" (305)	1,18
CFRM03_20_120AZ	NPT	2"	50	52,9	60,3	12" (305)	1,52
CFRM03_25_120AZ	NPT	2"1/2	65	63,2	73	12" (305)	2,29
CFRM03_30_120AZ	NPT	3"	80	78,5	88,9	12" (305)	2,86
CFRM03_35_120AZ	NPT	3"1/2	90	90,7	101,6	12" (305)	3,56
CFRM03_40_120AZ	NPT	4"	100	102,9	114,3	12" (305)	4,19
CFRM03_50_120AZ	NPT	5"	125	128,9	141,3	12" (305)	5,71
CFRM03_60_120AZ	NPT	6"	150	154,8	168,3	12" (305)	7,8

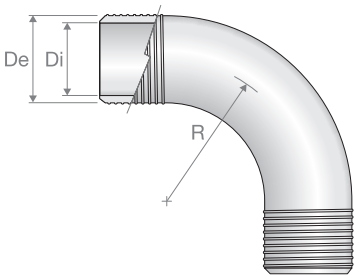
RMC Cap



Code	Version	Size	Nominal size [mm]	Dimensions [mm]		Length [ft (m)]
				Di	De	L
CFRM03_05_00AZ	NPT	1/2"	15	16,1	21,3	1,125" (29)
CFRM03_07_00AZ	NPT	3/4"	20	21,2	26,7	1,375" (35)
CFRM03_10_00AZ	NPT	1"	25	27	33,4	1,5" (39)
CFRM03_12_00AZ	NPT	1"1/4	32	35,4	42,2	1,625" (42)
CFRM03_15_00AZ	NPT	1"1/2	40	41,2	48,3	1,75" (45)

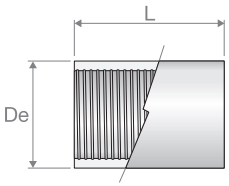
Code	Version	Size	Nominal size [mm]	Dimensions [mm]		Length [ft (m)]
				Di	De	L
CFRM03_20_00AZ	NPT	2"	50	52,9	60,3	2" (51)
CFRM03_25_00AZ	NPT	2"1/2	65	63,2	73	2,5" (64)
CFRM03_30_00AZ	NPT	3"	80	78,5	88,9	2,625" (67)
CFRM03_35_00AZ	NPT	3"1/2	90	90,7	101,6	2,75" (70)
CFRM03_40_00AZ	NPT	4"	100	102,9	114,3	2,875" (74)
CFRM03_50_00AZ	NPT	5"	125	128,9	141,3	3" (77)
CFRM03_60_00AZ	NPT	6"	150	154,8	168,3	3,125" (80)

RMC Threaded Elbow 90°



Code	Version	Size	Nominal size [mm]	Dimensions [mm]			Weight [kg]
				Di	De	R	
CFRMC9_05AZ	NPT	1/2"	15	16,1	21,3	102	0,32
CFRMC9_07AZ	NPT	3/4"	20	21,2	26,7	114	0,51
CFRMC9_10AZ	NPT	1"	25	27	33,4	146	0,87
CFRMC9_12AZ	NPT	1"1/4	32	35,4	42,2	184	1,45
CFRMC9_15AZ	NPT	1"1/2	40	41,2	48,3	210	1,87
CFRMC9_20AZ	NPT	2"	50	52,9	60,3	241	3,04
CFRMC9_25AZ	NPT	2"1/2	65	63,2	73	267	5,44
CFRMC9_30AZ	NPT	3"	80	78,5	88,9	330	8,62
CFRMC9_35AZ	NPT	3"1/2	90	90,7	101,6	381	12,70
CFRMC9_40AZ	NPT	4"	100	102,9	114,3	406	14,06
CFRMC9_50AZ	NPT	5"	125	128,9	141,3	610	30,84
CFRMC9_60AZ	NPT	6"	150	154,8	168,3	762	51,70

RMC/IMC Coupling

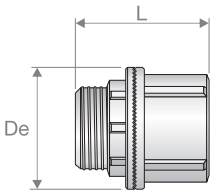


Code	Version	Size	Nominal size [mm]	Dimensions [mm]	
				De	L
CFRMM1_05AZ	NPT	1/2"	15	25,7	41,3
CFRMM1_07AZ	NPT	3/4"	20	31,8	41,7
CFRMM1_10AZ	NPT	1"	25	38,7	50,0
CFRMM1_12AZ	NPT	1"1/4	32	47,5	51,6
CFRMM1_15AZ	NPT	1"1/2	40	54,7	52,4
CFRMM1_20AZ	NPT	2"	50	67,3	54,0
CFRMM1_25AZ	NPT	2"1/2	65	82,6	81,0

Code	Version	Size	Nominal size [mm]	Dimensions [mm]	
				De	L
CFRMM1_30AZ	NPT	3"	80	98,3	84,1
CFRMM1_35AZ	NPT	3"1/2	90	114,3	86,5
CFRMM1_40AZ	NPT	4"	100	123,8	89,3
CFRMM1_50AZ	NPT	5"	125	152,4	100,4
CFRMM1_60AZ	NPT	6"	150	182,9	108,0

The compression coupling is used to connect two elements together (RMC/IMC conduits and elbows).

