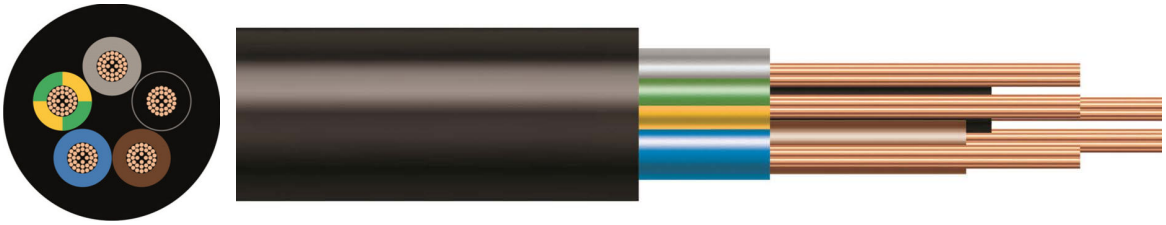
# H07RN-F FLEXIBLE RUBBER CABLE



The H07RN-F heavy-duty rubber flexible trailing cable is highly versatile, built to withstand harsh conditions in various applications. Its exceptional flexibility and durability make it suitable for handling equipment, mobile power supplies, worksites, stage and audiovisual equipment, port areas, and dams. With resistance to chemical, mechanical, and thermal stresses, as well as harsh weather, oil, and mechanical stress, it is ideal for powering electrical appliances and building sites, even in refrigerated environments and severe industrial conditions.

| | |
|---|---|
| **CONDUCTOR** | Plain Copper |
| **STRANDING** | Class 5 |
| **INSULATION** | EPR |
| **OUTERSHEATH** | PCP |
| **OUTERSHEATH COLOUR** | Black |
| **RATED VOLTAGE** | 450/750v |
| **CORE IDENTIFICATION** | single core: black<br>2 core: Blue & brown<br>3 core: Blue, brown & green/yellow<br>4 core: Black, brown, grey & green/yellow<br>5 core: Black, blue, brown, grey & green/yellow<br>7 cores and above: Black Numbered + 1 Green/Yellow |
| **MINIMUM BENDING RADIUS** | 6 x overall diameter for cables not exceeding 25mm O/D / 8 x overall diameter for cables exceeding 25mm O/D |
| **OPERATING TEMPERATURE** | Maximum 60°C / Minimum bending -30°C |
| **STANDARDS** | BS EN 50525-2-21 Water resistant to AD8 |

# SPECIFICATION DATA

| BATT Part No | No of cores | Nominal cross sectional area of conductor (mm2) | Nominal thickness of insulation (mm) | Approx overall diameter (mm) | Weight (kg/km) |
|---|---|---|---|---|---|
| 22099 | 1 | 16 | 1.2 | 11.35 | 258 |
| 22050 | 1 | 25 | 1.4 | 13.3 | 375 |
| 22102 | 1 | 35 | 1.4 | 14.6 | 485 |
| 22027 | 1 | 50 | 1.6 | 17.2 | 669 |
| 22029 | 1 | 70 | 1.6 | 19.35 | 892 |
| 22067 | 1 | 95 | 1.8 | 22.2 | 1160 |
| 22031 | 1 | 120 | 1.8 | 24.3 | 1436 |
| 22082 | 1 | 150 | 2 | 25.9 | 1748 |
| 22083 | 1 | 185 | 2.2 | 29.7 | 2142 |
| 22084 | 1 | 240 | 2.4 | 31.5 | 2698 |
| 22085 | 1 | 300 | 2.6 | 36.5 | 3348 |
| 22462 | 1 | 400 | 2.8 | 40.4 | 4293 |
| 22509 | 1 | 500 | 3 | 42.6 | 5262 |
| 22388 | 1 | 630 | 3 | 47.2 | 6790 |
| 22010 | 2 | 1 | 0.8 | 8.1 | 94 |
| 22409 | 2 | 1.5 | 0.8 | 9 | 120 |
| 22009 | 2 | 2.5 | 0.9 | 10.7 | 173 |
| 22151 | 2 | 4 | 1 | 12.3 | 239 |
| 22260 | 2 | 6 | 1 | 13.8 | 313 |
| 22278 | 2 | 16 | 1.2 | 21.7 | 830 |
| 22048 | 3 | 1 | 0.8 | 8.74 | 117 |
| 22056 | 3 | 1.5 | 0.8 | 9.68 | 147 |
| 22028 | 3 | 2.5 | 0.9 | 11.48 | 123 |
| 22008 | 3 | 4 | 1 | 13.2 | 297 |
| 22208 | 3 | 6 | 1 | 14.78 | 390 |
| 22015 | 3 | 10 | 1.2 | 19.9 | 705 |
| 22214 | 3 | 16 | 1.2 | 23.31 | 1031 |
| 22081 | 3 | 25 | 1.4 | 27.7 | 1512 |
| 22068 | 3 | 35 | 1.4 | 30.2 | 1907 |
| 22078 | 3 | 50 | 1.6 | 35.8 | 2651 |
| 22080 | 3 | 70 | 1.6 | 40.1 | 3484 |
| 22296 | 3 | 95 | 1.8 | 46.4 | 4594 |
| 22014 | 3 | 120 | 1.8 | 53.9 | 6700 |
| 22300 | 3 | 150 | 2.0 | 59.9 | 8000 |
| 22294 | 4 | 1 | 0.8 | 9.63 | 142 |
| 22123 | 4 | 1.5 | 0.8 | 10.63 | 180 |
| 22319 | 4 | 2.5 | 0.9 | 12.6 | 260 |
| 22127 | 4 | 4 | 1 | 14.6 | 336 |
| 22131 | 4 | 6 | 1 | 16.4 | 449 |
| 22137 | 4 | 10 | 1.2 | 21.8 | 833 |
| 22400 | 4 | 16 | 1.2 | 25.4 | 1138 |
| 22344 | 4 | 25 | 1.4 | 30.7 | 1714 |
| 22304 | 4 | 35 | 1.4 | 33.4 | 2204 |
| 22347 | 4 | 50 | 1.6 | 39.6 | 3029 |
| 22402 | 4 | 70 | 1.6 | 44.9 | 4121 |
| 22326 | 4 | 95 | 1.8 | 51.9 | 5361 |

