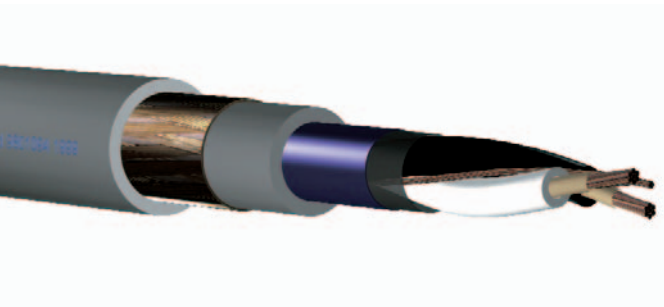


Instrumentation and communication cables

HXXMB-FR EEP 0.6/1 kV IEC 60092-3

Overall shielded*



Application:

Armored overall shielded fire resistant instrumentation and communication cables 0.6/1 kV with special properties for electrical installations in ships and offshore units. Temperature Class 85 °C, Flame Retardant (IEC 60332-3 category "A", "A/F"), Low Smoke, Halogen Free, Low Toxicity and Fire Resistant (IEC 60331 950 °C). Suitable for application in cold climate areas required to pass cold bend and cold impact testing at -40 °C and -35 °C, respectively.

Construction:

According to IEC 60092-3 with enhanced properties.

Conductors:	stranded bare annealed copper, IEC 60 228, sizes 1 to 2.5 mm ²
Insulation:	mica tape, and cross linked polyethylene (XLPE/HF XLPE) according to IEC 60092-3, IEC 60092-351 and IEEE Std 45
Twisting:	cores twisted to a pair/triad/quad
Overall shield:	tinned copper drain wire; aluminum/polyester tape; polyester tape
Innersheath:	halogen free, flame retardant (SHF1, IEC 60092-359)
Braiding:	bronze wires according to IEEE Std 45, CDA 220, weight coverage 90% on nominal diameter according to IEC 60092-3, wire diameter 0.32 - 0.40 mm
Sheathing:	halogen free, flame retardant (SHF1, IEC 60092-359); all sheath and jacketing materials shall pass tear resistance testing to 35 lbs/in (6.4 N/mm)
Sheathing color:	gray (other colors are available on request)

Identification of the groups:

1 pair	black, white
1 triad	black, white, red
1 quad	black, white, red, green

Special cable properties:

Fire propagation:	IEC 60332-3 category "A", "A/F"
Fire resistance:	IEC 60331 950 °C
Smoke:	IEC 61034-1/2, MIL-C-24643A (par. 4.7.27) and NES 711
Acidity:	IEC 60754-1/2 and MIL-C-24643A (par. 4.7.25)
Halogen content:	IEC 60754-1/2 and MIL-C-24643A (par. 4.7.26)
Toxicity index:	NES 713
Cold properties:	cold bend (-40 °C) and cold impact (-35 °C) according to CAN/CSA-C22.2 No. 0.3-Dec. '92

*Remark: Other constructions available on request.

General data for HXXMB-FR Overall shielded EEP 0.6/1 kV IEC 60092-3

number of cores and nominal cross sectional area (n x mm ²)	number of wires in conductor class 2 (n)	nominal conductor diameter (mm)	nominal core diameter (mm)	nominal diameter over inner-sheath (inches)	nominal diameter over inner-sheath (mm)	nominal diameter of braiding wire (mm)	nominal outer diameter (inches)	nominal outer diameter (mm)	minimum bending radius (mm)	approximate weight (lbs/M')	approximate weight (kg/km)	conductor resistance at 20 °C DC (Ω/M')	conductor resistance at 20 °C DC (Ω/km)
1 x 2 x 1	7	1.3	3.8	0.406	10.3	0.32	0.559	14.2	85	195	290	5.6	18.5
1 x 3 x 1	7	1.3	3.8	0.429	10.9	0.32	0.583	14.8	89	215	320	5.6	18.5
1 x 2 x 1.5	7	1.6	4.1	0.429	10.9	0.32	0.579	14.7	88	208	310	3.7	12.3
1 x 3 x 1.5	7	1.6	4.1	0.461	11.7	0.32	0.614	15.6	94	249	370	3.7	12.3
1 x 4 x 1.5	7	1.6	4.1	0.504	12.8	0.32	0.665	16.9	101	280	416	3.7	12.3
1 x 2 x 2.5	7	2.0	4.5	0.472	12.0	0.32	0.622	15.8	95	269	400	2.30	7.56

Electrical characteristics for HXXMB-FR Overall shielded EEP 0.6/1 kV IEC 60092-3

cross section of the conductor (mm ²)	mutual capacitance core to core (nF/M')	mutual capacitance core to core (nF/km)	mutual capacitance core to shield (nF/M')	mutual capacitance core to shield (nF/km)	loop inductance (mH/M')	loop inductance (mH/km)	loop inductance (mH/M')	loop inductance (mH/km)
	pair, triad & quad	pair, triad & quad	pair, triad & quad	pair, triad & quad	pair & triad	pair & triad	quad	quad
1	20	66	35	115	0.24	0.80	-	-
1.5	22	73	38	124	0.23	0.76	0.27	0.90
2.5	25	82	42	138	0.21	0.70	-	-