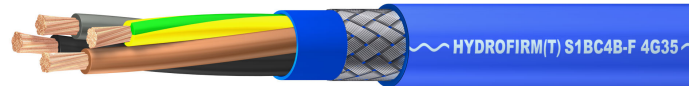


HYDROFIRM(T) EMV-FC S1BC4B-F



Application

HYDROFIRM(T) rubber-sheathed cables S1BC4B-F are intended for connection of electrical equipment in water and for medium mechanical stresses, e.g. submersible pumps, lowering of water level and booster plants. Especially for frequency converter controlled AC drives and if considerable demands in respect of electromagnetic compatibility (EMC) according to the EMC directive imposes. For an effective shielding both ends of cable must have a good shield contact to ground. These cables are also suitable for use in drinking water, cooling water, surface water, rainwater. They further can be used in groundwater and seawater (salt water) up to 2000 m water depth. The outer sheath fulfills the requirements of health according to the "Elastomerleitlinien (ELL)" of the German "Umwelt Bundesamt" and the Attestation de Conformité Sanitaire (ACS) according to the French law. When corrosive water is involved, or water of some other special compositions must be investigated in each individual case. They may not be used in water containing more than 0,5 mg/l of chlorine. These cables can be used indoors, outdoors, in industrial and agricultural plant, but not in explosion-hazard areas. In other respects the specifications of DIN EN 50565-2 apply.

Global data

Brand	HYDROFIRM(T)
Type designation	S1BC4B-F
Standard	Based on EN 50525-2-21

Notes on installation

Maximum Submersing Depth	2000 Meter
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Design features

Conductor	Plain copper, finely stranded class 5 in accordance with DIN EN 60228 / IEC 60228
Insulation	Ozone, water and weather resistant insulation compound, base EPR (Ethylene-Propylene Rubber)
Core identification	up to 5 cores: colored in accordance with DIN VDE 0293-308 more than 5 cores: DIN EN 50525-1 Annex D
Screen	Braid of tinned copper wires Maximum transfer impedance 30Ω/km at 30MHz
Outer sheath	EPR special compound type EM6 according to DIN EN 50363-2-1:2006-10; water resistant; Compound 3G357
Outer sheath colour	Blue

Electrical parameters

Rated voltage	0.6/1 kV (600/1000V)
Max. permissible operating voltage AC	0.7/1.2 kV
Max. permissible operating voltage DC	0.9/1.8 kV
AC test voltage - main cores	5 kV (5 Min.)

Chemical parameters

Water resistance	DIN EN 50525-2-21
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Thermal parameters

Max. permissible temperature at conductor	90 °C
Max. short circuit temperature of the conductor	250 °C
Max. permissible water temperature	60 °C (At higher water temperatures, a shortened cable service life is to be expected)
Ambient temperature for fix installation min.	-50 °C
Ambient temp. in fully flex. operation min.	-50 °C

Number of cores x cross section	Part number	Conductor diameter max. mm	Outer diameter min. mm	Outer diameter max. mm	Bending radius fixed min. mm	Bending radius free moving min. mm	Weight (approx.) kg/km	Conductor resistance at 20°C max. Ω/km	Current carrying capacity in water A	Short Circuit Current (conductor) max. (1s) kA
3x1,5/1,5 KON		1.6	9.5	11.1	33	44	171	13.3	29	0.21
3x2,5/2,5 KON	20026461	2	10.5	12.1	48	61	225	7.98	38	0.36
3x4/4 KON	20040091	2.4	11.8	13.4	54	67	304	4.95	52	0.57
3x6/6 KON	20006934	2.9	13.6	15.2	61	76	382	3.3	67	0.86
3x10/10 KON		3.9	17.8	19.8	79	99	680	1.91	93	1.43
3x16/16 KON	20006935	5	20.9	22.9	92	115	1016	1.21	125	2.29
3x25+3G16/3		6.3	25.3	28.3	113	142	1448	0.7839	165	3.58
3x35+3G16/3	20036153	7.5	28.3	31.3	125	157	1845	0.554	205	5.01
3x50+3G25/3	20194972	8.9	33.2	36.2	145	181	2582	0.386	255	7.15
3x70+3G35/3	20169250	10.7	38.7	41.7	167	209	3560	0.272	316	10.01
3x95+3G50/3	20096401	12.3	43.7	47.7	191	239	4560	0.206	380	13.59
3x120+3G70/3	20157144	14.3	48.8	51.8	207	259	5685	0.161	445	17.16

Current carrying capacity in water: The values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30 °C ambient water temperature, two or three cores loaded (cable compete immersed in water).