

Data cable preassembled - NBC-MSD/ 2,0-93E/R4AC SCO - 1407361

<https://www.phoenixcontact.com/in/products/1407361>

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Network cable, Ethernet CAT5 (100 Mbps), 4-position, PUR, water blue RAL 5021, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Plug straight RJ45 / IP20, cable length: 2 m

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Commercial Data

Order Key	1407361
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1
Catalog Page	Page 399 (C-2-2019)
GTIN	4046356774895
Weight per Piece (including packing)	113.2 GRM
Weight per Piece (excluding packing)	113.0 GRM
Customs tariff number	85444210
Country of origin	PL

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Technical Data

Cable / line

Outer sheath, material	PUR
External sheath, color	water blue RAL 5021
Single wire, color	white/orange-orange, white/green-green
Cable structure	2x2xAWG26/7; SF/UTP
UL AWM Style	20963 (80°C/30 V) 20963 (80°C/30 V)
Cable length	2 m
Cable weight	42 kg/km
Flame resistance	according to IEC 60332-1-2
Cable type	Ethernet flexible CAT5, 2-pair 93E
Shielded	yes
Nominal voltage, cable	≤ 100 V (Peak value, not for high-power applications)
Conductor cross section	0.14 mm ²
Conductor structure signal line	7x 0.16 mm
AWG signal line	26

Electrical properties

Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Nominal voltage, cable	≤ 100 V (Peak value, not for high-power applications)
Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 290.00 Ω/km
Cable insulation resistance	≥ 500 MΩ*km
Cable capacity	approx. 45 nF/km (at 1 kHz)
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Signal runtime	5.3 ns/m
Current carrying capacity of cable	2 A (according to DIN VDE 0891-1)

Cable structure

External sheath, color	water blue RAL 5021
	water blue RAL 5021
Outer sheath, material	PUR
	PUR
External cable diameter	6.4 mm ±0.2 mm
Single wire, color	white/orange-orange, white/green-green
Wire diameter incl. insulation	0.98 mm
Cable structure	2x2xAWG26/7; SF/UTP
Cable abbreviation	02YS(ST)C11Y
Twisted pairs	2 cores to the pair
Thickness, outer sheath	1.2 mm
Optical shield covering	70 %

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Shielding	Aluminum-coated foil, tinned copper braided shield
Cable type	Ethernet flexible CAT5, 2-pair
Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps Ethernet CAT5 (IEC 11801), 100 Mbps
Conductor structure signal line	7x 0.16 mm
Overall twist	Two pairs with two fillers to the core
AWG signal line	26
Material wire insulation	Foamed PE
Cable type (abbreviation)	93E
Conductor material	Bare Cu litz wires

Mechanical properties

Minimum bending radius, fixed installation	4 x D
Tensile strength	≤ 80 N
Minimum bending radius, flexible installation	8 x D

Attenuation

Damping	3.2 dB (with 1 MHz)
	6 dB (at 4 MHz)
	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.6 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Near end crosstalk attenuation (NEXT)	65.3 dB (with 1 MHz)
	56.3 dB (at 4 MHz)
	50.3 dB (at 10 MHz)
	47.2 dB (at 16 MHz)
	45.8 dB (at 20 MHz)
	42.9 dB (at 31.25 MHz)
	38.4 dB (at 62.5 MHz)
	35.3 dB (at 100 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)
	42.8 dB (at 20 MHz)
	39.9 dB (at 31.25 MHz)
	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Return loss (RL)	23 dB (at 4 MHz)
	24.1 dB (at 8 MHz)
	25 dB (at 10 MHz)

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	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)

Ambient conditions

Ambient temperature (operation)	-20 °C ... 80 °C (cable, flexible installation)
	-40 °C ... 80 °C (cable, fixed installation)
Resistance to oil	according to EN 60811-2-1
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
	in acc. to UL VW1

Connector

Head 2

Number of positions	4 (8)
Type	Plug straight RJ45 / IP20
Handle color	gray
Ambient temperature (operation)	-25 °C ... 60 °C
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)
	PA (Housing)
Insertion/withdrawal cycles	≥ 750

Header 1

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

Electrical properties

Transmission medium	Copper
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Nominal current I_N	1 A
Nominal voltage U_N	48 V AC
	60 V DC

