

## Data sheet

### Patch cord 6kV Flex500 Outdoor 5.0 m black

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P/N

13084F5000-E

EAN 4251394639918

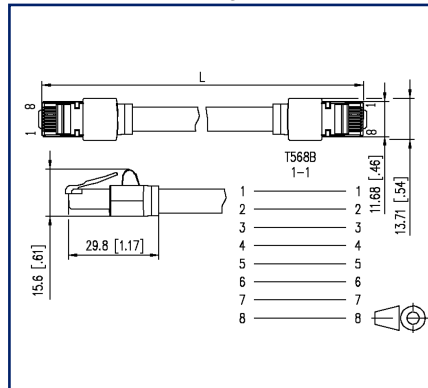
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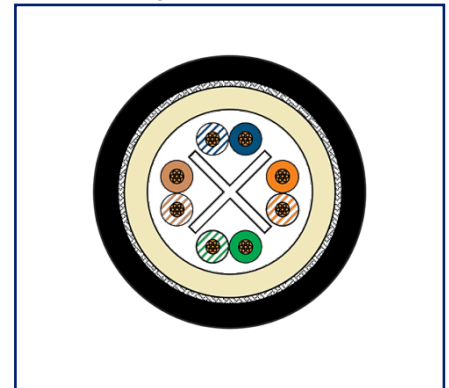
## Illustrations



Dimensional drawing



Principle diagram



See enlarged drawings at the end of document

## Product specification

- RJ45 patch cord for industrial and outdoor applications
- shielded Cat.5e, Class E<sub>A</sub> RJ45 patch cord
- compliance with class EA Channel-Link acc. to ISO/IEC 11801-1, DIN EN 50173-1
- tested: Channel-Link up to 500 MHz
- suitable 10 GBit/s Ethernet (IEEE 802.3an) up to 40 m
- especially suitable for unshielded and shielded Class EA systems
- robust and abrasion-resistant cable for industrial applications, such as machine and plant construction. Also suitable for outdoor installation
- meeting the VDE-AR-N 4100:2019-04 (6KV impulse voltage test according to DIN EN 60664-1) for installation in metering position and electrical distribution panels
- cable type: S/UTP 4x2xAWG24/7
- cable sheath: LSHF (FRNC) PUR, black
- the cable is designed for repeated moving application (drag chain). Tested with a bending radius of 100mm and an acceleration of 4m/s<sup>2</sup>, 3 million cycles at room temperature were achieved.
- two shielded RJ45 connectors; 1:1 assignment
- UV and oil-resistant
- Remote Powering (PoE, PoE plus and UPoE)
- suitable for IoT, M2M IoT, HDBaseT, industry 4.0, multimedia, wideband video
- molded snagless anti-bend sleeve
- considerably longer durability than standard patch cords
- very short cable boot

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### Technical Data

#### General Data

|   |  |
|---|--|
| Fields of application                         | Industrial Ethernet<br>harsh environment<br>Distributed building services<br>Automated Infrastructure Management (AIM)<br>Tertiary |
| Mechanical measurement according to MICE      | M1   |
| Ingress measurement according to MICE         | I1   |
| Climatic measurement according to MICE        | C1   |
| Electromagnetic measurement according to MICE | E2   |
| Design  | patch cord   |
| Shielding                                     | shielded   |
| Transmission technology                       | Copper   |
| Cable Type                                    | S/UTP  |
| Number of twisting elements                   | 4  |
| Twisting element                              | Pair   |
| Wiring  | 1 - 1  |
| Color   | black  |
| Dimensions                                    |  |
| Dimension - Interface 1 (L x W x H)           | 27.4 mm x 13.71 mm x 15.5 mm   |
| Dimension - Interface 1 (L x W x H)           | 1.079 in. x 0.54 in. x 0.61 in.  |
| Dimension - Interface 2 (L x W x H)           | 27.4 mm x 13.71 mm x 15.5 mm   |
| Dimension - Interface 2 (L x W x H)           | 1.079 in. x 0.54 in. x 0.61 in.  |
| Cable length (m)                              | 5 m  |
| Cable length (ft)                             | 16.4 ft  |
| Weight  | 71.8 kg/km   |
| Marking option                                | by cable boot  |

#### Transmission characteristics

|                 |                |
|-----------------|----------------|
| Category (ISO)  | 5              |
| Class (ISO/IEC) | E <sub>A</sub> |
| Category (TIA)  | 5e             |
| Remote Powering | yes            |
| PoE             | IEEE 802.3af   |
| PoE plus        | IEEE 802.3at   |

