

**UNITRONIC® FD CP (TP) plus A 6X2X0,75**
**Article No.:** 11139532

Low-frequency data cable; 6X2X0.75; Conductor color code: DIN 47100; PUR; Shielded; UL recognized; Cable chain


**Details**
**Benefits**

- The combination of the very robust cable design and the wide temperature range in which it can be used provides a wide range of applications..
- The conductor circuits are well decoupled thanks to the twisted pair (TP) with short lay lengths.
- Durable, resistant product thanks to the outer jacket PUR material that is resistant to abrasions, notches and cuts.
- Low-capacitance conductor insulation for long transmission paths or higher data transmission rates.
- Ideal protection against electromagnetic interference thanks to copper shielding braiding with a high degree of coverage.
- Relatively small bending radii thanks to highly flexible cable design.
- UL certification according to technical data enables the product to be used on the North American market.

**Application**

- Can be used universally at machine interfaces for many applications for data and signal transmission in the low-frequency range.
- Especially for environments where electromagnetic compatibility (EMC) is required.

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- Cable design enables flexible, constantly flexing use in industrial robots (without torsional stress) and handling devices.
  - The cable design allows flexible, continuously flexing use in moving machine parts and in the cable chain.
  - Cable design also suitable for torsion applications in wind turbines.
  - Can be used in dry, damp and, especially, harsh and oily environments.
  - Suitable for outdoor use in Europe.
  - The PUR outer jacket is resistant to mineral oil-based lubricants and highly resistant to chemicals.
  - Flexible use at temperatures down to -40°C.

### Notes

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

If applicable, the prices are solid metal prices without additional charges and VAT. Sales only to business customers.

Unless specified otherwise, the product values shown are rated values at room temperature. You can receive additional values, such as tolerances, upon request if they are available and have been released for publication.

The absence of PWIS raw materials does not protect against the potential risk of contamination with substances that interfere with the paint wetting during subsequent handling of the product(s) during transport, storage or further processing after delivery.

### Remarks

### Technical Data

#### General information

|              |                          |
|--------------|--------------------------|
| Brand        | UNITRONIC®               |
| Product type | Low-frequency data cable |

|                  |   |
|------------------|---|
| Copper index     | 876.25 lb/10000 ft  |
| Industry segment | Agricultural & Farm Machinery<br>Assembly Machines<br>Automotive<br>Construction Machinery<br>Energy<br>Food & Beverage<br>Healthcare & Pharma<br>Intralogistics & Material handling<br>Lifts & Elevators<br>Machine Tools<br>Packaging<br>Process Industry<br>Robotics<br>Rolling Stock<br>Ships & boats |

#### Electrical parameters

|  |        |
|--|--------|
| Maximum operating voltage (not for power transmission) | 500 V  |
| Test voltage conductor/conductor                       | 1.5 kV |
| Test voltage conductor/shielding                       | 1.5 kV |

#### Product design

|  |                            |
|--|----------------------------|
| Cable dimension                                    | 6X2X0.75                   |
| Nominal cross section conductor (mm <sup>2</sup> ) | 0.75 mm <sup>2</sup>       |
| Nominal cross section conductor (AWG)              | 19 AWG                     |
| Conductor material                                 | Bare Copper                |
| Conductor design                                   | extra-fine wire            |
| Including protective ground                        | No                         |
| Number of cores                                    | 12                         |
| Number of pairs                                    | 6                          |
| Stranding type                                     | Twisted-pair               |
| Shielded   | Yes                        |
| Type of overall shielding                          | Tin-plated copper braiding |
| Nominal outer diameter                             | 0.484 in                   |
| Cable form   | Round                      |

|   |              |
|---|--------------|
| Core insulation base material                   | Polyolefin   |
| Conductor insulation basic material, short form | PO           |
| Basic material of outer jacket                  | Polyurethane |
| Base material of outer sheath, shortname        | PUR          |
| Outer jacket color                              | gray         |
| Core identification                             | Colors       |
| Conductor color code                            | DIN 47100    |

