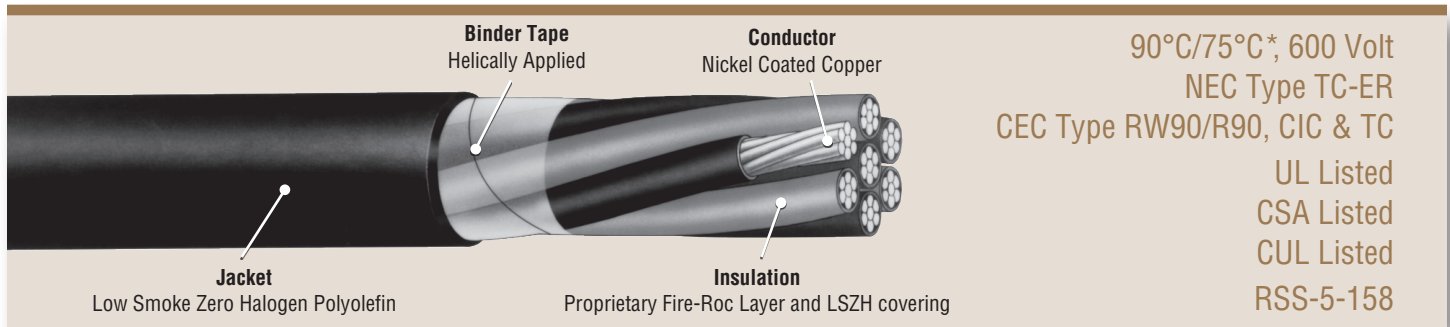




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# VITALink® TC/NCC Fire Resistive Control/Power Cable



## Features

- Fire Rated
- Installed on steel tray with steel fittings
- Moisture Resistant
- Installed in steel raceway/conduit with steel fittings
- Low Smoke, Halogen free design
- Flexible for installation ease
- Easy stripability
- Available in long lengths
- No special tools, connectors, or procedures
- Easily pulled (low friction jacket)

## Performance Standards

- Third party qualification for 30 minutes at 2000°F (1093°C) Rapid Rise Test witnessed by UL, modified IEC60331 with side bricks and 15A load
- Passes IEC 60331-11 flame test modified to 3 hours @ 2000°F
- UL Listed, NEC Type TC in accordance with UL Standard No. 1277
- Approved and marked with the “Sunlight Resistant” designation
- Singles wet rated per UL44/CSA 22.2 No. 38 Section 5.4 Long Term Insulation Resistance in Water Test and listed as UL/CUL Type RHW-2/RW90
- Approved and marked with the “FT-4” flame test designation
- CSA Listed R90 in accordance with CSA C22.2 No. 38/UL44
- CUL Listed as CEC Type CIC in accordance with CSA Standard C22.2 No. 239
- CUL Listed as CEC Type TC in accordance with CSA Standard C22.2 No. 230
- ABS Recognized for marine shipboard
- -ER meets the crush and impact requirement of Type MC cable and can be used per NEC 336.10 (7) for extended runs

\* 90°C dry, 75°C wet per NEC

## Scope

VITALink® TC/NCC is a unique cable which offers superior fire endurance capabilities along with the well-established benefits and features associated with NEC Type TC cable designs. This cable is suitable for use in circuits where the maintenance of circuit integrity is an absolute necessity to allow the operation of systems or equipment vital to life or safety under emergency conditions. It has applications in the petroleum industry for MOVs, fire pumps and other critical functions where fire survivability is essential.

## Construction

**Conductor:** Stranded, nickel coated copper

**Insulation System:** Proprietary Low Smoke Zero Halogen thermoset Fire-Roc® layer and thermoset low smoke zero halogen covering

**Circuit Identification:** ICEA Method 3 Table E2: Black insulation with printed numbers and color names. In addition, legs other than black have colored stripe in the named color. Circuits of four conductor cables are identified black, red, blue, and green.