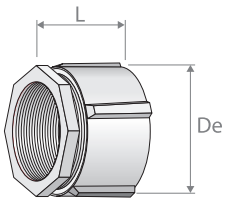
Conduit hubs

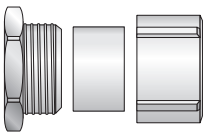


Code	Version	Size	Nominal size [mm]	Dimensions [mm]	
				De	L
CFRMM4_05LZ	NPT	1/2"	15	30,7	36,8
CFRMM4_07LZ	NPT	3/4"	20	36,3	39,9
CFRMM4_10LZ	NPT	1"	25	47,0	47,4
CFRMM4_12LZ	NPT	1"1/4	32	57,9	50,4
CFRMM4_15LZ	NPT	1"1/2	40	64,9	51,8
CFRMM4_20LZ	NPT	2"	50	77,7	54,6
CFRMM4_25LZ	NPT	2"1/2	60	90,9	64,8
CFRMM4_30LZ	NPT	3"	80	106,4	66,7
CFRMM4_35LZ	NPT	3"1/2	90	121,4	67,4
CFRMM4_40LZ	NPT	4"	100	136,0	68,1

This product is used to secure threaded rigid conduit to box or enclosure.

RMC 3 - Pieces Coupling





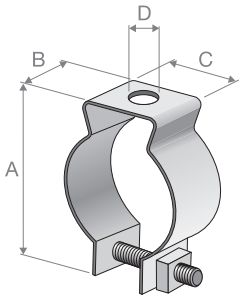
Code	Version	Size	Nominal size [mm]	Dimensions [mm]	
				De	L
CFRMM3_05GD	NPT	1/2"	15	34,5	33,3
CFRMM3_07GD	NPT	3/4"	20	35,8	39,9
CFRMM3_10GD	NPT	1"	25	41,1	47,5
CFRMM3_12GD	NPT	1"1/4	32	46,5	57,9
CFRMM3_15GD	NPT	1"1/2	40	49,3	65,8
CFRMM3_20GD	NPT	2"	50	56,6	79,8
CFRMM3_25GD	NPT	2"1/2	65	78,5	94,5
CFRMM3_30GD	NPT	3"	80	81,0	111,0
CFRMM3_35GD	NPT	3"1/2	90	85,6	124,5
CFRMM3_40GD	NPT	4"	100	87,6	138,2

Code	Version	Size	Nominal size [mm]	Dimensions [mm]	
				De	L
CFRMM3_50GD(1)	NPT	5"	125	111,3	177,8
CFRMM3_60GD(1)	NPT	6"	150	111,3	209,6

This product, made of galvanized malleable iron, is used to join two lengths of RMC or IMC conduits, when neither can be rotated.

(1) Not certified for Canadian market.

Conduit hangers



Code	Conduit	Dimensions [mm]				Bolt size
		A	B	C	D	
CFAAS1_00AZ	RMC/IMC 3/8"-1/2" - EMT 1/2"	47,6	19,1	18,4	6,4	1/4"-20
CFAAS1_01AZ	RMC/IMC 3/4" - EMT 3/4"	54,0	19,1	21,6	6,4	1/4"-20
CFAAS1_02AZ	RMC/IMC 1" - EMT 1"	61,9	22,2	24,8	6,4	1/4"-20
CFAAS1_03AZ	RMC/IMC 1"1/4 - EMT 1"1/2	69,9	22,2	24,8	6,4	1/4"-20
CFAAS1_04AZ	EMT 1"1/4	73,0	22,2	26,7	6,4	1/2"-20
CFAAS1_05AZ	RMC/IMC 1"1/2	79,4	25,4	28,6	6,4	1/2"-20
CFAAS1_06AZ	RMC/IMC 2" - EMT 2"	98,4	25,4	29,1	6,4	1/2"-20
CFAAS1_07AZ	RMC/IMC 2"1/2 - EMT 2"1/2	117,5	31,8	31,1	7,9	5/16"-18
CFAAS1_08AZ	RMC/IMC 3" - EMT 3"	139,7	31,8	32,4	7,9	5/16"-18
CFAAS1_09AZ	RMC/IMC 3"1/2 - EMT 3"1/2	146,1	31,8	32,4	7,9	5/16"-18
CFAAS1_10AZ	RMC/IMC 4" - EMT 4"	158,8	31,8	32,4	7,9	5/16"-18

Note. Product not certified for Canadian market.

Code composition

CF	□□	□□	_	□□	_□□...□	□□

Material	To be inserted
AISI 304 stainless steel	A4
Galvanized steel	AZ
Cast iron	GH
Cast iron hop-dip galvanized	GD
Zinc die cast	LZ

Product family	To be inserted
RMC Conduit	RM
IMC Conduit	IM
Product suitable for more families	AA

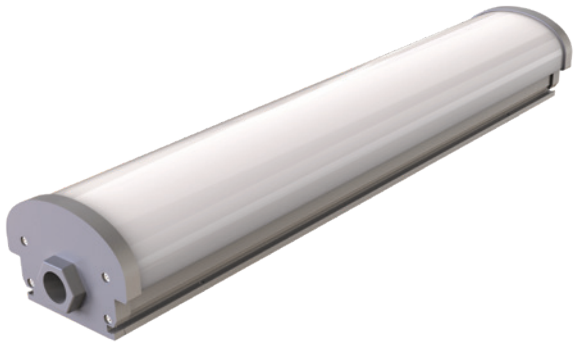
Product type	To be inserted
Tube	01
Nipple or cap	03
90° Elbow	C9
3-Pieces coupling	M3
Hanger	S1

Size	To be inserted
Nipples: 1"1/2, 2", 2"1/2, 3", 3"1/2, 4", 5", 6", 8", 10", 12"	12, 15, 20, 25, 30, 35, 40, 50, 60, 80, 100, 120
Caps	00
For all other products	<empty>

Size	To be inserted
1/2", 3/4", 1", 1"1/4, 1"1/2, 2", 2"1/2, 3", 3"1/2, 4", 5", 6"	05, 07, 10, 12, 15, 20, 25, 30, 35, 40, 50, 60
For size range (cfr. hangers)	00, 01, 02, 03, …

