

## SIENOPYR FR MHXCH 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	MHXCH
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 MHXCH: 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 MHXCH-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
Screen	Plain copper wire braid
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 60332-1-2
Flame propagation	according to IEC 60332-3-22

### 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 <sup>2</sup>
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
<b>MHXCH FE120 1 core</b>								
1 x 4			5BG7 503	8.2	50	120	200	51
1 x 6			5BG7 504	8.8	53	145	300	52
1 x 10		20001938	5BG7 505	9.6	58	195	500	72
1 x 16		20001939	5BG7 506	10.6	64	265	800	96
1 x 25		20001940	5BG7 507	12.2	74	390	1250	127
1 x 35		20001941	5BG7 508	13.5	81	485	1750	157
1 x 50		20001942	5BG7 510	15.3	92	660	2500	196
1 x 70			5BG7 511	17.5	105	880	3500	242
1 x 95		20001943	5BG7 512	19.3	116	1180	4750	293
1 x 120			5BG7 513	21.2	128	1420	6000	339
<b>MHXCH FE120 2 cores</b>								
2 x 1.5		20001944	5BG7 521	13.3	80	245	150	20
2 x 2.5		20001945	5BG7 522	14.1	85	290	250	26
2 x 4			5BG7 523	15.5	93	380	400	34
2 x 6			5BG7 524	17	102	465	600	44
2 x 10			5BG7 525	19	114	615	1000	61
2 x 16			5BG7 526	21	126	810	1600	82
<b>MHXCH FE120 3 cores</b>								
3 x 1.5		20001950	5BG7 531	13.8	83	270	225	16
3 x 2.5		20001951	5BG7 532	14.7	89	322	375	21
3 x 4		20001952	5BG7 533	16.7	101	445	600	28
3 x 6		20001953	5BG7 534	18	108	545	900	36
3 x 10		20001954	5BG7 535	20	120	730	1500	50
3 x 16		20001955	5BG7 536	22.3	134	980	2400	67
3 x 25		20001956	5BG7 537	25.7	155	1380	3750	89
3 x 35		20001957	5BG7 538	28.5	171	1770	5250	110
3 x 50		20001958	5BG7 540	32.1	193	2300	7500	137
3 x 70		20165126	5BG7 541	35.7	215	3110	10500	169
3 x 95		20115714	5BG7 542	41.5	249	4230	14250	205
3 x 120		20001959	5BG7 543	45.5	273	5150	18000	237
<b>MHXCH-J FE120 3 cores with gn/ye</b>								
3 x 1.5	-J	20001968	5BG7 601	13.8	83	270	225	16
3 x 2.5	-J	20001969	5BG7 602	14.7	89	322	375	21
3 x 4	-J		5BG7 603	16.7	101	445	600	28
3 x 6	-J		5BG7 604	18	108	545	900	36
3 x 10	-J		5BG7 605	20	120	730	1500	50
3 x 16	-J		5BG7 606	22.3	134	980	2400	67
<b>MHXCH FE120 4 cores</b>								
4 x 1.5		20008803	5BG7 551	15.3	92	345	300	16
4 x 2.5		20102350	5BG7 552	16.5	99	415	500	21
4 x 4		20001960	5BG7 553	17.5	105	525	800	28
4 x 6		20001961	5BG7 554	18.8	113	645	1200	36
4 x 10		20001962	5BG7 555	21.5	129	880	2000	50
4 x 16		20165127	5BG7 556	24	144	1200	3200	67

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 25		20037902	5BG7 557	28	168	1740	5000	89
4 x 35			5BG7 558	31	186	2190	7000	110
4 x 50		20165128	5BG7 560	35	210	2860	10000	137
4 x 70			5BG7 561	40	240	3940	14000	169
MHXCH-J FE120 4 cores with gn/ye		20165129	5BG7 562	46	276	5330	19000	205
4 x 1.5	-J	20001970	5BG7 611	15.3	92	345	300	16
4 x 2.5	-J	20001971	5BG7 612	16.5	99	415	500	21
4 x 4	-J		5BG7 613	17.5	105	525	800	28
4 x 6	-J		5BG7 614	18.8	113	645	1200	36
4 x 10	-J		5BG7 615	21.5	129	880	2000	50
4 x 16	-J		5BG7 616	24	144	1200	3200	67
MHXCH FE120 5 and multicores			5BG7 617	28	168	1740	5000	89
5 x 1.5		20001963	5BG7 571	16.5	99	400	375	14
5 x 2.5		20042607	5BG7 572	17.5	105	490	625	18
7 x 1.5		20001936	5BG7 172	16.1	97	360	525	10
12 x 1.5		20001964	5BG7 592	20.6	124	565	900	9
14 x 1.5		20040048	5BG7 593	21.5	129	630	1050	8
16 x 1.5			5BG7 594	22.6	136	700	1200	8
19 x 1.5		20001965	5BG7 595	23.8	143	790	1425	7
24 x 1.5		20001966	5BG7 596	26.3	158	970	1800	7
MHXCH-J FE120 5 and multicores with gn/ye								
5 x 1.5	-J		5BG7 621	16.5	99	400	375	14
5 x 2.5	-J		5BG7 622	17.5	105	490	625	18
7 x 1.5	-J		5BG7 176	16.5	99	360	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