37-108VFD

Flexible Type TC-ER VFD Cable

Three Conductor • 90°C • 600V

AmerCable® INCORPORATED

VFD Cables

Power Conductors (x3)

Tin-coated, high strand count copper. See Stranding Profile on back.

Insulation

Cross-linked, flexible, low dielectric constant compound rated 90°C. Color coded per ICEA Method 4:

Sizes 4/0 AWG and Larger – individual conductors colored black with conductor number surface printed in contrasting ink.

Sizes Smaller than 4/0 AWG – individually colored conductors - red, white, black.

Jacket

Flame retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC). Colored black.

Symmetrical Ground Conductors (x3)

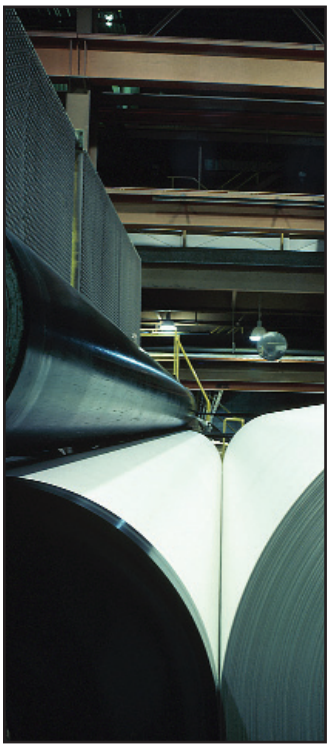
Three symmetrically placed tin-coated, high strand count copper conductors in direct contact with the shield.

Metallic Shield

Sizes 8 AWG and Larger – Helically applied 5 mil bare copper tape.

Sizes Smaller than 8 AWG – tin-coated copper braid plus aluminum/ polyester tape

Both shielding systems provide 100% coverage.



Ratings & Approvals

- UL Listed as 600V Type TC-ER
- UL Listed as 1000V Flexible Motor Supply Cable (Up to #2AWG)
- 90°C Temperature Rating
- FT-4 and IEEE 1202 flame ratings
- Sunlight resistant
- Direct Burial (Up to #2AWG)

Made in America

Application

A flexible, shielded power cable specifically engineered for use in variable frequency AC motor drive (VFD) applications.

Features

- Specially engineered cable design produces a longer cable life in VFD applications.
- Overall shield provides 100% coverage containing VFD EMI emissions.
- Symmetrical ground conductors reduce induced voltage imbalances and carry common mode noise back to the drive.
- High strand count design is much more flexible, easier to install and more resistant to vibration than Type MC cable.
- Meets crush and impact requirements for Type MC cable.
- AmerCable's specially formulated insulation material has a lower dielectric constant (standard XLPE and EPR insulation materials have higher dielectric constants) which withstands reflected voltages. This allows for longer output cable distances and minimizes the effect of high frequency noise induced into the plant ground system.
- Permitted for Exposed Run ("ER") use in accordance with the NEC.
- Permitted for use in Class I, Division 2 and Zone 2 industrial hazardous locations per the NEC.
- Gas and vapor tight – impervious to water and air.
- Reduced tray fill (up to 35% less) than Type MC.
- Reduced installation time and cost compared to Type MC.
- Glands for this product cost up to 50% LESS than those for Type MC.
- Bend radius 12X O.D.

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Size AWG/kcmil	Size (mm2)	Part No. 37-108	Nominal Diameter (inches)	Weight (lbs/1000ft)	DC Resistance at 25°C (ohms/1000ft)	AC Resistance 90°C, 60Hz (ohms/1000ft)	Inductive Reactance (ohms/1000ft)	Voltage Drop 90°C, 60Hz (Volts/Amp/1000ft)	Grounding Conductor (x3) Size (AWG)	Ampacity		
										In Free Air	In Cable Tray	In Conduit
14	2.08	-508VFD	0.466	158	2.907	3.635	0.036	5.069	18	15	15	15
12	3.29	-516VFD	0.509	199	1.826	2.283	0.034	3.195	18	20	20	20
10	5.23	-308VFD	0.522	258	1.153	1.441	0.032	2.028	14	30	30	30
8	8.30	-309VFD	0.653	368	0.708	0.885	0.036	1.262	14	65	55	48
6	13.21	-310VFD	0.737	517	0.445	0.556	0.034	0.804	12	87	75	65
4	21.17	-312VFD	0.956	814	0.300	0.376	0.031	0.552	12	114	95	89
2	35	-314VFD	1.103	1178	0.184	0.230	0.030	0.349	10	133	130	119
1	42.52	-315VFD	1.221	1462	0.147	0.184	0.031	0.287	10	177	150	137
1/0	50	-316VFD	1.447	1714	0.117	0.147	0.030	0.235	10	205	170	163
2/0	66.12	-317VFD	1.538	1951	0.093	0.117	0.029	0.193	10	237	195	186
4/0	95	-319VFD	1.883	3102	0.058	0.075	0.028	0.133	8	316	260	253
262	120	-320VFD	1.981	3642	0.048	0.063	0.026	0.114	6	362	297	286
313	150	-321VFD	2.082	4185	0.040	0.053	0.026	0.100	6	404	328	324
373	185	-322VFD	2.215	4834	0.034	0.045	0.025	0.088	6	449	364	357
444	240	-323VFD	2.371	5634	0.028	0.039	0.025	0.079	6	497	402	396
535	272.68	-324VFD	2.616	7592	0.024	0.033	0.025	0.071	6	556	446	441
646	300	-326VFD	2.878	9183	0.020	0.028	0.025	0.065	4	617	496	489
777	400	-327VFD	3.089	10834	0.016	0.025	0.025	0.060	4	688	546	537

- Ampacity In Free Air: Based on 90°C conductor temperature and 30°C ambient temperature per 2008 NEC Table B.310.3
- Ampacity In Cable Tray: Based on 90°C conductor temperature and 30°C ambient temperature per 2008 NEC Table 310.16
- Ampacity In Conduit: Based on 90°C conductor temperature and 30°C ambient temperature per 2008 NEC Table B.310.1
- Cable diameters are subject to a +/- 5% manufacturing tolerance

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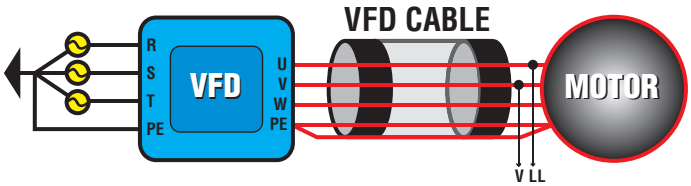

Stranding Profile

Size AWG/kcmil	Size (mm2)	Number of Strands	Uninsulated Conductor Diameter (inch)
14	2.08	19	0.074
12	3.29	19	0.093
10	5.23	37	0.113
8	8.30	133	0.159
6	13.21	133	0.201
4	21.17	259	0.255
2	35	259	0.321
1	42.52	259	0.361
1/0	50	266	0.413
2/0	66.12	323	0.455
4/0	95	532	0.584
262	120	646	0.654
313	150	777	0.720
373	185	925	0.785
444	240	1110	0.860
535	272.68	1332	0.941
646	300	1591	1.029
777	400	1924	1.132