Hazardous Locations Led Luminaires

Fixed led luminaires



Use

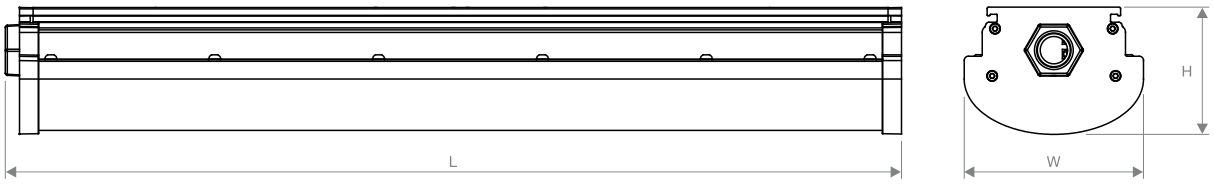
This luminaires are a durable and high efficient solution for industrial applications in Hazardous Locations and ATEX zone classification. The die cast aluminum housing guarantees optimal thermal dissipation and the diffuser is made of tempered glass. This luminaires are available in 2 ft or 4,6 ft versions and they can be ceiling, wall, pole or chain suspended mounted. This product meets the requirements of Articles 410, 500 and 501 of ANSI/NFPA 70 "National Electrical Code" (NEC) and of IEC 60079 "Explosive atmospheres" standards.

Technical data

Characteristics	Value/property
Material	Housing made of painted aluminum and diffuser in tempered glass.
Operating temperature	(-40°F/+131°F)
Voltage range	100÷277 Vac (50÷60 Hz)
Power factor	> 0,95
Luminous flux	120÷140 lm/W
Beam angle	120°
Protection class	IP 66, Dust-tight and powerful water jets
Cable gland connection thread	3/4"-14 NPT *
Standards of construction	UL 844, UL 1598, CSA C22.2 No.250, CSA C22.2 No.137 Class I, Division 2, Groups A, B, C, D IEC 60079-0, IEC 60079-7, IEC 60079-18, IEC 60079-31 Atex Zone 1,21, 2, 22, Ex eb mb IIC T5 Gb, Ex tb IIIC T75 °C Db
Standards of use	NFPA 70 (NEC), CSA C22.1 (CE Code)

* Upon request two connection threaded holes, one for each side, and M25 or M26 thread connection.

Coding and dimensions

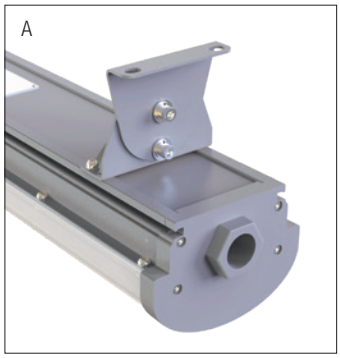


Code	Color temperature [K]	Voltage [V]	Power [W]	Dimensions [mm (inch)]		
				L	W	H
LPH1000303A06_GC	3000	100 ÷277	30	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000303B06_GC	3000	100÷277	40	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000303C06_GC	3000	100÷277	50	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000303B12_GC	3000	100÷277	40	1229 (48,38")	125 (4,92")	88,7 (3,49"
LPH1000303C12_GC	3000	100÷277	50	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000303D12_GC	3000	100÷277	60	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000303E12_GC	3000	100÷277	65	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000303F12_GC	3000	100÷277	75	1229 (48,38")	125 (4,92")	88,7 (3,49")

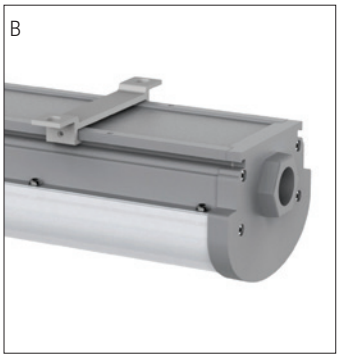
Code	Color temperature [K]	Voltage [V]	Power [W]	Dimensions [mm (inch)]		
				L	W	H
LPH1000304A06_GC	4000	100÷277	30	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000304B06_GC	4000	100÷277	40	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000304C06_GC	4000	100÷277	50	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000304B12_GC	4000	100÷277	40	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000304C12_GC	4000	100÷277	50	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000304D12_GC	4000	100÷277	60	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000304E12_GC	4000	100÷277	65	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000304F12_GC	4000	100÷277	75	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000305A06_GC	5000	100÷277	30	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000305B06_GC	5000	100÷277	40	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000305C06_GC	5000	100÷277	50	629 (24,76")	125 (4,92")	88,7 (3,49")
LPH1000305B12_GC	5000	100÷277	40	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000305C12_GC	5000	100÷277	50	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000305D12_GC	5000	100÷277	60	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000305E12_GC	5000	100÷277	65	1229 (48,38")	125 (4,92")	88,7 (3,49")
LPH1000305F12_GC	5000	100÷277	75	1229 (48,38")	125 (4,92")	88,7 (3,49")

