



APPLICATION

Xtrem[®] H07RN-F rubber cables are designed to supply power to low voltage appliances including electric motors and submersible pumps in deep water installations, as well as many other electrical equipment.

Thanks to its extraordinary flexibility and mechanical strength, the Xtrem[®] H07RN-F cable is ideal for power transmission in both fixed installation or mobile service. The nominal voltage up to 1000 V thanks to the high dielectric properties of the insulation material (according to HD 516). Top Cable Xtrem[®] H07RN-F cables are designed to power all types of electrical equipment including motors and submersible pumps in deep water installations (AD8).

- Industrial use.
- Mobile use.
- Robotics.
- Windmills
- Temporary site installations.

CONSTRUCTION

Conductor

Electrolytic annealed copper, class 5 (flexible) according to EN 60228 and IEC 60228.

Insulation

Thermosetting rubber insulation type EI7 according to EN 50363-1. The standard identification, according to HD 308 and HD 186, is the following:

| | |
|-----------|--|
| 1 x | Natural |
| 2 x | Blue + Brown |
| 3 G | Blue + Brown + Green/Yellow |
| 3 x | Brown + Black + Grey |
| 4 G | Brown + Black + Grey + Green/Yellow |
| 4 x | Brown + Black + Grey + Blue |
| 5 G | Brown + Black + Grey + Blue + Green/Yellow |
| 6 or more | Black numbered + Green/Yellow |

Outer sheath

Thermosetting flexible rubber outer sheath type EM2 according to EN 50363-2-1. Black colour.

CHARACTERISTICS

Electrical performance

Low voltage 450/750V.

Thermal performance

Maximum service temperature: 90°C.

Maximum short-circuit temperature: 250°C (max. 5 s).

Minimum service temperature: -40°C (fixed and protected installations) and -35°C (mobile use).

Fire performance

Flame non-propagation according to EN 60332-1 and IEC 60332-1.

Reaction to fire CPR: E_{ca}, according to EN 50575.

Mechanical performance

Minimum bending radius:

3 x cable diameter < 12 mm.

4 x cable diameter ≥ 12 mm.

Impact resistance: AG2 Medium severity.

Environmental performance

Chemical performance:

Chemical & Oil resistance: excellent.

Grease & mineral oils resistance: excellent.

Water resistance:

AD8 Submersion.

Cable for submersible pumps in drinkable water according to AS/ NZS 4020.

Deep wells | Drinkable water | AWQC.

Installation conditions

Open Air.

Submersible pumps cable.

Other

Meter by meter marking.

STANDARDS / COMPLIANCE



According to

EN 50525-2-21 / IEC 60092-353 / IEC 60245



Standards and approvals

HAR / AENOR / DNV / RoHS / CE.

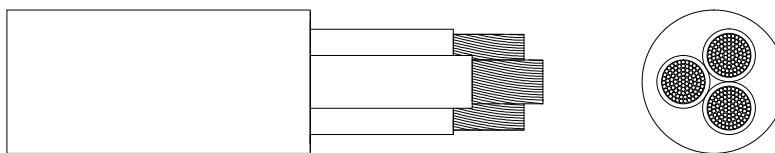


CPR (Construction Products Regulation)

E_{ca}.



