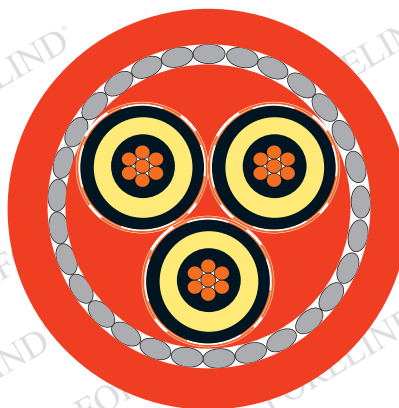


MEDIUM VOLTAGE (ARMOURED) CABLE

IDENTIFICATION

From 1,8/3 KV to 26/45 KV



CABLE CONSTRUCTION AND SPECIFICATIONS

CONDUCTOR

Rigid class 2 red copper conductor ÷ Aluminium rigid compact conductor class 2

INSULATION

Inner semi-conducting layer
HEPR insulation in G7 quality XLPE
Outer semi-conducting layer

SHIELD

Two alternated copper tapes screen

INNER SHEATH

PVC + Not fibrous and not hygroscopic filler ÷ Halogen free

ARMOUR

Galvanized Steel TAPES
Galvanized Steel WIRES
Galvanized Steel STRIPS

OUTER SHEATH

PVC sheath in RZ/ST2 quality ÷ Halogen free

CHARACTERISTICS

| | |
|--|----------------------|
| Nominal voltage U ₀ | from 1,8 kV to 26 kV |
| Nominal voltage U | from 3 kV to 45 kV |
| Maximum voltage U _m | from 3,6 kV to 52 kV |
| Maximum operating temperature | + 90° C |
| Maximum short circuit temperature | + 250° C |
| Min. operating temperature (without mechanical shocks) | - 15° C |
| Minimum installation and use temperature | 0° C |
| Minimum bending radius per D cable diameter (in mm) | 12 D |
| Maximum pulling stress | 60 N/mm ² |

NOTE

On request cable may be also fire retardant according to CEI 20-22 II

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Special Electrical Cables

MEDIUM VOLTAGE (ARMOURED) CABLE

PAGE 02

IDENTIFICATION

From 1,8/3 kV to 26/45 kV

DATASHEET

U₀/U : 1,8/3 kV - U max : 3,6 kV (EX GRADO 8)

| Conductor number | Nominal section | Approx conductor diameter | Approx insulation diameter [THREE CORES] | Approx external production diameter | Approx cable weight | Minimum bending radius |
|------------------|-----------------|---------------------------|--|-------------------------------------|---------------------|------------------------|
| (N°) | (mmq) | (mmq) | (mm) | (mm) | (kg/km) | (mm) |
| 3x | 10 | 4.0 | 8.0 | 30.5 | 1343 | 488 |
| 3x | 16 | 4.8 | 8.8 | 32.7 | 1642 | 523 |
| 3x | 25 | 6.0 | 10.0 | 35.7 | 1990 | 571 |
| 3x | 35 | 7.0 | 11.0 | 37.7 | 2388 | 603 |
| 3x | 50 | 8.1 | 12.1 | 40.4 | 2985 | 646 |
| 3x | 70 | 9.9 | 13.9 | 44.5 | 3861 | 712 |
| 3x | 95 | 11.5 | 15.5 | 48.2 | 4876 | 771 |
| 3x | 120 | 12.9 | 16.9 | 51.9 | 5871 | 830 |
| 3x | 150 | 14.2 | 18.2 | 55.4 | 6915 | 886 |
| 3x | 185 | 15.9 | 19.9 | 59.7 | 8278 | 955 |
| 3x | 240 | 18.3 | 22.3 | 64.8 | 10398 | 1037 |
| 3x | 300 | 20.7 | 24.7 | 70.5 | 13154 | 1128 |
| 3x | 400 | 23.5 | 27.5 | 77.4 | 15821 | 1238 |