Accessories

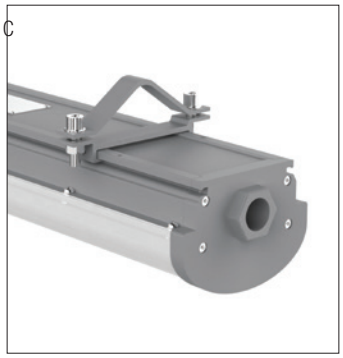
A



B



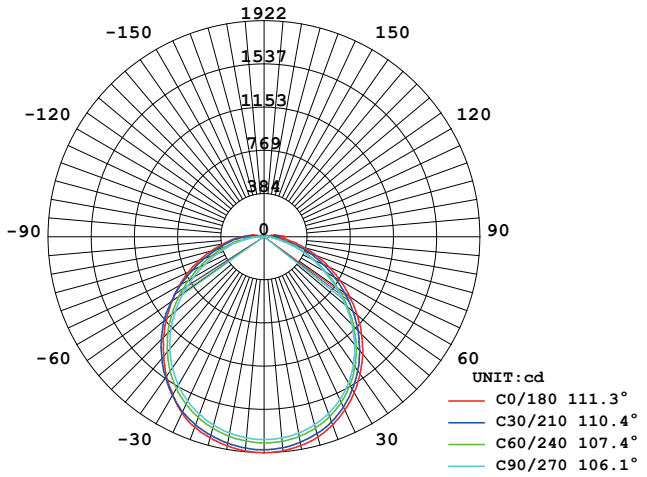
C



D

Code	Description	Figure
LPH1000002_GC	Kit made of adjustable brackets for ceiling/wall mounting	A
LPH1000003_GC	Kit made of brackets for ceiling mounting	B
LPH1000004_GC	Kit made of brackets for pole mounting	C
LPH1000005_GC	Kit made of brackets for pendent with chain mounting	D

Lighting plot



Code composition

LP	H10	□□	□□	□	□	□□	_	□□

Version	To be inserted
On/Off	00
Dimmer*	0D

Length	To be inserted
629 mm	06
1229 mm	12

Body color	To be inserted
Gray painted aluminum	GC

Voltage	To be inserted
100/277	30

Color temperature	To be inserted
3000K*	3
4000K	4
5000K*	5
5700K*	6
6500K*	7

Power	To be inserted
30 W	A
40 W	B
50 W	C
60 W	D
65 W	E
75 W	F

* Available upon request and with minimum applicable quantities.

Safety signs and labels

Use

The safety of the employees comes always first in the planning and realization of a plant, machinery or equipment. In an industrial environment there are many hazards: mechanical parts in motion, electric energy, pneumatic power, water power, hot surfaces, noise, and the employees must be protected from these dangers but also trained and informed about them. Even if safety barriers, protections or mechanical devices are supplied to reduce the hazards for the employees, there are always residual risks, and exactly towards them the safety signs and labels play a an important role. The article 1910.145 of OSHA (Occupational Safety & Health Administration), representing the American legislation for safety and health, requires the use of specific signs to indicate and define possible hazards that, without identification, could cause injuries and property damage. The reference standard for the American market is ANSI Z535.4 “Product Safety Signs and Labels”, which regulates the safety signs and gives a guide for their application with the aim of indicating potential or imminent hazards during the use of the product.

Technical data

Characteristics	Value/property
Material	PVC with adhesive layer and protective lamination or Anodized aluminum 0.5 mm thickness with white background and 3.5 mm holes on the edges
Hazard level	Caution, Warning, Danger, Notice
Standard languages (1)	English, France, Spanish
Size	According to the article code
Use	Indoor and outdoor
Minimum working temperature	-40°C(2)
Maximum working temperature	PVC: +95°C (3), Aluminum: +100°C
Standard packaging	PVC: 12 pcs, Aluminium: 6 pcs
Standards of construction	ANSI Z535, UL 969, CSA C22.2 No.0.15, ISO 3864, RoHS
Standards of use	ANSI Z535, OSHA Art. 1910.145, NFPA 70 (NEC), NFPA 79, UL 508A, CSA C22.1 (CE Code), CSA C22.2 No.286
Certifications	c(UL)us Recognized - File# PDGQ2. MH60136, PGDQ8.MH60136

(1) Other languages available on request and for minimum quantities apply.
(2) The minimum application temperature is +0°C.
(3) Maximum working temperature for UL is +60°C.

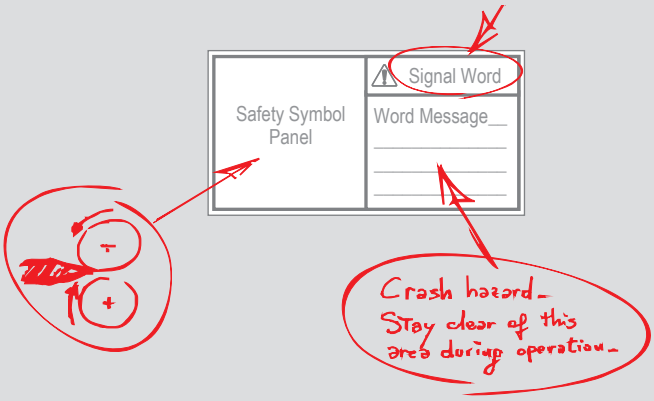
Range

The range consists of hundreds of safety labels, some of which are already made in languages other than English, French and Spanish. You can search for the labels available through our website by going to the dedicated section using the QR Code.

www.tekima.com\safety-labels

Did not find the safety label you are looking for or you need it in a specific language, please contact our commercial office.We can create custom safety labels to meet your specific system requirements.

+39 030 7288000 sales@tekima.it



Code composition

TK.LB □ □ □□□□ . □ □ □

Packaging	To be inserted
Pre-cut and bagged labels	C

Type	To be inserted
Standard safety label	<empty>
Safety labels for inside control panels	Q

Message
Identification code of the message.

