

BARRYNAX U-1000 R2V

DoP : ME1000R2V. MIGUELEZ ARTICLE GROUP

101



MIGUELEZ



NF C 32-321**

| | | | | | | | | | | | | | |
|--|----------------------------|--|----------------------|--|--------------------------------|--|---------------|--|-------------------------|--|---------------|--|----------------|
| | Max. conductor temperature | | Copper, class 1 or 2 | | Single-core or multicore cable | | Rated voltage | | Cold weather resistance | | UV resistance | | Water/humidity |
|--|----------------------------|--|----------------------|--|--------------------------------|--|---------------|--|-------------------------|--|---------------|--|----------------|

| | | | | | | | | | | | | | |
|--|---------------------------------|--|-------------------------------|--|---------------------------|--|-----------------------------------|--|-------------------------------|--|------------------|--|----------------|
| | Power cable | | LV networks | | Industrial | | Outdoor lighting | | Permanent outdoor application | | | | |
| | Buried in conduit in the ground | | Buried directly in the ground | | In wall embedded conduits | | In ceiling voids or raised floors | | On brackets or clamps | | On cable ladders | | On cable trays |

| | | | |
|--|------------------------|--|-------------------------------|
| | Reaction to fire (CPR) | | Flame retardant IEC 60332-1-2 |
|--|------------------------|--|-------------------------------|

- Standards (construction/tests): NF C 32-321 and IEC 60502-1.

- Technical designation: U-1000 R2V.

- Construction:**

- Conductor: Copper, class 1 ($s=1.5 / 2.5 / 4 \text{ mm}^2$) or class 2 ($s\geq 6 \text{ mm}^2$) (EN 60228 / IEC 60228).
- Insulation: Cross-linked polyethylene (XLPE). XLPE (IEC 60502-1) & XLPE type DIX 3 (UNE-HD 603-1).

Assembly of cores (multicore cables): Cores cabled helically.

Filler/Inner covering (multicore cables): Optional ($s\leq 10 \text{ mm}^2$). Material suitable for the operating temperature of the cable and compatible with the insulation and oversheat material.

- Oversheat: Polyvinyl chloride (PVC). PVC (NF C 32-321) & PVC type ST2 (IEC 60502-1).

- Rated voltage (Uo/U): 0.6/1 kV AC.

- Max. conductor temperature. Normal operation / short-circuit ($t\leq 5s$): 90°C / 250°C.

- Range: Single-core or multicore cable.

Configurations: 1x(1.5...300) mm² / 2x(1.5...70) mm² / (3-4)x0 G(1.5...240) mm² / 5G(1.5...240) mm².

- Reaction to fire classification (CPR - EN 50575 & EN 13501-6): Eca.

- Other fire performance features (when CPR Regulation is not applicable): Flame retardant (IEC 60332-1-2).

- Resistant to weathering and UV radiation (AN3). Presence of water (AD7).

- Applications: Especially suitable as power cable in industrial plants, street lighting and LV distribution networks.

They can be installed directly and permanently exposed to weathering and UV radiation. Suitable for indoor and outdoor installations, on supports, in conduits or buried.

In the case the cable is installed on cable brackets or cleats, the horizontal distance between cleats should not surpass 20 times the overall diameter of the cable. The distance is also valid between points of support in case of laying on other type of supports. The maximal distance between supports will never be greater than 80 cm under any circumstances.

In case of separate laying of single-core cables, cleats made of plastics or cleats consisting of non-magnetic metals must be used.

Cables and bundles of cables are to be tightened in such a way that damages in form of indentation marks by pressure caused by heat expansion are avoided.

- Temperature ranges:

- Maximum ambient temperature: +60 °C.
- Minimum ambient temperature: -30 °C (static, permanently installed, protected against mechanical damage, without exposure to movement, mechanical damages, shocks, or vibrations).
- Minimum temperature for cable laying during installation and assembly of accessories: 0 °C.

This temperature is valid for the cable itself and not for the environment. If possible, the temperature of the cable shall be raised before laying, e.g., in a heated building, to facilitate handling and reduce the risk of damages.

- Minimum bending radius: 6xD. D = overall diameter of the cable in mm.

Bending nearby the temperature limits should be carried out extra carefully.

- Maximum pulling force:

- If the traction force is applied on the copper conductors: $F = 50 \times S(N)$. S = cross-sectional area of the conductors (in mm²).
- If the traction force is applied on the oversheat: $F = 5 \times D^2(N)$. D = overall diameter of the cable (in mm).

- Identification: Oversheat colour → Black.

- Core identification for multicore cables (From 2 to 5): HD 308 S2.

- Packaging: Drum/cut to length, Coils (100, 50 m) and Reels (500, 1000 m).