| Formation | Electric resistance at 20°C | Capacity at 50 Hz | Apparent resistance at 90°C and 50 Hz [THREE CORES] | Phase reactance | Current carrying capacity | |
|------------|-----------------------------|-------------------|---|-----------------|---------------------------|-----------|
| | | | | | In air | In ground |
| (N° x mmq) | (Ohm/km) | (microF/km) | (Ohm/km) | (Ohm/km) | (A) | (A) |
| 3x10 | 1.83 | 0.19 | 2.34 | 0.11 | 81 | 89 |
| 3x16 | 1.15 | 0.23 | 1.47 | 0.10 | 105 | 115 |
| 3x25 | 0.727 | 0.27 | 0.927 | 0.097 | 138 | 148 |
| 3x35 | 0.524 | 0.30 | 0.669 | 0.093 | 166 | 175 |
| 3x50 | 0.387 | 0.34 | 0.494 | 0.088 | 200 | 208 |
| 3x70 | 0.268 | 0.40 | 0.342 | 0.084 | 250 | 255 |
| 3x95 | 0.193 | 0.45 | 0.247 | 0.081 | 305 | 303 |
| 3x120 | 0.153 | 0.50 | 0.197 | 0.079 | 351 | 345 |
| 3x150 | 0.124 | 0.55 | 0.159 | 0.077 | 398 | 385 |
| 3x185 | 0.0991 | 0.60 | 0.129 | 0.076 | 455 | 435 |
| 3x240 | 0.0754 | 0.68 | 0.0990 | 0.074 | 540 | 505 |
| 3x300 | 0.0601 | 0.75 | 0.0807 | 0.072 | 615 | 565 |
| 3x400 | 0.0470 | 0.83 | 0.0651 | 0.071 | 715 | 645 |

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IDENTIFICATION

From 1,8/3 kV to 26/45 kV

DATASHEET

U₀/U : 3,6/6 kV - U max : 7,2 kV (EX GRADO 11)

| Conductor number (N°) | Nominal section (mmq) | Approx conductor diameter (mmq) | Approx insulation diameter [THREE CORES] (mm) | Approx external production diameter (mm) | Approx cable weight (kg/km) | Minimum bending radius (mm) |
|--------------------------|--------------------------|------------------------------------|---|---|--------------------------------|--------------------------------|
| 3x | 10 | 4.0 | 11.6 | 36.0 | 1525 | 576 |
| 3x | 16 | 4.8 | 12.4 | 37.6 | 1812 | 602 |
| 3x | 25 | 6.0 | 13.6 | 40.6 | 2267 | 650 |
| 3x | 35 | 7.0 | 14.6 | 42.9 | 2723 | 686 |
| 3x | 50 | 8.1 | 15.7 | 45.8 | 3544 | 733 |
| 3x | 70 | 9.9 | 17.5 | 49.5 | 4455 | 792 |
| 3x | 95 | 11.5 | 19.1 | 53.5 | 4554 | 856 |
| 3x | 120 | 12.9 | 20.5 | 57.4 | 6336 | 918 |
| 3x | 150 | 14.2 | 21.8 | 60.5 | 7623 | 968 |
| 3x | 185 | 15.9 | 23.6 | 64.6 | 9009 | 1034 |
| 3x | 240 | 18.3 | 26.0 | 70.0 | 11187 | 1120 |
| 3x | 300 | 20.7 | 28.4 | 76.1 | 13662 | 1218 |
| 3x | 400 | 23.5 | 32.4 | 82.5 | 16731 | 1320 |