Hazard level	To be inserted
Not specified	0
Caution	C
Warning	W
Danger	D
Notice	N
Safety instruction	S
Informative	I

Language	To be inserted
English	E
Franch	F
Spanish	S
Portuguese	P
Chinese	Y
German	D
English/Franch	EF
English/Italian	EI
English/Spanish	ES
Czech	C
Norwegian	N
Dutch	O
Russian	R
Swedish	V
Turkish	T
Ukrainian	U
Hungarian	H
Arabic	B

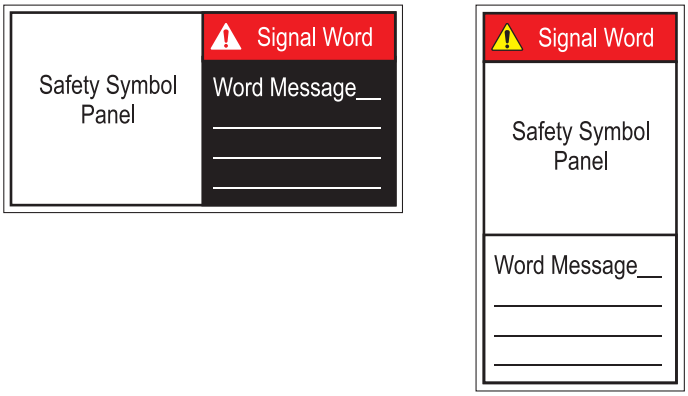
Material	To be inserted
Polyester with adhesive layer	A
Anodized aluminum 0.5 mm, white background, holes Ø3.5 mm	M

+Production and use of safety labels

+Safety labels' layout

The ANSI Z535.4, "Product Safety Signs and Labels" regulates safety labels' production and provides guidance for the application of these signals that must be capable of indicating the potential or imminent dangers. The safety labels must inform the person about the type of hazard, level of risk, how to avoid the hazard and the consequences in not respecting the rules. The American Standard specifies how to communicate efficiently and effectively all of this information. The Standard also classifies safety labels according to the level of risk of a situation and in particular on the probability and severity of the damage this can cause if not avoided. A safety label consists of three distinct main parts: the signal word that defines the level of risk, the word message and the safety symbol panel.

Examples of safety lables typical structure



Signal word

It is the text that identifies the level of risk and must contain the symbol of physical risk to persons in case it exists. The signal word is composed of an exclamation mark within a triangle and of the text of the risk level. The meaning of the signal word is to alert the user about potential personal injury that may arise from the misuse of the product and in case the instructions for use and maintenance are not observed. Its meaning is: "Obey all safety messages that follow this symbol to avoid possible injury or death". Each signal word is indicated with special colors and always with uppercase text, however there are safety labels that do not indicate risk but which have a purely informative meaning.

Types of Signal Word

DANGER	DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	NOTICE is used to address practices not related to physical injury.
SAFETY INSTRUCTIONS	SAFETY INSTRUCTION (or equivalent) signs indicate specific safety-related instructions or procedures.

Word Message

This is the message that identifies the hazard and indicates how to avoid it and what are the implications if it is not avoided. The information contained in the word message should be presented taking into account some basic rules.

1. The information must be concise and easily understood. This means choosing words that accurately identify the risk and actions to be taken and that are understandable by the people to whom the message is addressed .
2. The order in which the content appears is not fixed and depends on the target audience to whom it is addressed and the level of responsiveness required to avoid the risk. As a general rule, the hazard message should come first when there are many actions to avoid it. In other cases it is possible to put an action to avoid the hazard before the hazard message and that's when you need to communicate immediately the precautions to be taken .
3. Avoid using the subject "you" or "your", then always place the subject followed by the verb , and then the object.
4. When the text is composed by more messages these can be separated by enough space to make it easily readable. The use of bullets may be considered to help separate portions of the word message and to make it easier to read (eg. black circles before each sentence).
5. It is preferable to align the text to the left and is not recommended the use of justified text .
6. It is not recommended to use text fully capitalized as difficult to read.
7. The message should be with black letters on white background or white on black background.

Safety Symbol Panel

The safety symbol panel contains the safety symbol and is used to graphically communicate the content of the message. It is important that the symbol is easily understandable and that actually communicates the message.

It is essential that the safety labels are easily understandable by those who use the machinery or makes maintenance. The Standard, however, suggests to include in the instructions of the machinery all the necessary information to understand the meaning of the signals and the messages used in safety labels. This allows the user to recognize instantly the meaning of the safety labels used.

Translation of Signal Words

For some languages, the translation of the Signal Words is suggested in the following table.

Translation of Signal Words

English	DANGER	WARNING	CAUTION	NOTICE
Danish	FARE	ADVARSEL	FORSIGTIG	VARSEL
Dutch	GEVAAR	WAAESCHUWING	VOORZICHTIG	LET OP
Estonian	OHT	HOIATUS	ETTEVAATUST	TEATE
Finnish	VAARA	VAROITUS	VAROITUS	ILMOITUS
French	DANGER	AVERTISSEMENT	ATTENTION	AVIS
German	GEFHAR	WARNUNG	VORSICHT	HINWEIS
Italian	PERICOLO	AVVERTENZA	ATTENZIONE	AVVISO
Norwegian	FARE	ADVARSEL	FORSIKTIG	VARSEL
Portuguese	PERIGO	AVISO	CUIDADO	AVISO
Slovenian	NEVARNOST	OPOZORILO	POZOR	OBVESTILO
Spanish	PELIGRO	ADVERTENCIA	ATENCIÓN	AVISO
Swedish	FARA	VARNING	VARNING	MEDDELANDE

Safe viewing distance

Particular attention should be given to the readability of the message in terms of safe viewing distance defined as the distance at which a person can read the safety label and have the time to follow the message to avoid the hazard. The safe viewing distance is related to the size of the letters used and in particular to their height that depends on several factors including the lack of light, unfavorable reading conditions, the need to give greater prominence to the message, making the message readable at distances greater than the minimum, to make the message readable to people with reading difficulties. The table shows the relation between the height of the characters and the safe viewing distance recommended for favorable and unfavorable conditions.

