

1489579

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Data connector, Ethernet CAT6 $_{\rm A}$  (10 Gbps), PROFINET CAT6 $_{\rm A}$  (10 Gbps), 8-position, shielded, Plug angled M12 Push-Pull, coding: X, Crimp connection, knurl material: Zinc die-cast, tin-plated, external cable diameter 6.5 mm ... 10 mm, without crimp contacts

### Your advantages

- · Extremely compact, thanks to the small wiring space and high contact density
- · Safe use in the field, thanks to a high degree of protection
- · Safely shielded: reliable shield connection even under extreme mechanical strain
- · Robust connection: suitable for railway applications with high shock and vibration loads

#### Commercial data

Item number	1489579
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AF2CJJ
Product key	AF2CJJ
GTIN	4063151936259
Weight per piece (including packing)	38.3 g
Weight per piece (excluding packing)	38.3 g
Country of origin	PL



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## Technical data

#### Notes

General	This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 8.2 Connectors for Outside Environment (Balanced cabling)
Assembly note	NOTE: Observe the permissible bending radii when routing cables, since the degree of protection may be at risk if the bending forces are too high. Reduce mechanical loads upstream of the connector, e.g., by using cable ties.

### Mounting

Assembly note	Contacts can be clipped in place and unclipped without tools
	The pin assignment can be rotated in a 30° pitch to the cable outlet

### Product properties

Product type	Circular connector (cable-side)
Application	Data
Sensor type	Ethernet
Number of positions	8
No. of cable outlets	1
Shielded	yes
Coding	X
Cable outlet	angled

#### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

#### **Dimensions**

Dimensional drawing	15.0
Length	52 mm
Wrench size, union nut	15 mm
Wrench size, counter nut	14 mm
External dimensions	
Outside diameter	6.5 mm 10 mm
Housing	



