

GAALSHIP® HF 1000 A FR WSR

Armoured, fire resistant and water spray resistant, power and control cable 0,6/1 kV



ELETTROTEK KABEL® GAALSHIP® HF 1000 A FR WSR



Applications:

FIRE RESISTANT AND WATER SPRAY RESISTANT POWER AND CONTROL CABLES FOR FIXED ELECTRICAL INSTALLATIONS ABOARD SHIPS, SUITABLE FOR THE POWER SUPPLY OF SAFETY-FIRE DEVICES. THESE CABLES PREVENT THE CABLE SHORT-CIRCUIT DUE TO WATER SPRAYS OF FIRE FIGHTERS' HYDRANTS USED DURING THE FIRE, ALLOWING THE CONTINUOUS OPERATION OF THESE DEVICES.

Construction:

| | |
|-----------------------------------|--|
| CONDUCTOR: | PLAIN ANNEALED COPPER OR TINNED ANNEALED COPPER CONDUCTOR CL. 2 FLEXIBLE UP TO 10 mm ² CL. 5 FROM 16 mm ² , ACC. TO EN IEC 60228 |
| INSULATION: | MICA GLASS TAPE + GAALTHERM® 597 |
| CORES COLOR: | ACC. TO DIN VDE 0293-308, HD 308 S2 FROM 6 CORES BLACK CORES WITH CONSECUTIVE NUMBERS ACC. TO EN 50334 GREEN-YELLOW EARTH-WIRE FROM 3 CORES |
| INNER SHEATH (IF ANY): | HALOGEN FREE COMPOUND OR SYNTHETIC TAPE |
| 1ST WRAPPING: | GLASS FIBER TAPE |
| 2ND WRAPPING: | TWO PLAIN ANNEALED COPPER / POLYESTER TAPES |
| 3RD WRAPPING: | GLASS FIBER TAPE |
| ARMOUR: | PLAIN OR TINNED ANNEALED COPPER WIRES BRAID ACC. TO IEC 60092-350 |
| OUTER SHEATH: | HALOGEN FREE THERMOPLASTIC COMPOUND TYPE SHF1, ACC. TO IEC 60092-360, THICKNESS ACC. TO IEC 60092-353 |
| MARKING: | ELETTROTEK KABEL® GAALSHIP® HF 1000 A FR WSR, CROSS NOMINAL SECTION SQMM, 0,6/1 kV, PART N°, IEC 60092-353, IEC 60332-3-22, IEC 60331, BS 8491, PRODUCTION PLANT, BATCH N°, PRODUCTION DATE, CE ROHS, PROGRESSIVE METER MARKING. |

Technical data:

| | |
|---------------------------------------|----------------------------|
| NOMINAL VOLTAGE: | U ₀ /U 0,6/1 kV |
| TEST VOLTAGE: | 3,5 kV |
| TEMPERATURE RANGE: | -40°C UP TO +90°C |
| INSTALLATION TEMP.: | -5°C |
| SHORT CIRCUIT TEMPERATURE: | +250°C |
| MIN. BENDING RADIUS: | 4 x OUTER DIAMETER |

Type Approvals/Certificates:

RINA /RINAMIL (REGISTRO ITALIANO NAVALE)
BV (BUREAU VERITAS)
LR (LLOYD'S REGISTER)
DNV-GL (DET NORSKE VERITAS - GERMANISHER LLOYD) IN PROGRESS
ABS (AMERICAN BUREAU OF SHIPPING)
OTHER APPROVALS ON REQUEST

Resistance:

| | |
|---|--|
|  | FIRE RESISTANT ACC. TO: IEC 60331-21, IEC 60331-2 (UNDER 20 MM Ø), IEC 60331-1 (OVER 20 MM Ø), EN 50200 ANNEX E WATER SPRAY TEST, BS 8491 WATER JET TEST |
|  | FLAME AND FIRE RETARDANT ACC. TO: EN IEC 60332-1-2, EN IEC 60332-3-22 |
|  | HALOGEN FREE ACC. TO: EN IEC 60754-1/2 |
|  | SMOKE EMISSION PROPERTIES ACC. TO: EN IEC 61034-1/2 |