| Formation (N° x mmq) | Electric resistance at 20°C (Ohm/km) | Capacity at 50 Hz (microF/km) | Apparent resistance at 90°C and 50 Hz [THREE CORES] (Ohm/km) | Phase reactance (Ohm/km) | Current carrying capacity | |
|-------------------------|---|----------------------------------|--|-----------------------------|---------------------------|------------------|
| | | | | | In air (A) | In ground (A) |
| 3x10 | 1.83 | 0.15 | 2.34 | 0.12 | 78 | 85 |
| 3x16 | 1.15 | 0.17 | 1.47 | 0.12 | 103 | 108 |
| 3x25 | 0.727 | 0.20 | 0.927 | 0.11 | 130 | 138 |
| 3x35 | 0.524 | 0.23 | 0.669 | 0.10 | 160 | 165 |
| 3x50 | 0.387 | 0.26 | 0.494 | 0.097 | 190 | 195 |
| 3x70 | 0.268 | 0.30 | 0.342 | 0.092 | 235 | 240 |
| 3x95 | 0.193 | 0.33 | 0.247 | 0.089 | 285 | 285 |
| 3x120 | 0.153 | 0.37 | 0.197 | 0.086 | 330 | 330 |
| 3x150 | 0.124 | 0.40 | 0.159 | 0.084 | 373 | 365 |
| 3x185 | 0.0991 | 0.44 | 0.129 | 0.082 | 430 | 415 |
| 3x240 | 0.0754 | 0.49 | 0.0990 | 0.079 | 503 | 480 |
| 3x300 | 0.0601 | 0.54 | 0.0807 | 0.077 | 577 | 540 |
| 3x400 | 0.0470 | 0.60 | 0.0651 | 0.075 | 670 | 620 |

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Special Electrical Cables

MEDIUM VOLTAGE (ARMOURED) CABLE

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IDENTIFICATION

From 1,8/3 kV to 26/45 kV

DATASHEET

U_o/U : 6/10 kV - U max : 12 kV (EX GRADO 17)

| Conductor number | Nominal section | Approx conductor diameter | Approx insulation diameter [THREE CORES] | Approx external production diameter | Approx cable weight | Minimum bending radius |
|------------------|-----------------|---------------------------|--|-------------------------------------|---------------------|------------------------|
| (N°) | (mmq) | (mmq) | (mm) | (mm) | (kg/km) | (mm) |
| 3x | 10 | 4.0 | 14.2 | 39.4 | 2607 | 630 |
| 3x | 16 | 4.8 | 14.2 | 41.7 | 2965 | 667 |
| 3x | 25 | 6.0 | 15.4 | 44.3 | 3453 | 709 |
| 3x | 35 | 7.0 | 16.4 | 47.6 | 4040 | 762 |
| 3x | 50 | 8.1 | 17.5 | 50.1 | 4617 | 802 |
| 3x | 70 | 9.9 | 19.3 | 54.6 | 5622 | 874 |
| 3x | 95 | 11.5 | 20.9 | 58.5 | 6746 | 936 |
| 3x | 120 | 12.9 | 22.3 | 62.1 | 7831 | 994 |
| 3x | 150 | 14.2 | 23.6 | 65.4 | 8965 | 1046 |
| 3x | 185 | 15.9 | 25.4 | 69.2 | 10408 | 1107 |
| 3x | 240 | 18.3 | 27.8 | 75.5 | 12756 | 1208 |
| 3x | 300 | 20.7 | 30.2 | 81.5 | 15258 | 1304 |
| 3x | 400 | 23.5 | 33.5 | 88.3 | 18810 | 1412 |