| | | | | | |
|---|---|---|---|---|---|
| 22073 | 4 | 120 | 1.8 | 55.3 | 6546 |
| 22301 | 4 | 150 | 2.0 | 60.8 | 8095 |
| 22309 | 4 | 185 | 2.2 | 65.7 | 9652 |
| 22404 | 4 | 240 | 2.4 | 75.7 | 12614 |
| 22331 | 5 | 1.5 | 0.8 | 11.8 | 206 |
| 22341 | 5 | 2.5 | 0.9 | 14 | 297 |
| 22145 | 5 | 4 | 1 | 16.2 | 422 |
| 22308 | 5 | 6 | 1 | 18.2 | 567 |
| 22389 | 5 | 10 | 1.2 | 24 | 1010 |
| 22403 | 5 | 16 | 1.2 | 28.2 | 1400 |
| 22171 | 5 | 25 | 1.4 | 33.9 | 2096 |
| 22377 | 5 | 35 | 1.4 | 37.2 | 2700 |
| 22399 | 5 | 50 | 1.6 | 44 | 3730 |
| 22416 | 5 | 70 | 1.6 | 48 | 5033 |
| 22041 | 5 | 95 | 1.6 | 53.2 | 6271 |
| 22378 | 7 | 1.5 | 0.8 | 15.13 | 315 |
| 22037 | 7 | 2.5 | 0.9 | 17.6 | 445 |
| 22240 | 7 | 4 | 1.0 | 21.6 | 618 |
| 22057 | 12 | 1.5 | 0.8 | 18.2 | 493 |
| 22013 | 12 | 2.5 | 0.9 | 21.4 | 702 |
| 22251 | 12 | 4 | 1.0 | 26.2 | 1180 |
| 22211 | 27 | 1.5 | 0.8 | 27.5 | 1090 |

# RATING TABLES

**COPPER CONDUCTORS**

**TABLE 4F1A – 60 °C thermosetting insulated flexible cables with sheath, non-armoured (COPPER CONDUCTORS)**

CURRENT-CARRYING CAPACITY (amperes): Ambient temperature: 30 °C
Conductor operating temperature: 60 °C

| Conductor cross-sectional area | Single-phase AC or DC | Three-phase AC | Single-phase AC or DC |
|---|---|---|---|
| | 1 two-core cable, with or without protective conductor | 1 three-core, four-core or five-core cable | 2 single-core cables, touching |
| 1 | 2 | 3 | 4 |
| ($mm^2$) | (A) | (A) | (A) |
| 4 | 30 | 26 | - |
| 6 | 39 | 34 | - |
| 10 | 51 | 47 | - |
| 16 | 73 | 63 | - |
| 25 | 97 | 83 | - |
| 35 | - | 102 | 140 |
| 50 | - | 124 | 175 |
| 70 | - | 158 | 216 |
| 95 | - | 192 | 258 |
| 120 | - | 222 | 302 |
| 150 | - | 255 | 347 |
| 185 | - | 291 | 394 |
| 240 | - | 343 | 471 |
| 300 | - | 394 | 541 |
| 400 | - | - | 644 |
| 500 | - | - | 738 |
| 630 | - | - | 861 |