### Product features

|  |   |
|--|---|
| Application area   | Cable chain   |
| For permanent bending  | Yes   |
| For torsional load   | No  |
| Minimum bending radius, stationary                           | 4 x outer diameter  |
| Minimum bending radius in inch, fixed installation           | 1.937 in  |
| Minimum bending radius, dynamic continuously flexing         | 7.5 x outer diameter  |
| Minimum bending radius in inch, dynamic continuously flexing | 3.634 in  |
| Minimum bending radius, occasionally moved                   | 7.5 x outer diameter  |
| Minimum bending radius in mm, occasionally moved             | 3.634 in  |
| Maximum bending cycles                                       | 5,000,000   |
| Maximum travel distance                                      | 16.404 ft   |
| Maximum speed unsupported                                    | 9.843 ft/s  |
| Maximum acceleration   | 9.843 ft/s <sup>2</sup>   |
| Temperature, fixed installation                              | -40 °C to +80 °C max. conductor temperature according to UL AWM |
| temperature, dynamic permanently moved                       | -40 °C to +80 °C max. conductor temperature according to UL AWM |
| Flame-retardant  | Yes   |
| Flame retardance according to                                | IEC 60332-1-2   |
| UV-resistant   | Yes   |

|                                |                            |
|--------------------------------|----------------------------|
| UV-resistant according to      | DIN EN ISO 4892-2 method A |
| weather resistant              | Yes                        |
| Weather-resistant according to | ISO 4892-2                 |
| Ozone-resistant                | Yes                        |
| ozone resistant according to   | EN 50396, method B         |
| Chemical resistant             | Yes                        |
| Halogenfree                    | Yes                        |
| Halogen-free according to      | VDE 0472-815               |
| Oil resistant                  | Yes                        |
| Oil resistance according to    | EN 50363-10-2              |
| PWIS-free                      | Yes                        |
| PWIS-free according to         | VDMA 24364-B2-L            |
| Mechanically resistant         | Yes                        |

#### Certifications and standards

|                      |  |
|----------------------|--|
| CE marking           | Yes  |
| UL recognized        | Yes  |
| UL AWM certification | according to UL 758 (e-file number: E63634)  |
| UL listed            | No   |
| cUR recognized       | Yes  |
| cUR certification    | AWM I A according to CSA C22.2 No. 210 (80°C, 300V) (e-file number: E63634)<br>AWM I B according to CSA C22.2 No. 210 (80°C, 300V) (e-file number: E63634)<br>AWM II A according to CSA C22.2 No. 210 (80°C, 300V) (e-file number: E63634)<br>AWM II B according to CSA C22.2 No. 210 (80°C, 300V) (e-file number: E63634) |
| cUL listed           | No   |
| CSA certified        | No   |
| VDE certified        | No   |
| DNV-certified        | No   |