Safe viewing distance and letter height

Safe viewing distance [m]	Letter height for favorable reading conditions [mm]	Letter height for unfavorable reading conditions [mm]
0,5	3,3	3,5
0,75	4,4	5,3
1	5,0	7,0
1,25	5,7	8,8
1,5	6,3	10,5
1,75	6,9	12,3
2	7,5	14,0
2,25	8,2	15,8
2,5	8,8	17,5

Application of safety labels

Use of safety labels

For the application of the safety labels, it is recommended to verify the existence of guidelines, rules, regulations or government, state or federal laws that can integrate ANSI standards. The safety labels are to be applied in areas where they are easily visible and legible by anyone who approaches and at a point such that the person can react quickly to take the necessary action to avoid the danger. When possible, they should be applied in areas protected from the risk of damage, abrasion, chemical attack, dust or anything else that would affect the visibility and reading. The temperature range of use of standard safety labels is from -40°C to +60°C (versions are available for use at higher temperatures) provided that there is not an unequal distribution of temperatures that negatively affects the thermal expansion of the material. The surfaces on which the safety labels are applied must be clean, smooth and free of grease, oil or chemicals that will reduce adhesion. The Standard requires that the safety labels are regularly checked and cleaned to ensure good readability at a safe distance. When the products are subjected to extreme environmental conditions or when the safety labels no longer fulfill the conditions of visibility required they must be replaced.

Selection of safety labels

Signal words are selected based on the risk that results from not following the safety message. The level of risk determines the signal word and its color. This appendix provides a guidance for selecting signal words. There are two classifications for severity of harm: death or serious injury, and moderate or minor injury. Death or serious injury: permanent loss of function or significant disfigurement, substantial and prolonged medical treatment required, long periods of disability, considerable pain and suffering over long periods of time (ie amputations, severe burns, loss or impairment of vision or hearing). Moderate or minor injury: does not include death or serious injury, typically does not result in permanent disability, significant disfigurement or pain. Moderate or minor injury are, for example, cuts, scratches and irritation When the outcome of an event includes results falling into more than one of the severity classifications, the most severe classification should be used. For example, an event that results in both minor injury to one body part and serious injury to another should be classified as “serious injury or death”. When the outcome of an event is included in more than one of the classifications of severity of harm, the most severe classification should be used. For example, an event that causes both minor injury to a body part and a serious injury to another must be classified as “death or serious injury.”

Selection scheme of Signal Words

<table>
<tr><td colspan="4">Physical injury is a credible possibility.</td><td rowspan="3">Physical injury is not a credible possibility.

NOTICE</td></tr>
<tr><td colspan="3">Death o serious injury is a credible possibility.</td><td rowspan="2">Death o serious injury is not a credible possibility. Minor or moderate injury is possible.

⚠CAUTION</td></tr>
<tr><td colspan="2">If the hazardous situation is not avoided the accident is expected to happen with near certainty.</td><td rowspan="2">If the hazardous situation is not avoided the accident is possible but not nearly certain.

⚠WARNING</td></tr>
<tr><td>If accident occurs death or serious injury is expected to happen with near certainty.

⚠DANGER</td><td>If accident occurs death or serious injury is possible but not nearly certain.

⚠WARNING</td></tr>
</table>

The symbol of the Signal Word

The symbol contained in the Signal Word indicates a hazard. It is composed of an equilateral triangle surrounding an exclamation mark. The safety alert symbol is only used on hazard alerting labels, it is not used on notice and instruction labels. The symbol can be printed in different ways in relation with the type of safety label. The symbol made from a triangle with a yellow background and black exclamation mark is used to allow compatibility with some international standards including ISO 3864-1 and ISO 3864-2.

Safe viewing distance and letter height

Options for DANGER safety labels.

Options for WARNING safety labels.

Options for CAUTION safety labels.

B.4 Ampacities of conductors according to NFPA 70 (NEC)

The tables show the ampacities of the conductors published in the standard to which reference must always be made.

Table B.4c. Ampacities of conductors with 90°C insulation temperature according to NFPA 70 (NEC) - Ed. 2008 - Table 310.16

Conductor's size [AWG/kcmil]	Allowable ampacities of insulated copper conductors [A], **not more than three current-carrying conductors in Raceway or Cable** Insulation temperature 90°C									
	Ambient temperature Ta									
	21÷25°C	26÷30°C	31÷35°C	36÷40°C	41÷45°C	46÷50°C	51÷55°C	56÷60°C	61÷70°C	71÷80°C
18 AWG	14,5	14,0	13,4	12,7	12,1	11,4	10,6	9,9	8,1	5,7
16	18,7	18,0	17,2	16,3	15,6	14,7	13,6	12,7	10,4	7,3
14	26,0	25,0	24,0	22,7	21,7	20,5	19,0	17,7	14,5	10,2
12	31,2	30,0	28,8	27,3	26,1	24,6	22,8	21,3	17,4	12,3
10	41,6	40,0	38,4	36,4	34,8	32,8	30,4	28,4	23,2	16,4
8	57,2	55,0	52,8	50,0	47,8	45,1	41,8	39,0	31,9	22,5
6	78,0	75,0	72,0	68,2	65,2	61,5	57,0	53,2	43,5	30,7
4	98,8	95,0	91,2	86,4	82,6	77,9	72,2	67,4	55,1	38,9
3	114,4	110,0	105,6	100,1	95,7	90,2	83,6	78,1	63,8	45,1
2	135,2	130,0	124,8	118,3	113,1	106,6	98,8	92,3	75,4	53,3
1	156,0	150,0	144,0	136,5	130,5	123,0	114,0	106,5	87,0	61,5
1/0	176,8	170,0	163,2	154,7	147,9	139,4	129,2	120,7	98,6	69,7
2/0	202,8	195,0	187,2	177,4	169,6	159,9	148,2	138,4	113,1	79,9
3/0	234,0	225,0	216,0	204,7	195,7	184,5	171,0	159,7	130,5	92,2
4/0	270,4	260,0	249,6	236,6	226,2	213,2	197,6	184,6	150,8	106,6
250 kcmil	301,6	290,0	278,4	263,9	252,3	237,8	220,4	205,9	168,2	118,9
300	332,8	320,0	307,2	291,2	278,4	262,4	243,2	227,2	185,6	131,2
350	364,0	350,0	336,0	318,5	304,5	287,0	266,0	248,5	203,0	143,5
400	395,2	380,0	364,8	345,8	330,6	311,6	288,8	269,8	220,4	155,8
500	447,2	430,0	412,8	391,3	374,1	352,6	326,8	305,3	249,4	176,3
600	494,0	475,0	456,0	432,2	413,2	389,5	361,0	337,2	275,5	194,7
700	540,8	520,0	499,2	473,2	452,4	426,4	395,2	369,2	301,6	213,2
750	556,4	535,0	513,6	486,8	465,4	438,7	406,6	379,8	310,3	219,3
800	577,2	555,0	532,8	505,0	482,8	455,1	421,8	394,0	321,9	227,5
900	608,4	585,0	561,6	532,3	508,9	479,7	444,6	415,3	339,3	239,8
1000	639,6	615,0	590,4	559,6	535,0	504,3	467,4	436,6	356,7	252,1
1250	691,6	665,0	638,4	605,1	578,5	545,3	505,4	472,1	385,7	272,6
1500	733,2	705,0	676,8	641,5	613,3	578,1	535,8	500,5	408,9	289,0
1750	764,4	735,0	705,6	668,8	639,4	602,7	558,6	521,8	426,3	301,3
2000	780,0	750,0	720,0	682,5	652,5	615,0	570,0	532,5	435,0	307,5

