CU 2000V XLPE Insulation Three Grounds Cu Tape Shield PVC Jacket. RHH/RHW-2 Flexible Variable Frequency Drive (VFD)

Type TC-ER VFD Power Cable 2000Volt Three Conductor Flexible Copper, Cross Linked Polyethylene (XLPE) insulation RHH/RHW-2 Polyvinyl Chloride (PVC) Jacket with 3 Symmetrical Bare CU Ground 50% Minimum Tape Shield Overlap. Silicone Free

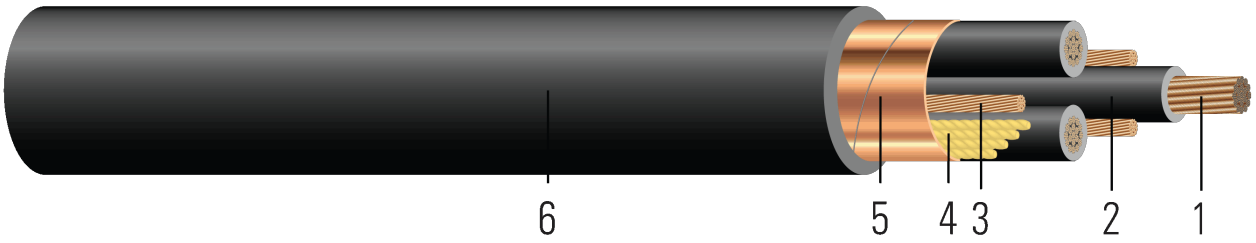


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class I flexible ropelay stranded bare copper modified per ASTM B172
2. **Insulation:** Cross-Linked Polyethylene (XLPE); Type RHH/RHW-2
3. **Grounding Conductor:** : 3 Flexible Ropelay Stranded Bare Copper Grounds modified per ASTM B172
4. **Filler:** Flame & Moisture Resistant Paper Filler
5. **Tape Shield:** 5 mil Copper Tape Shield with a minimum of 50% Overlap for 100% Coverage
6. **Overall Jacket:** Black 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® Article 336.10.

SPECIFICATIONS:

- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors (As Applicable)
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1277 TC-ER
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- 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
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

Copyright © 2024 Southwire Company, LLC. All Rights Reserved

UPDATED: March 11, 2024, 12:41 p.m.UTC REVISION: 1.000.005

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® VFD {UL} [#AWG or #KCMIL] 3/C TYPE TC-ER RHH OR RHW-2 CDRS CU GW 3 X # AWG CU T/S50% 90°C PVC JACKET SUN RES DIRECT BURIAL FT4/IEEE1202 2000 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Strand Count	Diameter Over Conductor	Insul. Thickness	Ground	Dia. Over Shield	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	inch	mil	inch	lb/1000ft	lb/1000ft
TBA	8	3	41	0.145	70	3 x 14	0.629	60	0.749	262	343
TBA	4	3	105	0.235	70	3 x 12	0.808	80	0.968	539	684
TBA	2	3	133	0.290	70	3 x 10	0.934	80	1.094	817	987
TBA	1	3	161	0.300	90	3 x 10	1.104	80	1.264	997	1234
674625	262.6	3	646	0.565	105	3 x 2	1.748	110	1.968	3106	4125
653047	313.3	3	779	0.650	110	3 x 2	1.904	140	2.184	3635	4888
674632	373.7	3	931	0.701	105	3 x 2	2.007	110	2.227	4162	5388
TBA	444.4	3	1121	0.782	105	3 x 1	2.420	110	2.640	5187	6680
668541	500	3	1225	0.858	110	3 x 1	2.348	115	2.578	5638	6851
674638	535.3	3	1349	0.859	120	3 x 2	2.396	110	2.616	5876	7448
673109	777.7	3	1924	0.966	125	3 x 2/0	2.763	140	3.043	9082	10865

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Allowable Ampacity At 60°C	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	Amp	Amp	Amp
TBA	8	3	9.0	396	0.679	0.818	0.047	0.052	40	50	55
TBA	4	3	11.6	1001	0.274	0.330	0.032	0.048	70	85	95
TBA	2	3	13.1	1592	0.172	0.207	0.027	0.045	95	115	130
TBA	1	3	15.2	2008	0.137	0.164	0.032	0.046	110	130	145
674625	262.6	3	23.6	6302	0.048	0.058	0.022	0.041	215	267	304
653047	313.3	3	26.2	7519	0.039	0.048	0.020	0.041	240	298	332
674632	373.7	3	26.7	8968	0.033	0.042	0.018	0.040	260	323	365
TBA	444.4	3	31.7	100000	0.026	0.033	0.016	0.040	280	358	405
668541	500	3	30.9	100000	0.023	0.031	0.015	0.039	320	380	430
674638	535.3	3	31.4	100000	0.021	0.028	0.017	0.039	320	394	446
673109	777.7	3	36.5	100000	0.016	0.024	0.015	0.038	400	483	543

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.