

标准的 H07RN-F 橡皮绝缘软电缆

型号: H07RN-F

Standard H07RN-F Rubber-insulated Flexible Cable

Type: H07RN-F

H07RN-F 450/750 V EN 50525



应用

用于加热装置的引接线，工业工具，移动设备和机械，如硫化板，手动工具，可移动的发电机等等，在正常的机械应力情况下可用于干燥和潮湿的地方，户外和易爆炸的危险区域以及工业，农业和建筑领域。

此电缆可以安装在固定的位置如临时建筑或传送设备。

我们设计的多芯电缆专门用于连接机械工具。

当电压小于等于 1000 伏时，此电缆可以用于固定的保护装置（如管道或用具上）和起重电动机等的电机引接线。

Application

For the connection of heating units, for industrial tools, mobile equipment and machines, e.g. vulcanisation plates, hand operated equipment, transportable motors etc., under normal mechanical stress in dry and damp areas, outdoors and in explosion hazard areas, as well as in industrial and agricultural applications and on building sites.

The cables can be installed in fixed positions e.g. in provisional constructions, at building sites or in conveyor Multicore cables are designed especially for use as connections to machine tools.

Use up to 1000 V a.c. is permitted for fixed protected installations (in conduit or appliances) and also for motor connections of hoisting motors and the like.

结构

| | |
|---------------------|--|
| 导体 | 光滑软铜丝, 满足 IEC60228 / DINVDE0295 5 类导体 |
| 绝缘 | 橡胶混合物, 满足 DINVDE0282 第 1 部份 标称厚度和外径见附表 |
| 线芯颜色 线芯排列 内护套 | 按照 HD308 线芯成缆 橡胶混合物, 满足 DINVDE0282 第 1 部份 标称厚度见附表 |
| 护套 | 橡胶混合物, 满足 DINVDE0282 第 1 部份 标称厚度和外径见附表 |
| 护套颜色 护套印字 | 黑色 白色油墨 H07RN-F 450/750V Size DRAKA SDC 年 / 周 长度 |

Construction

| | |
|------------------|--|
| Conductor: | Copper plain or tinned, fine wire class 5 acc. IEC 60228 / DINVDE0295 |
| Insulation: | Rubber, compound, acc. to DIN VDE 0282 Part 1 Wall thickness and diameter see table. |
| Core marking: | acc. to HD 308 |
| Core arrangement | Cores laid up |
| Inner sheath: | Rubber, compound acc. to DIN VDE 0282 part 1 Wall thickness see table |
| Sheath: | Rubber, compound Acc. To DIN VDE 0282 part 1 Wall thickness and outside diameter see table |
| Sheath colour: | Black |
| Sheath marking | White print H07RN-F 450/750V Size <VDE> DRAKA SDC Year/Week Length |

技术参数

| | |
|----------|----------|
| 标准 | EN 50525 |
| 标称电压 | 450/750V |
| 电缆表面最低温度 | |

Technical data

| | |
|------------------------------|----------|
| Standards: | EN 50525 |
| Nominal voltage: | 450/750V |
| Minimum surface temperature: | |

| | |
|----------|---------------------------|
| 固定状态 | -40 °C |
| 移动状态 | -25 °C |
| 导体最高容许温度 | + 60 °C |
| 弯曲半径: | |
| 移动状态 | 6 X D |
| 固定状态 | 4 X D |
| 电缆最低使用寿命 | 20 年 |
| 抗张强度 | 15N/mm2 DIN VDE 0298-3 |
| 耐紫外线 | 是 |
| 耐臭氧 | 按照 IEC 60811 |

| | |
|-----------------------|--------------|
| 计算载流量时的修正系数 | 0,91 (35 °C) |
| 根据 IEC 60364-5-523 标准 | 0,82 (40 °C) |
| (表 52-D1) 或 DIN VDE | 0,71 (45 °C) |
| 0298-4 标准 (表 15) | 0,58 (50 °C) |

