SIENOPYR FR MMGCEGCH FC

Medium voltage motor supply cables for ships and offshore units

Application

The three-core SIENOPYR-FR medium-voltage motor supply cables MMGCEGCH FC have been specially designed for pulse-type static inverter-fed-three-phase AC drives.
For fixed installation on ships and off-shore units in all locations and on open decks. The cables are not suitable for continuous use in water.

Global data

Brand	SIENOPYR FR
Type designation	MMGCEGCH FC
Standard	IEC 60092-354

Design features

Conductor	Copper, round stranded acc. to IEC 60228 class 2 or class 5
Insulation	Ethylen-propylene rubber (EPR) acc. to IEC 60092-360
Electrical field control	Inner and outer layer of semiconductive rubber compound
Core identification	Numerical 1-2-3 imprint on the black outer semi-conductive layer
Individual screen	Copper wires wrapped in a traverse spiral and/or copper tapes. The nominal cross-section of the screening is the sum of all individual core screens.
Inner covering	Polyolefine compound, black
Screen	Plain copper wire braid
Outer sheath	Polyolefine compound, type SHF-1, according to IEC 60092-360

Electrical parameters

Rated voltage	Three-phase AC operation at 50Hz: - Uo/U: 6/10 kV - Umax: 12 kV FC-operation: - Uo/U: 3,6/6 kV - Umax: 7,2 kV FC-operation (for a link voltage of max. 6.8 kV) incl. harmonics: - U: 4,16 kV (fundamental) - Û: max 15 kV
AC test voltage	21 kV
Current Carrying Capacity description	The definitions in IEC 60092-201 apply.

Chemical parameters

Smoke emmission	according to IEC 61034
Acidity of fire gases	according to IEC 60754-2
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/mm²
Min. bending radius	12 x D

Number of cores x cross section	Part number	MLFB Number	Outer diameter max. mm	Bending radius fixed min. mm	Weight (ca.) kg/km	Nom. operating capaci-tance µF/km	Induc-tance nom. mH/ km	Current carrying capacity (1) A
MMGCEGCH FC 3 cores								
3 x 35 /16		5BG3 951	48	576	3850	0.29	0.3	110
3 x 50 /16		5BG3 952	50	600	4360	0.32	0.28	137
3 x 70 /16		5BG3 953	54.5	654	5400	0.37	0.27	169
3 x 95 /16		5BG3 950	58.5	702	6600	0.41	0.26	205
3 x 120 /16	20001770	5BG3 954	62	744	7600	0.45	0.25	237
3 x 150 /25		5BG3 955	67	804	8700	0.48	0.24	272
MMGCEGCH FC 3 cores class 5								
3 x 35F /16		5BG3 966	50	600	3930	0.3	0.3	105
3 x 50F /16		5BG3 961	52	624	4450	0.33	0.28	130
3 x 70F /16		5BG3 962	56.5	678	5510	0.38	0.27	161
3 x 95F /16	20007754	5BG3 963	61.5	738	6730	0.42	0.26	195
3 x 120F /16		5BG3 964	64	768	7750	0.46	0.25	225
3 x 150F /25		5BG3 965	69	828	8870	0.5	0.24	258

F = flexible conductor, stranded copper, class 5 acc. to IEC 60228
(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