The black oversheat of the multicore cables

(2, 3, 4, 5)x or G(1.5...16 mm²) should have a coloured stripe to indicate the nominal cross-section of copper conductors.

| Nominal cross-sectional area | Coloured stripe |
|------------------------------|-----------------|
| mm ² | |
| 1.5 | Pink |
| 2.5 | Pale yellow |
| 4 | Violet |
| 6 | Turquoise |
| 10 | Brown |
| 16 | Grey |

* Short product code. Must be completed with the corresponding characters for 'oversheat colour' and 'packaging'. Check the 'Miguel product code' section on our web page, in 'Downloads'.

** Check the CPR-classified range and the range included in the certifications indicated for each product, as well as much more information about our products, on the website: www.miguel.com

*** Dimensional and weight values are approximate and subject to normal manufacturing tolerances.

**** It is the sole responsibility of the end user to determine suitability of this product for its intended use and application. Please, consult the regulations, laws or standards that are applicable to each particular case.

The installation systems and additional requirements established by any regulation, law and/or standards applicable to each particular case must be met.

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| Code* | No. of cores & nominal cross-sectional area | Insulation thickness | Overall diameter | Total weight | Maximum electrical resistance at 20°C (DC) |
|-------------|---|----------------------|------------------|--------------|--|
| | mm ² | mm | mm | kg/km | ohm/km |
| 81010101-50 | 1 x 1.5 | 0.7 | 5.7 | 44 | 12.1 |
| 81010102-50 | 1 x 2.5 | 0.7 | 6.0 | 52 | 7.41 |
| 81010100040 | 1 x 4 | 0.7 | 6.4 | 73 | 4.61 |
| 81010100060 | 1 x 6 | 0.7 | 7.0 | 90 | 3.08 |
| 81010100100 | 1 x 10 | 0.7 | 8.0 | 140 | 1.83 |
| 81010100160 | 1 x 16 | 0.7 | 8.8 | 190 | 1.15 |
| 81010100250 | 1 x 25 | 0.9 | 10.4 | 305 | 0.727 |
| 81010100350 | 1 x 35 | 0.9 | 11.5 | 385 | 0.524 |
| 81010100500 | 1 x 50 | 1.0 | 12.6 | 495 | 0.387 |
| 81010100700 | 1 x 70 | 1.1 | 14.7 | 710 | 0.268 |
| 81010100950 | 1 x 95 | 1.1 | 16.2 | 950 | 0.193 |
| 81010101200 | 1 x 120 | 1.2 | 18.3 | 1,185 | 0.153 |
| 81010101500 | 1 x 150 | 1.4 | 20.0 | 1,455 | 0.124 |
| 81010101850 | 1 x 185 | 1.6 | 22.8 | 1,874 | 0.0991 |
| 81010102400 | 1 x 240 | 1.7 | 24.8 | 2,309 | 0.0754 |
| 81010103000 | 1 x 300 | 1.8 | 29.1 | 2,993 | 0.0601 |
| 81010201-50 | 2 x 1.5 | 0.7 | 8.8 | 105 | 12.1 |
| 81010202-50 | 2 x 2.5 | 0.7 | 9.6 | 132 | 7.41 |
| 81010200040 | 2 x 4 | 0.7 | 10.5 | 172 | 4.61 |
| 81010200060 | 2 x 6 | 0.7 | 12.0 | 234 | 3.08 |
| 81010200100 | 2 x 10 | 0.7 | 14.3 | 353 | 1.83 |
| 81010200160 | 2 x 16 | 0.7 | 15.6 | 497 | 1.15 |
| 81010200250 | 2 x 25 | 0.9 | 18.4 | 756 | 0.727 |
| 81010200350 | 2 x 35 | 0.9 | 21.3 | 1,025 | 0.524 |
| 81010200500 | 2 x 50 | 1.0 | 24.0 | 1,346 | 0.387 |
| 81010200700 | 2 x 70 | 1.1 | 28.3 | 1,903 | 0.268 |
| 81010301-50 | 3 x 1.5 | 0.7 | 9.2 | 115 | 12.1 |
| 81010311-50 | 3 G 1.5 | 0.7 | 9.2 | 115 | 12.1 |
| 81010302-50 | 3 x 2.5 | 0.7 | 10.0 | 156 | 7.41 |
| 81010312-50 | 3 G 2.5 | 0.7 | 10.0 | 156 | 7.41 |
| 81010300040 | 3 x 4 | 0.7 | 11.0 | 217 | 4.61 |
| 81010310040 | 3 G 4 | 0.7 | 11.0 | 217 | 4.61 |
| 81010300060 | 3 x 6 | 0.7 | 13.1 | 319 | 3.08 |
| 81010310060 | 3 G 6 | 0.7 | 13.1 | 319 | 3.08 |
| 81010300100 | 3 x 10 | 0.7 | 15.3 | 476 | 1.83 |
| 81010300160 | 3 x 16 | 0.7 | 16.8 | 647 | 1.15 |
| 81010300250 | 3 x 25 | 0.9 | 20.0 | 958 | 0.727 |
| 81010300350 | 3 x 35 | 0.9 | 22.5 | 1,265 | 0.524 |
| 81010300500 | 3 x 50 | 1.0 | 25.5 | 1,943 | 0.387 |
| 81010300700 | 3 x 70 | 1.1 | 31.8 | 2,579 | 0.268 |
| 81010300950 | 3 x 95 | 1.1 | 36.5 | 3,735 | 0.193 |
| 81010301200 | 3 x 120 | 1.2 | 40.0 | 4,690 | 0.153 |
| 81010301500 | 3 x 150 | 1.4 | 45.0 | 5,800 | 0.124 |
| 81010301850 | 3 x 185 | 1.6 | 48.8 | 7,392 | 0.0991 |
| 81010302400 | 3 x 240 | 1.7 | 56.8 | 9,848 | 0.0754 |