LED signaling

Status display present	No
Status display	No

Material specifications

Contact material	CuSn
Color Handle area	gray / black
Material of grip body	TPU, hardly inflammable, self-extinguishing
Cable gland material	Zinc die-cast, nickel-plated
Contact surface material	Ni/Au
Housing material	Plastic
Contact carrier material	TPU GF

Interfaces

Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps
Bus system	Ethernet

Ambient conditions

Degree of protection	IP65 (M12 connector)
	IP67 (M12 connector)
	IP20 (RJ45 connector)
	IP67/IP20

Notes

General	Further products with variable cable type and variable cable length can be found in the accessories section
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Standards and regulations

Standards/specifications	IEC 61076-2-101
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Product properties

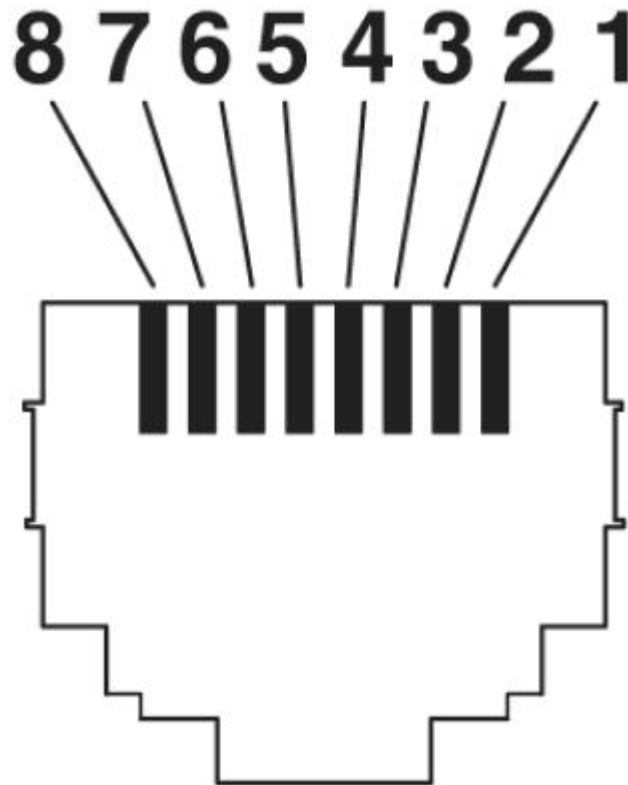
Number of positions	4
Coding	D - data
Application	Standard

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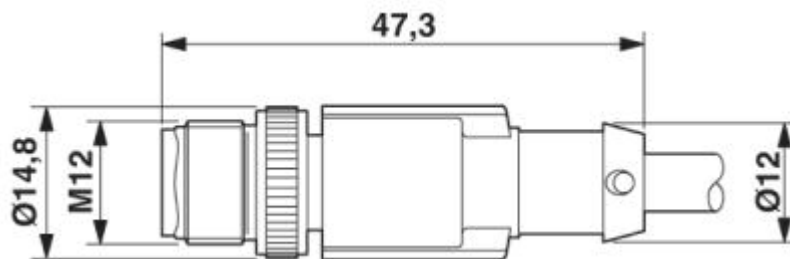
<https://www.phoenixcontact.com/in/products/1407361>

