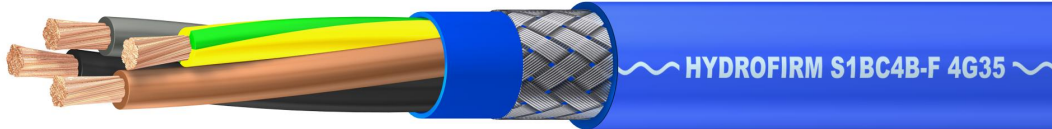


## HYDROFIRM (T) SCREENED

**SIEMENS**  
Flexible cables

### Flexible Cables for use Underwater and for Submersible Pumps



#### APPLICATION

- ~ Submersible pumps in boreholes, mining, irrigation dams, reticulation systems
- ~ Ponds and fountains
- ~ For fresh, salt & lightly polluted water (60°C)
- ~ Underwater and marine installations
- ~ Sub zero installations (-40°C)
- ~ De-watering & drainage systems
- ~ Pumps with thermistors
- ~ Flexible marina power supplies
- ~ Suitable for depths up to 500mts

#### OPERATING TEMPERATURE

- Minimum permissible ambient temperature -40°C
- Maximum permissible conductor temperature 90°C
- Maximum permissible short circuit temperature 250°C
- Minimum ambient temperature for optimum fully flexible operation -25°C

#### MINIMUM BENDING RADII

- The following minimum bending radii should be observed to ensure operating reliability.
- For fixed installation 4 x cable diameter
  - When freely flexing 5 x cable diameter

#### CURRENT CARRYING CAPACITY

Current ratings are based on continuous operation at an ambient temperature of 40°C. At other temperatures these values must be converted using the following table.

| °C     | 15   | 20   | 25   | 30  | 35   | 40 | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   |
|--------|------|------|------|-----|------|----|------|------|------|------|------|------|------|------|
| Factor | 1.26 | 1.20 | 1.15 | 1.1 | 1.05 | 1  | 0.94 | 0.88 | 0.81 | 0.73 | 0.65 | 0.57 | 0.47 | 0.34 |

#### DESIGN

HYDROFIRM (T) SCREENED cables consist of finely stranded copper conductors laid up to provide a flexible design. R-EP-90 elastomer insulation enables improved current capacities and a specially compounded EPR sheath inhibits water absorption. A hand stripable bond between insulation and inner sheath stops any moisture migration along the insulated conductors should the sheath be damaged. Between the inner and outer EPR sheaths there is an overall copper screen. HYDROFIRM (T) is suitable for water temperatures up to 60°C and is designed and approved for use in drinking water eg., mineral spring and spa pumps. For particularly aggressive liquids refer to OZOFLEX (PLUS) and PROTOMONT HD. The sheath colour is blue for identification. The cable is in accordance with the Australian Standard AS 1125, AS 3116, AS 3191 and DIN VDE 0282 pt 810.

#### VOLTAGE RATING

- Rated Voltage:  $U_0/U = 0.6/1kV$
  - Maximum operating voltages in:
    - 3 phase AC operation  $U_0/U = 0.7/1.15kV$
    - DC operation  $U_0/U = 0.9/1.73kV$
  - AC test voltage = 2.5kV
- The cable is designated 450/750V with E11 insulation compound in accordance with VDE/IEC and meets or exceeds the Australian Standard AS 3116 for the voltage rating of 0.6/1kV, R-EP-90.

#### CORE COLOUR IDENTIFICATION

- 4 Core - blue, brown, black and green/yellow
- Pilot Core - black

#### TENSILE STRENGTH

The maximum allowable tensile stress is 15 N/mm<sup>2</sup>. This ensures no conductor damage will occur in operation.

| Part No. | Number of Cores x Conductor Size mm <sup>2</sup> | Approx. No of Strands x Max. Strand Diameter mm | Diameter of each Conductor (Approx) mm | Cable Overall Diameter |        | Cable Weight kg/km | Current Carrying Capacity |                    |
|----------|--|---|--|------------------------|--------|--------------------|---------------------------|--------------------|
|          |  |   |  | Min mm                 | Max mm |                    | free in air A             | direct installed A |
| 5DH1 401 | 4G1.5  | 28 x 0.26                                       | 1.5                                    | 13                     | 15     | 260                | 20                        | 19                 |
| 5DH1 751 | 4G2.5  | 45 x 0.26                                       | 1.9                                    | 15.5                   | 18     | 396                | 28                        | 26                 |
| 5DH1 752 | 4G4  | 51 x 0.31                                       | 2.5                                    | 17.5                   | 20     | 525                | 38                        | 35                 |
| 5DH5 634 | 4G6  | 75 x 0.31                                       | 3.2                                    | 19.5                   | 22     | 665                | 48                        | 45                 |
| 5DH1 754 | 4G10   | 77 x 0.41                                       | 4.1                                    | 23.5                   | 26     | 970                | 66                        | 62                 |
| 5DH1 755 | 4G16   | 123 x 0.41                                      | 5.6                                    | 27.5                   | 31     | 1400               | 88                        | 83                 |
| 5DH1 407 | 4G25   | 190 x 0.41                                      | 6.8                                    | 32.5                   | 36     | 2030               | 120                       | 110                |
| 5DH1 408 | 4G35   | 268 x 0.41                                      | 8.1                                    | 36                     | 39.5   | 2610               | 145                       | 135                |
| 5DH1 409 | 4G50   | 384 x 0.41                                      | 9.6                                    | 42                     | 45.5   | 3610               | 180                       | 170                |
| 5DH1 410 | 4G70   | 545 x 0.41                                      | 11.2                                   | 46.5                   | 50     | 4710               | 230                       | 215                |
| 5DH1 411 | 4G95   | 724 x 0.41                                      | 13.2                                   | 53.5                   | 58     | 6340               | 285                       | 265                |
| 5DH1 412 | 4G120  | 926 x 0.41                                      | 14.9                                   | 57.5                   | 62     | 7470               | 330                       | 305                |