| Formation | Electric resistance at 20°C | Capacity at 50 Hz | Apparent resistance at 90°C and 50 Hz [THREE CORES] | Phase reactance | Current carrying capacity | |
|------------|-----------------------------|-------------------|---|-----------------|---------------------------|-----------|
| | | | | | In air | In ground |
| (N° x mmq) | (Ohm/km) | (microF/km) | (Ohm/km) | (Ohm/km) | (A) | (A) |
| 3x16 | 1.15 | 0.15 | 1.47 | 0.14 | 95 | 98 |
| 3x25 | 0.727 | 0.18 | 0.927 | 0.13 | 142 | 140 |
| 3x35 | 0.524 | 0.19 | 0.669 | 0.12 | 171 | 168 |
| 3x50 | 0.387 | 0.21 | 0.494 | 0.12 | 205 | 200 |
| 3x70 | 0.268 | 0.24 | 0.342 | 0.11 | 252 | 245 |
| 3x95 | 0.193 | 0.26 | 0.247 | 0.10 | 303 | 290 |
| 3x120 | 0.153 | 0.29 | 0.197 | 0.10 | 347 | 327 |
| 3x150 | 0.124 | 0.31 | 0.159 | 0.097 | 390 | 365 |
| 3x185 | 0.0991 | 0.34 | 0.129 | 0.094 | 446 | 413 |
| 3x240 | 0.0754 | 0.37 | 0.0990 | 0.090 | 520 | 476 |
| 3x300 | 0.0601 | 0.42 | 0.0807 | 0.088 | 595 | 535 |
| 3x400 | 0.0470 | 0.44 | 0.0651 | 0.086 | 675 | 620 |

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IDENTIFICATION

From 1,8/3 KV to 26/45 KV

DATASHEET

U₀/U : 8,7/15 kV - U max : 17,5 kV (EX GRADO 24)

| Conductor number (N°) | Nominal section (mmq) | Approx conductor diameter (mmq) | Approx insulation diameter [THREE CORES] (mm) | Approx external production diameter (mm) | Approx cable weight (kg/km) | Minimum bending radius (mm) |
|--------------------------|--------------------------|------------------------------------|---|---|--------------------------------|--------------------------------|
| 3x | 16 | 4.8 | 17.4 | 49.5 | 3632 | 670 |
| 3x | 25 | 6.0 | 17.4 | 50.5 | 4189 | 710 |
| 3x | 35 | 7.0 | 18.4 | 52.5 | 4746 | 750 |
| 3x | 50 | 8.1 | 19.5 | 55.5 | 5343 | 780 |
| 3x | 70 | 9.9 | 21.3 | 60.0 | 6487 | 840 |
| 3x | 95 | 11.5 | 22.9 | 63.0 | 7671 | 900 |
| 3x | 120 | 12.9 | 24.3 | 67.0 | 8726 | 940 |
| 3x | 150 | 14.2 | 25.6 | 70.0 | 9980 | 990 |
| 3x | 185 | 15.9 | 27.4 | 73.5 | 11464 | 1040 |
| 3x | 240 | 18.3 | 29.8 | 80.0 | 13811 | 1120 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Formation (N° x mmq) | Electric resistance at 20°C (Ohm/km) | Capacity at 50 Hz (microF/km) | Apparent resistance at 90°C and 50 Hz [THREE CORES] (Ohm/km) | Phase reactance (Ohm/km) | Current carrying capacity | |
|-------------------------|---|----------------------------------|--|-----------------------------|---------------------------|------------------|
| | | | | | In air (A) | In ground (A) |
| 3x16 | 1.15 | 0.15 | 1.47 | 0.14 | 95 | 98 |
| 3x25 | 0.727 | 0.18 | 0.927 | 0.13 | 142 | 140 |
| 3x35 | 0.524 | 0.19 | 0.669 | 0.12 | 171 | 168 |
| 3x50 | 0.387 | 0.21 | 0.494 | 0.12 | 205 | 200 |
| 3x70 | 0.268 | 0.24 | 0.342 | 0.11 | 252 | 245 |
| 3x95 | 0.193 | 0.26 | 0.247 | 0.10 | 303 | 290 |
| 3x120 | 0.153 | 0.29 | 0.197 | 0.10 | 347 | 327 |
| 3x150 | 0.124 | 0.31 | 0.159 | 0.097 | 390 | 365 |
| 3x185 | 0.0991 | 0.34 | 0.129 | 0.094 | 446 | 413 |
| 3x240 | 0.0754 | 0.37 | 0.0990 | 0.090 | 520 | 476 |
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Special Electrical Cables

