



## DESCRIPTION

- Technical designation RZ1MZ1-K(AS) for multipolar cables and RZ1MAZ1-K(AS) for unipolar cables.
- Construction Standard: IEC 60502-1, UNE 21123-4
- Low Voltage Directive (LVD) compliant: 2014/35/UE
- Construction Products Regulation (CPR) - (EU) N° 305/2011: **Reaction to fire Cca-s1b, d1, a1.**
- DoP Number: **C003-ENG-RZ1MZ1K** for multipolar cables, **C005-ENG-RZ1MAZ1K** for unipolar cables.
- RoHS compliant.
- Suitable for Industrial use / **Potentially explosion hazard locations (ATEX area).**

HFFR and armour cables **RZ1MZ1-K(AS)** / **RZ1MAZ1-K(AS)** are highly recommended in hazardous areas with explosive gas atmospheres (ATEX) or with risk of fire (Petrochemical plants, gas stations, flammable product stores, etc.) and in general, where the cable is subject to risk of mechanical aggression.

## TECHNICAL CHARACTERISTICS

|                                |   |
|--------------------------------|---|
| Conductor                      | Flexible electrolytic copper conductor (Class V) according to UNE-EN 60288 and IEC 60228                                      |
| Insulation                     | Cross-linked Polyethylene (XLPE), type DIX 3 according UNE 21123, UNE HD 603 and XLPE according IEC 60502.                    |
| Inner sheath                   | Thermoplastic polyolefin sheath DMZ-E type according to UNE 21123 and ST8 according to IEC 60502-1                            |
| Armour                         | Crown galvanized steel wire (M – multipolar) or aluminum wire (MA – unipolar cables) according to IEC 60502-1 and UNE 21123-4 |
| Outer sheath                   | Thermoplastic polyolefin sheath DMZ-E type according to UNE 21123 and ST8 according to IEC 60502-1                            |
| Nominal Voltage                | 0,6/1 kV C.A  |
| Voltage Test                   | 3.500 V C.A.  |
| Maximum conductor temperatures | Normal operation 90°C<br>Short circuit (5sec) 250°C   |

## OTHER CHARACTERISTICS

- Non-flame propagation according to EN 60332-1-2, IEC 60332-1-2.
- Non-fire propagation according to EN 60332-3-24, IEC 60332-3-24.
- Low halogen content according to EN 60754-2, EN 60754-1, IEC 60754-2, IEC 60754-1.
- Low corrosive gas emission according to EN 60754-2, IEC 60754-2.
- Low smoke emission according to EN 61034-2, IEC 61034-2.
- **Fire reaction (CPR) Cca-s1b, d1, a1.**
- UV resistance (1 cycle) according to UNE 211605.
- Water absorption resistance.
- High cold resistance.
- Impact and rodent resistance.



## AVAILABLE ON REQUEST

- Hydrocarbons and oil resistance according to UIC-895 OR.

