VFD 600/1000 VOLT WITH SIGNAL PAIR FLEXIBLE CABLE

Type TC-ER Variable Frequency Drive Cable 600 Volt Tinned Copper Conductors, Cross Linked Insulation Type RHH/RHW-2 With Shielded Pair Thermoplastic Elastomer Jacket, 90°C Dry or Wet -40°C Cold Impact Identification Method 4. 1000 Volt Flexible Motor Supply

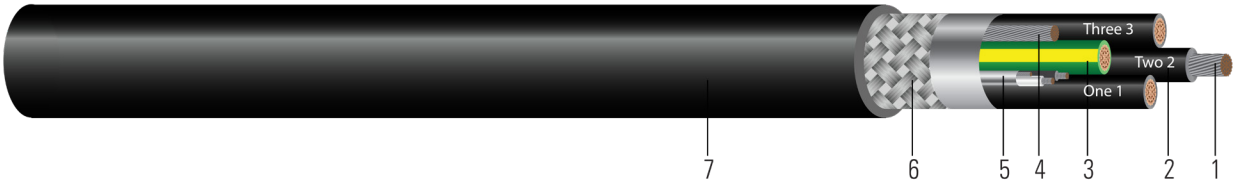

Image not to scale. See Table 1 for Dimensions

CONSTRUCTION:

1. **Conductors**: Class K, Flexible stranded tinned annealed copper per ASTM B33, B172, and B174
2. **Insulation:** Cross linked insulation on all conductors. Type RHH/RHW-2 on 14 awg and larger.
3. **Ground:** One green ground with yellow stripe cross linked insulation. Size equal to phase conductor
4. **Drain Wire:** Tinned copper
5. **Pair:** Twisted pair shielded drain - Color code: Black, White
6. **Overall Shielding:** 100% coverage Alum/Mylar/Alum Foil, overall 85% coverage tinned copper braid
7. **Jacket:** Black Thermoplastic Elastomer TPE

APPLICATIONS AND FEATURES:

Power supply cable for VFDs and motors, suitable for cable tray, conduit, raceways, exposed run (TC-ER) and machine tool wiring conforming to NFPA 79 2018. Suitable for free air and direct burial. For use on operation processes including fans, pumps, conveyors, compressors, elevators and lifts, extruders, crushers and presses. Can be used in accordance with NEC® Articles 336, 501 and 502. The additional shielded pair can be used for signal, temperature sensors or brake.

SPECIFICATIONS:

- ASTM B172 - Rope-Lay-Stranded Copper Conductors
- ASTM B174 - Bunch-Stranded Copper Conductors
- ASTM B33 - Tinned soft or annealed Copper
- UL 44 - Thermoset Insulation
- UL 1277 - Type TC-ER Standard Power and Control Cables
- UL 2277 - Type WTTC Flexible Motor Supply
- UL 758 - AWM Style 20886 Standard for Appliance Wiring Material.
- C22.2 No. 230 Type TC
- CSA 22.2 No. 239 TYPE CIC
- CSA C22.2 No. 210 - CSA AWM I/II A/B
- NFPA 79 - Electrical Standard for Industrial Machinery
- **CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive.**

SAMPLE PRINT LEGEND:

Southwire XXAWG (XXmm2) XX/C VFD RHH/RHW-2 CDRS PLUS 16 AWG 1 PR TYPE TC-ER EXXXXX (UL) 600V 90°C DRY 90°C WET SUN RES OIL RES I/II DIR BUR -40°C OR WTTC 1000V OR AWM 20886 105°C 1000V OR Flexible Motor Supply Cable 1000V -- LLXXXXXX CSA CIC/TC FT4 OR AWM I/II A/B 1000V 105C FT4 -40°C -- CE RoHS-2 Made in USA

Made in USA

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Table 1 – Measurements and Electrical

Stock Code	Conductor Size	Cond. OD	Num. of ϕ Cond.	Ground Size	Drain Wire (4)	Insulation Thickness	Jacket Thick-ness	Shielded Pair (5)	Nominal OD (7)	Nominal Weight	+Ampacity NEC 310.15 (B) (16) amps		Min Bend Radius
	AWG (Strds)	inches		AWG		mils	mils	AWG	inches	Lbs/MFT	75°C	90°C	inches
646241	16 (26)	0.054	3	1 x 16	1 x 16	46	62	16	0.604	199	10	10	7.25
646242	14 (41)	0.074	3	1 x 14	1 x 14	46	62	16	0.689	242	15	15	8.27
646243	12 (65)	0.090	3	1 x 12	1 x 12	46	62	16	0.719	308	20	20	8.63
646244	10 (105)	0.112	3	1 x 10	1 x 10	46	62	16	0.773	370	30	30	9.28
677156	8 (168)	0.162	3	1 x 8	4 x 14	62	82	14	1.034	654	50	55	12.4
677158	6 (266)	0.186	3	1 x 6	4 x 12	62	82	14	1.099	829	65	75	13.2

+Ampacity based on 310.15 (B) (16) up to and including 2000 volts, not more than 3 current-carrying conductors, ambient 30°C (86°F)
All dimensions are nominal and subject to normal manufacturing tolerances

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