根据 IEC 60949 (短路温度+200 °C, 导体温度+60 °C) 得出常数 K=141。

| | |
|-------------------------------|---------------------------|
| fixed installation: | -40 °C |
| Moved : | -25 °C |
| Maximum conductor temperature | + 60 °C |
| Bending radius | |
| Moved min. | 6 X D |
| Fixed min. | 4 X D |
| Min. lifetime | 20 years |
| Tensile strength | 15N/mm2 DIN VDE 0298-3 |
| UV resistance | Yes |
| Ozone resistance: | acc. to IEC 60811 |

| | |
|---|--------------|
| Correction factor to calculate the current carrying capacity acc. to IEC 60364-5-523 table 52-D1 or DIN VDE 0298-4 table 15 | 0,91 (35 °C) |
| | 0,82 (40 °C) |
| | 0,71 (45 °C) |
| | 0,58 (50 °C) |

The constant k = 141 is calculated acc. to IEC 60949 (short circuit temperature +200 °C and conductor temperature +60 °C)

| 规格 | 载流量 A 30 °C | SIZE | Current carrying capacity A 30 °C |
|------------------|----------------|------------------------------------|---|
| 三叶形 三项负载 | | Three loaded conductors Trefoil | |
| 单芯电缆 | | Single core | |
| 1 X 1.5 mm2(三叶形) | 17 | 1 X 1.5 mm2(trefoil) | 17 |
| 1 X 2.5 mm2 | 23 | 1 X 2.5 mm2 | 23 |
| 1 X 4 mm2 | 31 | 1 X 4 mm2 | 31 |
| 1 X 6 mm2 | 40 | 1 X 6 mm2 | 40 |
| 1 X 10 mm2 | 55 | 1 X 10 mm2 | 55 |
| 1 X 16 mm2 | 73 | 1 X 16 mm2 | 73 |
| 1 X 25 mm2 | 94 | 1 X 25 mm2 | 94 |
| 1 x 35 mm2 | 117 | 1 x 35 mm2 | 117 |
| 1 x 50 mm2 | 148 | 1 x 50 mm2 | 148 |
| 1 x 70 mm2 | 185 | 1 x 70 mm2 | 185 |
| 1 x 95 mm2 | 222 | 1 x 95 mm2 | 222 |
| 1 x 120 mm2 | 260 | 1 x 120 mm2 | 260 |
| 1 x 150 mm2 | 300 | 1 x 150 mm2 | 300 |
| 1 x 185 mm2 | 341 | 1 x 185 mm2 | 341 |
| 1 X 240 mm2 | 407 | 1 X 240 mm2 | 407 |
| 1 x 300 mm2 | 468 | 1 x 300 mm2 | 468 |
| 1 x 400 mm2 | 553 | 1 x 400 mm2 | 553 |

| 多芯电缆 | | Mulri core | |
|---------|------|------------|------|
| 1.0 mm2 | 10 | 1.0 mm2 | 10 |
| 1.5 mm2 | 15.5 | 1.5 mm2 | 15.5 |
| 2.5 mm2 | 21 | 2.5 mm2 | 21 |
| 4 mm2 | 29 | 4 mm2 | 29 |
| 6 mm2 | 36 | 6 mm2 | 36 |
| 10 mm2 | 51 | 10 mm2 | 51 |
| 16 mm2 | 67 | 16 mm2 | 67 |
| 25 mm2 | 89 | 25 mm2 | 89 |
| 35 mm2 | 110 | 35 mm2 | 110 |
| 50 mm2 | 138 | 50 mm2 | 138 |
| 70 mm2 | 172 | 70 mm2 | 172 |

测试

电压测试 2500V
 阻燃性能 按照 IEC60332-1
 耐油性 按照 IEC 60811
 IRM902 24h at 100 °C

Tests

Test voltage 2500V
 Behavior in a fire acc. to IEC 60332-1
 Oil resistance acc. to IEC 60811
 IRM 902 24h at 100 °C