Table B.4f. Ampacities of conductors with 90°C insulation temperature according to NFPA 70 (NEC) - Ed. 2011-2017 - Table 310.15(B)(16) and Ed. 2020-2023 - Table 310.16

Conductor's size [AWG/kcmil]	Allowable ampacities of insulated copper conductors [A], **not more than three current-carrying conductors in Raceway or Cable** Insulation temperature 90°C												
	Ambient temperature Ta												
	21÷25°C	26÷30°C	31÷35°C	36÷40°C	41÷45°C	46÷50°C	51÷55°C	56÷60°C	61÷65°C	66÷70°C	71÷75°C	76÷80°C	81-85°C
18 AWG	14,5	14,0	13,4	12,7	12,1	11,4	10,6	9,9	9,1	8,1	7,0	5,7	4,0
16	18,7	18,0	17,2	16,3	15,6	14,7	13,6	12,7	11,7	10,4	9,0	7,3	5,2
14	26,0	25,0	24,0	22,7	21,7	20,5	19,0	17,7	16,2	14,5	12,5	10,2	7,2
12	31,2	30,0	28,8	27,3	26,1	24,6	22,8	21,3	19,5	17,4	15,0	12,3	8,7
10	41,6	40,0	38,4	36,4	34,8	32,8	30,4	28,4	26,0	23,2	20,0	16,4	11,6
8	57,2	55,0	52,8	50,0	47,8	45,1	41,8	39,0	35,7	31,9	27,5	22,5	15,9
6	78,0	75,0	72,0	68,2	65,2	61,5	57,0	53,2	48,7	43,5	37,5	30,7	21,7
4	98,8	95,0	91,2	86,4	82,6	77,9	72,2	67,4	61,7	55,1	47,5	38,9	27,5
3	119,6	115,0	110,4	104,6	100,0	94,3	87,4	81,6	74,7	66,7	57,5	47,1	33,3
2	135,2	130,0	124,8	118,3	113,1	106,6	98,8	92,3	84,5	75,4	65,0	53,3	37,7
1	150,8	145,0	139,2	131,9	126,1	118,9	110,2	102,9	94,2	84,1	72,5	59,4	42,0
1/0	176,8	170,0	163,2	154,7	147,9	139,4	129,2	120,7	110,5	98,6	85,0	69,7	49,3
2/0	202,8	195,0	187,2	177,4	169,6	159,9	148,2	138,4	126,7	113,1	97,5	79,9	56,5
3/0	234,0	225,0	216,0	204,7	195,7	184,5	171,0	159,7	146,2	130,5	112,5	92,2	65,2
4/0	270,4	260,0	249,6	236,6	226,2	213,2	197,6	184,6	169,0	150,8	130,0	106,6	75,4
250 kcmil	301,6	290,0	278,4	263,9	252,3	237,8	220,4	205,9	188,5	168,2	145,0	118,9	84,1
300	332,8	320,0	307,2	291,2	278,4	262,4	243,2	227,2	208,0	185,6	160,0	131,2	92,8
350	364,0	350,0	336,0	318,5	304,5	287,0	266,0	248,5	227,5	203,0	175,0	143,5	101,5
400	395,2	380,0	364,8	345,8	330,6	311,6	288,8	269,8	247,0	220,4	190,0	155,8	110,2
500	447,2	430,0	412,8	391,3	374,1	352,6	326,8	305,3	279,5	249,4	215,0	176,3	124,7
600	494,0	475,0	456,0	432,2	413,2	389,5	361,0	337,2	308,7	275,5	237,5	194,7	137,7
700	540,8	520,0	499,2	473,2	452,4	426,4	395,2	369,2	338,0	301,6	260,0	213,2	150,8
750	556,4	535,0	513,6	486,8	465,4	438,7	406,6	379,8	347,7	310,3	267,5	219,3	155,1
800	577,2	555,0	532,8	505,0	482,8	455,1	421,8	394,0	360,7	321,9	277,5	227,5	160,9
900	608,4	585,0	561,6	532,3	508,9	479,7	444,6	415,3	380,2	339,3	292,5	239,8	169,6
1000	639,6	615,0	590,4	559,6	535,0	504,3	467,4	436,6	399,7	356,7	307,5	252,1	178,3
1250	691,6	665,0	638,4	605,1	578,5	545,3	505,4	472,1	432,2	385,7	332,5	272,6	192,8
1500	733,2	705,0	676,8	641,5	613,3	578,1	535,8	500,5	458,2	408,9	352,5	289,0	204,4
1750	764,4	735,0	705,6	668,8	639,4	602,7	558,6	521,8	477,7	426,3	367,5	301,3	213,1
2000	780,0	750,0	720,0	682,5	652,5	615,0	570,0	532,5	487,5	435,0	375,0	307,5	217,5

