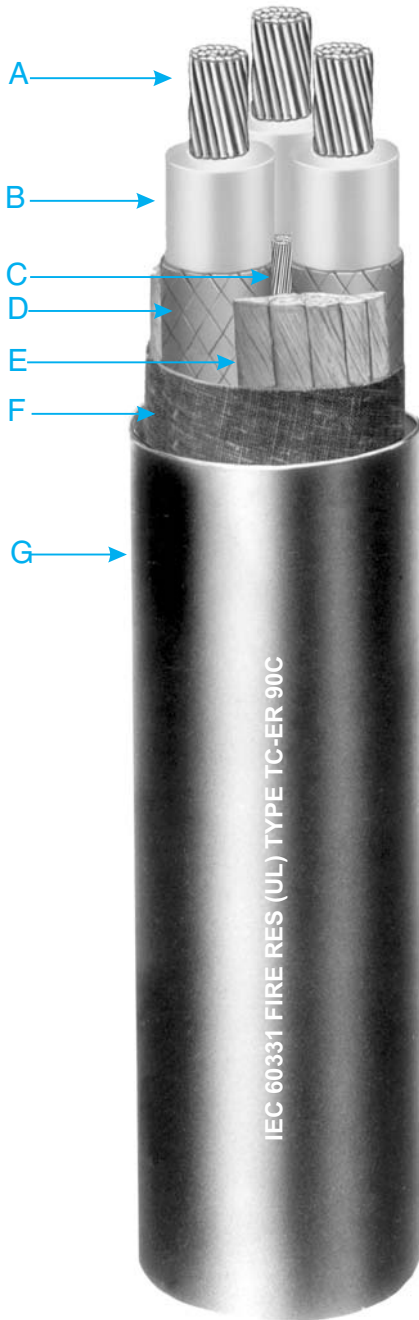


Okotherm® CIC Fire Resistant Cable Type TC-ER Cable

600V Power & Control Tray Cable

Multiple Tinned or Nickel Coated Copper Conductors 90°C Dry Rating
Sunlight Resistant



- A Tinned or Nickel Coated Copper Conductors
- B Okotherm (Silicone) Thermoset Insulation
- C Grounding Conductor
- D Fiberglass Braid - Coded per ICEA
- E Glass Fillers
- F Cable Tape
- G Black Okoclear TP (TPPO) Jacket

Cable Description

Nickel coated or tinned coated copper conductors, Okotherm CIC fire resistant thermoset silicone insulation, with FR tape if required, color or number coded fiberglass braid, cabled conductors with bare grounding conductor, cable tape, Okoclear, TP (TPPO) jacket.

Conductors: Tinned Coated Copper or Nickel Coated Copper

Insulation: Okotherm Thermoset Silicone, with FR tape if required

Color Code: ICEA S-73-532, Method 3,4 or 5

Braid: Fiberglass Braid

Grounding Conductor: Bare, same material as phase conductor

Outer Jacket: Black Okoclear TP (TPPO)

Applicable Industry Standards:

UL 1277, ICEA S-73-532 (NEMA WC 57), ICEA S-95-658 (NEMA WC70), ASTM B-33 & B-355

Flame Tests:

IEC 60331, UL 1277, IEEE 1202

Applications

Okotherm CIC 600 volt power & control cables are used in systems where, in the event of a fire, circuit integrity is required in order to maintain a process or to safely shut down the process. Fire resistance is determined by compliance to the IEC 60331 circuit integrity fire test. Okotherm CIC cables maintain circuit integrity based on qualification to the IEC standard 60331 for all temperatures and times up to and including 2000°F for three hours. When exposed to the fire source, the Okotherm CIC insulation becomes an electrically insulating ceramic-like ash that is capable of maintaining the operating voltage. Okotherm CIC power & control cables may be installed in dry location, as an aerial cable on a messenger and in any approved raceway.

Product Features

- UL listed Type TC-ER per E60422.
- Sunlight resistant.
- Passes UL 1277 vertical tray flame test.
- Passes IEEE 1202-1991 vertical tray flame test.
- Conforms with "LS" limited smoke requirements of UL 1277 (3 or more type RHH insulated conductors).
- 90°C continuous rating.
- 130°C emergency overload rating.
- 250°C short circuit rating.
- Quality control inspected to meet or exceed applicable industry standards.
- Jacket resistant to moisture and most chemical atmospheres.
- Thermal stability at elevated temperatures.
- Easy to install and terminate.
- Mechanically rugged.
- Fire Resistant - Qualified to meet IEC 60331, -11 & -21, including temperature and time up to 2000° F for 3 hours, respectively.
- Fire Resistant - Qualified to meet the Hydrocarbon Pool Circuit Integrity Fire Test, utilizing the UL 1709 time-temperature curve, with minimum requirements of 65,000 BTU/h-ft² heat flux, 2000°F flame temperature, 30 minute test duration, and 15A load.