| 导体 / Conductor | | | | 线芯 / Core | 电缆 / Cable | | | |
|--------------------------------------|----------------------------|---|--|--------------------------------------|---|--|----------------------------|----------------|
| 芯数 X 标称截面 | 导体近似直径 | 裸导体最大电阻 | 镀锡导体最大电阻 | 绝缘标称厚度 | 内护套标称厚度 | 外护套标称厚度 | 外径最小/最大 | 近似重量 |
| Number of cores x nominal cross-sec. | Conductor-diameter approx. | Resistance max. at20 °C for bare copper | Resistance max. at20 °C for tin copper | Insulation wall thickness nom. value | Inner sheath wall thickness. nom. value | Outersheath wall thickness. nom. value | Outside diameter min./max. | Weight approx. |
| mm ² | mm | Ω/km | Ω/km | mm | mm | mm | mm | kg/km |
| 1X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | — | 1.4 | 5.7-7.1 | 52 |
| 1X2.5 | 2.0 | 7.98 | 8.21 | 0.9 | — | 1.4 | 6.3-7.9 | 68 |
| 1X4 | 2.5 | 4.95 | 5.09 | 1.0 | — | 1.5 | 7.2-9.0 | 95 |
| 1X6 | 3.0 | 3.30 | 3.39 | 1.0 | — | 1.6 | 7.9-9.8 | 125 |
| 1X10 | 3.9 | 1.91 | 1.95 | 1.2 | — | 1.8 | 9.5-11.9 | 200 |
| 1X16 | 5.2 | 1.21 | 1.24 | 1.2 | — | 1.9 | 10.8-13.4 | 275 |
| 1X25 | 6.5 | 0.780 | 0.795 | 1.4 | — | 2.0 | 13.5-15.0 | 390 |
| 1x35 | 7.6 | 0.554 | 0.565 | 1.4 | — | 2.2 | 15.0-16.5 | 500 |
| 1x50 | 9.3 | 0.386 | 0.393 | 1.6 | — | 2.4 | 17.5-19.0 | 690 |
| 1X70 | 11.3 | 0.272 | 0.277 | 1.6 | — | 2.6 | 19.0-21.0 | 920 |
| 1x95 | 13.3 | 0.206 | 0.210 | 1.8 | — | 2.8 | 22.0-24.0 | 1185 |
| 1X120 | 15.0 | 0.161 | 0.164 | 1.8 | — | 3.0 | 24.0-26.0 | 1490 |
| 1x150 | 16.2 | 0.129 | 0.132 | 2.0 | — | 3.2 | 26.0-28.0 | 1795 |
| 1X185 | 18.0 | 0.106 | 0.108 | 2.2 | — | 3.4 | 28.0-30.0 | 2140 |

| 导体 / Conductor | | | | 线芯 / Core | 电缆 / Cable | | | |
|--------------------------------------|----------------------------|---|--|--------------------------------------|---|--|----------------------------|----------------|
| 芯数 X 标称截面 | 导体近似直径 | 裸导体最大电阻 | 镀锡导体最大电阻 | 绝缘标称厚度 | 内护套标称厚度 | 外护套标称厚度 | 外径最小/最大 | 近似重量 |
| Number of cores x nominal cross-sec. | Conductor-diameter approx. | Resistance max. at20 °C for bare copper | Resistance max. at20 °C for tin copper | Insulation wall thickness nom. value | Inner sheath wall thickness. nom. value | Outersheath wall thickness. nom. value | Outside diameter min./max. | Weight approx. |
| mm ² | mm | Ω/km | Ω/km | mm | mm | mm | mm | kg/km |
| 1x240 | 20.50 | 0.0801 | 0.0817 | 2.4 | — | 3.5 | 30.0-33.0 | 2750 |
| 1X300 | 23.5 | 0.0641 | 0.0654 | 2.6 | — | 3.6 | 34.0-37.0 | 3450 |
| 1X400 | 26.2 | 0.0486 | 0.0495 | 2.8 | — | 3.8 | 37.0-42.0 | 4370 |
| 2x1 | 1.25 | 19.5 | 20.0 | 0.8 | — | 1.3 | 8.2-9.2 | 95 |
| 2x1.5 | 1.5 | 13.3 | 13.7 | 0.8 | — | 1.5 | 9.2-10.2 | 118 |
| 2x2.5 | 2.0 | 7.98 | 8.21 | 0.9 | — | 1.7 | 11.0-12.0 | 170 |
| 2x4 | 2.5 | 4.95 | 5.09 | 1.0 | — | 1.8 | 12.5-13.5 | 230 |
| 2x6 | 3.1 | 3.3 | 3.39 | 1.0 | — | 2.0 | 14.0-15.5 | 305 |
| 2X10 | 4.0 | 1.91 | 1.95 | 1.2 | 1.2 | 1.9 | 19.0-21.5 | 550 |
| 2X16 | 5.3 | 1.21 | 1.24 | 1.2 | 1.3 | 2.0 | 22.0-23.5 | 775 |
| 2X25 | 6.5 | 0.780 | 0.795 | 1.4 | 1.4 | 2.2 | 26.0-28.0 | 1105 |
| 3x1 | 1.25 | 19.5 | 20.0 | 0.8 | — | 1.4 | 8.8-9.8 | 112 |
| 3x1.5 | 1.5 | 13.3 | 13.7 | 0.8 | — | 1.6 | 9.8-11.0 | 142 |
| 3x2.5 | 2.0 | 7.98 | 8.21 | 0.9 | — | 1.8 | 11.7-13.0 | 205 |
| 3x4 | 2.5 | 4.95 | 5.09 | 1.0 | — | 1.9 | 13.5-15.0 | 285 |
| 3x6 | 3.1 | 3.3 | 3.39 | 1.0 | — | 2.1 | 15.0-16.5 | 380 |
| 3X10 | 4.0 | 1.91 | 1.95 | 1.2 | 1.3 | 2.0 | 20.0-22.0 | 695 |
| 3X16 | 5.3 | 1.21 | 1.24 | 1.2 | 1.4 | 2.1 | 23.0-25.5 | 960 |
| 3X25 | 6.5 | 0.780 | 0.795 | 1.4 | 1.5 | 2.3 | 27.5-30.0 | 1390 |
| 3x35 | 7.6 | 0.554 | 0.565 | 1.4 | 1.6 | 2.5 | 30.5-33.5 | 1795 |
| 3x50 | 9.3 | 0.386 | 0.393 | 1.6 | 1.8 | 2.7 | 34.0-37.0 | 2460 |