**UNITRONIC® FD CP (TP) plus A**

| Article No. | Name                                   | Number of pairs | Nominal cross section conductor (mm <sup>2</sup> ) | Nominal outer diameter | Copper index        |
|-------------|--|-----------------|--|------------------------|---------------------|
| 11139499    | UNITRONIC® FD CP (TP) plus A 8X2X0,34  | 8               | 0.34 mm <sup>2</sup>                               | 0.465 in               | 721.02 lb/10000 ft  |
| 11139501    | UNITRONIC® FD CP (TP) plus A 2X2X0,14  | 2               | 0.14 mm <sup>2</sup>                               | 0.232 in               | 130.36 lb/10000 ft  |
| 11139502    | UNITRONIC® FD CP (TP) plus A 3X2X0,14  | 3               | 0.14 mm <sup>2</sup>                               | 0.244 in               | 157.24 lb/10000 ft  |
| 11139503    | UNITRONIC® FD CP (TP) plus A 4X2X0,14  | 4               | 0.14 mm <sup>2</sup>                               | 0.264 in               | 182.1 lb/10000 ft   |
| 11139504    | UNITRONIC® FD CP (TP) plus A 5X2X0,14  | 5               | 0.14 mm <sup>2</sup>                               | 0.287 in               | 251.32 lb/10000 ft  |
| 11139505    | UNITRONIC® FD CP (TP) plus A 6X2X0,14  | 6               | 0.14 mm <sup>2</sup>                               | 0.295 in               | 331.95 lb/10000 ft  |
| 11139506    | UNITRONIC® FD CP (TP) plus A 8X2X0,14  | 8               | 0.14 mm <sup>2</sup>                               | 0.346 in               | 368.24 lb/10000 ft  |
| 11139507    | UNITRONIC® FD CP (TP) plus A 10X2X0,14 | 10              | 0.14 mm <sup>2</sup>                               | 0.398 in               | 403.85 lb/10000 ft  |
| 11139508    | UNITRONIC® FD CP (TP) plus A 2X2X0,25  | 2               | 0.25 mm <sup>2</sup>                               | 0.26 in                | 215.03 lb/10000 ft  |
| 11139509    | UNITRONIC® FD CP (TP) plus A 3X2X0,25  | 3               | 0.25 mm <sup>2</sup>                               | 0.276 in               | 258.04 lb/10000 ft  |
| 11139510    | UNITRONIC® FD CP (TP) plus A 4X2X0,25  | 4               | 0.25 mm <sup>2</sup>                               | 0.299 in               | 290.29 lb/10000 ft  |
| 11139511    | UNITRONIC® FD CP (TP) plus A 5X2X0,25  | 5               | 0.25 mm <sup>2</sup>                               | 0.335 in               | 346.06 lb/10000 ft  |
| 11139512    | UNITRONIC® FD CP (TP) plus A 6X2X0,25  | 6               | 0.25 mm <sup>2</sup>                               | 0.346 in               | 482.47 lb/10000 ft  |
| 11139513    | UNITRONIC® FD CP (TP) plus A 8X2X0,25  | 8               | 0.25 mm <sup>2</sup>                               | 0.406 in               | 499.94 lb/10000 ft  |
| 11139514    | UNITRONIC® FD CP (TP) plus A 10X2X0,25 | 10              | 0.25 mm <sup>2</sup>                               | 0.465 in               | 604.77 lb/10000 ft  |
| 11139515    | UNITRONIC® FD CP (TP) plus A 14X2X0,25 | 14              | 0.25 mm <sup>2</sup>                               | 0.472 in               | 747.23 lb/10000 ft  |
| 11139516    | UNITRONIC® FD CP (TP) plus A 2X2X0,34  | 2               | 0.34 mm <sup>2</sup>                               | 0.287 in               | 275.51 lb/10000 ft  |
| 11139517    | UNITRONIC® FD CP (TP) plus A 3X2X0,34  | 3               | 0.34 mm <sup>2</sup>                               | 0.315 in               | 349.42 lb/10000 ft  |
| 11139518    | UNITRONIC® FD CP (TP) plus A 4X2X0,34  | 4               | 0.34 mm <sup>2</sup>                               | 0.343 in               | 396.46 lb/10000 ft  |
| 11139519    | UNITRONIC® FD CP (TP) plus A 6X2X0,34  | 6               | 0.34 mm <sup>2</sup>                               | 0.394 in               | 579.24 lb/10000 ft  |
| 11139520    | UNITRONIC® FD CP (TP) plus A 10X2X0,34 | 10              | 0.34 mm <sup>2</sup>                               | 0.539 in               | 880.95 lb/10000 ft  |
| 11139521    | UNITRONIC® FD CP (TP) plus A 2X2X0,5   | 2               | 0.5 mm <sup>2</sup>                                | 0.327 in               | 335.98 lb/10000 ft  |
| 11139522    | UNITRONIC® FD CP (TP) plus A 3X2X0,5   | 3               | 0.5 mm <sup>2</sup>                                | 0.346 in               | 482.47 lb/10000 ft  |
| 11139523    | UNITRONIC® FD CP (TP) plus A 4X2X0,5   | 4               | 0.5 mm <sup>2</sup>                                | 0.386 in               | 499.94 lb/10000 ft  |
| 11139524    | UNITRONIC® FD CP (TP) plus A 5X2X0,5   | 5               | 0.5 mm <sup>2</sup>                                | 0.421 in               | 567.81 lb/10000 ft  |
| 11139525    | UNITRONIC® FD CP (TP) plus A 6X2X0,5   | 6               | 0.5 mm <sup>2</sup>                                | 0.445 in               | 669.28 lb/10000 ft  |
| 11139526    | UNITRONIC® FD CP (TP) plus A 8X2X0,5   | 8               | 0.5 mm <sup>2</sup>                                | 0.52 in                | 969.65 lb/10000 ft  |
| 11139527    | UNITRONIC® FD CP (TP) plus A 10X2X0,5  | 10              | 0.5 mm <sup>2</sup>                                | 0.598 in               | 1182.66 lb/10000 ft |
| 11139528    | UNITRONIC® FD CP (TP) plus A 14X2X0,5  | 14              | 0.5 mm <sup>2</sup>                                | 0.61 in                | 1447.42 lb/10000 ft |
| 11139529    | UNITRONIC® FD CP (TP) plus A 2X2X0,75  | 2               | 0.75 mm <sup>2</sup>                               | 0.354 in               | 403.18 lb/10000 ft  |

