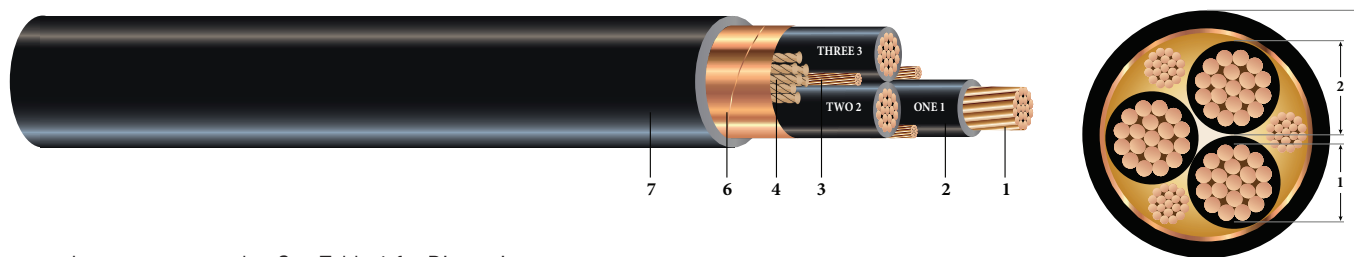


## 3/C CU 2000V XLPE RHH/RHW-2 PVC VFD Power Cable Type TC-ER

Type TC-ER VFD Power Cable 2000Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation RHH/RHW-2 Polyvinyl Chloride (PVC) Jacket with 3 Symmetrical Bare CU Ground



Images not to scale. See Table 1 for Dimensions

### CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type RHH/RHW-2
3. **Grounding Conductor:** 3 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (ground size is 50% of the phase conductor)
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
6. **Tape Shield:** 5 mil copper tape shield
7. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

### APPLICATIONS AND FEATURES:

Southwire's 2000 Volt Type TC-ER VFD power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

### SPECIFICATIONS:

- ASTM B3 Soft Or annealed copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1277 Electrical Power And Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

### SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU RHH/RHW-2 XLPE/PVC 2000V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NEC) [SEQUENTIAL FEET MARKS]



**Southwire**<sup>®</sup>

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | [www.southwire.com](http://www.southwire.com)

## Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Ground	Jacket Thickness	Approx. OD (7)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	No. x AWG	mils	inches	lbs./MFT	lbs./MFT
580672 <sup>◇</sup>	14	0.070	60	0.190	3 x 18	45	0.519	54	175
580685 <sup>◇</sup>	12	0.087	60	0.207	3 x 16	45	0.558	85	220
580693 <sup>◇</sup>	10	0.111	60	0.231	3 x 14	60	0.638	136	307
569388 <sup>◇</sup>	8	0.139	70	0.279	3 x 14	60	0.743	193	427
580701 <sup>◇</sup>	6	0.174	70	0.314	3 x 12	60	0.819	307	586
569389 <sup>◇</sup>	4	0.221	70	0.361	3 x 12	80	0.959	452	789
569387 <sup>◇</sup>	2	0.277	70	0.417	3 x 10	80	1.081	718	1120
TBA	1	0.321	90	0.501	3 x 8	80	1.262	937	1460
644333 <sup>◇</sup>	1/0	0.360	90	0.540	3 x 6	80	1.346	1233	1805
644334 <sup>◇</sup>	2/0	0.404	90	0.584	3 x 6	80	1.441	1491	2121
644337 <sup>◇</sup>	3/0	0.454	90	0.634	3 x 5	80	1.549	1880	2577
644338 <sup>◇</sup>	4/0	0.510	90	0.690	3 x 4	80	1.670	2370	3146
644339 <sup>◇</sup>	250	0.558	105	0.768	3 x 2	110	1.899	2960	3978
644340 <sup>◇</sup>	350	0.661	105	0.871	3 x 2	110	2.121	3896	5084
644341 <sup>◇</sup>	500	0.789	105	0.999	3 x 1	110	2.398	5461	6867

All dimensions are nominal and subject to normal manufacturing tolerances

<sup>◇</sup> Standard stock item

## Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size	Min. Bending Radius	Max. Pull Tension	Resistance		Reactance X <sub>L</sub> @ 60Hz	Ø Short Circuit Current 6 Cycles	Allowable Ampacities <sup>†</sup>		
				DC @ 25°C	AC @ 90°C			60 °C	75 °C	90 °C
				Ω/MFT	Ω/MFT			Amps	Amps	Amps
580672 <sup>◇</sup>	14	6.2	99	2.630	3.288	0.045	935	15	15	15
580685 <sup>◇</sup>	12	6.7	157	1.660	2.075	0.042	1485	20	20	20
580693 <sup>◇</sup>	10	7.7	249	1.040	1.300	0.039	2360	29	30	30
569388 <sup>◇</sup>	8	8.9	396	0.652	0.815	0.038	3754	40	48	55
580701 <sup>◇</sup>	6	9.8	630	0.411	0.514	0.035	5966	55	66	75
569389 <sup>◇</sup>	4	11.5	1002	0.258	0.323	0.033	9491	70	84	95
569387 <sup>◇</sup>	2	13.0	1593	0.162	0.203	0.031	15089	96	115	130
TBA	1	15.1	2009	0.129	0.161	0.032	19029	107	128	145
644333 <sup>◇</sup>	1/0	16.2	2534	0.102	0.128	0.031	24011	126	150	170
644334 <sup>◇</sup>	2/0	17.3	3194	0.081	0.102	0.030	30264	144	172	195
644337 <sup>◇</sup>	3/0	18.6	4027	0.064	0.081	0.029	38154	167	199	225
644338 <sup>◇</sup>	4/0	20.0	5078	0.051	0.064	0.029	48114	192	230	260
644339 <sup>◇</sup>	250	22.8	6000	0.043	0.055	0.029	56845	215	257	290
644340 <sup>◇</sup>	350	25.5	8400	0.031	0.040	0.028	79583	259	310	350
644341 <sup>◇</sup>	500	28.8	12000	0.022	0.028	0.027	113690	319	381	430

<sup>†</sup> Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

