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

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

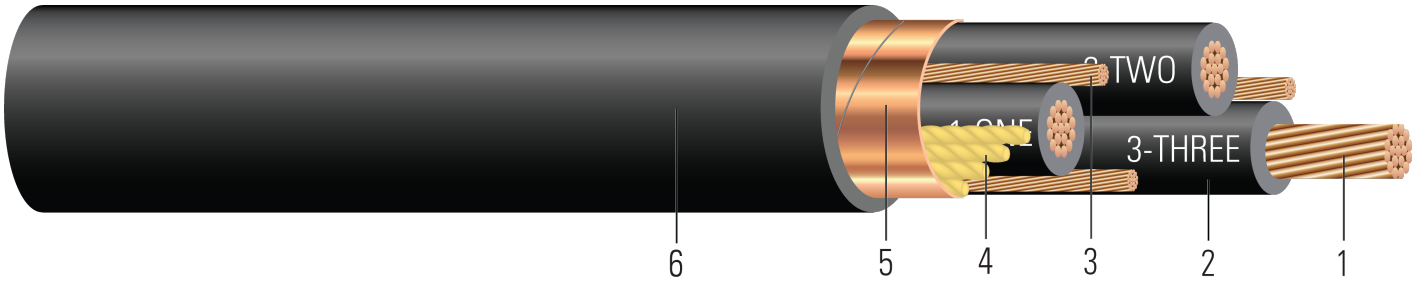

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and 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 B8 (Ground size is 100% for sizes 14 - 10 AWG and a minimum of 50% of the phase conductor for larger sizes.)
4. **Filler:** Fillers as needed to make round
5. **Tape Shield:** 5 mil copper tape shield with a minimum of 50% overlap
6. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket

APPLICATIONS AND FEATURES:

Southwire's 2000 Volt Type TC 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. Type (TC) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- 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
- ICEA S-138-738 Power Cables Rated 2000 Volts or Less for use Between Variable Frequency Drives and Motors
- 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

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SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® VFD {UL} XXX AWG 3/C TYPE TC RHH OR RHW-2 CDRS CU GW 3 X XXX AWG CU T/S50% CPE JACKET SUN. RES. OIL RES II 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	Jacket Color
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	inch	mil	inch	lb/1000ft	lb/1000ft	
TBA	14	3	7	0.07	60	3 x 18	0.451	60	0.571	93	202	BK
679309	12	3	7	0.088	60	3 x 16	0.486	60	0.607	128	251	BK
TBA	10	3	7	0.113	60	3 x 14	0.537	60	0.657	183	329	BK
TBA	8	3	7	0.141	70	3 x 14	0.652	60	0.772	270	456	BK
TBA	6	3	7	0.177	70	3 x 12	0.723	80	0.883	389	624	BK
TBA	4	3	7	0.225	70	3 x 12	0.825	80	0.985	547	815	BK
679311	2	3	7	0.282	70	3 x 10	0.946	115	1.174	827	1209	BK
TBA	1	3	19	0.322	95	3 x 8	1.316	80	1.272	1065	1508	BK
TBA	1/0	3	19	0.361	90	3 x 6	1.22	80	1.38	1373	1858	BK
679310	2/0	3	19	0.405	90	3 x 6	1.311	80	1.531	1641	2312	BK
TBA	3/0	3	19	0.456	90	3 x 5	1.419	80	1.579	2041	2604	BK
679312	4/0	3	19	0.512	90	3 x 4	1.506	115	1.742	2542	3221	BK
TBA	250	3	37	0.558	105	3 x 2	1.665	115	1.895	3150	3995	BK
TBA	300	3	37	0.61	105	3 x 3	1.783	110	2.003	2956	3906	BK
TBA	350	3	37	0.661	105	3 x 3	1.879	115	2.109	3981	4969	BK
TBA	350	3	37	0.661	105	3 x 2	1.879	115	2.109	4110	5098	BK
TBA	400	3	37	0.705	105	3 x 2	1.988	110	2.208	3908	4993	BK
665537	500	3	37	0.789	105	3 x 1	2.149	115	2.379	5706	6779	BK
TBA	600	3	61	0.865	120	3 x 1	2.409	115	2.639	6673	8025	BK
TBA	750	3	61	0.968	120	3 x 2/0	2.621	140	2.901	7235	9006	BK

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
TBA	14	3	4	98	6.659	8.265	0.036	20	25
679309	12	3	4.2	156	1.662	2.002	0.054	25	30
TBA	10	3	4.6	249	1.04	1.253	0.05	35	40
TBA	8	3	5.4	396	0.653	0.786	0.052	50	55
TBA	6	3	6.2	629	0.411	0.495	0.051	65	75
TBA	4	3	6.9	1001	0.258	0.31	0.048	85	95
679311	2	3	8.2	1592	0.162	0.195	0.045	115	130
TBA	1	3	8.9	2009	0.129	0.167	0.032	130	145
TBA	1/0	3	9.7	2534	0.102	0.122	0.044	150	170
679310	2/0	3	10.7	3194	0.081	0.097	0.043	175	195
TBA	3/0	3	11.1	4027	0.064	0.078	0.042	200	225
679312	4/0	3	12.2	5078	0.051	0.062	0.041	230	260
TBA	250	3	13.3	6000	0.043	0.053	0.041	255	290
TBA	300	3	14	7200	0.036	0.045	0.041	285	320
TBA	350	3	14.8	8400	0.031	0.039	0.04	310	350
TBA	350	3	14.8	8400	0.031	0.039	0.04	310	350
TBA	400	3	15.5	9600	0.027	0.035	0.04	335	380
665537	500	3	16.7	12000	0.022	0.029	0.039	380	430
TBA	600	3	18.5	14400	0.018	0.025	0.039	420	475
TBA	750	3	20.3	18000	0.014	0.022	0.038	475	535

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

VFD Sizing Calculator

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