| Article No. | Name                                   | Number of pairs | Nominal cross section conductor (mm <sup>2</sup> ) | Nominal outer diameter | Copper index        |
|-------------|--|-----------------|--|------------------------|---------------------|
| 11139530    | UNITRONIC® FD CP (TP) plus A 3X2X0,75  | 3               | 0.75 mm <sup>2</sup>                               | 0.386 in               | 575.88 lb/10000 ft  |
| 11139531    | UNITRONIC® FD CP (TP) plus A 4X2X0,75  | 4               | 0.75 mm <sup>2</sup>                               | 0.421 in               | 628.96 lb/10000 ft  |
| 11139532    | UNITRONIC® FD CP (TP) plus A 6X2X0,75  | 6               | 0.75 mm <sup>2</sup>                               | 0.484 in               | 876.25 lb/10000 ft  |
| 11139533    | UNITRONIC® FD CP (TP) plus A 8X2X0,75  | 8               | 0.75 mm <sup>2</sup>                               | 0.579 in               | 1291.52 lb/10000 ft |
| 11139534    | UNITRONIC® FD CP (TP) plus A 10X2X0,75 | 10              | 0.75 mm <sup>2</sup>                               | 0.657 in               | 1733.68 lb/10000 ft |
| 11139535    | UNITRONIC® FD CP (TP) plus A 14X2X0,75 | 14              | 0.75 mm <sup>2</sup>                               | 0.669 in               | 2127.45 lb/10000 ft |
| 11139536    | UNITRONIC® FD CP (TP) plus A 1X2X1,0   | 1               | 1 mm <sup>2</sup>                                  | 0.248 in               | 282.23 lb/10000 ft  |
| 11139537    | UNITRONIC® FD CP (TP) plus A 2X2X1,0   | 2               | 1 mm <sup>2</sup>                                  | 0.39 in                | 490.54 lb/10000 ft  |
| 11139538    | UNITRONIC® FD CP (TP) plus A 3X2X1,0   | 3               | 1 mm <sup>2</sup>                                  | 0.413 in               | 628.96 lb/10000 ft  |
| 11139539    | UNITRONIC® FD CP (TP) plus A 4X2X1,0   | 4               | 1 mm <sup>2</sup>                                  | 0.465 in               | 791.58 lb/10000 ft  |
| 11139540    | UNITRONIC® FD CP (TP) plus A 5X2X1,0   | 5               | 1 mm <sup>2</sup>                                  | 0.516 in               | 934.04 lb/10000 ft  |
| 11139541    | UNITRONIC® FD CP (TP) plus A 1X2X0,34  | 1               | 0.34 mm <sup>2</sup>                               | 0.201 in               | 134.39 lb/10000 ft  |
| 11139542    | UNITRONIC® FD CP (TP) plus A 1X2X0,5   | 1               | 0.5 mm <sup>2</sup>                                | 0.217 in               | 147.83 lb/10000 ft  |
| 11139543    | UNITRONIC® FD CP (TP) plus A 1X2X0,75  | 1               | 0.75 mm <sup>2</sup>                               | 0.232 in               | 228.47 lb/10000 ft  |
| 11139544    | UNITRONIC® FD CP (TP) plus A 1X2X0,25  | 1               | 0.25 mm <sup>2</sup>                               | 0.185 in               | 94.08 lb/10000 ft   |

V1.1