

HYDROFIRM(T) S07BBH2-F



Application

HYDROFIRM(T) rubber-sheathed cables S07BBH2-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. 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. For protected, fixed installation within equipment, pipes or wells, as well as for rotor connections, these cables may be operated with an AC voltage to 1000 V or a DC voltage to 750 V with respect to earth. The permissible AC voltage for motor tests is 3 kV for a maximum duration of 3 minutes. In other respects the specifications of DIN EN 50565-2 apply.

Global data

| | |
|------------------|-------------------|
| Brand | HYDROFIRM (T) |
| Type designation | S07BBH2-F |
| Model | Flat |
| Standard | DIN EN 50525-2-21 |

Notes on installation

| | |
|--------------------------|------------|
| Maximum Submersing Depth | 2000 Meter |
|--------------------------|------------|

Design features

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|---------------------|---|
| 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) |
| Color code | up to 5 cores: colored in accordance with DIN VDE 0293-308 more than 5 cores: DIN EN 50525-1 Annex D |
| Outer sheath | EPR special compound type EM6 according to DIN EN 50363-2-1; water resistant; Compound 3G357 |
| Outer Sheath Colour | Blue |

Electrical parameters

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|---------------------------------------|------------------|
| Rated voltage | 450/750V |
| Max. permissible operating voltage AC | 0.476/0.825 kV |
| Max. permissible operating voltage DC | 0.619/1.238 kV |
| AC Test Voltage | 2.5 kV (15 Min.) |

Chemical parameters

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|---------------------------------|--|
| Compatibility to drinking water | ELL - (Elastomerleitlinie of Umwelt Bundesamt) Germany ACS - France |
| Water resistance | DIN EN 50525-2-21 |

Thermal parameters

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|---|--|
| 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 | MLFB Number | Min. Height (for flat cable) mm | Max. Height (for flat cable) mm | Min. Width (for flat cable) mm | Max. Width (for flat cable) mm | Bending radius fixed min. mm | Bending radius free moving min. mm | Weight (approx.) kg/km | Permissible tensile force max. N | Current carrying capacity free in air (2) A | Current carrying capacity in water A | Short Circuit Current (conductor) kA |
|---------------------------------|-------------|-------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|------------------------------|------------------------------------|------------------------|----------------------------------|---|--------------------------------------|--------------------------------------|
| 3x1,5 | 20055073 | 5DH1502 | 6 | 7.5 | 12.5 | 14 | 23 | 23 | 120 | 68 | 24 | 29 | 0.21 |
| 3x2,5 | 20003747 | 5DH1503 | 7 | 8.5 | 14.5 | 16.5 | 26 | 34 | 185 | 113 | 32 | 38 | 0.36 |
| 3x4 | 20003748 | 5DH1504 | 8 | 9.5 | 17 | 19 | 29 | 38 | 260 | 180 | 43 | 52 | 0.57 |
| 3x6 | 20007918 | 5DH1505 | 9 | 10.5 | 19 | 21.5 | 32 | 42 | 333 | 270 | 56 | 67 | 0.86 |
| 3x10 | 20003750 | 5DH1506 | 12.5 | 14.5 | 25 | 28 | 58 | 73 | 581 | 450 | 78 | 93 | 1.43 |
| 3x16 | 20003751 | 5DH1507 | 14.5 | 17 | 31 | 34 | 68 | 85 | 863 | 720 | 104 | 125 | 2.29 |
| 3x25 | 20003752 | 5DH1508 | 17 | 19 | 36.5 | 40 | 76 | 95 | 1300 | 1125 | 138 | 165 | 3.56 |
| 3x35 | 20003753 | 5DH1510 | 19 | 21.5 | 42 | 45.5 | 86 | 108 | 1643 | 1575 | 171 | 205 | 5 |
| 3x50 | 20003754 | 5DH1511 | 22 | 24 | 48.5 | 53 | 96 | 120 | 2245 | 2250 | 213 | 255 | 7.15 |
| 3x70 | 20003755 | 5DH1512 | 24 | 26.5 | 54.5 | 59 | 106 | 133 | 2990 | 3150 | 263 | 316 | 10 |
| 3x95 | 20041041 | 5DH1513 | 25.4 | 27.9 | 57 | 61.5 | 112 | 140 | 3740 | 4275 | 317 | 380 | 13.59 |
| 3x120 | 20003756 | 5DH1514 | 27.6 | 30.1 | 62.4 | 66.9 | 120 | 151 | 4530 | 5400 | 371 | 445 | 17.16 |
| 3x240 | | 5DH1517 | 38.3 | 40.3 | 87 | 92 | 161 | 202 | 8904 | 10800 | 576 | 691 | 34.32 |
| 4G1,5 | 20003758 | 5DH1522 | 6 | 7.5 | 16 | 18.5 | 23 | 23 | 167 | 90 | 24 | 29 | 0.21 |
| 4G2,5 | 20003759 | 5DH1523 | 7 | 8.5 | 19 | 21.5 | 26 | 34 | 240 | 150 | 32 | 38 | 0.36 |
| 4G4 | 20003760 | 5DH1524 | 8 | 9.5 | 22.5 | 25.5 | 29 | 38 | 337 | 240 | 43 | 52 | 0.57 |
| 4G6 | 20003761 | 5DH1525 | 9.5 | 10.5 | 25.5 | 29 | 32 | 42 | 448 | 360 | 56 | 67 | 0.86 |
| 4G10 | 20003762 | 5DH1526 | 12.5 | 14.5 | 33 | 36.5 | 58 | 73 | 791 | 600 | 78 | 93 | 1.43 |
| 4G16 | 20003763 | 5DH1527 | 14.5 | 17 | 41 | 44.5 | 68 | 85 | 1162 | 960 | 104 | 125 | 2.29 |
| 4G25 | 20003764 | 5DH1528 | 17.5 | 20 | 49 | 53.5 | 80 | 100 | 1698 | 1500 | 138 | 165 | 3.56 |
| 4G35 | 20003765 | 5DH1530 | 19.5 | 22 | 56.5 | 60.5 | 88 | 110 | 2293 | 2100 | 171 | 205 | 5 |
| 4G50 | 20003766 | 5DH1531 | 22.5 | 25 | 66.5 | 69.5 | 100 | 125 | 3054 | 3000 | 213 | 255 | 7.15 |
| 4G70 | 20003767 | 5DH1532 | 25 | 28 | 73 | 77.5 | 112 | 140 | 4200 | 4200 | 263 | 316 | 10 |
| 4G95 | 20008720 | 5DH1533 | 27.5 | 29.5 | 78 | 82 | 118 | 148 | 5260 | 5700 | 317 | 380 | 13.59 |
| 4G150 | 20048350 | 5DH1535 | 32 | 35 | 96 | 100 | 140 | 175 | 8550 | 9000 | 425 | 510 | 21.45 |

(2) Current carrying capacity free in air: The values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30 °C ambient temperature, two or three cores loaded, multi-core cables all cores loaded (see also DIN VDE 298-4).

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, multi-core cables all cores loaded (cable complete immersed in water).

x = without ye/gn core; G = with ye/gn core