37-000VFD

XLPE/PVC TC-ER VFD POWER CABLE

THREE CONDUCTOR • 90°C • 2000V

POWER CONDUCTORS (X3)
Soft annealed stranded bare copper per ASTM B3, B496

INSULATION
Low dielectric constant XLPE meeting RHH/RHW-2 per UL 44

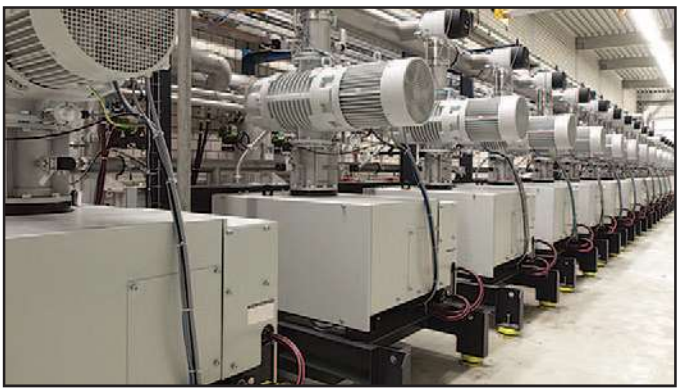
SYMMETRICAL GROUND CONDUCTORS (X3)
Three symmetrically placed stranded bare copper conductors in direct contact with the shield.

METALLIC SHIELD
Helically applied bare copper tape for provide 100% coverage.

JACKET
Flame retardant, moisture and sunlight resistant Polyvinyl Chloride (PVC) per UL 1277. Colored black.

RATINGS & APPROVALS

- UL Listed as Type TC-ER 2000V
- 90°C Wet/Dry Temperature Rating
- FT-4/ IEEE 1202 Flame Rating
- Sunlight Resistant
- For Direct Burial



APPLICATION

TC-ER VFD cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations supported by a messenger wire. Type TC-ER VFD is Listed for direct burial or in underground ducts and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used in wet or dry locations at temperatures not to exceed 90°C. The cable is 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.
- Meets crush and impact requirements for Type MC
- AmerCable's specially formulated XLPE insulation material has a lower dielectric constant 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 336.10(7).
- 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.
- Bend radius 12X O.D.
- Color code per ICEA S-58-679 Method 4
- Cables are fully compliant with NFPA 79-2018

37-000VFD • TC-ER VFD • 2000 VOLTS

Size AWG/ kcmil	Size mm^2	Part No. 37-000	Nominal Diameter Inches*	Weight (Lbs./ 1000 Ft.)	DC Resist. @ 25°C (Ohms/ 1000 Ft.)	AC Resist. @ 90°C, 60 Hz (Ohms/ 1000 Ft.)	Inductive Reactance (Ohms/ 1000 Ft.)	Voltage Drop (Volts/Amp/ 1000 Ft.)	Grounding Conductor Size (3x) (AWG)	NEC Ampacities					
										In Free Air		Single Tray		In Conduit	
										90°C	75°C	90°C	75°C	90°C	75°C
14	2.1	-508VFDCT	0.570	158	2.680	3.350	0.046	4.684	18	15	13	15	13	15	13
12	3.3	-516VFDCT	0.610	199	1.680	2.100	0.043	2.951	18	20	18	20	18	20	18
10	5.2	-308VFDCT	0.655	258	1.060	1.325	0.040	1.876	14	30	27	30	27	30	27
8	8.3	-309VFD	0.770	368	0.6663	0.8329	0.040	1.194	14	65	58	55	49	48	43
6	13.2	-310VFD	0.885	517	0.4192	0.5240	0.038	0.765	12	87	77	75	67	65	58
4	21	-312VFD	0.975	814	0.2636	0.3295	0.036	0.493	12	114	101	95	84	89	79
2	35	-314VFD	1.090	1178	0.1659	0.2074	0.034	0.322	10	152	135	130	115	119	106
1	43	-315VFD	1.225	1462	0.1315	0.1644	0.034	0.263	10	177	157	150	133	137	121
1/0	50	-316VFD	1.330	1714	0.1042	0.1304	0.033	0.215	10	205	182	170	151	163	145
2/0	66	-317VFD	1.420	1951	0.0827	0.1034	0.032	0.176	10	237	210	195	173	186	165
3/0	86	-318VFD	1.520	2607	0.0655	0.0819	0.031	0.146	8	274	243	225	200	214	190
4/0	95	-319VFD	1.635	3102	0.0520	0.0653	0.030	0.122	8	316	280	260	231	253	224
250	126	-330VFD	1.855	3836	0.0440	0.0553	0.030	0.108	8	351	311	290	255	276	245
350	178	-331VFD	2.060	5141	0.0314	0.0396	0.029	0.085	6	430	381	350	310	345	306
500	250	-333VFD	2.325	6977	0.0220	0.0280	0.028	0.068	6	531	471	430	381	427	379
750	379	-334VFD	2.809	10051	0.0147	0.0191	0.028	0.055	4	671	595	535	474	529	469

- Cable diameters are subject to a +/- 5% manufacturing tolerance
- Ampacity In Free Air: Based on 90°C conductor temperature and 30°C ambient temperature per 2014 NEC Table B.310.15(B)(2)(3)
- Ampacity In Cable Tray: Based on 90°C conductor temperature and 30°C ambient temperature per 2014 NEC Table 310.15(B)(16)
- Ampacity In Conduit: Based on 90°C conductor temperature and 30°C ambient temperature per 2014 NEC Table B.310.15(B)(2)(1)