DIMENSIONS & ADMISSIBLE INTENSITIES



| Cross-Section (mm ²) | Diameter (mm) | Weight (kg/km) | Fixed Inst. (A) ¹ | Mobile Inst. (A) ² | Voltage drop (V/A · km) ³ |
|----------------------------------|---------------|----------------|------------------------------|-------------------------------|--------------------------------------|
| 1 x 1,5 | 5,9 | 45 | 28 | 16 | 30,7 |
| 1 x 2,5 | 6,5 | 60 | 39 | 25 | 18,4 |
| 1 x 4 | 7,4 | 85 | 53 | 34 | 11,4 |
| 1 x 6 | 8,1 | 110 | 68 | 43 | 7,63 |
| 1 x 10 | 9,9 | 175 | 93 | 60 | 4,42 |
| 1 x 16 | 11,2 | 240 | 124 | 79 | 2,80 |
| 1 x 25 | 13,0 | 345 | 161 | 104 | 1,80 |
| 1 x 35 | 14,6 | 460 | 200 | 129 | 1,28 |
| 1 x 50 | 17,0 | 635 | 242 | 162 | 0,893 |
| 1 x 70 | 19,1 | 845 | 310 | 202 | 0,629 |
| 1 x 95 | 21,4 | 1.100 | 377 | 240 | 0,476 |
| 1 x 120 | 23,3 | 1.375 | 437 | 280 | 0,372 |
| 1 x 150 | 25,8 | 1.695 | 504 | 321 | 0,298 |
| 1 x 185 | 28,1 | 2.045 | 575 | 363 | 0,245 |
| 1 x 240 | 31,3 | 2.635 | 679 | 433 | 0,185 |
| 1 x 300 | 34,4 | 3.275 | 783 | 497 | 0,148 |
| 1 x 400 | 39,0 | 4.270 | 940 | 586 | 0,112 |
| 1 x 500 | 41,9 | 5.370 | 1.083 | 670 | 0,0888 |
| 1 x 630 | 47,8 | 6.960 | 1.254 | 784 | 0,0664 |
| 2 x 1 | 7,7 | 80 | 21 | 10 | 45,1 |
| 2 x 1,5 | 8,5 | 100 | 26 | 16 | 30,7 |
| 2 x 2,5 | 10,1 | 145 | 36 | 25 | 18,4 |
| 2 x 4 | 11,8 | 210 | 49 | 34 | 11,4 |
| 2 x 6 | 12,7 | 265 | 63 | 43 | 7,63 |
| 2 x 10 | 17,7 | 485 | 86 | 60 | 4,42 |
| 2 x 16 | 20,2 | 670 | 115 | 79 | 2,80 |
| 2 x 25 | 24,5 | 995 | 149 | 105 | 1,80 |
| 2 x 35 | 26,3 | 1.240 | 185 | 130 | 1,28 |
| 2 x 50 | 31,9 | 1.765 | 225 | 165 | 0,893 |
| 2 x 70 | 36,0 | 2.335 | 289 | 205 | 0,629 |
| 3 G 1 | 8,3 | 100 | 21 | 10 | 45,1 |
| 3 G 1,5 | 9,3 | 130 | 26 | 16 | 30,7 |
| 3 G 2,5 | 11,1 | 190 | 36 | 25 | 18,4 |
| 3 G 4 | 12,7 | 265 | 49 | 35 | 11,4 |
| 3 G 6 | 14,3 | 350 | 63 | 44 | 7,63 |
| 3 G 10 | 19,6 | 630 | 86 | 62 | 4,42 |
| 3 G 16 | 21,8 | 855 | 115 | 82 | 2,80 |
| 3 G 25 | 26,1 | 1.250 | 149 | 109 | 1,80 |
| 3 G 35 | 29,4 | 1.650 | 185 | 135 | 1,28 |
| 3 G 50 | 33,7 | 2.235 | 225 | 169 | 0,893 |
| 3 G 70 | 38,3 | 2.970 | 289 | 211 | 0,629 |
| 3 G 95 | 44,0 | 3.930 | 352 | 250 | 0,476 |
| 3 G 120 | 47,5 | 4.815 | 410 | 292 | 0,372 |
| 3 G 150 | 52,8 | 5.985 | 473 | 335 | 0,298 |
| 3 G 185 | 57,7 | 7.210 | 542 | 378 | 0,245 |
| 4 G 1 | 9,2 | 120 | 21 | 10 | 45,1 |
| 4 G 1,5 | 10,4 | 160 | 26 | 16 | 30,7 |
| 4 G 2,5 | 12,1 | 230 | 36 | 20 | 18,4 |
| 4 G 4 | 14,0 | 325 | 49 | 30 | 11,4 |
| 4 G 6 | 15,7 | 435 | 63 | 37 | 7,63 |
| 4 G 10 | 21,4 | 775 | 86 | 52 | 4,42 |
| 4 G 16 | 24,6 | 1.080 | 115 | 69 | 2,80 |
| 4 G 25 | 29,5 | 1.610 | 149 | 92 | 1,80 |
| 4 G 35 | 32,7 | 2.115 | 185 | 114 | 1,28 |
| 4 G 50 | 37,9 | 2.895 | 225 | 143 | 0,893 |
| 4 G 70 | 41,8 | 3.825 | 289 | 178 | 0,629 |
| 4 G 95 | 48,4 | 4.995 | 352 | 210 | 0,476 |
| 4 G 120 | 53,0 | 6.110 | 410 | 246 | 0,372 |
| 4 G 150 | 58,0 | 7.565 | 473 | 282 | 0,298 |
| 4 G 185 | 64,0 | 9.145 | 542 | 319 | 0,245 |

