



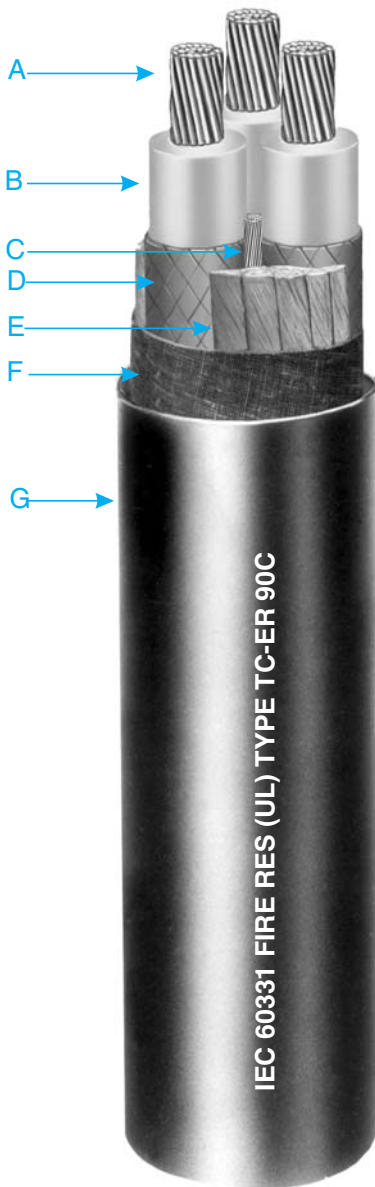
Okotherm® CIC Fire Resistant Cable Type TC-ER Cable



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, 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

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 loca-

tions, 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 2000°F for 3 hours per IEC 60331.

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Sunlight Resistant

Catalog Number	Conductor 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	0.48	0.18	135	158	15	15
202-17-3453	14 (7X)	3	45	14	45	0.51	0.20	162	185	15	15
202-17-3454	14 (7X)	4			60	0.59	0.27	215	239	15	15
202-17-3455	14 (7X)	5			60	0.66	0.34	283	322	15	15
202-17-3457	14 (7X)	7			60	0.75	0.44	370	409	15	14
202-17-3459	14 (7X)	9			60	0.90	0.64	518	582	15	14
202-17-3462	14 (7X)	12	45	14	80	0.99	0.77	641	705	12	10
202-17-3469	14 (7X)	19			80	1.16	1.06	899	979	12	10
202-17-3487	14 (7X)	37			80	1.52	1.81	1608	1751	10	8
202-17-3552	12 (7X)	2			45	0.52	0.21	169	192	20	20
202-17-3553	12 (7X)	3	45	12	60	0.58	0.26	221	245	20	20
202-17-3554	12 (7X)	4			60	0.65	0.33	294	333	20	20
202-17-3555	12 (7X)	5			60	0.72	0.41	363	402	20	20
202-17-3557	12 (7X)	7			60	0.81	0.52	464	503	20	17
202-17-3559	12 (7X)	9			80	0.97	0.74	645	709	20	17
202-17-3562	12 (7X)	12	45	12	80	1.07	0.90	802	882	15	12
202-17-3569	12 (7X)	19			80	1.25	1.23	1137	1243	15	12
202-17-3587	12 (7X)	37			80	1.64	2.11	2053	2196	12	10
202-17-3652	10 (7X)	2			60	0.60	0.28	238	262	30	30
202-17-3653	10 (7X)	3	45	10	60	0.66	0.34	323	362	30	30
202-17-3654	10 (7X)	4			60	0.72	0.41	391	430	30	28
202-17-3655	10 (7X)	5			60	0.80	0.50	479	518	30	28
202-17-3657	10 (7X)	7			80	0.93	0.68	647	711	28	24
202-17-3659	10 (7X)	9			80	1.06	0.88	842	922	28	24
202-17-3662	10 (7X)	12	45	10	80	1.18	1.09	1054	1134	20	17
202-17-3669	10 (7X)	19			80	1.37	1.47	1509	1625	20	17
202-17-3687	10 (7X)	37			110	1.88	2.78	2852	3039	16	14

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

Okotherm CIC Fire Resistant Cable Type TC-ER Cable

600V Power & Control Tray Cable

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

Catalog Number	Conductor 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	45	0.51	0.20	162	185	15	15
202-17-3553	12 (7X)			12	60	0.58	0.26	221	245	20	20
202-17-3653	10 (7X)			10	60	0.66	0.34	323	362	30	30
112-15-3503	8 (133X)	3	60	10	60	0.81	0.52	440	479	55	50
112-15-3603	6 (133X)			8	80	0.97	0.74	677	741	75	65
112-15-3703	4 (133X)			8	80	1.08	0.92	858	938	95	85
TINNED COPPER, IEC Rating: 2000°F for 3 hours											
112-16-3803	2 (7X)	3	60	6	80	1.11	0.97	1111	1191	130	115
112-16-3903	1 (19X)	3	80	6	80	1.29	1.31	1413	1503	145	130
112-16-3913	1/0 (19X)			6	80	1.37	1.47	1677	1777	170	150
112-16-3923	2/0 (19X)			6	80	1.46	1.67	2001	2144	195	175
112-16-3943	4/0 (19X)			4	110	1.75	2.41	3037	3271	260	230
112-16-3953	250 (37X)	3	95	4	110	1.94	2.96	3606	3872	290	255
112-16-3963	350 (37X)			3	110	2.17	3.70	4780	5170	350	310
112-16-3973	500 (37X)			2	110	2.44	4.68	6495	7065	430	380
112-16-3983	750 (61X)			1	140	2.96	6.88	9598	10360	535	475

(1) - Uninsulated, same metal as phase conductor
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† **Cross-sectional** area for calculation of cable tray fill in accordance with NEC Section 392.22.

(2) **Ampacities** are based on Table 310.15(B)(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(B)(3)(a).

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