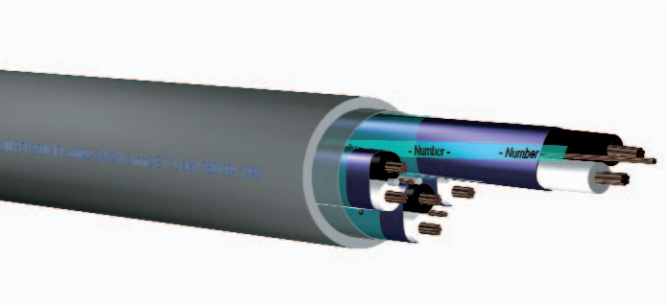
Instrumentation and communication cables

HXXM EEP 250 V IEC 60092-3

Individually shielded and isolated*



Application:

Unarmored, individually shielded and isolated instrumentation and communication cables 250 V 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. 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 60228, sizes 1 - 4 mm^2
Insulation:	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
Individual shield and isolation:	tinned copper drain wire; aluminum/polyester tape; polyester tape
Assembly:	shielded pairs/triads cabled together
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
multi pairs	black, white (groups sequential numbered 1-1, 2-2, 3-3 etc.)
1 triad	black, white, red
multi triads	black, white, red (groups sequential numbered 1-1-1, 2-2-2, 3-3-3, etc.)

Special cable properties:

Fire propagation:	IEC 60332-3 category "A", "A/F"
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 HXXM Individually shielded and isolated EEP 250V IEC 60092-3

number of cores and nominal cross sectional area (n x mm²)	number of wires in conductor class 2 (n)	nominal conductor diameter (mm)	nominal core diameter (mm)	nominal outer diameter (inches)	nominal outer diameter (mm)	minimum bending radius (mm)	approxi-mate weight (lbs/M')	approxi-mate 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	3.1	0.350	8.9	45	57	85	5.6	18.5
2 x 2 x 1	7	1.3	3.1	0.567	14.4	86	202	300	5.6	18.5
4 x 2 x 1	7	1.3	3.1	0.673	17.1	103	296	440	5.6	18.5
7 x 2 x 1	7	1.3	3.1	0.748	19.0	114	336	500	5.6	18.5
10 x 2 x 1	7	1.3	3.1	0.984	25.0	150	504	750	5.6	18.5
12 x 2 x 1	7	1.3	3.1	1.047	26.6	160	571	850	5.6	18.5
16 x 2 x 1	7	1.3	3.1	1.185	30.1	181	739	1,100	5.6	18.5
19 x 2 x 1	7	1.3	3.1	1.209	30.7	184	806	1,200	5.6	18.5
1 x 2 x 1.5	7	1.6	3.4	0.371	9.4	57	67	100	3.7	12.3
2 x 2 x 1.5	7	1.6	3.4	0.606	15.4	92	235	350	3.7	12.3
5 x 2 x 1.5	7	1.6	3.4	0.799	20.3	122	363	540	3.7	12.3
12 x 2 x 1.5	7	1.6	3.4	1.130	28.7	172	659	980	3.7	12.3
12 x 2 x 2.5	7	2.0	3.8	1.272	32.3	194	853	1.270	2.30	7.56
2 x 2 x 4	7	2.5	4.6	0.787	20.0	120	356	530	1.43	4.70
1 x 3 x 1	7	1.3	3.1	0.369	9.4	47	67	100	5.6	18.5
1 x 3 x 1.5	7	1.6	3.4	0.392	10.0	50	87	130	3.7	12.3
10 x 3 x 1.5	7	1.6	3.4	1.240	31.5	189	806	1,200	3.7	12.3
16 x 3 x 1.5	7	1.6	3.4	1.449	36.8	221	1,062	1,580	3.7	12.3

Electrical characteristics for HXXM Individually shielded and isolated EEP 250 V IEC 60092-3

cross section of the conductor (mm²)	mutual capacitance core to core (nF/M') pair & triad	mutual capacitance core to core (nF/km) pair & triad	mutual capacitance core to shield (nF/M') pair & triad	mutual capacitance core to shield (nF/km) pair & triad	loop inductance (mH/M') pair & triad	loop inductance (mH/km) pair & triad
1	19	63	33	108	0.22	0.72
1.5	21	70	37	121	0.21	0.68
2.5	24	79	41	136	0.20	0.64
4	25	82	43	142	0.19	0.62