

SIENOPYR FR MXHX FE120 0,6/1 kV

Fire resistant power cables for ships and offshore units



Application

For fixed installation on ships and offshore units in all locations and on open decks. Special measures, e.g. screening are necessary for installation of unarmoured cables in radio stations or above the upper metallic deck. The cables are not suitable for continuous use in water.

Global data

Brand	SIENOPYR FR
Type designation	MXHX
Standard	IEC 60092-353

Design features

Conductor	Copper, round stranded acc. to IEC 60228 class 2 (class 5 on request)
Insulation	halogen free, ceramized special-elastomere insulation compound S95
Core identification	Core identification according to IEC 60092-353 MXHX: 1-core: brown; 2 core: blue, brown 3-core: brown, black, grey 4-core: blue, brown, black, grey 5 and multicore: white with black numbers MXHX-J: 1-core: gn-ye 3-core: gn-ye, blue, brown 4-core: gn-ye, brown, black, grey 5 and multicore: white with black numbers, one core gn-ye
Inner covering	Halogen free, flame retardant compound
Outer sheath	Polyolefine compound, type SHF-1, according to IEC 60092-360, color orange

Electrical parameters

Rated voltage	0.6/1 kV (600/1000V)
Max. permissible operating voltage AC	1.2 kV
Max. permissible operating voltage DC	1.8 kV
AC test voltage	3.5 kV
Current Carrying Capacity description	The definitions in IEC 60092-201 apply.

Chemical parameters

Smoke emission	according to IEC 61034
Acidity of fire gases	according to IEC 60754-2
Resistance to fire	according to IEC 60331-1 resp. IEC 60331-2 120min.
Flame propagation	according to IEC 60332-3-22
Flame propagation	according to IEC 60332-1-2

Thermal parameters

Max. permissible temperature at conductor	90 °C
Max. short circuit temperature of the conductor	250 °C
Ambient temperature for fix installation min.	-35 °C
Laying temperature min.	-15 °C

Mechanical parameters

Max. tensile load on the conductor	50 N/mm ²
Min. bending radius	6 x D

Number of cores x cross section	Art. Des. O/J	Part number	MLFB Number	Outer diameter max. mm	Bending radius fixed min. mm	Weight (ca.) kg/km	Permissible tensile force max. N	Current carrying capacity (1) A
MHXH FE120 1 core								
1 x 4			5BG7 703	7	28	80	200	51
1 x 6			5BG7 704	7.5	30	100	300	52
1 x 10			5BG7 705	8.5	34	150	500	72
1 x 16			5BG7 706	9.5	38	210	800	96
1 x 25		20165130	5BG7 707	11.1	45	305	1250	127
1 x 35		20165131	5BG7 708	12.3	50	410	1750	157
1 x 50		20165132	5BG7 710	13.8	56	540	2500	196
1 x 70		20165133	5BG7 711	15.7	63	750	3500	242
1 x 95		20165134	5BG7 712	18	72	1020	4750	293
1 x 120			5BG7 713	19.8	80	1260	6000	339
MHXH FE120 2 cores								
2 x 1.5		20001925	5BG7 012	9.9	40	115	150	20
2 x 2.5		20165135	5BG7 013	10.8	44	145	250	26
2 x 4			5BG7 014	12	48	170	400	34
2 x 6			5BG7 015	13.5	54	215	600	44
2 x 10			5BG7 016	15.5	62	310	1000	61
2 x 16			5BG7 017	17.5	70	450	1600	82
MHXH FE120 3 cores								
3 x 1.5		20001926	5BG7 022	10.5	42	125	225	16
3 x 2.5		20001927	5BG7 023	11.9	48	165	375	21
3 x 4		20165136	5BG7 024	12.8	52	225	600	28
3 x 6		20001928	5BG7 025	14.2	57	290	900	36
3 x 10		20001929	5BG7 026	16.6	67	430	1500	50
3 x 16		20001930	5BG7 027	18.9	76	630	2400	67
3 x 25		20001972	5BG7 737	23.9	96	1210	3750	89
3 x 35		20001973	5BG7 738	27.2	164	1570	5250	110
3 x 50		20001974	5BG7 740	30.6	184	2060	7500	137
3 x 70		20001975	5BG7 741	34.7	209	2820	10500	169
3 x 95		20165137	5BG7 742	39.5	237	3830	14250	205
3 x 120		20001976	5BG7 743	43	258	4670	18000	237
MHXH-J FE120 3 cores with gn/ye								
3 x 1.5	-J	20001931	5BG7 032	10.5	42	125	225	16
3 x 2.5	-J	20001932	5BG7 033	11.9	48	165	375	21
3 x 4	-J		5BG7 034	12.8	52	225	600	28
3 x 6	-J		5BG7 035	14.2	57	290	900	36
3 x 10	-J		5BG7 036	16.6	67	430	1500	50
3 x 16	-J		5BG7 037	18.9	76	630	2400	67
MHXH FE120 4 cores								
4 x 1.5		20001933	5BG7 042	12	48	158	300	16
4 x 2.5		20165138	5BG7 043	13	52	207	500	21
4 x 4		20165139	5BG7 044	14	56	285	800	28
4 x 6		20165140	5BG7 045	15.5	62	380	1200	36
4 x 10		20165191	5BG7 046	18	72	565	2000	50
4 x 16		20165192	5BG7 047	21	84	830	3200	67
4 x 25		20026222	5BG7 757	26.7	161	1520	5000	89

Number of cores x cross section	Art. Des. O/J	Part number	MLFB Number	Outer diameter max. mm	Bending radius fixed min. mm	Weight (ca.) kg/km	Permissible tensile force max. N	Current carrying capacity (1) A
4 x 35		20165193	5BG7 758	30	180	1980	7000	110
4 x 50		20165194	5BG7 760	33.5	201	2640	10000	137
4 x 70			5BG7 761	38	228	3560	14000	169
MHXH-J FE120 4 cores with gn/ye								
4 x 1.5	-J		5BG7 052	12	48	158	300	16
4 x 2.5	-J		5BG7 053	13	52	207	500	21
4 x 4	-J		5BG7 054	14	56	285	800	28
4 x 6	-J	20008563	5BG7 055	15.5	62	380	1200	36
4 x 10	-J		5BG7 056	18	72	565	2000	50
4 x 16	-J		5BG7 057	21	84	830	3200	67
MHXH FE120 5 and multicores								
5 x 1.5		20001934	5BG7 062	12.9	52	195	375	14
5 x 2.5		20165195	5BG7 063	14	56	255	625	18
7 x 1.5		20001935	5BG7 072	14.1	57	240	525	10
12 x 1.5		20001977	5BG7 792	18.8	76	405	900	9
14 x 1.5		20001978	5BG7 593	19.7	79	460	1050	8
16 x 1.5			5BG7 794	20.5	82	550	1200	8
19 x 1.5		20001979	5BG7 795	22	88	605	1425	7
24 x 1.5		20001980	5BG7 796	25.5	153	800	1800	7
MHXH-J FE120 5 and multicores with gn/ye								
5 x 1.5	-J		5BG7 066	12.9	52	195	375	14
5 x 2.5	-J		5BG7 067	14	56	255	625	18
7 x 1.5	-J		5BG7 076	14.1	57	240	525	10

(1) The values are for continuous load at 45 °C ambient temperature and laying of max. 6 cables in horizontal arrangement, tightly packed, free air circulation around the cable bundle.

At ambient temperatures below -15 °C the cables should be subjected to no further mechanical movement than normal ship's vibrations