

NBC-MSD/ 0,3-93K/MSD SCO - Bus system cable



1410685

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Assembled Sercos III cable, shielded, star quad, 22 AWG stranded (7-wire), RAL 3020 (traffic red), M12 plug, SPEEDCON, 4-pos. to M12 plug, SPEEDCON, length: 0.3 m

Commercial data

Item number	1410685
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	AF1CJO
GTIN	4046356905442
Weight per piece (including packing)	48.3 g
Weight per piece (excluding packing)	48.2 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Product properties

Product type	Data cable preassembled
Sensor type	Sercos
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	Sercos III
Signal type/category	Sercos CAT5 (IEC 11801), 100 Mbps

Signaling

Status display	no
Status display present	no

Electrical properties

Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Material specifications

Flammability rating according to UL 94	V0
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Connector

Connection 1

Type	Plug straight M12 SPEEDCON / IP67
Number of positions	4
Locking type	SPEEDCON
Coding type	D

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Handle color	black
Material	CuSn (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	≥ 100
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

Connection 2

Type	Plug straight M12 SPEEDCON / IP67
Number of positions	4
Locking type	SPEEDCON
Coding type	D
Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	Zinc die-cast, nickel-plated (Screw connection)
	Zinc die-cast, nickel-plated (Screw connection)
	TPU, hardly inflammable, self-extinguishing (Grip body)
	PA (Contact carrier)
TPU, hardly inflammable, self-extinguishing (Grip body)	
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C

Cable/line

Cable length	0.3 m
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Sercos III [93K]

Dimensional drawing	
Cable weight	68 kg/km
UL AWM Style	21694 (60 °C / 600 V)
Number of positions	4

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Shielded	yes
Cable type	Sercos III [93K]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	5.3 ns/m
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm ²
Wire diameter incl. insulation	approx. 1.55 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	signal red RAL 3020
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Thickness, outer sheath	approx. 0.90 mm
Type of pair shielding	Aluminum-lined polyester foil
Overall twist	Star quad
Max. conductor resistance	≤ 120 Ω/km
Insulation resistance	≥ 0.5 GΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 Hz)
Wave impedance	100 Ω ±15 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	3 x D
Minimum bending radius, flexible installation	7 x D
Smallest bending radius, fixed installation	20 mm
Smallest bending radius, movable installation	46 mm
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent
Other resistance	UV resistant (according to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation) -40 °C ... 70 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65/IP67/IP69K
Ambient temperature (operation)	-25 °C ... 70 °C (cable, fixed installation) -25 °C ... 70 °C (Cable, flexible installation)

Standards and regulations

M12

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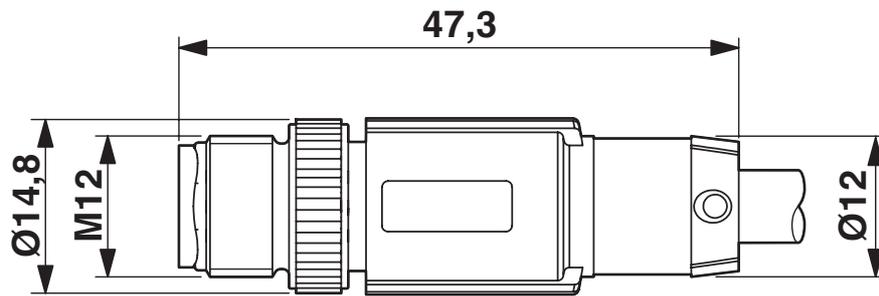
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Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

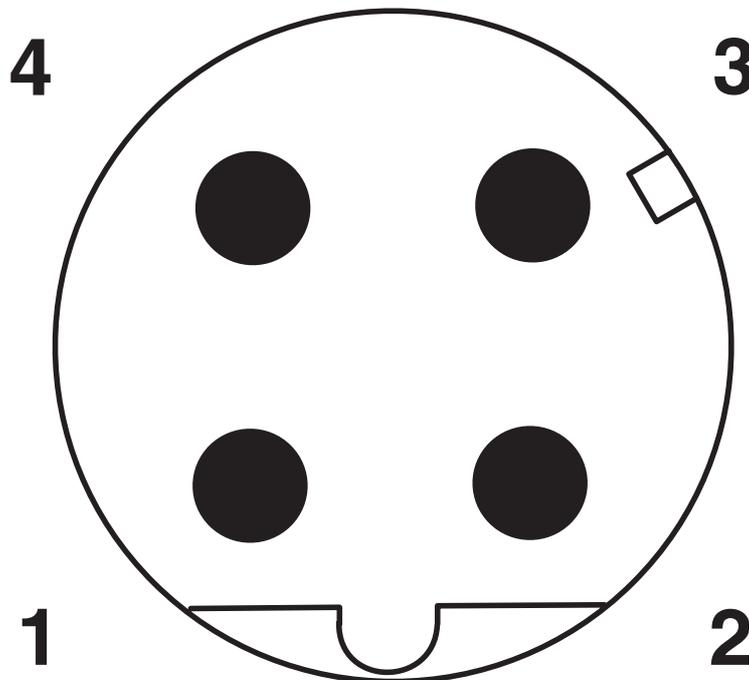
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram

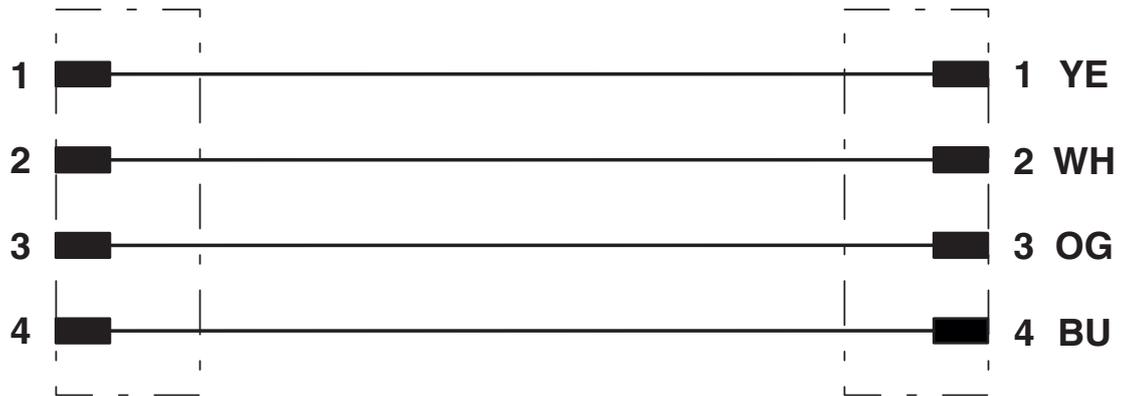


Pin assignment M12 male connector, 4-pos., D-coded, male side

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Circuit diagram



Contact assignment of the M12 plugs

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Classifications

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

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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