

HYDROFIRM TGSH2G



Application

HYDROFIRM rubber-sheathed cables TGSH2G are intended for connection of electrical equipment in hot water and for medium mechanical stresses. These cables are also suitable for use in industrial water, cooling water, surface water, rainwater, groundwater and seawater (salt water) up to 2000 m water depth. When corrosive water is involved, or water of some other special compositions must be investigated in each individual case. These cables can be used indoors, outdoors, in industrial and agricultural plant. Use in workshops having an explosive atmosphere. When a cable is to be used in the presence of explosive or flammable atmospheres, guidance should be sought by reference to EN 60079 series of specifications and guidance should be sought in selecting suitable cables. 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
Type designation	TGSH2G
Standard	Based on EN 50525-2-21

Notes on installation

Maximum Submersing Depth	2000 Meter
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Design features

Conductor	Copper, tinned, finely stranded, class 5 according to DIN EN 60228 / IEC 60228
Insulation	Ozone, weather, heat and water resistant insulation compound, base SIR
Color code	up to 5 cores: colored in accordance with DIN VDE 0293-308
Outer sheath	Ozone, weather, heat, and water resistant special compound, base SIR
Outer Sheath Colour	Black

Electrical parameters

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
Duration of AC test voltage	15 min.

Chemical parameters

Water resistance	DIN EN 50525-2-21
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Thermal parameters

Max. short circuit temperature of the conductor	350 °C (max. 5 s)
Max. permissible water temperature	120 °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	Art. Des. O/J	Part number	MLFB Number	Outer diameter min. mm	Outer diameter max. mm	Bending radius fixed min. mm	Bending radius free moving min. mm	Weight (approx.) kg/km	Permissible tensile force max. N	Current carrying capacity (1) A	Short Circuit Current (conductor) kA
3 x 25	-O		5DH1	27	30	150	120	1352	1125	93	3.65
1 x 10	-O		5DH1	9.8	11	44	33	173	150	55	1.46
3 x 16	-O		5DH1	23.6	25.6	128	102	968	720	70	2.34
1 x 6	-O		5DH1	8.2	8.9	36	27	116	90	39	0.88
3 x 10	-O		5DH1	19.8	21.8	109	87	665	450	53	1.46
1 x 1.5	-O		5DH1	5.7	6.4	19	19	50	23	17	0.22
3 x 6	-O		5DH1	14	15.6	78	62	334	270	38	0.88
1 x 50	-O		5DH1	17	18.5	93	74	670	750	150	7.3
3 x 4	-O		5DH1	12.5	14.1	71	56	252	180	29	0.58
1 x 35	-O		5DH1	14.9	16.4	82	66	485	525	120	5.11
3 x 2.5	-O		5DH1	10.9	12.5	63	50	187	113	21	0.37
1 x 25	-O		5DH1	13.2	14.4	72	58	375	375	97	3.65
3 x 1.5	-O		5DH1	9.4	10.4	42	31	130	68	16	0.22
1 x 16	-O		5DH1	11.5	12.7	64	51	265	240	73	2.34
1 x 70	-O		5DH1	18.6	20.1	101	80	859	1050	185	10.22
4 x 2.5	-J		5DH1	12	13.6	68	54	235	150	21	0.37
4 x 1.5	-J		5DH1	10.1	11.7	47	35	157	90	16	0.22
3 x 4	-J		5DH1	12.5	14.1	71	56	269	180	29	0.58
3 x 2.5	-J		5DH1	10.9	12.5	63	50	197	113	21	0.37
3 x 1.5	-J		5DH1	9.4	10.4	42	31	137	68	16	0.22
3 x 70	-O		5DH1	39.7	42.7	214	171	3289	3150	178	10.22
3 x 50	-O		5DH1	35.6	38.6	193	154	2421	2250	143	7.3
3 x 35	-O		5DH1	30.5	33.5	168	134	1707	1575	115	5.11
4 x 50	-J		5DH1	39.5	42.5	213	170	3034	3000	143	7.3
4 x 70	-J		5DH1	43.5	46.5	233	186	3975	4200	178	10.22
4 x 25	-J		5DH1	29.9	32.9	165	132	1668	1500	93	3.65
4 x 35	-J		5DH1	33.6	36.6	183	146	2184	2100	115	5.11
4 x 10	-J		5DH1	20.9	22.9	115	92	746	600	53	1.46
4 x 16	-J	20162333	5DH1	24.5	27.5	138	110	1124	960	70	2.34
4 x 4	-J		5DH1	14.2	15.8	79	63	335	240	29	0.58
4 x 6	-J		5DH1	15.5	17.5	88	70	428	360	38	0.88

-O = without green/yellow core, -J = with green/yellow core

The values are valid for a multicore cable or three singlecore cables in trefoil in permanent operation with DC or AC with 50 up to 60 Hz at 120 °C ambient temperature, touching a surface, three cores loaded