DIMENSIONS & ADMISSIBLE INTENSITIES

| Cross-Section (mm ²) | Diameter (mm) | Weight (kg/km) | Fixed Inst. (A) ¹ | Mobile Inst. (A) ² | Voltage drop (V/A · km) ³ |
|----------------------------------|---------------|----------------|------------------------------|-------------------------------|--------------------------------------|
| 4 G 240 | 72,0 | 11.925 | 641 | 377 | 0,185 |
| 5 G 1 | 9,8 | 145 | 21 | 10 | 45,1 |
| 5 G 1,5 | 11,1 | 190 | 26 | 16 | 30,7 |
| 5 G 2,5 | 13,1 | 280 | 36 | 20 | 18,4 |
| 5 G 4 | 15,3 | 400 | 49 | 30 | 11,4 |
| 5 G 6 | 17,7 | 545 | 63 | 38 | 7,63 |
| 5 G 10 | 23,7 | 945 | 86 | 54 | 4,42 |
| 5 G 16 | 26,9 | 1.320 | 115 | 71 | 2,80 |
| 5 G 25 | 32,9 | 1.995 | 149 | 94 | 1,80 |
| 5 G 35 | 35,8 | 2.560 | 185 | 114 | 1,28 |
| 5 G 50 | 42,2 | 3.575 | 225 | 143 | 0,893 |
| 5 G 70 | 46,7 | 4.715 | 289 | 178 | 0,629 |
| 5 G 95 | 52,5 | 6.105 | 352 | 210 | 0,476 |
| 5 G 120 | 58,0 | 7.455 | 410 | 246 | 0,372 |
| 5 G 150 | 65,1 | 9.300 | 473 | 282 | 0,298 |
| 5 G 185 | 71,4 | 11.240 | 542 | 319 | 0,245 |
| 7 G 1,5 | 15,0 | 315 | 26 | 16 | 45,1 |
| 7 G 2,5 | 17,1 | 435 | 36 | 25 | 30,7 |
| 7 G 4 | 20,2 | 640 | 49 | 34 | 11,4 |
| 8 G 1,5 | 15,5 | 350 | 26 | 16 | 45,1 |
| 8 G 2,5 | 18,4 | 510 | 36 | 25 | 30,7 |
| 8 G 4 | 21,8 | 740 | 49 | 34 | 11,4 |
| 10 G 2,5 | 19,2 | 560 | 36 | 25 | 30,7 |
| 10 G 4 | 22,8 | 830 | 49 | 34 | 11,4 |
| 12 G 1,5 | 17,5 | 445 | 26 | 16 | 45,1 |
| 12 G 2,5 | 20,5 | 650 | 36 | 25 | 30,7 |
| 12 G 4 | 24,4 | 950 | 49 | 34 | 11,5 |
| 14 G 2,5 | 21,7 | 745 | 36 | 25 | 18,5 |
| 16 G 1,5 | 19,6 | 580 | 26 | 16 | 45,1 |
| 16 G 2,5 | 22,5 | 845 | 36 | 25 | 30,7 |
| 18 G 1,5 | 20,5 | 645 | 26 | 16 | 45,1 |
| 18 G 2,5 | 23,6 | 920 | 36 | 25 | 30,7 |
| 19 G 1,5 | 21,2 | 680 | 26 | 16 | 45,1 |
| 19 G 2,5 | 25,1 | 1.005 | 36 | 25 | 30,7 |
| 24 G 1,5 | 23,1 | 815 | 26 | 16 | 45,1 |
| 24 G 2,5 | 27,3 | 1.190 | 36 | 25 | 30,7 |
| 27 G 1,5 | 24,5 | 895 | 26 | 16 | 45,1 |
| 27 G 2,5 | 28,7 | 1.315 | 36 | 25 | 30,7 |

*1.- One conductor in open air at 30°C ambient temperature installation method F and E according to IEC 60364-5-52.

*2.- One conductor in open air at 20°C ambient temperature according to EN 50565

*3.- At 60°C conductor temp. and cos Phi=1

SHORT CIRCUIT CURRENT CARRYING CAPACITIES

| Time (s) | 0,1 | 0,2 | 0,3 | 0,5 | 1 | 1,5 | 2 | 2,5 | 3 |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Amp/mm ² | 452 | 320 | 261 | 202 | 143 | 117 | 101 | 90 | 83 |

CORRECTION FACTORS

| Air Temp (°C) | 30 | 35 | 40 | 45 | 50 | 55 |
|--------------------|----|------|------|------|------|------|
| Mobile service | 1 | 0,91 | 0,82 | 0,71 | 0,58 | 0,41 |
| Fixed installation | 1 | 0,96 | 0,91 | 0,87 | 0,82 | 0,76 |