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Connection 1
Head design

Head cable outlet

Head thread type

Head locking type

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Connection method	Diameter housing	19 mm
Material of grip body         Zinc die-cast, nickel-plated           Contact carrier material         PA 6.6           Material for screw connection         Zinc die-cast, tin-plated           Innection data         Innection data           Innection method         Crimp connection           Connection method         Crimp connection           Connection cross section AWG         26 22 (flexible)           Stripping length of the individual wire         4 mm +0,5 mm           Tightening torque         1.5 Nm (Screw plug insert with sleeve housing as far it will 4 Nm (Pressure nut with coupling sleeve)           In assignment         2 = OG (D1+)           Contact   Color (signal designation)   Contact (optional)         1 = WHOG (D1+)           2 = OG (D1-)         3 = WHON (D2+)           4 = GN (D2-)         5 = WHBN (D4+)           6 = BN (D4-)         7 = WHBU (D3-)           8 = BU (D3+)         8 = BU (D3+)           ctrical properties         ≥ 100 MQ           Nominal voltage U <sub>N</sub> 48 ∨ AC           60 ∨ DC         Nominal current I <sub>N</sub> 0.5 A	erial specifications	
Contact carrier material         PA 6.6           Material for screw connection         Zinc die-cast, tin-plated           Innection data         Innection data           Innection data           Connection method         Crimp connection           Connection cross section AWG         26 22 (flexible)           Connection cross section AWG         26 22 (flexible)           Stripping length of the individual wire         4 mm +0.5 mm           Tightening torque         1.5 Nm (Screw plug insert with sleeve housing as far it will 4 Nm (Pressure nut with coupling sleeve)           in assignment         1 = WHOG (D1+)           Contact   Color (signal designation)   Contact (optional)         1 = WHOG (D1+)           2 = OG (D1-)         3 = WHGN (D2+)           4 = GN (D2-)         5 = WHBN (D4+)           6 = BN (D4+)         6 = BN (D4-)           7 = WHBU (D3-)         8 = BU (D3+)           ctrical properties           Rated surge voltage         0.8 kV           Nominal voltage U <sub>N</sub> Nominal current I <sub>N</sub> 0.5 A           chanical properties	Flammability rating according to UL 94	V0
Material for screw connection         Zinc die-cast, tin-plated           Innection data	Material of grip body	Zinc die-cast, nickel-plated
onductor connection  Connection method Crimp connection  Connection cross section 0.14 mm² 0.34 mm² (flexible)  Connection cross section AWG 26 22 (flexible)  Stripping length of the individual wire 4 mm +0.5 mm  Tightening torque 1.5 Nm (Screw plug insert with sleeve housing as far it will 4 Nm (Pressure nut with coupling sleeve)  in assignment  Contact   Color (signal designation)   Contact (optional) 1 = WHOG (D1+) 2 = OG (D1-) 3 = WHGN (D2+) 4 = GN (D2-) 5 = WHBN (D4+) 6 = BN (D4-) 7 = WHBU (D3-) 8 = BU (D3+)  ctrical properties  Rated surge voltage 0.8 kV Insulation resistance 2 100 MΩ  Nominal voltage U <sub>N</sub> 48 ∨ AC 60 ∨ DC  Nominal current I <sub>N</sub> 0.5 A	Contact carrier material	PA 6.6
Connection method	Material for screw connection	Zinc die-cast, tin-plated
Connection method Connection cross section Connection cross section Connection cross section AWG 26 22 (flexible) Stripping length of the individual wire 4 mm +0,5 mm  1.5 Nm (Screw plug insert with sleeve housing as far it will 4 Nm (Pressure nut with coupling sleeve)  in assignment  Contact   Color (signal designation)   Contact (optional)  I = WHOG (D1+)  2 = OG (D1-)  3 = WHGN (D2+)  4 = GN (D2-)  5 = WHBN (D4+)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3+)   ctrical properties  Rated surge voltage Nominal voltage U <sub>N</sub> Nominal voltage U <sub>N</sub> Nominal current I <sub>N</sub> Chanical properties  Rehating a section AWG  26 22 (flexible)  26 22 (flexible)  1 = WHOG (D1+)  2 = OG (D1-)  3 = WHOG (D1+)  2 = OG (D1-)  3 = WHGN (D2-)  5 = WHBN (D3-)  8 = BU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3-)  8 = BU (D3-)  9 = CHANCH AND (D3-)  8 = BU (D3-)  9 = CHANCH AND (D3-)  9 = CHANC	nnection data	
Connection cross section   0.14 mm² 0.34 mm² (flexible)	onductor connection	
Connection cross section AWG         26 22 (flexible)           Stripping length of the individual wire         4 mm +0,5 mm           Tightening torque         1.5 Nm (Screw plug insert with sleeve housing as far it will 4 Nm (Pressure nut with coupling sleeve)           in assignment         1 = WHOG (D1+)           Contact   Color (signal designation)   Contact (optional)         1 = WHOG (D1+)           2 = OG (D1-)         3 = WHGN (D2+)           4 = GN (D2-)         5 = WHBN (D4+)           6 = BN (D4-)         7 = WHBU (D3-)           8 = BU (D3+)         8 = BU (D3+)           Ctrical properties           Rated surge voltage         0.8 kV           Insulation resistance         ≥ 100 MΩ           Nominal voltage U <sub>N</sub> 48 V AC           60 V DC           Nominal current I <sub>N</sub> 0.5 A	Connection method	Crimp connection