Table B.4g. Adjustment factors for more than three current-carrying conductors according to NFPA 70 (NEC) – Ed. 2008/2011 - Ed. 2008 - Table 310.15(B)(2)(a), Ed. 2011-2017 - Table 310.15(B)(3)(a) and Ed. 2020-2023 - Table 310.15(C)(1)

Number of current-carrying conductors in cable, in raceway or in cable tray	Ampacities adjustment factors
4÷6	0,80
7÷9	0,70
10÷20	0,50
21÷30	0,45
31÷40	0,40
>40	0,35

B.6 Ampacity of conductors according to CSA C22.1 (CE Code)

The tables show the ampacities of the conductors published in the standard to which reference must always be made.

Ampacity of conductors in free air according to CSA C22.1 (CE Code)

Table B.6c. Ampacities of conductors in free air with 90°C insulation temperature according to CSA C22.1 (CE Code) – Ed. 2015-2021 (Table 1)

Conductor's size [AWG/kcmil]	Allowable ampacities of insulated copper conductors [A], **rated not more than 5000V, in free air** Insulation temperature 90°C										
	Ambient temperature Ta										
	30°C	31÷35°C	36÷40°C	41÷45°C	46÷50°C	51÷55°C	56÷60°C	61÷65°C	66÷70°C	71÷75°C	76÷80°C
14 AWG	35,0	33,6	31,8	30,4	28,7	26,6	24,8	22,7	20,3	17,5	14,3
12	40,0	38,4	36,4	34,8	32,8	30,4	28,4	26,0	23,2	20,0	16,4
10	55,0	52,8	50,0	47,8	45,1	41,8	39,0	35,7	31,9	27,5	22,5
8	80,0	76,8	72,8	69,6	65,6	60,8	56,8	52,0	46,4	40,0	32,8
6	105,0	100,8	95,5	91,3	86,1	79,8	74,5	68,2	60,9	52,5	43,0
4	140,0	134,4	127,4	121,8	114,8	106,4	99,4	91,0	81,2	70,0	57,4
3	165,0	158,4	150,1	143,5	135,3	125,4	117,1	107,2	95,7	82,5	67,6
2	190,0	182,4	172,9	165,3	155,8	144,4	134,9	123,5	110,2	95,0	77,9
1	220,0	211,2	200,2	191,4	180,4	167,2	156,2	143,0	127,6	110,0	90,2
1/0	260,0	249,6	236,6	226,2	213,2	197,6	184,6	169,0	150,8	130,0	106,6
2/0	300,0	288,0	273,0	261,0	246,0	228,0	213,0	195,0	174,0	150,0	123,0
3/0	350,0	336,0	318,5	304,5	287,0	266,0	248,5	227,5	203,0	175,0	143,5
4/0	405,0	388,8	368,5	352,3	332,1	307,8	287,5	263,2	234,9	202,5	166,0
250 kcmil	455,0	436,8	414,0	395,8	373,1	345,8	323,0	295,7	263,9	227,5	186,5
300	500,0	480,0	455,0	435,0	410,0	380,0	355,0	325,0	290,0	250,0	205,0
350	570,0	547,2	518,7	495,9	467,4	433,2	404,7	370,5	330,6	285,0	233,7
400	615,0	590,4	559,6	535,0	504,3	467,4	436,6	399,7	356,7	307,5	252,1
500	700,0	672,0	637,0	609,0	574,0	532,0	497,0	455,0	406,0	350,0	287,0
600	780,0	748,8	709,8	678,6	639,6	592,8	553,8	507,0	452,4	390,0	319,8
700	850,0	816,0	773,5	739,5	697,0	646,0	603,5	552,5	493,0	425,0	348,5
750	885,0	849,6	805,3	769,9	725,7	672,6	628,3	575,2	513,3	442,5	362,8
800	920,0	883,2	837,2	800,4	754,4	699,2	653,2	598,0	533,6	460,0	377,2
900	980,0	940,8	891,8	852,6	803,6	744,8	695,8	637,0	568,4	490,0	401,8
1000	1055,0	1012,8	960,0	917,8	865,1	801,8	749,0	685,7	611,9	527,5	432,5
1250	1200,0	1152,0	1092,0	1044,0	984,0	912,0	852,0	780,0	696,0	600,0	492,0
1500	1325,0	1272,0	1205,7	1152,7	1086,5	1007,0	940,7	861,2	768,5	662,5	543,2
1750	1445,0	1387,2	1314,9	1257,1	1184,9	1098,2	1025,9	939,2	838,1	722,5	592,4
2000	1560,0	1497,6	1419,6	1357,2	1279,2	1185,6	1107,6	1014,0	904,8	780,0	639,6

Table B.6g. Adjustment factors for the ampacities indicated in the previous tables and based on the number of c conductors.
It applies when the space between cables is less than 25% of the largest cable diameter. Values according to CSA C22.1 (CE Code) – Ed. 2015-2021 (Table 5B)

Number of conductors	Correction factor
2	0,90
3	0,85
4	0,80

Note. Where more than four conductors are in contact, the ratings for conductors in raceways shall be used.

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