Features:

SHEATHING AND INSULATING MATERIALS ACC. TO IEC 60092-360
DESIGN GUIDELINES ACC. TO IEC 60092-350/353
CHOICE AND INSTALLATION OF ELECTRIC CABLES ACC. TO IEC 60092-352
COLD BEND TEST AT LOW TEMPERATURES
ACC. TO IEC 60092-350 ART. 8.9 AND ANNEX E (-40°C)
COLD BEND IMPACT AT LOW TEMPERATURES
ACC. TO IEC 60092-350 ART. 8.9 AND ANNEX E (-35°C)
ON REQUEST CLASS 5 CONDUCTOR FOR SECTIONS UP TO 10 mm²

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| Part no. | No. of cores x cross section n x mm ² | Outer sheath color | Outer diameter ca.mm | Copper weight approx. kg/km | Cable weight approx. kg/km | Current rating in open air at 45°C (A) |
|----------------|--|--------------------------|-------------------------|--------------------------------------|-------------------------------------|--|
| 1211G7L010M15 | 1 x 1,5 | BLACK | 7,5 | 49 | 97 | 23 |
| 1211G7L010M25 | 1 x 2,5 | BLACK | 7,9 | 61 | 113 | 30 |
| 1211G7L010M40 | 1 x 4 | BLACK | 8,5 | 79 | 139 | 40 |
| 1211G7L010M60 | 1 x 6 | BLACK | 9,0 | 101 | 166 | 52 |
| 1211G7L010M61 | 1 x 10 | BLACK | 10,1 | 147 | 226 | 72 |
| 1211G7L010M62 | 1 x 16 | BLACK | 11,2 | 214 | 308 | 96 |
| 1211G7L010M63 | 1 x 25 | BLACK | 13 | 312 | 434 | 127 |
| 1211G7L010M64 | 1 x 35 | BLACK | 14,6 | 445 | 587 | 157 |
| 1211G7L010M65 | 1 x 50 | BLACK | 16,4 | 606 | 777 | 196 |
| 1211G7L010M66 | 1 x 70 | BLACK | 18,4 | 819 | 1027 | 242 |
| 1211G7L010M67 | 1 x 95 | BLACK | 20,1 | 1079 | 1314 | 293 |
| 1211G7L010M68 | 1 x 120 | BLACK | 22,2 | 1330 | 1610 | 339 |
| 1211G7L010M69 | 1 x 150 | BLACK | 24,1 | 1639 | 1964 | 389 |
| 1211G7L010M70 | 1 x 185 | BLACK | 26,5 | 2002 | 2392 | 444 |
| 1211G7L010M71 | 1 x 240 | BLACK | 29,3 | 2546 | 3005 | 522 |
| 1211G7L010M72 | 1 x 300 | BLACK | 32,3 | 3149 | 3685 | 601 |
| 1211G7L010M73 | 1 x 400 | BLACK | 36,4 | 4224 | 4878 | 690 (DC) / 670 (AC) |
| 1211G73020M10 | 2 x 1 | BLACK | 11,3 | 74 | 188 | 11 |
| 1211G73020M15 | 2 x 1,5 | BLACK | 11,8 | 87 | 209 | 20 |
| 1211G73020M25 | 2 x 2,5 | BLACK | 12,7 | 112 | 251 | 26 |
| 1211GE3020M40 | 2 x 4 | GREEN | 13,9 | 148 | 310 | 34 |
| 12101GE3020M60 | 2 x 6 | GREEN | 15,5 | 224 | 412 | 44 |
| 1211G73020M61 | 2 x 10 | BLACK | 17,5 | 319 | 545 | 61 |