## SECTIONS

| Section (mm <sup>2</sup> ) | Resistance at 20 °C (Ohm/km) | Nominal outer diameter (mm) | Weight (kg/m) | CPR           |
|----------------------------|------------------------------|-----------------------------|---------------|---------------|
| 1x10                       | 1,91                         | 14,6                        | 14            | Cca-s1b-d1-a1 |
| 1x16                       | 1,21                         | 15,7                        | 15,1          | Cca-s1b-d1-a1 |
| 1x25                       | 0,78                         | 17,5                        | 17,8          | Cca-s1b-d1-a1 |
| 1x35                       | 0,554                        | 18,6                        | 18,9          | Cca-s1b-d1-a1 |
| 1x50                       | 0,386                        | 20,2                        | 20,5          | Cca-s1b-d1-a1 |
| 1x70                       | 0,272                        | 22,2                        | 23,1          | Cca-s1b-d1-a1 |
| 1x95                       | 0,206                        | 23,6                        | 24,5          | Cca-s1b-d1-a1 |
| 1x120                      | 0,161                        | 25,8                        | 26,8          | Cca-s1b-d1-a1 |
| 1x150                      | 0,129                        | 28,4                        | 29,6          | Cca-s1b-d1-a1 |
| 1x185                      | 0,106                        | 30,8                        | 32,2          | Cca-s1b-d1-a1 |
| 1x240                      | 0,0801                       | 33,3                        | 35,5          | Cca-s1b-d1-a1 |
| 1x300                      | 0,0641                       | 38,0                        | 38,4          | Cca-s1b-d1-a1 |
| 1x400                      | 0,0486                       | 42,1                        | 42,1          | Cca-s1b-d1-a1 |
| 2x1.5                      | 13.3                         | 13.60                       | 0.349         | Cca-s1b-d1-a1 |
| 3x1.5                      | 13.3                         | 14                          | 0.374         | Cca-s1b-d1-a1 |
| 4x1.5                      | 13.3                         | 14.80                       | 0.419         | Cca-s1b-d1-a1 |
| 5x1.5                      | 13.3                         | 15.60                       | 0.463         | Cca-s1b-d1-a1 |
| 7x1.5                      | 13.3                         | 16.50                       | 0.524         | Cca-s1b-d1-a1 |
| 10x1.5                     | 13.3                         | 19.40                       | 0.674         | Cca-s1b-d1-a1 |
| 12x1.5                     | 13.3                         | 19.80                       | 0.725         | Cca-s1b-d1-a1 |
| 2x2.5                      | 7.98                         | 14.60                       | 0.389         | Cca-s1b-d1-a1 |