MEDIUM VOLTAGE (ARMOURED) CABLE

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IDENTIFICATION

From 1,8/3 KV to 26/45 KV

DATASHEET

U₀/U : 12/20 kV - U max : 24 kV (EX GRADO 32)

| Conductor number | Nominal section | Approx conductor diameter | Approx insulation diameter [THREE CORES] | Approx external production diameter | Approx cable weight | Minimum bending radius |
|------------------|-----------------|---------------------------|---|-------------------------------------|---------------------|------------------------|
| (N°) | (mmq) | (mmq) | (mm) | (mm) | (kg/km) | (mm) |
| 3x | 25 | 6.0 | 20.4 | 57.6 | 4826 | 921 |
| 3x | 35 | 7.0 | 20.4 | 58.3 | 5393 | 933 |
| 3x | 50 | 8.1 | 21.5 | 61.2 | 6099 | 979 |
| 3x | 70 | 9.9 | 23.3 | 65.6 | 7214 | 1050 |
| 3x | 95 | 11.5 | 24.9 | 69.7 | 8448 | 1115 |
| 3x | 120 | 12.9 | 26.3 | 73.2 | 9602 | 1173 |
| 3x | 150 | 14.2 | 27.6 | 76.5 | 10826 | 1218 |
| 3x | 185 | 15.9 | 29.4 | 80.5 | 12338 | 1288 |
| 3x | 240 | 18.3 | 31.8 | 86.8 | 14510 | 1389 |
| 3x | 300 | 20.7 | 34.2 | 93.5 | 17300 | 1496 |
| | | | | | | |
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| Formation | Electric resistance at 20°C | Capacity at 50 Hz | Apparent resistance at 90°C and 50 Hz [THREE CORES] | Phase reactance | Current carrying capacity | |
|------------|-----------------------------|-------------------|--|-----------------|---------------------------|-----------|
| | | | | | In air | In ground |
| (N° x mmq) | (Ohm/km) | (microF/km) | (Ohm/km) | (Ohm/km) | (A) | (A) |
| 3x25 | 0.727 | 0.18 | 0.927 | 0.14 | 141 | 150 |
| 3x35 | 0.524 | 0.17 | 0.0669 | 0.13 | 173 | 177 |
| 3x50 | 0.387 | 0.19 | 0.494 | 0.12 | 203 | 208 |
| 3x70 | 0.268 | 0.21 | 0.342 | 0.11 | 251 | 255 |
| 3x95 | 0.193 | 0.23 | 0.247 | 0.11 | 303 | 301 |
| 3x120 | 0.153 | 0.25 | 0.197 | 0.10 | 348 | 342 |
| 3x150 | 0.124 | 0.27 | 0.159 | 0.10 | 393 | 381 |
| 3x185 | 0.0991 | 0.29 | 0.129 | 0.098 | 448 | 431 |
| 3x240 | 0.0754 | 0.33 | 0.0990 | 0.094 | 520 | 495 |
| 3x300 | 0.0601 | 0.36 | 0.0807 | 0.092 | 595 | 555 |
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IDENTIFICATION

From 1,8/3 KV to 26/45 KV

DATASHEET

U₀/U : 18/30 kV - U max : 36 kV (EX GRADO 47)