| 1211G73020M62 | 2 x 16 | BLACK | 19,6 | 452 | 724 | 82 |
| 1211G73020M63 | 2 x 25 | BLACK | 22,6 | 659 | 981 | 108 |
| 1211G73020M64 | 2 x 35 | BLACK | 25 | 873 | 1258 | 133 |
| 1211G73020M65 | 2 x 50 | BLACK | 28,7 | 1194 | 1681 | 155 |
| 1211G73030M10 | 3 x 1 | BLACK | 11,8 | 89 | 211 | 9 |
| 1211G73030M15 | 3 x 1,5 | BLACK | 12,5 | 105 | 239 | 16 |
| 1211GE2031M15 | 3 g 1,5 | GREEN | 12,5 | 105 | 239 | 20 |
| 1211G73030M25 | 3 x 2,5 | BLACK | 13,5 | 142 | 296 | 21 |
| 1211GE2031M25 | 3 g 2,5 | GREEN | 13,5 | 142 | 296 | 26 |
| 1211G73030M40 | 3 x 4 | BLACK | 15,1 | 221 | 399 | 28 |
| 1211G72031M40 | 3 g 4 | BLACK | 15,1 | 221 | 399 | 34 |
| 1211G73030M60 | 3 x 6 | BLACK | 16,4 | 289 | 502 | 36 |
| 1211G72031M60 | 3 g 6 | BLACK | 16,4 | 289 | 502 | 44 |
| 1211G73030M61 | 3 x 10 | BLACK | 18,4 | 429 | 681 | 50 |
| 1211G72031M61 | 3 g 10 | BLACK | 18,4 | 429 | 681 | 61 |
| 1211G73030M62 | 3 x 16 | BLACK | 20,9 | 628 | 936 | 67 |
| 1211G72031M62 | 3 g 16 | BLACK | 20,9 | 628 | 936 | 82 |
| 1211G73030M63 | 3 x 25 | BLACK | 24,1 | 919 | 1297 | 89 |
| 1211G73030M64 | 3 x 35 | BLACK | 26,7 | 1222 | 1664 | 110 |
| 1211G73030M65 | 3 x 50 | BLACK | 30,6 | 1697 | 2252 | 137 |
| 1211G73030M66 | 3 x 70 | BLACK | 34,8 | 2316 | 3011 | 169 |
| 1211G73030M67 | 3 x 95 | BLACK | 39 | 3164 | 3993 | 205 |
| 1211G73030M68 | 3 x 120 | BLACK | 43,4 | 3931 | 4933 | 237 |
| 1211G73030M69 | 3 x 150 | BLACK | 47,5 | 4845 | 6008 | 272 |
| 1211G73030M70 | 3 x 185 | BLACK | 52,7 | 5917 | 7295 | 311 |
| 1211G73030M71 | 3 x 240 | BLACK | 58,8 | 7559 | 9182 | 365 |
| 1211G73030M72 | 3 x 300 | BLACK | 65,4 | 9375 | 11279 | 421 |
| 1211GG3040M10 | 4 x 1 | ORANGE | 12,7 | 102 | 245 | 13 |
| 1211GG3040M15 | 4 x 1,5 | ORANGE | 13,5 | 128 | 288 | 16 |
| 1211G73040M15 | 4 x 1,5 | BLACK | 13,5 | 128 | 288 | 16 |
| 1211GE2041M15 | 4 g 1,5 | GREEN | 13,5 | 128 | 288 | 16 |
| 1211GG3040M25 | 4 x 2,5 | ORANGE | 15 | 201 | 385 | 21 |
| 1211G73040M25 | 4 x 2,5 | BLACK | 15 | 201 | 385 | 21 |
| 1211GE2041M25 | 4 g 2,5 | GREEN | 15 | 201 | 385 | 21 |
| 1211G73040M40 | 4 x 4 | BLACK | 16,3 | 271 | 480 | 28 |
| 1211G72041M40 | 4 g 4 | BLACK | 16,3 | 271 | 480 | 28 |

