



Oil & Gas - Cable Solutions

Exploration & Production - Offshore

VFD Cables

IEEE

BOSTRIG TYPE P VFD 2 kV

Shielded three conductor, unarmored or armored and sheathed Type P power cable 2000 V, 1/0 AWG to 777 MCM. Mud Resistant design option (Type P-MR) available on demand.

APPLICATION

Bostrig™ Type P shielded three conductor VFD Marine and Offshore Cable is designed specifically for use with variable frequency AC motor drives. This cable is designed to significantly mitigate the deleterious effects of high frequency harmonics and electromagnetic interference (EMI) on the motor /drive system as well as the adjacent environment. Armored and sheathed cables are suitable for use in Class I Division 1 and Zone 1 hazardous locations offshore. Unarmored cables are suitable for use in Class I, Division 2 hazardous locations offshore.

STANDARDS & APPROVALS

IEEE 1580 and IEEE 45 Marine Shipboard Cables
UL 1309 Marine Shipboard Cable Type XP110
CSA 22.2 No. 245 Marine Shipboard Cable Type XP110
UL 1277 Type TC-ER for exposed runs (unarmoured)
ASTM B 33 Conductor Materials
CSA 22.2 Cold bend/cold impact (-40 °C / -35 °C)
IEEE 1202 and IEC 60332-3-22 Flame propagation



Det Norske Veritas (DNV)



American Bureau of Shipping (ABS)
 Transport Canada Approved AMS400-20-2
 Transport Canada 8700-20-2



Lloyd's Register of Shipping (LRS)
 United States Coast Guard-46CFR



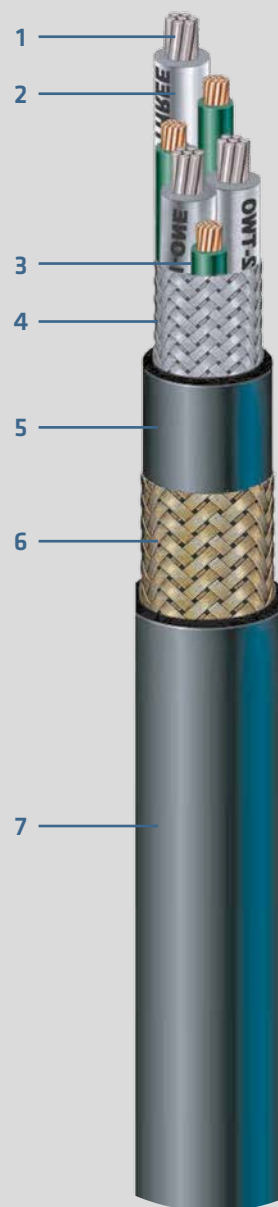
ETL listed



CSA listed

DESIGN & CONSTRUCTION

- 1 CONDUCTOR**
Soft annealed tinned copper; a polyester tape separator is used over the conductor
- 2 INSULATION**
Bostrig Type P chemically cross-linked polyolefin (XLPO)
- 3 GROUND CONDUCTORS**
All Bostrig Type P-VFD Cables listed in this specification sheet are built using system grounds equal to the aggregate cross-section of a phase conductor and can be in contact with or isolated from the overall shield. A system ground is REQUIRED for supplying power from the switchboard to the inverter and then to the motor. If the VFD cable is only being used between the motor and the inverter, a cable with a lesser ground can be utilized.
- 4 SHIELD**
Braided tinned copper and aluminum polyester tape for 100% coverage
- 5 JACKET**
Flame-retardant Arctic Neoprene (complying with Type N Neoprene as required in IEEE 1580)
- 6 ARMOUR (optional)**
Braided bronze
- 7 SHEATH (only armoured versions)**
Flame-retardant Arctic Neoprene applied over the armor (complying with Type N Neoprene as required in IEEE 1580)
Special ester-based mud resistant jacket is available on request



Bostrig VFD - 09/2017

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PERFORMANCES / RATINGS

FIRE BEHAVIOUR



IEEE 1202
IEC 60332-3-22

CHEMICAL RESISTANCE



VERY GOOD
EXCELLENT (MUD RES)

IMPACTS



GOOD

SMOKE DENSITY, CORROSIVITY AND TOXICITY



LOW EMISSION (MUD RES)

MIN. PERMISSIBLE AMBIENT TEMPERATURE DURING LAYING



-40 °C
(-20 °C MUD RES)

MAX OPERATING TEMPERATURE



+100 °C

SHORT CIRCUIT TEMPERATURE



+250 °C

UV RESISTANCE



GOOD

QUALITY & TESTING

Prysmian has a built-in multi-step quality assurance program, covering the production process from cable design and raw material purchases to final inspection and testing documentation.