| Section (mm <sup>2</sup> ) | Resistance at 20 °C (Ohm/km) | Nominal outer diameter (mm) | Weight (kg/m) | CPR           |
|----------------------------|------------------------------|-----------------------------|---------------|---------------|
| 3x2.5                      | 7.98                         | 15.10                       | 0.448         | Cca-s1b-d1-a1 |
| 4x2.5                      | 7.98                         | 16.00                       | 0.505         | Cca-s1b-d1-a1 |
| 5x2.5                      | 7.98                         | 17.00                       | 0.570         | Cca-s1b-d1-a1 |
| 7x2.5                      | 7.98                         | 18.00                       | 0.651         | Cca-s1b-d1-a1 |
| 10x2.5                     | 7.98                         | 21.40                       | 0.853         | Cca-s1b-d1-a1 |
| 12x2.5                     | 7.98                         | 21.90                       | 0.92          | Cca-s1b-d1-a1 |
| 14x2.5                     | 7.98                         | 22.80                       | 1.006         | Cca-s1b-d1-a1 |
| 16x2.5                     | 7.98                         | 23.80                       | 1.100         | Cca-s1b-d1-a1 |
| 20x2.5                     | 7.98                         | 24.80                       | 1.210         | Cca-s1b-d1-a1 |
| 24x2.5                     | 7.98                         | 28.40                       | 1.480         | Cca-s1b-d1-a1 |
| 2x4                        | 4.95                         | 15.60                       | 0.474         | Cca-s1b-d1-a1 |
| 3x4                        | 4.95                         | 16.20                       | 0.528         | Cca-s1b-d1-a1 |
| 4x4                        | 4.95                         | 17.20                       | 0.599         | Cca-s1b-d1-a1 |
| 5x4                        | 4.95                         | 18.30                       | 0.686         | Cca-s1b-d1-a1 |
| 2x6                        | 3.3                          | 16.80                       | 0.565         | Cca-s1b-d1-a1 |
| 3x6                        | 3.3                          | 17.50                       | 0.638         | Cca-s1b-d1-a1 |
| 4x6                        | 3.3                          | 18.60                       | 0.734         | Cca-s1b-d1-a1 |
| 5x6                        | 3.3                          | 20.00                       | 0.849         | Cca-s1b-d1-a1 |
| 2x10                       | 1.91                         | 18.40                       | 0.692         | Cca-s1b-d1-a1 |
| 3x10                       | 1.91                         | 19.40                       | 0.83          | Cca-s1b-d1-a1 |
| 4x10                       | 1.91                         | 20.80                       | 0.974         | Cca-s1b-d1-a1 |
| 5x10                       | 1.91                         | 24.20                       | 1.456         | Cca-s1b-d1-a1 |
| 2x16                       | 1.21                         | 22.60                       | 1.177         | Cca-s1b-d1-a1 |
| 3x16                       | 1.21                         | 23.60                       | 1.339         | Cca-s1b-d1-a1 |
| 4x16                       | 1.21                         | 25.30                       | 1.561         | Cca-s1b-d1-a1 |
| 5x16                       | 1.21                         | 27.20                       | 1.890         | Cca-s1b-d1-a1 |
| 2x25                       | 0.78                         | 25.80                       | 1.579         | Cca-s1b-d1-a1 |
| 3x25                       | 0.78                         | 27.40                       | 1.859         | Cca-s1b-d1-a1 |
| 4x25                       | 0.78                         | 29.60                       | 2.203         | Cca-s1b-d1-a1 |
| 2x35                       | 0.554                        | 28.40                       | 1.910         | Cca-s1b-d1-a1 |
| 3x35                       | 0.554                        | 30.00                       | 2.268         | Cca-s1b-d1-a1 |
| 4x35                       | 0.554                        | 32.70                       | 2.734         | Cca-s1b-d1-a1 |
| 2x50                       | 0.386                        | 31.80                       | 2.427         | Cca-s1b-d1-a1 |
| 3x50                       | 0.386                        | 33.70                       | 2.941         | Cca-s1b-d1-a1 |
| 4x50                       | 0.386                        | 37.50                       | 3.823         | Cca-s1b-d1-a1 |
| 5x50                       | 0.386                        | 40,9                        | 4,460         | Cca-s1b-d1-a1 |
| 3x70                       | 0.272                        | 39.00                       | 4.082         | Cca-s1b-d1-a1 |
| 4x70                       | 0.272                        | 42,40                       | 5.028         | Cca-s1b-d1-a1 |
| 5x70                       | 0.272                        | 46,20                       | 5,840         | Cca-s1b-d1-a1 |
| 3x95                       | 0.206                        | 42.60                       | 5.003         | Cca-s1b-d1-a1 |
| 4x95                       | 0.206                        | 45,90                       | 6.125         | Cca-s1b-d1-a1 |
| 5x95                       | 0.206                        | 51,60                       | 7,610         | Cca-s1b-d1-a1 |

| Section (mm <sup>2</sup> ) | Resistance at 20 °C (Ohm/km) | Nominal outer diameter (mm) | Weight (kg/m) | CPR           |
|----------------------------|------------------------------|-----------------------------|---------------|---------------|
| 3x120                      | 0.161                        | 47,60                       | 6.197         | Cca-s1b-d1-a1 |
| 4x120                      | 0.161                        | 53,60                       | 8.14          | Cca-s1b-d1-a1 |
| 5x120                      | 0.161                        | 58,40                       | 9,456         | Cca-s1b-d1-a1 |
| 3x150                      | 0.129                        | 54,30                       | 8.075         | Cca-s1b-d1-a1 |
| 4x150                      | 0.129                        | 58,90                       | 9.871         | Cca-s1b-d1-a1 |
| 3x185                      | 0.106                        | 60,40                       | 9.594         | Cca-s1b-d1-a1 |
| 4x185                      | 0.106                        | 66,30                       | 11.88         | Cca-s1b-d1-a1 |
| 3x240                      | 0.0801                       | 65,60                       | 11,86         | Cca-s1b-d1-a1 |
| 4x240                      | 0,0801                       | 72,40                       | 14,07         | Cca-s1b-d1-a1 |
| 3x300                      | 0,0641                       | 71,80                       | 13,81         | Cca-s1b-d1-a1 |

*\*The values of the outer diameters are approximate, always within production tolerance. For more information, please contact us.*

*\*Unipolar cables with aluminum wire armour.*

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