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| Part no. | No. of cores x cross section n x mm ² | Outer sheath color | Outer diameter ca.mm | Copper weight approx. kg/km | Cable weight approx. kg/km | Current rating in open air at 45°C (A) |
|---------------|--|--------------------------|-------------------------|--------------------------------------|-------------------------------------|--|
| 1211G73040M60 | 4 x 6 | BLACK | 17,8 | 360 | 601 | 36 |
| 1211G72041M60 | 4 g 6 | BLACK | 17,8 | 360 | 601 | 36 |
| 1211G73040M61 | 4 x 10 | BLACK | 20,2 | 535 | 821 | 50 |
| 1211G72041M61 | 4 g 10 | BLACK | 20,2 | 535 | 821 | 50 |
| 1211G73040M62 | 4 x 16 | BLACK | 22,8 | 788 | 1133 | 67 |
| 1211G72041M62 | 4 g 16 | BLACK | 22,8 | 788 | 1133 | 67 |
| 1211G73040M63 | 4 x 25 | BLACK | 26,4 | 1174 | 1588 | 89 |
| 1211G73040M64 | 4 x 35 | BLACK | 29,3 | 1580 | 2060 | 110 |
| 1211G73040M65 | 4 x 50 | BLACK | 33,6 | 2199 | 2880 | 137 |
| 1211G73040M66 | 4 x 70 | BLACK | 38,8 | 3115 | 3967 | 169 |
| 1211G73040M67 | 4 x 95 | BLACK | 42,9 | 4121 | 5135 | 205 |
| 1211G73040M68 | 4 x 120 | BLACK | 47,9 | 5135 | 6327 | 237 |
| 1211G73040M69 | 4 x 150 | BLACK | 52,4 | 6343 | 7783 | 272 |
| 1211G73040M70 | 4 x 185 | BLACK | 58,3 | 7755 | 9519 | 311 |
| 1211G73040M71 | 4 x 240 | BLACK | 65 | 9950 | 12012 | 365 |
| 1211GG3050M10 | 5 x 1 | ORANGE | 13,8 | 119 | 292 | 13 |
| 1211GG3050M15 | 5 x 1,5 | ORANGE | 15 | 177 | 370 | 16 |
| 1211G72051M15 | 5 g 1,5 | BLACK | 15 | 177 | 370 | 16 |
| 1211GG3050M25 | 5 x 2,5 | ORANGE | 16,1 | 237 | 455 | 21 |
| 1211G72051M25 | 5 g 2,5 | BLACK | 16,1 | 237 | 455 | 21 |
| 1211G73050M40 | 5 x 4 | BLACK | 17,7 | 319 | 573 | 28 |
| 1211G72051M40 | 5 g 4 | BLACK | 17,7 | 319 | 573 | 28 |
| 1211G73050M60 | 5 x 6 | BLACK | 19,3 | 430 | 717 | 36 |
| 1211G72051M60 | 5 g 6 | BLACK | 19,3 | 430 | 717 | 36 |
| 1211G73050M61 | 5 x 10 | BLACK | 22 | 650 | 997 | 50 |
| 1211G72051M61 | 5 g 10 | BLACK | 22 | 650 | 997 | 50 |
| 1211G73050M62 | 5 x 16 | BLACK | 24,9 | 965 | 1384 | 67 |
| 1211G72051M62 | 5 g 16 | BLACK | 24,9 | 965 | 1384 | 67 |
| 1211G73050M63 | 5 x 25 | BLACK | 29,1 | 1439 | 1956 | 89 |
| 1211G73050M64 | 5 x 35 | BLACK | 32,2 | 1945 | 2548 | 110 |
| 1211G73050M65 | 5 x 50 | BLACK | 37,6 | 2793 | 3628 | 137 |
| 1211G73050M66 | 5 x 70 | BLACK | 42,9 | 3813 | 4873 | 169 |
| 1211G73050M67 | 5 x 95 | BLACK | 47,6 | 5085 | 6297 | 172 |
| 1211G73050M68 | 5 x 120 | BLACK | 53,1 | 6364 | 7833 | 199 |
| 1211G73050M69 | 5 x 150 | BLACK | 58,2 | 7823 | 9531 | 228 |
| 1211G73050M70 | 5 x 185 | BLACK | 64,7 | 9597 | 11689 | 261 |
| 1211GG1070M10 | 7 x 1 | ORANGE | 14,8 | 174 | 366 | 8 |
| 1211GG1070M15 | 7 x 1,5 | ORANGE | 15,6 | 214 | 421 | 10 |
| 1211GG1070M25 | 7 x 2,5 | ORANGE | 16,9 | 295 | 531 | 14 |
| 1211GG1100M10 | 10 x 1 | ORANGE | 17,6 | 226 | 509 | 7 |
| 1211GG1100M15 | 10 x 1,5 | ORANGE | 18,6 | 285 | 595 | 9 |
| 1211GG1100M25 | 10 x 2,5 | ORANGE | 20,3 | 393 | 746 | 12 |
| 1211GG1120M10 | 12 x 1 | ORANGE | 18,6 | 257 | 568 | 7 |
| 1211GG1120M15 | 12 x 1,5 | ORANGE | 19,8 | 325 | 667 | 9 |
| 1211GG1120M25 | 12 x 2,5 | ORANGE | 21,6 | 458 | 852 | 11 |
| 1211GG1140M10 | 14 x 1 | ORANGE | 19,4 | 283 | 622 | 6 |
| 1211GG1140M15 | 14 x 1,5 | ORANGE | 20,6 | 368 | 741 | 8 |
| 1211GG1140M25 | 14 x 2,5 | ORANGE | 22,7 | 512 | 946 | 11 |
| 1211GG1160M10 | 16 x 1 | ORANGE | 20,4 | 308 | 687 | 6 |
| 1211GG1160M15 | 16 x 1,5 | ORANGE | 21,8 | 401 | 823 | 8 |
| 1211GG1160M25 | 16 x 2,5 | ORANGE | 23,8 | 568 | 1055 | 10 |
| 1211GG1190M10 | 19 x 1 | ORANGE | 21,5 | 352 | 780 | 6 |
| 1211GG1190M15 | 19 x 1,5 | ORANGE | 22,9 | 452 | 922 | 7 |
| 1211GG1190M25 | 19 x 2,5 | ORANGE | 25 | 657 | 1193 | 10 |
| 1211GG1240M10 | 24 x 1 | ORANGE | 24,5 | 429 | 1012 | 5 |
| 1211GG1240M15 | 24 x 1,5 | ORANGE | 26,1 | 552 | 1198 | 7 |
| 1211GG1240M25 | 24 x 2,5 | ORANGE | 28,7 | 814 | 1563 | 9 |

