

# NBC-M12MSD/50,0-93C KA - Bus system cable



1576627

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Bus system cable, PROFINET, 4-position, PUR halogen-free, green RAL 6018, shielded (Advanced Shielding Technology), Plug straight M12, coding: D, on free cable end, cable length: 50 m, Customer version

## Commercial data

Item number	1576627
Packing unit	1 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	AF1CJN
Product key	AF1CJN
GTIN	4046356445290
Weight per piece (including packing)	3,116 g
Weight per piece (excluding packing)	3,116 g
Customs tariff number	85444290
Country of origin	PL

## Technical data

### Product properties

Product type	Data cable preassembled
Sensor type	PROFINET
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	D

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Interfaces

Bus system	PROFINET
Signal type/category	PROFINET

### Signaling

Status display	no
Status display present	no

### Electrical properties

Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC
	60 V DC
Nominal current I <sub>N</sub>	4 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100
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### Material specifications

Flammability rating according to UL 94	V0
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated

### Connector

#### Connection 1

Type	Plug straight M12
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Number of positions	4
Coding type	D (Data)


## Connection 2

Type	free cable end
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## Cable/line

Cable length	50 m
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## PROFINET drag chain CAT5 [93C]

Dimensional drawing	
UL AWM Style	20233 (80°C/300 V)
Number of positions	4
Shielded	yes
Cable type	PROFINET drag chain CAT5 [93C]
Conductor structure	1x4xAWG22/7, SF/TQ
AWG signal line	22
Conductor cross section	4x 0.34 mm²
Wire diameter incl. insulation	1.5 mm ±0.05 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PUR
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	≥ 500 MΩ*km
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 1 ... 100 MHz)
Nominal voltage, cable	≤ 300 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	5 x D
Minimum bending radius, flexible installation	7.5 x D
Dynamic load capacity (bending)	Max. bending cycles: 3000000, Bending radius: 200 mm, Traversing path: 10 m, Traversing rate: 4 m/s, Acceleration: 4 m/s²

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Dynamic load capacity (torsion)	Torsion: $\pm 30$ °/m
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
	in accordance with UN ECE-R 118.03
	according to CSA C 22.2 No. 210-FT1
Resistance to oil	in accordance with DIN EN 60811-404
Other resistance	UV resistant
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-40 °C ... 70 °C (Cable, flexible installation)

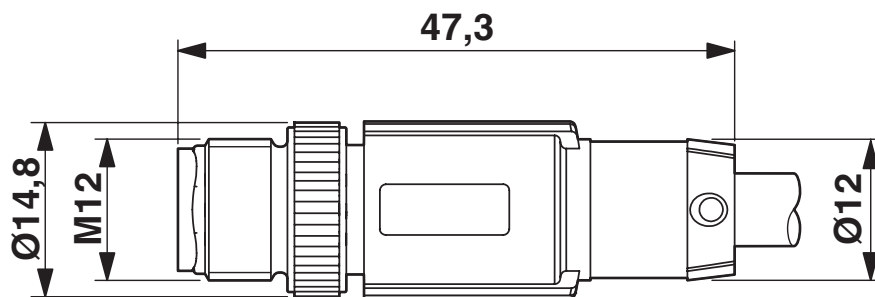
## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
	-20 °C ... 70 °C (cable, fixed installation)
	0 °C ... 50 °C (Cable, flexible installation)

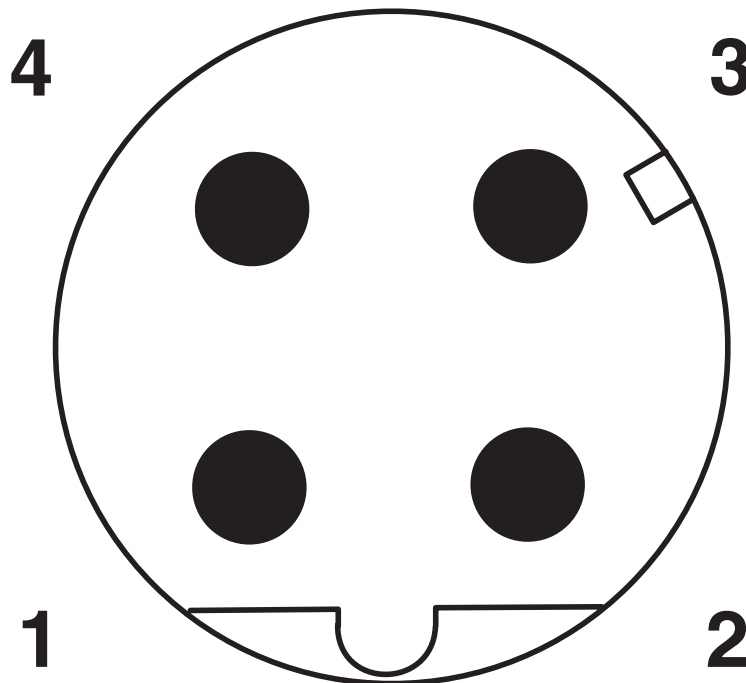
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



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

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Circuit diagram



Contact assignment of the M12 plug

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## Classifications

### ECLASS

ECLASS-13.0	27060307
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### ETIM

ETIM 9.0	EC001855
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### 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.)	No substance above 0.1 wt%
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