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#### Transmission characteristics

|  |              |
|--|--------------|
| UPoE   | yes          |
| HDBaseT  | yes          |
| Transmission rate up to 100 MBit (Fast Ethernet) | IEEE 802.3u  |
| Transmission rate up to 1 GBit (Fast Ethernet)   | IEEE 802.3ab |
| Transmission rate up to 10 GBit                  | IEEE 802.3an |

#### Connections/interfaces

|   |   |
|---|---|
| Connector technology interface 1                | RJ45 plug                                     |
| Connector technology interface 2                | RJ45 plug                                     |
| Number of ports interface 1                     | 1   |
| Number of ports interface 2                     | 1   |
| Number of equipped ports interface 1            | 1   |
| Number of ports interface 2 equipped            | 1   |
| Number of positions/contacts interface 1        | 8P/8C   |
| Number of positions/contacts interface 2        | 8P/8C   |
| Termination data, stranded wire (min. - max.)   |   |
| Conductor cross section, stranded wire          | AWG 24/7                                      |
| Conductor cross section, stranded wire          | 0.227 mm <sup>2</sup> - 0.227 mm <sup>2</sup> |
| Conductor diameter, stranded wire (bare copper) | 0.61 mm - 0.61 mm                             |
| Conductor diameter, stranded wire (bare copper) | 0.024 in. - 0.024 in.                         |
| Core diameter (min. - max.)                     |   |
| Core diameter (conductor with insulation)       | 0.96 mm - 0.96 mm                             |
| Core diameter (conductor with insulation)       | 0.038 in. - 0.038 in.                         |
| Cable sheath diameter (min. - max.)             |   |
| Cable sheath diameter                           | 8 mm - 8 mm                                   |
| Copper index                                    | 33.9 kg/km                                    |

#### Electrical characteristics

|                           |              |
|---------------------------|--------------|
| Current carrying capacity | max. 1 A     |
| Rated voltage             | max. 60 V DC |

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#### Electrical characteristics

Rated test voltage

|   |                  |
|---|------------------|
| Rated test voltage core / cable jacket acc. to DIN EN 60664-1   | 6000 V           |
| Rated test voltage shield / cable jacket acc. to DIN EN 60664-1 | 6000 V           |
| Rated test voltage core / shield                                | 1500 V           |
| Rated test voltage core / core                                  | 800 V            |
| Contact resistance  | max. 20 mOhm     |
| Through resistance  | max. 200 mOhm    |
| Insulation resistance   | min. 1000 MOhm   |
| Resistance unbalance  | max. 2 %         |
| Capacitance at 800 Hz   | Nom. 45 nF/km    |
| Capacitance unbalance pair to ground                            | max. 1200 pF/km  |
| Nominal velocity of propagation                                 | ca. 65 %         |
| Delay skew  | max. 45 ns/100 m |
| Dielectric strength conductor-conductor (primarily)             | max. 500 V DC    |
| Dielectric strength conductor-conductor (primarily)             | max. 500 V AC    |
| Dielectric strength conductor-conductor (secondary)             | max. 500 V DC    |
| Dielectric strength conductor-conductor, peak value (secondary) | max. 500 V AC    |

#### Mechanical data

|  |                    |
|--|--------------------|
| Tensile force  | 100 N              |
| Position/mounting of latch<br>standard installation position     | top                |
| Bending radius without load                                      | max. 60 mm         |
| Bending radius with load   | max. 80 mm         |
| Number of alternating bending cycles (mechanical resistance) at: | max. 8500          |
| Alternating bending radius                                       | 100 mm             |
| acceleration   | 4 m/s <sup>2</sup> |

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#### Materials and material properties

|   |                    |
|---|--------------------|
| Material - Conductor                    | Cu (copper)        |
| Material - Conductor Insulation         | Polyethylene       |
| Material - Cable jacket                 | PUR                |
| Material - Inner cable jacket           | HFFR               |
| Material - Plug housing interface 1     | PC (polycarbonate) |
| Material - Plug housing interface 2     | PC (polycarbonate) |
| Material - Contact interface 1          | CuSn (tin bronze)  |
| Material - Contact interface 2          | CuSn (tin bronze)  |
| Material - Contact finish interface 1   | Au (gold)          |
| Material - Contact finish interface 2   | Au (gold)          |
| Material - Contact carriers interface 1 | Plastics           |
| Material - Contact carriers interface 2 | Plastics           |
| Material - Shield interface 1           | CuSn (tin bronze)  |
| Material - Shield interface 2           | CuSn (tin bronze)  |
| Material - Shield finish interface 1    | Sn (tin)           |
| Material - Shield finish interface 2    | Sn (tin)           |
| Material - Main shield                  | Cu (copper) braid  |
| Flame retardancy                        | yes                |
| Halogen free                            | yes                |
| Oil resistance                          | yes                |
| UV-resistance                           | yes                |
| drag chain suitable                     | yes                |