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| Part no. | No. of cores x cross section n x mm ² | Outer sheath color | Outer diameter ca.mm | Copper weight approx. kg/km | Cable weight approx. kg/km | Current rating in open air at 45°C (A) |
|----------------|--|--------------------------|-------------------------|--------------------------------------|-------------------------------------|--|
| 12111GG1270M10 | 27 x 1 | ORANGE | 25,4 | 463 | 1090 | 5 |
| 12111GG1270M15 | 27 x 1,5 | ORANGE | 27,1 | 603 | 1290 | 7 |
| 12111GG1270M25 | 27 x 2,5 | ORANGE | 29,8 | 890 | 1686 | 9 |
| 12111GG1300M10 | 30 x 1 | ORANGE | 26,2 | 495 | 1157 | 5 |
| 12111GG1300M15 | 30 x 1,5 | ORANGE | 28 | 661 | 1394 | 6 |
| 12111GG1300M25 | 30 x 2,5 | ORANGE | 30,9 | 965 | 1815 | 8 |
| 12111GG1370M10 | 37 x 1 | ORANGE | 28,2 | 586 | 1362 | 5 |
| 12111GG1370M11 | 37 x 1,5 | ORANGE | 30,2 | 776 | 1635 | 6 |
| 12111GG1370M12 | 37 x 2,5 | ORANGE | 33,2 | 1158 | 2145 | 8 |

Other dimensions and colors available on request.