**NOTES:**

1. The current ratings tabulated are for cables in free air but may also be used for cables resting on a surface. If the cable is to be wound on a drum on load the ratings should be reduced in accordance with NOTE 2 below and for cables which may be covered, NOTE 3 below.

2. *Flexible cables wound on reeling drums*

   The current ratings of cables used on reeling drums are to be reduced by the following factors:

   a) Radial type drum
      ventilated: 85 %
      unventilated: 75 %

   b) Ventilated cylindrical type drum
      1 layer of cable: 85 %
      2 layers of cable: 65 %
      3 layers of cable: 45 %
      4 layers of cable: 35 %

   A radial type drum is one where spiral layers of cable are accommodated between closely spaced flanges; if fitted with solid flanges the ratings given above should be reduced and the drum is described as non-ventilated. If the flanges have suitable apertures the drum is described as ventilated.

   A ventilated cylindrical cable drum is one where layers of cable are accommodated between widely spaced flanges and the drum and end flanges have suitable ventilating apertures.

3. Where cable may be covered over or coiled up whilst on load, or the air movement over the cable restricted, the current rating should be reduced.

   It is not possible to specify the amount of reduction but the table of rating factors for reeling drums can be used as a guide.

## TABLE 4F1B

VOLTAGE DROP (per ampere per metre): Conductor operating temperature: 60 °C

| Conductor cross-sectional area | Two-core cable, DC | Two-core cable, single-phase AC | | | 1 three-core, four-core or five-core cable, three-phase AC | | | 2 single-core cables, touching | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | DC | Single-phase AC* | | |
| 1 | 2 | 3 | | | 4 | | | 5 | 6 | | |
| ($mm^2$) | (mV/A/m) | (mV/A/m) | | | (mV/A/m) | | | (mV/A/m) | (mV/A/m) | | |
| 4 | 12 | 12 | | | 10 | | | - | - | | |
| 6 | 7.8 | 7.8 | | | 6.7 | | | - | - | | |
| 10 | 4.6 | 4.6 | | | 4.0 | | | - | - | | |
| 16 | 2.9 | 2.9 | | | 2.5 | | | - | - | | |
| | | r | x | z | r | x | z | | r | x | z |
| 25 | 1.80 | 1.80 | 0.175 | 1.85 | 1.55 | 0.150 | 1.55 | - | - | - | - |
| 35 | - | - | - | - | 1.10 | 0.150 | 1.15 | 1.31 | 1.31 | 0.21 | 1.32 |
| 50 | - | - | - | - | 0.83 | 0.145 | 0.84 | 0.91 | 0.91 | 0.21 | 0.93 |
| 70 | - | - | - | - | 0.57 | 0.140 | 0.58 | 0.64 | 0.64 | 0.20 | 0.67 |
| 95 | - | - | - | - | 0.42 | 0.135 | 0.44 | 0.49 | 0.49 | 0.195 | 0.53 |
| 120 | - | - | - | - | 0.33 | 0.135 | 0.36 | 0.38 | 0.38 | 0.190 | 0.43 |
| 150 | - | - | - | - | 0.27 | 0.130 | 0.30 | 0.31 | 0.31 | 0.190 | 0.36 |
| 185 | - | - | - | - | 0.22 | 0.130 | 0.26 | 0.25 | 0.25 | 0.190 | 0.32 |
| 240 | - | - | - | - | 0.170 | 0.130 | 0.21 | 0.190 | 0.195 | 0.185 | 0.27 |
| 300 | - | - | - | - | 0.135 | 0.125 | 0.185 | 0.150 | 0.155 | 0.180 | 0.24 |
| 400 | - | - | - | - | - | - | - | 0.115 | 0.120 | 0.175 | 0.21 |
| 500 | - | - | - | - | - | - | - | 0.090 | 0.099 | 0.170 | 0.20 |
| 630 | - | - | - | - | - | - | - | 0.068 | 0.079 | 0.170 | 0.185 |

**NOTE:** * A larger voltage drop will result if the cables are spaced.