37-103VFD
Type VFD Power Cable Gexol®-HF Insulated Low Smoke Halogen-Free

Three Conductor • 2kV • Rated 110°C

AmerCable INCORPORATED

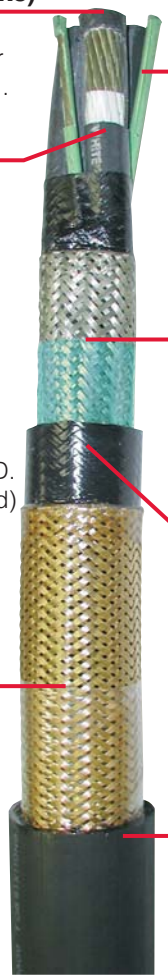
Oil & Gas Cables

Power Conductors (x3)
Soft annealed flexible stranded tinned copper per IEEE 1580 Table 11.

Insulation (2kV)
GEXOL®-HF low smoke Halogen-Free flame retardant cross-linked polyolefin, meeting the requirements for Type LSX of IEEE 1580 and Type X110 of UL 1309/CSA 245.

Color: Gray with printed phase I.D. (Black-White-Red)

Armor (Optional)
Basket weave wire armor per IEEE 1580 and UL 1309/CSA 245. Bronze standard. Aluminum or tinned copper available by request.



Ground Conductors (x3)
Soft annealed flexible stranded tinned copper per IEEE 1580 Table 11. Gexol®-HF insulated and sized per UL 1277. Color: Green

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

Jacket
A black low smoke Halogen-Free flame retardant polyolefin, meeting IEEE 1580 and UL 1309/CSA 245.

Sheath (Optional)
A black low smoke Halogen-Free flame retardant polyolefin, meeting IEEE 1580 and UL 1309/CSA 245.

Ratings & Approvals

- 110˚C Temperature Rating
- American Bureau of Shipping (ABS): 99-BT5905-X
- UL Listed as Marine Shipboard Cable: (E111461)
- Transport Canada: pending
- Det Norske Veritas (DNV): pending
- Lloyd's Register of Shipping pending
- Germanischer Lloyd (GL): pending

Other certifications pending

Application

A flexible, braid and foil shielded, 2kV power cable specifically engineered for use in variable frequency AC motor drive (VFD) applications.

Features

- Low Smoke and Halogen-Free.
- 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 insulated 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 and easier than IEC 60092-350 series cables to install.
- Gexol-HF's lower dielectric constant (standard HFXLPE, HFEPR insulation materials 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 1580 Type LSX and UL 1309/CSA 245 Type X110.
- 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 I, Division 1 and Zone 1 environments (armored and sheathed).
- Optional braid armor of bronze, aluminum or tinned copper.

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	Unarmored			Armored			Armored & Sheathed (BS)						
Size AWG/ kcmil	Part No. 37-103	Nominal Diameter Inches*	Weight Per 1000 Ft.	Part No. 37-103	Nominal Diameter Inches*	Weight Per 1000 Ft.	Part No. 37-103	Nominal Diameter Inches*	Weight Per 1000 Ft.	Green Insulated Grounding Conductor (x3) Size (AWG)	Ampacity 110°C	Ampacity 90°C	Ampacity 75°C
14	-508VFD	0.540	194	-508BVFD	0.590	281	-508BSVFD	0.725	356	18	27	24	18
12	-516VFD	0.590	224	-516BVFD	0.646	321	-516BSVFD	0.772	401	18	33	29	24
10	-308VFD	0.633	308	-308BVFD	0.694	412	-308BSVFD	0.820	497	14	44	38	33
8	-309VFD	0.764	441	-309BVFD	0.820	565	-309BSVFD	0.988	702	14	56	48	43
6	-310VFD	0.865	570	-310BVFD	0.925	708	-310BSVFD	1.090	865	12	75	65	58
4	-312VFD	1.072	886	-312BVFD	1.125	1061	-312BSVFD	1.295	1243	12	99	83	79
2	-314VFD	1.215	1421	-314BVFD	1.271	1618	-314BSVFD	1.440	1822	10	131	111	105
1	-315VFD	1.340	1517	-315BVFD	1.395	1743	-315BSVFD	1.560	1966	10	153	131	121
1/0	-316VFD	1.443	1803	-316BVFD	1.493	2027	-316BSVFD	1.666	2327	10	176	150	145
2/0	-317VFD	1.572	2153	-317BVFD	1.622	2399	-317BSVFD	1.854	2840	10	201	173	166
4/0	-319VFD	2.053	3463	-319BVFD	2.103	3785	-319BSVFD	2.335	4347	8	270	232	223
262	-320VFD	2.193	4175	-320BVFD	2.243	4522	-320BSVFD	2.475	5120	6	315	273	254
313	-321VFD	2.370	4727	-321BVFD	2.420	5104	-321BSVFD	2.652	5747	6	344	298	287
373	-322VFD	2.501	5415	-322BVFD	2.551	5809	-322BSVFD	2.845	6674	6	387	332	315
444	-323VFD	2.670	6707	-323BVFD	2.721	7141	-323BSVFD	3.014	8059	6	440	382	350
535	-324VFD	2.972	7483	-324BVFD	3.022	2966	-324BSVFD	3.316	8981	6	498	407	390
646	-326VFD	3.164	8916	-326BVFD	3.214	9428	-326BSVFD	3.508	10504	4	553	474	431
777	-327VFD	3.388	10395	-327BVFD	3.438	10940	-327BSVFD	3.732	12088	4	602	516	473

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

See page 2 for Stranding Profile

VFD Cable 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.

75°C Ratings

Based on Table B.310.1 of the 2005 NEC for cables in raceway and a 30°C ambient.

90°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 90°C ampacities should be multiplied by 0.8.