

# Marine Unarmoured Power Cables - Fire Resistant

Low Smoke Zero Halogen TAC. MGT. XLPE. ZH 600/1000 V



## Application

Anixter unarmoured fire resistant cables are designed for use where mechanical protection is not required for fixed wiring in ships, and in mobile and fixed offshore units such as drilling rigs and oil platforms. These cables are particularly designed for regularly occupied areas such as accommodation facilities, control rooms and computer suites. This is essential in reducing smoke and noxious fumes, and helps during evacuation procedures and fire fighting duties, and also helps to protect vital and sensitive equipment. These cables are also used where circuit integrity is essential under fire conditions e.g. safety and emergency lighting, fire pumps, shut down systems, communications systems, gas detectors, alarms etc.

## Specifications

- In accordance with IEC60092-353 with fire resistant properties relevant to the internationally recognised test of IEC60331
- **Conductor:** Class 2 or flexible plain copper conductor to BS EN 60228
- **Insulation:** Mica Glass Tape, XLPE complying with IEC60092-351
- **Core Identification:**
  - 2 cores are brown and blue
  - 3 cores are brown, black and grey
  - 4 cores are brown, black, grey and blue
- **Outer Sheath:** Zero halogen type SHF1 to IEC60092-359  
Orange as standard
- **Identification:** The legend will include the manufacturers name, voltage, number of cores and cross sectional area, and IEC60331 and IEC60332-3A reference where applicable. Standard sheath colour is orange but is also available in black if required
- **Sheath Characteristics:**
  - Oxygen index:  $>37\%$
  - Temperature index:  $250^{\circ}\text{C}$
  - HCL emission:  $<0.5\%$  of weight of compound @  $800^{\circ}\text{C}$  (typically  $<0.1\%$ )
- **Fire Performance:** Flame retardant to IEC60332-3-22 Category A (reduced propagation)  
Fire resistant to IEC60331 ( $750^{\circ}\text{C}$  for three hours)
- **Temperature Rating:**  $90^{\circ}\text{C}$  maximum conductor operating temperature
- **Voltage Rating:** 600/1000 V

# Marine Unarmoured Power Cables - Fire Resistant

Low Smoke Zero Halogen TAC. MGT. XLPE. ZH 600/1000 V

Anixter Number	Nominal Cond Area mm <sup>2</sup>	Approximate Overall Diameter mm	Approximate Weight kg/km	Flame Proof Stuffing Gland	
				PRYSMIAN ETAT-A2EX	CMP ETAT-A2F
<b>2 Core</b>					
MUF-2C-0015	1.5	9.5	95	-20S	-20SC
MUF-2C-0025	2.5	10.5	120	-20	-20C
MUF-2C-0040	4	11.5	160	-20	-20C
<b>3 Core</b>					
MUF-3C-0015	1.5	10.0	120	-20S	-20SC
MUF-3C-0025	2.5	11.5	160	-20	-20C
MUF-3C-0040	4	12.5	220	-20	-20C
MUF-3C-0060	6	14.0	290	-25	-25C
MUF-3C-0100	10	16.0	415	-25	-25C
MUF-3C-0160	16	18.5	615	-25	-25C
<b>4 Core</b>					
MUF-4C-0015	1.5	11.5	150	-20	-20C
MUF-4C-0025	2.5	12.5	205	-20	-20C
MUF-4C-0040	4	14.0	280	-25	-25C
MUF-4C-0060	6	15.5	370	-25	-25C
MUF-4C-0100	10	17.5	540	-25	-25C
MUF-4C-0160	16	20.5	810	-32	-32C
<b>5 Core</b>					
MUF-5C-0015	1.5	12.0	185	-20	-20C
MUF-5C-0025	2.5	13.0	240	-20	-20C
<b>7 Core</b>					
MUF-7C-0015	1.5	13.0	230	-20	-20C
MUF-7C-0025	2.5	14.5	315	-20	-25C
<b>10 Core</b>					
MUF-10C-0015	1.5	16.5	330	-25	-25C
MUF-10C-0025	2.5	18.5	450	-25	-25C
<b>12 Core</b>					
MUF-12C-0015	1.5	17.5	380	-25	-25C
MUF-12C-0025	2.5	19.5	510	-25	-32C
<b>19 Core</b>					
MUF-19C-0015	1.5	20.5	565	-32	-32C
MUF-19C-0025	2.5	23.0	765	-32	-32C
<b>27 Core</b>					
MUF-27C-0015	1.5	25.0	795	-32	-32C
MUF-27C-0025	2.5	28.0	1095	-40	-40C
<b>37 Core</b>					
MUF-37C-0015	1.5	28.0	1050	-40	-40C
MUF-37C-0025	2.5	31.5	1450	-40	-50SC

For further technical information please refer to page 6:56.

# Technical Information – IEC60092 Marine Cables (continued)

## MultiCore Cables

Continuous current ratings for groups of circuits (up to 6 cables bunched) for twin and multicore XLPE or EPR insulated cables, run open or enclosed, and are also applicable to mica taped fire resistant types.

### CURRENT RATINGS

Nominal Conductor Area	Twin Cables			Three & Four Core Cables	
	Current Rating Single Phase a.c. or d.c.	Voltage Drop Per Ampere Per Metre		Current Rating Three Phase a.c.	Voltage Drop Per Ampere Per Metre
		d.c.	Single Phase a.c.		
mm <sup>2</sup>	A	mV	mV	A	mV
1.0	14	54	54	12	47
1.5	18	35	35	15	30
2.5	25	18	18	21	16
4.0	34	12	12	29	10
6.0	43	7.8	7.8	36	6.7
10	60	4.6	4.6	50	4.0
16	81	2.7	2.7	67	2.3
25	105	1.7	1.7	89	1.5
35	135	1.2	1.2	105	1.1
50	165	0.98	1.0	135	0.89
70	200	0.68	0.70	170	0.64
95	250	0.49	0.53	205	0.50
120	290	0.39	0.43	240	0.44
150	330	0.31	0.36	270	0.38
185	370	0.25	0.32	305	0.34
240	445	0.19	0.27	365	0.31
300	505	0.15	0.24	415	0.29

Where more than six cables are bunched, a rating factor of 0.85 should be applied to the current rating.

For ambient temperatures other than 45°C, the following rating factors should be applied:

Ambient air temp °C	35	40	45	50	55	60	65	70	75	80
Rating factor	1.11	1.05	1.0	0.94	0.88	0.82	0.75	0.67	0.58	0.47