

Type VFD Power Cable

Gexol® Insulated

Three Conductor • 2kV • Rated 110°C

Power Conductors (x3)

Soft annealed flexible stranded tinned copper per ASTM B 33.

Shield

Overall tinned copper braid plus aluminum/-polyester tape providing 100% coverage.

Armor (Optional)

Basket weave wire armor per IEEE 45 and UL 1309/CSA 245. Bronze standard. Aluminum or tinned copper available by request.

Sheath (Optional)

Heavy-duty arctic grade neoprene meeting the requirements for Type N of IEEE 45 and UL 1309/CSA 245.



Ground Conductors (x3)

Soft annealed tinned copper per ASTM B 33 flexible stranding with 600/1000V Gexol® insulation sized per UL 1277. Color: Green

Insulation

Gexol® chemically cross-linked, non-chlorinated flame retardant polyolefin meeting the requirements for Type P of IEEE 45 and Type X110 of UL 1309/CSA 245. Color: Gray with printed phase I.D.

Jacket

Heavy-duty arctic grade neoprene meeting the requirements for Type N of IEEE 45 and UL 1309/CSA 245.

Application

A flexible, braid and foil shielded, 2kV 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 braid and foil 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 conductors and braid shield design is much more flexible, easier to install and more resistant to vibration than Type MC cable
- Gexol's lower dielectric constant (standard XLPEs and EPRs have higher dielectric constants) reduces reflected wave peak voltage magnitudes. This allows for longer output cable distances and minimizes the effect of high frequency noise induced into the plant ground system.
- 2kV insulation thickness resists the repetitive 2x voltage spikes from 600V VFDs and reduces drive over-current trip problems due to cable charging current
- Dual certified IEEE 45 Type P and UL 1309/CSA 245 Type X110
- Highest ampacity ratings: ABS 100°C, DNV 95°C, LRS 95°C, Transport Canada 95°C
- Severe cold durability: exceeds CSA cold bend/cold impact (-40°C/-35°C)
- Flame retardant: IEC 332-3 Category A and IEEE 1202
- Suitable for use in Class 1 Division 1, and Zone 1 environments (armored and sheathed)
- Optional braid armor of bronze, aluminum or tinned copper

Ratings & Approvals

- UL Listed as Marine Shipboard Cable (E111461) and Type TC (E123629)
- 110°C Temperature Rating
- American Bureau of Shipping (ABS) 99-BT5905-X
- Transport Canada 8700-20-2
- Det Norske Veritas (DNV) E-4999, E-5000, E-5001, E-5002
- Lloyd's Register of Shipping (LRS) 91/60333 (E4)
- NVE 95/1696, FAL
- United States Coast Guard November 2, 1987 / 9304
- CSA Listed as Type RW90 (LL80350)

Other certifications pending

37-102VFD • Type VFD Power Cable • Gexol® Insulated

Size AWG/ kcmil	Unarmored			Armored (B)			Armored and Sheathed (BS)			Ampacity			
	Part No. 37-102-	Nominal Diameter Inches*	Weight Per M. Ft.	Part No. 37-102	Nominal Diameter Inches*	Weight Per M. Ft.	Part No. 37-102	Nominal Diameter Inches*	Weight Per M. Ft.				
										110°C	100°C	95°C	75°C
1/0	316VFD	1.443	1803	-316BVFD	1.493	2027	-316BSVFD	1.666	2327	176	164	152	145
2/0	317VFD	1.572	2153	-317BVFD	1.622	2399	-317BSVFD	1.854	2840	201	188	175	166
4/0	319VFD	2.53	3463	-319BVFD	2.103	3785	-319BSVFD	2.335	4347	270	252	235	223
262	320VFD	2.193	4175	-320BVFD	2.243	4522	-320BSVFD	2.475	5120	315	294	267	254
313	321VFD	2.370	4727	-321BVFD	2.420	5104	-321BSVFD	2.652	5747	344	321	299	287
373	322VFD	2.501	5415	-322BVFD	2.551	5809	-322BSVFD	2.845	6674	387	361	334	315
444	323VFD	2.670	6707	-323BVFD	2.721	7141	-323BSVFD	3.014	8059	440	411	372	350
535	324VFD	2.972	7483	-324BVFD	3.022	2966	-324BSVFD	3.316	8981	498	465	418	390
646	326VFD	3.164	8916	-326BVFD	3.214	9428	-326BSVFD	3.508	10504	553	516	470	431
777	327VFD	3.388	10395	-327BVFD	3.438	10940	-327BSVFD	3.732	12088	602	562	529	473

*Cable diameters and weights are subject to a +/- 5% manufacturing tolerance

Ampacity Ratings

110°C Ratings

Based on IEEE Std. 45 with a 45°C ambient and arranged in a single bank per hanger. For those instances where cable must be double banked, the 110°C ampacities should be multiplied by 0.8.

100°C Ratings

Based on IEEE Std. 45 with a 45°C ambient and arranged in a single bank per hanger. For those instances where cable must be double banked, the 100°C ampacities should be multiplied by 0.8.

95°C Ratings

Based on Table 4/3C.10 of the 1997 ABS MODU rules and a 45°C ambient.

75°C Ratings

Based on Table B-310-1 of the 2005 NEC for cables in raceway and a 30°C ambient.

Halogen-Free and Fire Resistant (IEC 331) constructions available by request.