Stripping length of the individual wire Tightening torque 1.5 Nm (Screw plug insert with sleeve housing as far it will 4 Nm (Pressure nut with coupling sleeve)  In assignment  Contact   Color (signal designation)   Contact (optional)  I = WHOG (D1+)  2 = OG (D1-)  3 = WHGN (D2+)  4 = GN (D2-)  5 = WHBN (D4+)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3+)  Contact   Properties  Rated surge voltage  Insulation resistance  Nominal voltage U <sub>N</sub> Nominal current I <sub>N</sub> Chanical properties  Chanical properties  Chanical properties  Chanical properties	Connection cross section	0.14 mm² 0.34 mm² (flexible)
Tightening torque	Connection cross section AWG	26 22 (flexible)
in assignment  Contact   Color (signal designation)   Contact (optional)  Contact   Color (signal designation)   Contact (optional)  I = WHOG (D1+)  2 = OG (D1-)  3 = WHGN (D2+)  4 = GN (D2-)  5 = WHBN (D4+)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3+)  Ctrical properties  Rated surge voltage  0.8 kV  Insulation resistance  Nominal voltage U <sub>N</sub> Nominal voltage U <sub>N</sub> A v AC  60 V DC  Nominal current I <sub>N</sub> 0.5 A  chanical properties  echanical data	Stripping length of the individual wire	4 mm +0,5 mm
in assignment  Contact   Color (signal designation)   Contact (optional)  2 = OG (D1-)  3 = WHGN (D2+)  4 = GN (D2-)  5 = WHBN (D4+)  6 = BN (D4-)  7 = WHBU (D3-)  8 = BU (D3+)   Ctrical properties  Rated surge voltage  0.8 kV  Insulation resistance  Nominal voltage U <sub>N</sub> 48 ∨ AC  60 ∨ DC  Nominal current I <sub>N</sub> 0.5 A	Tightening torque	1.5 Nm (Screw plug insert with sleeve housing as far it will go
Contact   Color (signal designation)   Contact (optional)       1 = WHOG (D1+)         2 = OG (D1-)       3 = WHGN (D2+)         4 = GN (D2-)       5 = WHBN (D4+)         6 = BN (D4-)       7 = WHBU (D3-)         8 = BU (D3+)       8 = BU (D3+)         Ctrical properties         Rated surge voltage       0.8 kV         Insulation resistance       ≥ 100 MΩ         Nominal voltage U <sub>N</sub> 48 V AC         60 V DC         Nominal current I <sub>N</sub> 0.5 A         chanical properties		4 Nm (Pressure nut with coupling sleeve)
$2 = OG (D1-)$ $3 = WHGN (D2+)$ $4 = GN (D2-)$ $5 = WHBN (D4+)$ $6 = BN (D4-)$ $7 = WHBU (D3-)$ $8 = BU (D3+)$ Ctrical properties  Rated surge voltage $0.8 \text{ kV}$ Insulation resistance $ \ge 100 \text{ M}\Omega$ Nominal voltage $U_N$ $48 \text{ V AC}$ $60 \text{ V DC}$ Nominal current $I_N$ $0.5 \text{ A}$ Chanical properties	in assignment	
$3 = WHGN (D2+)$ $4 = GN (D2-)$ $5 = WHBN (D4+)$ $6 = BN (D4-)$ $7 = WHBU (D3-)$ $8 = BU (D3+)$ Ctrical properties  Rated surge voltage $0.8 \text{ kV}$ Insulation resistance $0.8 \text{ kV}$ $1 \text{ Nominal voltage } \text{U}_{\text{N}}$ $48 \text{ V AC}$ $60 \text{ V DC}$ Nominal current $\text{I}_{\text{N}}$ $0.5 \text{ A}$ Chanical properties	Contact   Color (signal designation)   Contact (optional)	1 = WHOG (D1+)
$4 = GN (D2-)$ $5 = WHBN (D4+)$ $6 = BN (D4-)$ $7 = WHBU (D3-)$ $8 = BU (D3+)$ Certical properties  Rated surge voltage $0.8 \text{ kV}$ Insulation resistance $0.8 \text{ kV}$ $1 \text{ Nominal voltage } U_{\text{N}}$ $48 \text{ V AC}$ $60 \text{ V DC}$ Nominal current $I_{\text{N}}$ $0.5 \text{ A}$ Chanical properties  echanical data		2 = OG (D1-)
5 = WHBN (D4+) 6 = BN (D4-) 7 = WHBU (D3-) 8 = BU (D3+)  ctrical properties  Rated surge voltage 0.8 kV Insulation resistance ≥ 100 MΩ  Nominal voltage U <sub>N</sub> 48 V AC 60 V DC  Nominal current I <sub>N</sub> 0.5 A  chanical properties  echanical data		3 = WHGN (D2+)
$6 = BN (D4-)$ $7 = WHBU (D3-)$ $8 = BU (D3+)$ Ctrical properties  Rated surge voltage $10.8 \text{ kV}$ Insulation resistance $2 = 100 \text{ M}\Omega$ Nominal voltage $U_N$ $48 \text{ V AC}$ $60 \text{ V DC}$ Nominal current $I_N$ $0.5 \text{ A}$ Chanical properties		4 = GN (D2-)
7 = WHBU (D3-) 8 = BU (D3+)  Ctrical properties  Rated surge voltage 0.8 kV Insulation resistance ≥ 100 MΩ  Nominal voltage U <sub>N</sub> 48 ∨ AC 60 ∨ DC  Nominal current I <sub>N</sub> 0.5 A  Chanical properties		5 = WHBN (D4+)
Extrical properties       Rated surge voltage     0.8 kV       Insulation resistance     ≥ 100 MΩ       Nominal voltage $U_N$ 48 V AC       60 V DC       Nominal current $I_N$ 0.5 A       chanical properties		6 = BN (D4-)
ctrical properties  Rated surge voltage $0.8 \text{ kV}$ Insulation resistance $\geq 100 \text{ M}\Omega$ Nominal voltage $U_N$ $48 \text{ V AC}$ $60 \text{ V DC}$ Nominal current $I_N$ $0.5 \text{ A}$ Chanical properties		7 = WHBU (D3-)
Rated surge voltage $0.8 \text{ kV}$ Insulation resistance       ≥ 100 MΩ         Nominal voltage U <sub>N</sub> 48 V AC         60 V DC         Nominal current I <sub>N</sub> 0.5 A         chanical properties         lechanical data		8 = BU (D3+)
Insulation resistance     ≥ 100 MΩ       Nominal voltage $U_N$ 48 V AC       60 V DC       Nominal current $I_N$ 0.5 A       chanical properties       echanical data	ctrical properties	
Nominal voltage U <sub>N</sub> 48 V AC  60 V DC  Nominal current I <sub>N</sub> 0.5 A  chanical properties	Rated surge voltage	0.8 kV
Nominal current I <sub>N</sub> 60 V DC  0.5 A  Chanical properties  echanical data	Insulation resistance	≥ 100 MΩ
Nominal current I <sub>N</sub> 0.5 A  chanical properties  echanical data	Nominal voltage U <sub>N</sub>	48 V AC
chanical properties		60 V DC
lechanical data	Nominal current I <sub>N</sub>	0.5 A
	chanical properties	
Incartion with drawal evides	echanical data	
insertion/withdrawai cycles ≥ 100	Insertion/withdrawal cycles	≥ 100