| Conductor number (N°) | Nominal section (mmq) | Approx conductor diameter (mmq) | Approx insulation diameter [THREE CORES] (mm) | Approx external production diameter (mm) | Approx cable weight (kg/km) | Minimum bending radius (mm) |
|--------------------------|--------------------------|------------------------------------|---|---|--------------------------------|--------------------------------|
| 3x | 35 | 7.0 | 28.0 | 75.5 | 7760 | 1208 |
| 3x | 50 | 8.1 | 27.1 | 76.0 | 8210 | 1216 |
| 3x | 70 | 9.9 | 28.9 | 78.0 | 9460 | 1248 |
| 3x | 95 | 11.5 | 30.5 | 81.0 | 10810 | 1296 |
| 3x | 120 | 12.9 | 31.9 | 84.5 | 12080 | 1352 |
| 3x | 150 | 14.2 | 33.2 | 89.0 | 13420 | 1424 |
| 3x | 185 | 15.9 | 35.0 | 93.0 | 15070 | 1488 |
| 3x | 240 | 18.3 | 37.4 | 98.0 | 17550 | 1568 |
| | | | | | | |
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| Formation (N° x mmq) | Electric resistance at 20°C (Ohm/km) | Capacity at 50 Hz (microF/km) | Apparent resistance at 90°C and 50 Hz [THREE CORES] (Ohm/km) | Phase reactance (Ohm/km) | Current carrying capacity | |
|-------------------------|---|----------------------------------|--|-----------------------------|---------------------------|------------------|
| | | | | | In air (A) | In ground (A) |
| 3x35 | 0.524 | 0.14 | 0.669 | 0.14 | 172 | 175 |
| 3x50 | 0.387 | 0.15 | 0.494 | 0.13 | 202 | 205 |
| 3x70 | 0.268 | 0.16 | 0.342 | 0.13 | 250 | 252 |
| 3x95 | 0.193 | 0.18 | 0.247 | 0.12 | 302 | 300 |
| 3x120 | 0.153 | 0.19 | 0.197 | 0.12 | 345 | 340 |
| 3x150 | 0.124 | 0.20 | 0.159 | 0.11 | 390 | 378 |
| 3x185 | 0.0991 | 0.22 | 0.129 | 0.11 | 445 | 428 |
| 3x240 | 0.0754 | 0.24 | 0.0990 | 0.10 | 520 | 491 |
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MEDIUM VOLTAGE (ARMOURED) CABLE

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IDENTIFICATION

From 1,8/3 KV to 26/45 KV

DATASHEET

U_o/U : 26/45 kV - U max : 52 kV (EX GRADO 67)

| Conductor number | Nominal section | Approx conductor diameter | Approx insulation diameter [THREE CORES] | Approx external production diameter | Approx cable weight | Minimum bending radius |
|------------------|-----------------|---------------------------|---|-------------------------------------|---------------------|------------------------|
| (N°) | (mmq) | (mmq) | (mm) | (mm) | (kg/km) | (mm) |
| 3x | 70 | 9.9 | 33.3 | 92.7 | 9157 | 1483 |
| 3x | 95 | 11.6 | 34.9 | 95.6 | 10500 | 1530 |
| 3x | 120 | 13.1 | 36.9 | 98.7 | 11980 | 1579 |
| 3x | 150 | 14.4 | 36.8 | 100,3 | 12450 | 1605 |
| 3x | 185 | 16.1 | 38.8 | 103.9 | 13990 | 1662 |
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| Formation | Electric resistance at 20°C | Capacity at 50 Hz | Apparent resistance at 90°C and 50 Hz [THREE CORES] | Phase reactance | Current carrying capacity | |
|------------|-----------------------------|-------------------|--|-----------------|---------------------------|-----------|
| | | | | | In air | In ground |
| (N° x mmq) | (Ohm/km) | (microF/km) | (Ohm/km) | (Ohm/km) | (A) | (A) |
| 3x70 | 0.268 | 0.21 | 0.343 | 0.14 | 255 | 241 |
| 3x95 | 0.193 | 0.20 | 0.247 | 0.13 | 308 | 288 |
| 3x120 | 0.153 | 0.19 | 0.196 | 0.13 | 353 | 327 |
| 3x150 | 0.124 | 0.18 | 0.160 | 0.12 | 398 | 366 |
| 3x185 | 0.0991 | 0.18 | 0.129 | 0.12 | 457 | 416 |
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Special Electrical Cables

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