#### Environmental conditions

|                               |                 |
|-------------------------------|-----------------|
| Temperature (min. - max.)     |                 |
| Temperature - Storage °C      | -40 °C - 70 °C  |
| Temperature - Storage °F      | -40 °F - 158 °F |
| Temperature - Operating °C    | -40 °C - 70 °C  |
| Temperature - Operating °F    | -40 °F - 158 °F |
| Temperature - Installation °C | 0 °C - 50 °C    |
| Temperature - Installation °F | 32 °F - 122 °F  |

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#### Standards/Regulations

Generic cabling systems

|  |  |
|--|--|
| General requirements   | ISO/IEC 11801-1   DIN EN 50173-1<br>ANSI/TIA-568.2-D |
| Test for vertical flame propagation for a single insulated wire or cable             | IEC 60332-1  |
| Measurement of smoke density of cables burning                                       | IEC 61034  |
| Determination of acidity (by measuring the pH value) and conductivity                | IEC 60754-2  |
| Specification for the testing of balanced and coaxial information technology cabling |  |
| Cords as specified in ISO/IEC 11801 and related standards                            | IEC 61935-2  |

#### Classifications

|          |          |
|----------|----------|
| ETIM 7.0 | EC001262 |
| ETIM 8.0 | EC001262 |
| ETIM 9.0 | EC001262 |



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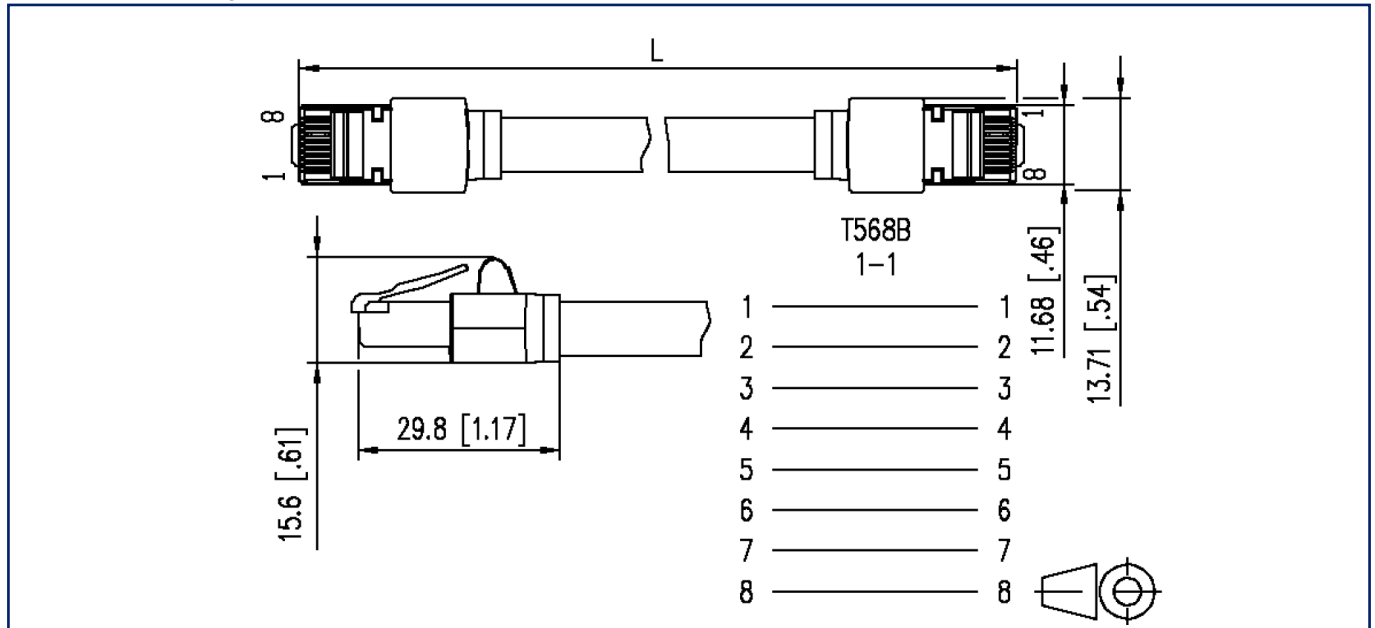
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