**Ground Wire:** Insulated ground wire upon request

**Binder Tape:** Helically applied

**Jacket:** Black Low-Smoke Zero Halogen Polyolefin (other colors available on request)



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**600 Volt – Multiconductor.** Note: Part number for four conductors has an insulated ground (TC-ER)

Product Code	Conductor Size AWG	Jacket Thickness (inch)	Jacket Thickness (mm)	Nominal Diameter (inch)	Nominal Diameter (mm)	Net Weight (lbs./1000 ft.)	Net Weight (kg/m)	Minimum Bending Radii <sup>1</sup> (inch)	Minimum Bending Radii <sup>1</sup> (cm)	Ampacity <sup>2</sup> (Amps)
<b>Size:</b> 14 AWG – 19/0.0142" nickel-coated copper; 0.045" thermoset ceramifiable insulation; and 0.015" black low smoke zero halogen thermoset conductor jacket (nominal diameter 0.196", 4.98 mm)										
VP03014-000	3	60	1.52	0.57	14.5	175	0.260	2.28	5.8	15
VP04014-000	4	60	1.52	0.60	15.2	220	0.329	2.50	6.35	15
VP07014-000	7	60	1.52	0.72	18.3	316	0.470	3.0	7.62	10.5
VP12014-000	12	80	2.03	0.99	25.1	514	0.765	4.0	10.2	7
<b>Size:</b> 12 AWG – 19/0.0179" nickel-coated copper; 0.045" thermoset ceramifiable insulation; and 0.015" black low smoke, zero halogen thermoset conductor jacket (nominal diameter 0.213", 5.4 mm)										
VP02012-000	2	60	1.52	0.56	14.2	171	0.254	2.25	5.7	18
VP03012-000	3	60	1.52	0.59	15.0	209	0.34	2.50	6.35	18
VP04012-000	4	60	1.52	0.64	16.3	242	0.36	2.75	7.0	18
VP07012-001	7	60	1.52	0.77	19.6	363	0.54	3.25	8.26	12.6
<b>Size:</b> 10 AWG – 49/0.0142" nickel-coated copper; 0.045" thermoset ceramifiable insulation; and 0.015" black low smoke, zero halogen thermoset conductor jacket (nominal diameter 0.254", 6.45 mm)										
VP02010-000	2	60	1.52	0.64	16.3	222	0.33	2.75	7.0	25
VP03010-000	3	60	1.52	0.68	17.3	277	0.412	2.75	7.0	25
VP04010-000	4	60	1.52	0.75	19.1	327	0.487	3.0	7.62	25
VP07010-000	7	80	2.03	0.94	23.9	551	0.82	4.0	10.16	17.5
<b>Size:</b> 8 AWG – 133/0.0113" nickel-coated copper; 0.060" thermoset ceramifiable insulation; and 0.030" black low smoke zero halogen thermoset conductor jacket (nominal diameter 0.352", 8.94 mm)										
VP03008-005	3	.080	2.03	0.93	23.6	536	0.798	3.75	9.53	32
VP04008-004	4	.080	2.03	1.02	25.9	585	0.870	4.25	10.8	32
<b>Size:</b> 6 AWG – 133/0.0142" nickel-coated copper; 0.060" thermoset ceramifiable insulation; and 0.030" black low smoke zero halogen thermoset conductor jacket (nominal diameter 0.411", 10.44 mm)										
VP03006-005	3	.080	2.03	1.01	25.7	672	1.000	4.04	10.3	41
VP04006-002	4	.080	2.03	1.16	29.5	779	1.160	4.75	12.1	41
<b>Size:</b> 4 AWG – 133/0.0179" nickel-coated copper; 0.060" thermoset ceramifiable insulation; and 0.030" black low smoke zero halogen thermoset conductor jacket (nominal diameter 0.495", 12.6 mm)										
VP03004-002	3	.080	2.03	1.14	29.0	894	1.330	4.56	11.6	53
VP04004-003	4	.080	2.03	1.26	32.0	1052	1.565	5.04	12.8	53
<b>Size:</b> 2 AWG – 665/0.0100" nickel-coated copper; 0.060" thermoset ceramifiable insulation; and 0.030" black low smoke zero halogen thermoset conductor jacket (nominal diameter 0.556", 14.1 mm)										
VP03002-001	3	.080	2.03	1.27	32.3	1230	1.830	5.08	12.9	73
VP04002-001	4	.080	2.03	1.41	35.8	1430	2.128	5.64	14.3	73

<sup>1</sup>Minimum Bending Radii are instructive for permanent training.

<sup>2</sup>Ampacity based on API 14FZ for nickel-coated copper conductor (27% nickel), 75°C, 600V adjustment factors from NEC 2011 Table 310.15(b)(2)(a) for more than three current carrying conductors.



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