

VFD Power Cable for Low Frequency Drives

16 AWG to 500 KCMIL / XLPE insulation • PVC jacket / 600 volt



Applications

These are three conductor, 600 volt, Variable Frequency Drive cables with cross-linked thermosetting polyethylene (XLPE) insulation, three bare grounding conductors (one in each interstice), a corrugated copper shield and an overall polyvinyl chloride (PVC) jacket. These cables are UL type TC rated.

The VFD Power Cables are designed for use with low voltage (600 volt) AC motors controlled for speed by modern PWM (pulse width modulated) inverters. These PWM inverters require properly designed power cables to prevent RF (radio frequency) electrical signals from causing stray electrical noise or malfunction of the motor.

Specifications and Ratings

- UL Standard 44
- UL Standard 1277
- IEEE 1202 (70,000 BTU/HR) Flame Test
- ICEA T-29-520 (210,000 BTU/HR) Flame Test
- MSHA approved

Design Parameters

CONDUCTORS: Class B, soft drawn, bare copper per ASTM B3 and ASTM B8.

INSULATION: Heat and moisture resistant, cross-linked thermo-setting polyethylene (XLPE) meeting the requirements of UL 44. The insulation is suitable for use in wet or dry locations at a conductor temperature not exceeding 90°C for normal operation. The insulation thickness is in accordance with Table 15.3 of UL 44. Single conductors pass VW-1 flame test..

GROUND CONDUCTORS: Single conductor cables can be paralleled or multiplexed with up to six conductors for more efficient installation.

CIRCUIT IDENTIFICATION: Appendix E, Method 4 of ICEA S-73-532 (NEMA WC 57). Black conductors with number print: 1-ONE, 2-TWO & 3-THREE

ASSEMBLY: The insulated circuit conductors and three bare grounding conductors are cabled together with non-hygroscopic fillers as needed. The cabled core is wrapped with a binder tape. A corrugated copper shield is applied to the taped core. A PVC jacket is applied to the shielded core.

SHIELD: 5 mil thick copper tape (10 mil for 250, 350 and 500 KCMIL versions) corrugated and longitudinally applied with a minimum overlap of 15%.

JACKET: Heat and moisture resistant, black polyvinyl chloride (PVC) meeting the requirements of UL 1581. The thickness is in accordance with Table 11.3 of UL 1277.



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Part Number	Number of Conductors/Size	Uses Crouse-Hinds Terminator™ Part Number	Number of Ground/Size	Nominal Insulation Thickness* in (mm)	Diameter Over Shield in (mm)	Nominal Cable Outside Diameter in (mm)	Cable Weight Lbs/Mft (Kg/Km)
382626	3 / 16 AWG	**	3 / 18 AWG	.030 (0.7)	0.32 (8.13)	0.43 (10.9)	92 (136)
382615	3 / 14 AWG	**	3 / 18 AWG	.030 (0.7)	0.35 (8.89)	0.46 (11.7)	144 (213)
382627	3 / 12 AWG	**	3 / 18 AWG	.030 (0.7)	0.39 (9.91)	0.51 (13.0)	176 (260)
382628	3 / 10 AWG	TMC 165	3 / 16 AWG	.030 (0.7)	0.45 (11.4)	0.59 (15.0)	254 (376)
382616	3 / 8 AWG	TMC 165	3 / 14 AWG	.045 (1.1)	0.58 (14.7)	0.73 (18.5)	390 (577)
382617	3 / 6 AWG	TMC 285	3 / 12 AWG	.045 (1.1)	0.66 (16.8)	0.78 (19.8)	263 (389)
382625	3 / 4 AWG	TMC 285	3 / 10 AWG	.045 (1.1)	0.76 (19.3)	0.93 (23.6)	769 (1138)
382618	3 / 2 AWG	TMC 3112	3 / 8 AWG	.045 (1.1)	0.89 (22.6)	1.11 (28.2)	1154 (1665)
382629	3 / 1 AWG	TMC 3112	3 / 8 AWG	.055 (1.4)	1.05 (26.7)	1.28 (32.5)	1427 (2112)
382619	3 / 1/0 AWG	TMC 4140	3 / 6 AWG	.055 (1.4)	1.15 (29.2)	1.37 (34.8)	1764 (2611)
382614	3 / 2/0 AWG	TMC 4140	3 / 6 AWG	.055 (1.4)	1.21 (30.7)	1.43 (36.3)	2077 (3074)
382630	3 / 3/0 AWG	TMC 4140	3 / 4 AWG	.055 (1.4)	1.32 (33.5)	1.55 (39.4)	2599 (3847)
382620	3 / 4/0 AWG	TMC 5161	3 / 4 AWG	.055 (1.4)	1.43 (36.3)	1.66 (42.2)	3093 (4578)
382621	3 / 250 KCMIL	TMC 5161	3 / 4 AWG	.065 (1.7)	1.57 (39.9)	1.88 (47.8)	3791 (5611)
382612	3 / 350 KCMIL	TMC 6206	3 / 2 AWG	.065 (1.7)	1.81 (46.0)	2.00 (50.8)	5020 (7430)
382631	3 / 500 KCMIL	TMC 7247	3 / 1/0 AWG	.065 (1.7)	2.08 (52.8)	2.30 (58.4)	7012 (10378)

*Insulation thicknesses shown are 600 volt. 2000 volt insulation thicknesses can also be supplied as an alternative. **Part numbers to be determined.

Optional features available are: 1) Ethylene propylene rubber (EPR) insulation, 2) CPE, LSZH or TPE jacket.

The data herein is approximate and subject to normal manufacturing tolerances. These specifications are subject to change without notice.

Consult factory for a variety of alternate constructions for specific applications.