

# VS-M12MSD-IP20-93B-X/10,0 DIFM - Network cable



1401146

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Network cable, PROFINET CAT5, 4-position, PVC/PVC, green RAL 6018, shielded (Advanced Shielding Technology), Plug straight M12, coding: D / IP65, on Plug straight RJ45, cable length: 10 m, Customer version

## Commercial data

Item number	1401146
Packing unit	1 pc
Minimum order quantity	100 pc
Note	Made to order (non-returnable)
Product key	AF1CJN
GTIN	4046356528689
Weight per piece (including packing)	670.7 g
Weight per piece (excluding packing)	670.7 g
Country of origin	PL

1401146

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## Technical data

### Product properties

Product type	Data cable preassembled
Number of positions	4
No. of cable outlets	1
Shielded	yes

### Insulation characteristics

Overvoltage category	I
Degree of pollution	1

### Interfaces

Bus system	PROFINET
Signal type/category	PROFINET CAT5 (IEC 11801:2002)

### Electrical properties

Nominal voltage $U_N$	48 V AC
	60 V DC
Nominal current $I_N$	4 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

### Connector

#### Connection 1

Type	Plug straight M12 / IP65
Number of positions	4
Coding type	D (Data)
Shielded	yes
Handle color	black
Material	CuZn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carrier)
	TPU, hardly inflammable, self-extinguishing (Grip body)
	Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	$\geq 100$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Tightening torque	0.4 Nm
Degree of protection	IP65
Ambient temperature (operation)	-40 °C ... 90 °C

#### Connection 2

Type	Plug straight RJ45
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### Cable/line

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1401146

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Cable length	10 m
PROFINET PVC stranded CAT5 [93B]	
Dimensional drawing	
UL AWM Style	21695 (80 °C / 600 V)
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B]
Conductor structure	1x4xAWG22/7, SF/TQ
AWG signal line	22
Conductor cross-section	4x 0.34 mm <sup>2</sup>
Wire diameter incl. insulation	1.5 mm ±0.1 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 5 GΩ*km
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Nominal voltage, cable	≤ 600 V
Test voltage Core/Core	2000 V ((50 Hz/1 min))
Test voltage Core/Shield	2000.00 V ((50 Hz/1 min))
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Flame resistance	UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1) UL 1685 (CSA FT 4) UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)
Resistance to oil	OIL RES I according to UL 2256
Other resistance	UV resistant (according to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -10 °C ... 70 °C (Cable, flexible installation)

## Environmental and real-life conditions

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1401146

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## Ambient conditions

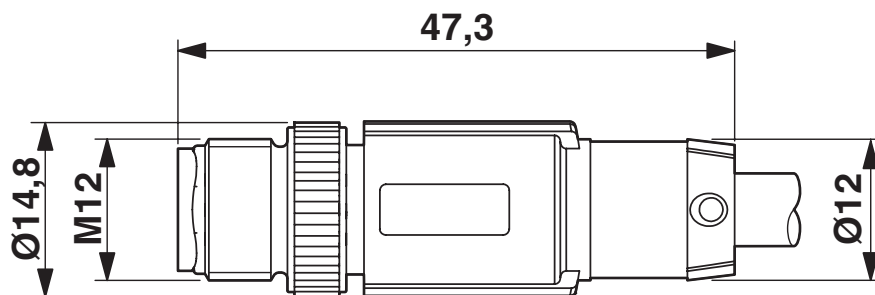
Degree of protection	IP20
	IP67
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-5 °C ... 50 °C (Cable, flexible installation)