| 导体 / Conductor | | | | 线芯 / Core | 电缆 / Cable | | | |
|--------------------------------------|----------------------------|---|--|--------------------------------------|---|--|----------------------------|----------------|
| 芯数 X 标称截面 | 导体近似直径 | 裸导体最大电阻 | 镀锡导体最大电阻 | 绝缘标称厚度 | 内护套标称厚度 | 外护套标称厚度 | 外径最小/最大 | 近似重量 |
| Number of cores x nominal cross-sec. | Conductor-diameter approx. | Resistance max. at20 °C for bare copper | Resistance max. at20 °C for tin copper | Insulation wall thickness nom. value | Inner sheath wall thickness. nom. value | Outersheath wall thickness. nom. value | Outside diameter min./max. | Weight approx. |
| mm ² | mm | Ω/km | Ω/km | mm | mm | mm | mm | kg/km |
| 3x70 | 11.3 | 0.272 | 0.277 | 1.6 | 1.9 | 2.9 | 40.0-43.0 | 3300 |
| 4X1 | 1.25 | 19.5 | 20.0 | 0.8 | — | 1.5 | 10.0-11.0 | 145 |
| 4x1.5 | 1.5 | 13.3 | 13.7 | 0.8 | — | 1.7 | 10.8-12.0 | 172 |
| 4x2.5 | 2.0 | 7.98 | 8.21 | 0.9 | — | 1.9 | 12.8-14.2 | 260 |
| 4x4 | 2.5 | 4.95 | 5.09 | 1.0 | — | 2.0 | 14.8-16.0 | 355 |
| 4x6 | 3.1 | 3.3 | 3.39 | 1.0 | — | 2.3 | 16.5-18.0 | 475 |
| 4x10 | 4.0 | 1.91 | 1.95 | 1.2 | 1.4 | 2.0 | 22.0-24.5 | 830 |
| 4X16 | 5.3 | 1.21 | 1.24 | 1.2 | 1.4 | 2.2 | 25.0-28.0 | 1190 |
| 4x25 | 6.5 | 0.78 | 0.795 | 1.4 | 1.6 | 2.5 | 31.0-34.0 | 1720 |
| 4x35 | 7.6 | 0.554 | 0.565 | 1.4 | 1.7 | 2.7 | 34.0-37.5 | 2250 |
| 4X50 | 9.3 | 0.386 | 0.393 | 1.6 | 1.9 | 2.9 | 39.0-42.0 | 3060 |
| 4x70 | 11.3 | 0.272 | 0.277 | 1.6 | 2.0 | 3.2 | 44.0-47.5 | 4130 |
| 5X1 | 1.25 | 19.5 | 20.0 | 0.8 | — | 1.6 | 10.7-11.7 | 170 |
| 5x1.5 | 1.5 | 13.3 | 13.7 | 0.8 | — | 1.8 | 12.0-13.2 | 210 |
| 5x2.5 | 2.0 | 7.98 | 8.21 | 0.9 | — | 2.0 | 14.0-15.5 | 305 |
| 5X4 | 2.5 | 4.95 | 5.09 | 1.0 | — | 2.2 | 16.5-18.0 | 430 |
| 5x6 | 3.1 | 3.3 | 3.39 | 1.0 | — | 2.5 | 18.5-20.5 | 600 |
| 5X10 | 4.0 | 1.91 | 1.95 | 1.2 | 1.4 | 2.2 | 24.0-27.0 | 1030 |
| 5X16 | 5.3 | 1.21 | 1.24 | 1.2 | 1.5 | 2.4 | 28.5-31.5 | 1460 |
| 5X25 | 6.5 | 0.78 | 0.795 | 1.4 | 1.7 | 2.7 | 34.0-37.0 | 2190 |

