

# Data sheet

## Patch cord 6kV Flex500 Outdoor 20.0 m black

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P/N

13084FB000-E

EAN 4251394639932

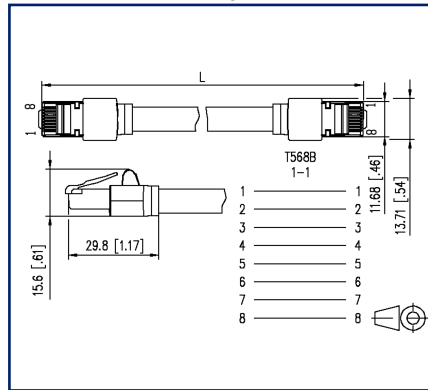
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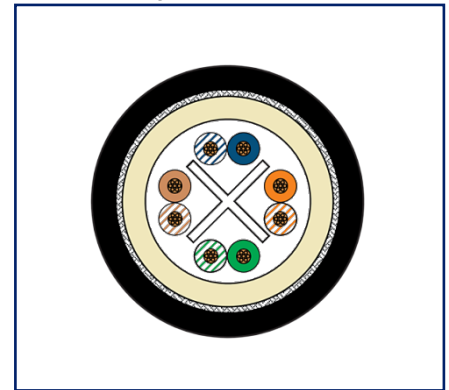
### Illustrations



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 harsh environment Distributed building services Automated Infrastructure Management (AIM) 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)	20 m
Cable length (ft)	65.62 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 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

#### Cable

Material - Conductor	Cu (copper)
Material - Conductor Insulation	Polyethylene
Material - Cable jacket	PUR
Material - Inner cable jacket	HFFR
Flame retardancy	yes, according to IEC 60332-1-2:2004 AMD1:2015

#### Interface 1

Material - Plug housing interface 1	PC (polycarbonate)
Material - Contact interface 1	CuSn
Material - Contact finish interface 1	Au (gold)
Material - Contact carriers interface 1	Plastics
Material - Shield interface 1	CuSn
Material - Shield finish interface 1	Sn

#### Interface 2

Material - Plug housing interface 2	PC (polycarbonate)
Material - Contact interface 2	CuSn
Material - Contact finish interface 2	Au (gold)
Material - Contact carriers interface 2	Plastics
Material - Shield interface 2	CuSn
Material - Shield finish interface 2	Sn

Material - Main shield	Cu (copper) braid
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 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
ETIM 10.0	EC001262

### Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way. At METZ CONNECT's request, the Customer shall submit and make available meaningful evidence (e.g. test and laboratory protocols, certifications, etc.).

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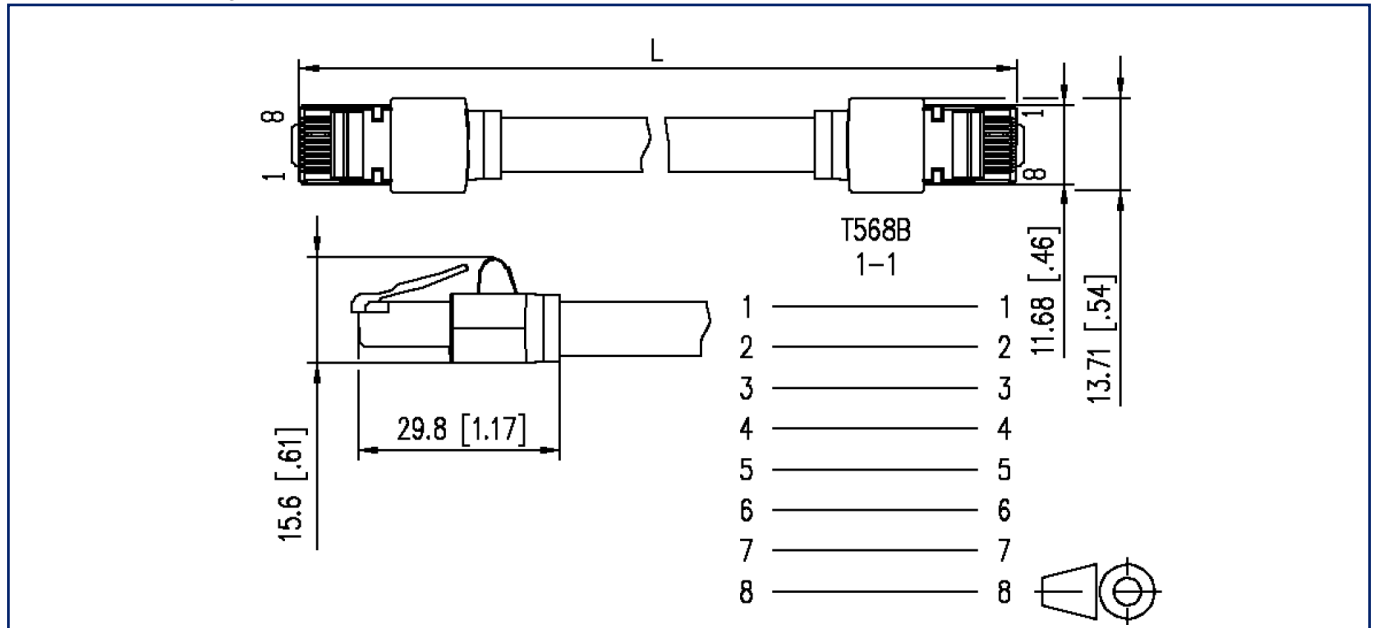
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**Accessories from**

P/N	Designation
140120APZ-E	Smart meter coupler RJ45/RJ45 shielded
1401A0APZ-E	Smart meter coupler RJ12/RJ12 unshielded
1401B0APZ-E	Smart meter coupler RJ45/RJ45 unshielded

**Illustrations**

Dimensional drawing



Principle diagram