1401146

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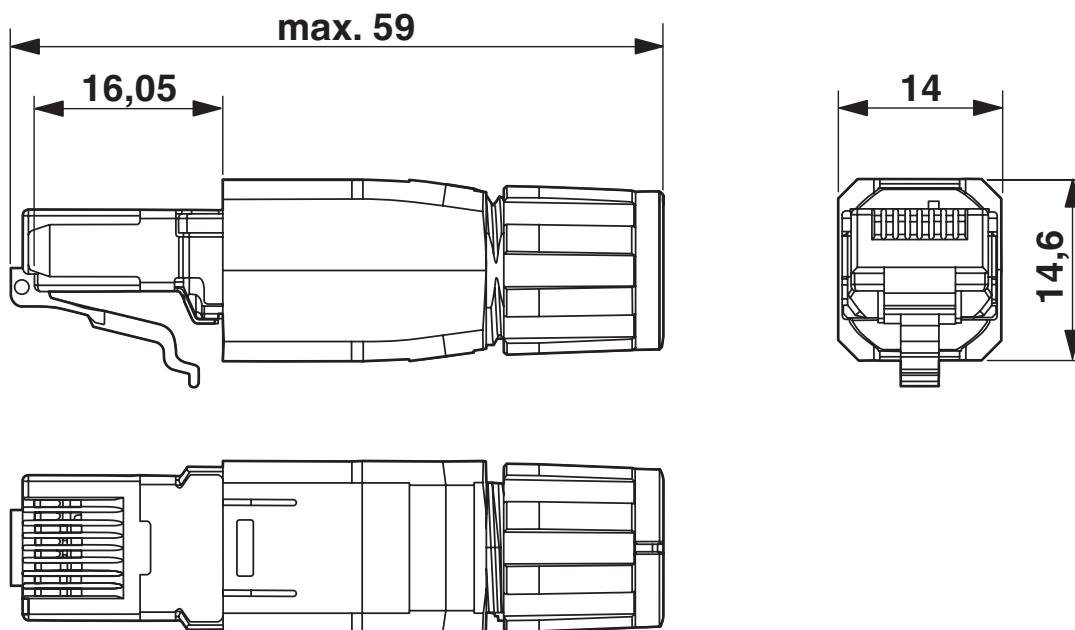
## Drawings

Dimensional drawing



Plug M12x1, straight for bus cables and 12-17-pos.

Dimensional drawing



RJ45 connector, IP20

1401146

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Schematic diagram

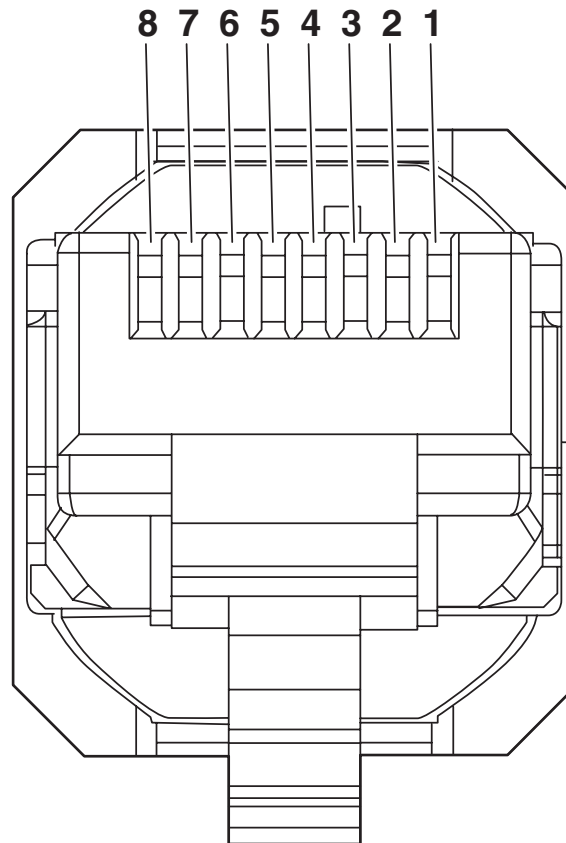


Pin assignment M12 male connector, 4-pos., D-coded, male side

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Schematic diagram



Connector pin assignment plug RJ45

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1401146

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## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9)
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