| 导体 / Conductor | | | | 线芯 / Core | 电缆 / Cable | | | |
|--------------------------------------|----------------------------|---|--|--------------------------------------|---|--|----------------------------|----------------|
| 芯数 X 标称截面 | 导体近似直径 | 裸导体最大电阻 | 镀锡导体最大电阻 | 绝缘标称厚度 | 内护套标称厚度 | 外护套标称厚度 | 外径最小/最大 | 近似重量 |
| Number of cores x nominal cross-sec. | Conductor-diameter approx. | Resistance max. at20 °C for bare copper | Resistance max. at20 °C for tin copper | Insulation wall thickness nom. value | Inner sheath wall thickness. nom. value | Outersheath wall thickness. nom. value | Outside diameter min./max. | Weight approx. |
| mm ² | mm | Ω/km | Ω/km | mm | mm | mm | mm | kg/km |
| 6X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | — | 2.5 | 14.5-16.0 | 280 |
| 7x1.5 | 1.5 | 13.3 | 13.7 | 0.8 | — | 2.6 | 15.2-17.2 | 330 |
| 12X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | 1.2 | 1.7 | 19.0-21.0 | 485 |
| 18X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | 1.3 | 1.9 | 22.0-24.0 | 685 |
| 19X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | 1.3 | 1.9 | 22.0-24.0 | 685 |
| 24X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | 1.4 | 2.1 | 26.0-28.0 | 895 |
| 27X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | | 3.5 | 26.0-27.0 | 980 |
| 36X1.5 | 1.5 | 13.3 | 13.7 | 0.8 | 1.5 | 2.3 | 29.5-31.5 | 1240 |
| 6X2.5 | 2.0 | 7.98 | 8.21 | 0.9 | — | 2.7 | 16.5-18.5 | 410 |
| 7X2.5 | 2.0 | 7.98 | 8.21 | 0.9 | — | 2.8 | 18.0-20.0 | 460 |
| 9 X 2.5 | 2.0 | 7.98 | 8.21 | 0.9 | 1.2 | 1.8 | 20.0-23.0 | 960 |
| 12X2.5 | 2.0 | 7.98 | 8.21 | 0.9 | 1.2 | 1.9 | 22.0-24.0 | 685 |
| 18X2.5 | 2.0 | 7.98 | 8.21 | 0.9 | 1.4 | 2.1 | 26.0-28.0 | 990 |
| 24X2.5 | 2.0 | 7.98 | 8.21 | 0.9 | 1.6 | 2.3 | 30.5-32.5 | 1300 |
| 36X2.5 | 2.0 | 7.98 | 8.21 | 0.9 | 1.7 | 2.6 | 35.0-37.0 | 1835 |
| 6X4 | 2.5 | 4.95 | 5.09 | 1.0 | 1.2 | 1.7 | 19.2-21 | 560 |
| 9 X 4 | 2.5 | 4.95 | 5.09 | 1.0 | 1.4 | 2.0 | 24.0-26.5 | 1380 |
| 12X4 | 2.5 | 4.95 | 5.09 | 1.0 | 1.4 | 2.1 | 25.5-28.0 | 1005 |
| 18X4 | 2.5 | 4.95 | 5.09 | 1.0 | 1.6 | 2.3 | 20.0-32.5 | 1435 |