Okotherm CIC Fire Resistant Cable Type TC-ER Cable



Product Data Section 4: Sheet 13

600V Power & Control Tray Cable

Multiple Tinned or Nickel Coated Copper Conductors 90°C Dry Rating

Sunlight Resistant

Catalog Number	Conduct Size AWG or kcmil	Number of Conductors	Insulation Thickness - mils	Grounding Conductor - AWG (1)	Jacket Thickness - mils	Approx. O.D. - Inches	Cross-Sectional Area (sq. in.)†	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	90°C NEC Ampacity (2)*	75°C NEC Ampacity*
NICKEL COPPER, IEC Rating: 2000°F for 3 hours											
202-17-3452	14(7X)	2			45	0.52	0.21	155	198	15	15
202-17-3453	14(7X)	3	45	14	45	0.58	0.26	198	222	15	15
202-17-3454	14(7X)	4			60	0.63	0.30	250	269	15	15
202-17-3455	14(7X)	5			60	0.69	0.36	269	288	15	15
202-17-3457	14(7X)	7			60	0.81	0.52	417	456	15	14
202-17-3459	14(7X)	9	45	14	80	0.97	0.72	452	639	15	14
202-17-3462	14(7X)	12			80	1.07	0.90	724	789	12	10
202-17-3469	14(7X)	19			80	1.18	1.09	937	1012	12	10
202-17-3487	14(7X)	37			80	1.64	1.89	1829	1813	10	8
202-17-3552	12(7X)	2			60	0.58	0.26	242	273	20	20
202-17-3553	12(7X)	3	45	12	60	0.62	0.30	285	306	20	20
202-17-3554	12(7X)	4			60	0.66	0.33	345	361	20	20
202-17-3555	12(7X)	5			60	0.80	0.41	473	447	20	20
202-17-3557	12(7X)	7			60	0.90	0.62	612	661	20	17
202-17-3559	12(7X)	9			80	1.04	0.75	808	812	20	17
202-17-3562	12(7X)	12	45	12	80	1.15	0.93	1014	1059	15	12
202-17-3569	12(7X)	19			80	1.25	1.29	1134	1473	15	12
202-17-3587	12(7X)	37			80	1.75	2.41	2595	2900	12	10
202-17-3652	10(7X)	2			60	0.64	0.32	315	350	30	30
202-17-3653	10(7X)	3			60	0.68	0.36	364	415	30	30
202-17-3654	10(7X)	4	45	10	60	0.73	0.42	450	479	30	28
202-17-3655	10(7X)	5			60	0.88	0.52	607	588	30	28
202-17-3657	10(7X)	7			60	0.96	0.71	771	815	28	24
202-17-3659	10(7X)	9			80	1.09	0.93	988	1100	28	24
202-17-3662	10(7X)	12	45	10	80	1.27	1.27	1322	1424	20	17
202-17-3669	10(7X)	19			80	1.49	1.74	1683	2048	20	17
202-17-3687	10(7X)	37			110	1.95	2.99	3444	3749	16	14

(1) - Uninsulated, same metal as phase conductor

Okonite's web site, www.okonite.com contains the most up to date information.

*Current limited to 15, 20 and 30 amps per Section 240.4(D) of the NEC for #14, #12 and #10 AWG, respectively.

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Product Data Section 4: Sheet 13

600V Power & Control Tray Cable

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Sunlight Resistant

Catalog Number	Conduct Size AWG or kcmil	Number of Conductors	Insulation Thickness - mils	Grounding Conductor - AWG (1)	Jacket Thickness - mils	Approx. O.D. - Inches	Cross-Sectional Area (sq. in.)†	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	90°C NEC Ampacity (2)*	75°C NEC Ampacity*
NICKEL COPPER, IEC Rating: 2000°F for 3 hours											
202-17-3453	14(7X)	3	45	14	60	0.58	0.26	198	222	15	15
202-17-3553	12(7X)			12	60	0.62	0.31	285	306	20	20
202-17-3653	10(7X)			10	60	0.68	0.36	364	415	30	30
112-15-3503	8(133X)	3	60	10	80	0.90	0.64	557	663	55	50
112-15-3603	6(133X)			8	80	1.00	0.79	730	866	75	65
112-15-3703	4(133X)			8	80	1.14	1.02	922	1145	95	85
TINNED COPPER, IEC Rating: 2000°F for 3 hours											
112-16-3803	2(7X)	3	60	6	80	1.11	0.97	1120	1191	130	115
112-16-3903	1(19X)	3	80	6	80	1.29	1.31	1485	1503	145	130
112-16-3913	1/0(19X)			6	80	1.37	1.47	1674	1777	170	150
112-16-3923	2/0(19X)			6	80	1.46	1.67	1998	2144	195	175
112-16-3943	4/0(19X)			4	110	1.75	2.41	3032	3271	260	230
112-16-3953	250(37X)	3	95	4	110	1.94	2.96	3632	3872	290	255
112-16-3963	350(37X)			3	110	2.17	3.70	4773	5170	350	310
112-16-3973	500(37X)			2	110	2.45	4.68	5896	7065	430	380
112-16-3983	750(61X)			1	140	2.96	6.88	9587	10360	535	475

(1) - Uninsulated, same metal as phase conductor

Okonite's web site, www.okonite.com contains the most up to date information.

†**Cross-sectional** area for calculation of cable tray fill in accordance with NEC Section 392.22.

(2)**Ampacities** are based on Table 310.16 of the National Electrical Code for conductors rated 90°C, in a multi-conductor cable, at an ambient temperature of 30°C (86°F). The 75°C column is provided for additional information.

The ampacities shown apply to open runs of cable, installation in any approved raceway, direct burial in the earth, or as aerial cable on a messenger. Derating for more than three current carrying conductors within the cable is in accordance with NEC Section 310.15(C)(1).

The ampacities shown also apply to cables installed in cable tray in accordance with NEC Section 392.80.

*Current limited to 15, 20 and 30 amps per Section 240.4(D) of the NEC for #14, #12 and #10 AWG, respectively.