Plug

M12

angled

Push-Pull



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Coding	X		
Cable/line			
Signal type/category	Ethernet CAT6 <sub>A</sub> (IEC 11801), 10 Gbps		
	PROFINET CAT6 <sub>A</sub> (IEC 11801), 10 Gbps		
Stripping length of the individual wire	4 mm +0,5 mm		
Environmental and real-life conditions  Ambient conditions			
Degree of protection	IP65		
	IP67		
Ambient temperature (operation)	-40 °C 85 °C (Plug)		
Standards and regulations			
Standard designation	M12-Push-Pull		
Standards/specifications	IEC 61076-2-010		
Standard designation	Shock, vibration		
Standards/specifications	EN 50155:2001		

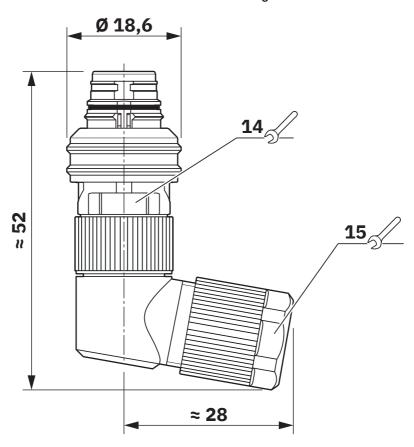


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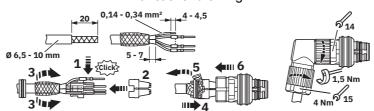
## **Drawings**

### Dimensional drawing



M12 x 1 male plug, angled, shielded

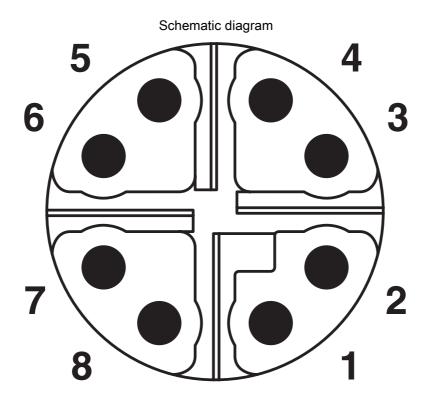
### Functional drawing





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Pin assignment M12 plug, 8-pos., view plug side



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## Classifications

ETIM 9.0

#### **ECLASS**

	ECLASS-13.0	27440116
ΕT	ТІМ	

EC002635



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## Environmental product compliance

#### EU RoHS

20 1.01.0	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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