The ISO 9001 quality system of Prysmian Group (together with ISO 14001 and OHSAS 18001) has been assessed, approved and is currently audited by SGS.

This information is provided for reference only. Please consult the factory or your representative to confirm all engineering information. This information is not intended to replace the information in the appropriate and applicable standard or code.

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TECHNICAL DATA

Unarmoured

CONDUCTOR SIZE		GROUND SIZE		SHEATH THICKNESS		CABLE DIAMETER (NOMINAL)		INDUCTANCE		CAPACITANCE		AMPACITY † (MEASURED @ °C)			CABLE WEIGHT (APPROXIMATE)	
(AWG/MCM)	(mm²)	(AWG/MCM)	(mm²)	(in)	(mm)	(in)	(mm)	(mH/kft)	(mH/km)	(pF/ft)	(pF/M)	95°	100°	110°	Lbs/Mft	kg/km
1/0	56,3	5	18,6	n/a	n/a	1,52	38,6	0,09	0,3	190	623	156	164	176	2275	3385
2/0	66,5	4	21,5	n/a	n/a	1,62	41,1	0,09	0,3	212	695	175	186	201	2730	4065
4/0	112,6	1	56,3	n/a	n/a	2,09	53,1	0,09	0,3	259	850	241	252	270	4360	6490
262	133	1	56,3	n/a	n/a	2,22	56,4	0,09	0,3	247	810	267	294	315	5045	7510
313	158,6	110	18,6	n/a	n/a	2,35	59,7	0,08	0,2	270	886	298	321	344	5855	8715
373	189,3	210	61,5	n/a	n/a	2,54	64,5	0,08	0,2	292	958	333	361	387	6950	10345
444	225,1	310	92,1	n/a	n/a	2,85	72,4	0,08	0,2	318	1043	371	411	440	8650	12875
535	271,2	310	92,1	n/a	n/a	3,01	76,5	0,09	0,3	291	954	417	443	475	9695	14430
646	327,5	410	112,6	n/a	n/a	3,16	80,3	0,09	0,3	314	1030	469	516	553	11395	16960
777	393,8	262 KCMIL	133	0,06	1,5	3,5	88,9	0,09	0,3	345	1132	528	582	602	13515	20115

Armoured and Sheathed

CONDUCTOR SIZE		GROUND SIZE		SHEATH THICKNESS		CABLE DIAMETER (NOMINAL)		INDUCTANCE		CAPACITANCE		AMPACITY † (MEASURED @ °C)			CABLE WEIGHT (APPROXIMATE)	
(AWG/MCM)	(mm²)	(AWG/MCM)	(mm²)	(in)	(mm)	(in)	(mm)	(mH/kft)	(mH/km)	(pF/ft)	(pF/M)	95°	100°	110°	Lbs/Mft	kg/km
1/0	56,3	5	18,6	0,11	2,8	1,8	45,7	0,09	0,3	190	623	156	164	176	2275	3385
2/0	66,5	4	21,5	0,11	2,8	1,9	48,3	0,09	0,3	212	695	175	186	201	2730	4065
4/0	112,6	1	56,3	0,11	2,8	2,37	60,2	0,09	0,3	259	850	241	252	270	4360	6490
262	133	1	56,3	0,11	2,8	2,5	63,5	0,09	0,3	247	810	267	294	315	5045	7510
313	158,6	110	18,6	0,11	2,8	2,63	66,8	0,08	0,2	270	886	298	321	344	5855	8715
373	189,3	210	61,5	0,14	3,6	2,88	73,2	0,08	0,2	292	958	333	361	387	6950	10345
444	225,1	310	92,1	0,14	3,6	3,19	81	0,08	0,2	318	1043	371	411	440	8650	12875
535	271,2	310	92,1	0,14	3,6	3,35	85,1	0,09	0,3	291	954	417	443	475	9695	14430
646	327,5	410	112,6	0,14	3,6	3,53	89,7	0,09	0,3	314	1030	469	516	553	11395	16960
777	393,8	262 KCMIL	133	0,14	3,6	3,84	97,5	0,09	0,3	345	1132	528	582	602	13515	20115

† Ampacity based on 45°C ambient temperature: 95°C values based on ABS MODU Rules Table 6 - 100°C values based on IEEE-45 - 110°C values based on API 14F.

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