| Code* | No. of cores & nominal cross-sectional area | Insulation thickness | Overall diameter | Total weight | Maximum electrical resistance at 20°C (DC) |
|-------------|---|----------------------|------------------|--------------|--|
| | mm ² | mm | mm | kg/km | ohm/km |
| 81010401-50 | 4 x 1.5 | 0.7 | 9.8 | 137 | 12.1 |
| 81010411-50 | 4 G 1.5 | 0.7 | 9.8 | 137 | 12.1 |
| 81010402-50 | 4 x 2.5 | 0.7 | 10.5 | 175 | 7.41 |
| 81010412-50 | 4 G 2.5 | 0.7 | 10.5 | 175 | 7.41 |
| 81010400040 | 4 x 4 | 0.7 | 12.0 | 268 | 4.61 |
| 81010410040 | 4 G 4 | 0.7 | 12.0 | 268 | 4.61 |
| 81010400060 | 4 x 6 | 0.7 | 14.5 | 377 | 3.08 |
| 81010400100 | 4 x 10 | 0.7 | 16.3 | 557 | 1.83 |
| 81010400160 | 4 x 16 | 0.7 | 18.4 | 806 | 1.15 |
| 81010400250 | 4 x 25 | 0.9 | 22.6 | 1,277 | 0.727 |
| 81010400350 | 4 x 35 | 0.9 | 25.4 | 1,702 | 0.524 |
| 81010400500 | 4 x 50 | 1.0 | 28.7 | 2,258 | 0.387 |
| 81010400700 | 4 x 70 | 1.1 | 34.7 | 3,256 | 0.268 |
| 81010400950 | 4 x 95 | 1.1 | 38.6 | 4,240 | 0.193 |
| 81010401200 | 4 x 120 | 1.2 | 45.7 | 5,627 | 0.153 |
| 81010401500 | 4 x 150 | 1.4 | 47.2 | 7,423 | 0.124 |
| 81010401850 | 4 x 185 | 1.6 | 52.0 | 9,181 | 0.0991 |
| 81010402400 | 4 x 240 | 1.7 | 63.2 | 11,084 | 0.0754 |
| 81010400503 | 3 x 50 + 1 x 35 | 1.0 / 0.9 | 28.6 | 2169 | 0.387 / 0.524 |
| 81010400703 | 3 x 70 + 1 x 50 | 1.1 / 1.0 | 33.6 | 3025 | 0.268 / 0.387 |
| 81010400953 | 3 x 95 + 1 x 50 | 1.1 / 1.0 | 36.9 | 3950 | 0.193 / 0.387 |
| 81010401203 | 3 x 120 + 1 x 70 | 1.2 / 1.1 | 41.1 | 4995 | 0.153 / 0.268 |
| 81010401503 | 3 x 150 + 1 x 70 | 1.4 / 1.1 | 45.1 | 5965 | 0.124 / 0.268 |
| 81010511-50 | 5 G 1.5 | 0.7 | 10.5 | 165 | 12.1 |
| 81010512-50 | 5 G 2.5 | 0.7 | 11.5 | 205 | 7.41 |
| 81010510040 | 5 G 4 | 0.7 | 13.0 | 306 | 4.61 |
| 81010510060 | 5 G 6 | 0.7 | 15.7 | 474 | 3.08 |
| 81010510100 | 5 G 10 | 0.7 | 18.5 | 723 | 1.83 |
| 81010510160 | 5 G 16 | 0.7 | 20.4 | 999 | 1.15 |
| 81010510250 | 5 G 25 | 0.9 | 24.9 | 1,538 | 0.727 |
| 81010510350 | 5 G 35 | 0.9 | 31.0 | 2,596 | 0.524 |
| 81010510500 | 5 G 50 | 1.0 | 31.8 | 2,734 | 0.387 |
| 81010510700 | 5 G 70 | 1.1 | 37.1 | 3,852 | 0.268 |
| 81010510950 | 5 G 95 | 1.1 | 42.0 | 5,252 | 0.193 |
| 81010511200 | 5 G 120 | 1.2 | 47.1 | 6,598 | 0.153 |
| 81010511500 | 5 G 150 | 1.4 | 52.5 | 8,118 | 0.124 |
| 81010511850 | 5 G 185 | 1.6 | 58.3 | 10,203 | 0.0991 |
| 81010512400 | 5 G 240 | 1.7 | 65.6 | 13,158 | 0.0754 |