Drawings

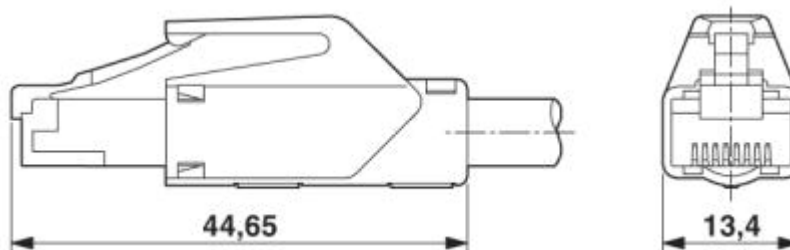
Schematic diagram



Dimensional drawing



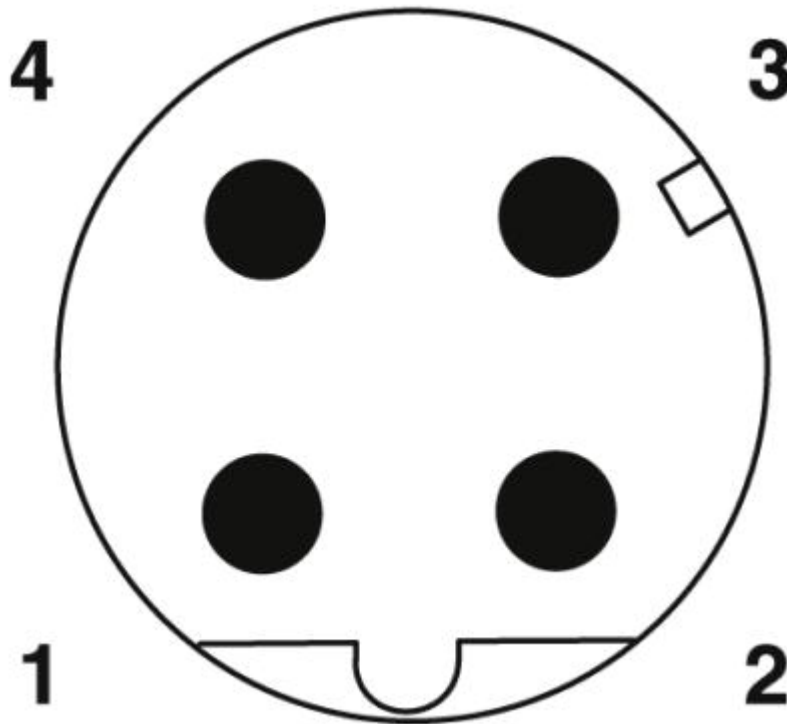
Dimensional drawing



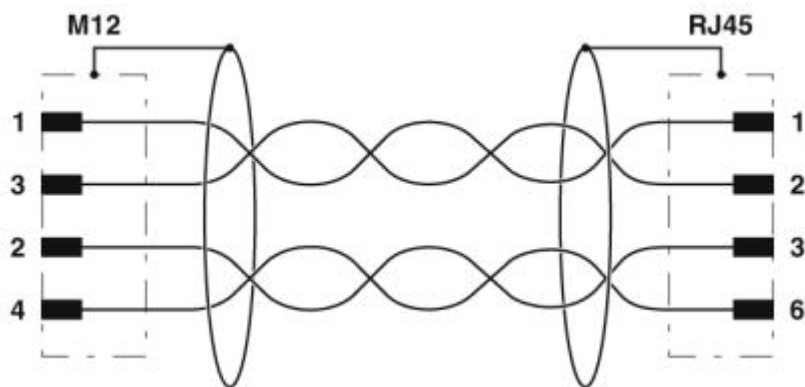
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Schematic diagram



Circuit diagram




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Approvals

UL Listed 

Nominal voltage U_N	30 V
Nominal current I_N	0.5 A

cUL Listed 

Nominal voltage U_N	30 V
Nominal current I_N	0.5 A

EAC-RoHS 

cULus Listed

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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
China RoHS	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

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Accessories

Data cable preassembled

Data cable preassembled - NBC-MSD-R4AC SCO/.../... - 1408712



Network cable, Ethernet CAT5 (100 Mbps), 4-position, Variable cable type, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Plug straight RJ45 / IP20, cable length: Free input (0.2 ... 40.0 m)

Data cable preassembled

Data cable preassembled - NBC-MRD-R4AC SCO/.../... - 1408704



Network cable, Ethernet CAT5 (100 Mbps), 4-position, Variable cable type, shielded, Plug angled M12 SPEEDCON / IP67, coding: D, on Plug straight RJ45 / IP20, cable length: Free input (0.2 ... 40.0 m)

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Data cable preassembled

Data cable preassembled - NBC-FSD-R4AC SCO/.../... - 1408696



Network cable, Ethernet CAT5 (100 Mbps), 4-position, Variable cable type, shielded, Plug straight RJ45 / IP20, on Socket straight M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Data cable preassembled

Data cable preassembled - NBC-FRD-R4AC SCO/.../... - 1408689



Network cable, Ethernet CAT5 (100 Mbps), 4-position, Variable cable type, shielded, Plug straight RJ45 / IP20, on Socket angled M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

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Torque tool

Torque tool - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

Torque tool

Torque tool - TSD-M 1,2NM - 1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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Screwdriver tools

Screwdriver tools - TSD-M SAC-BIT ADAPTER - 1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

Screwdriver tools

Screwdriver tools - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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Protective cap

Protective cap - PROT-M12 FS-PA-CHAIN - 1430873

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



Safety locking

Safety locking - SAC-M12-EXCLIP-M - 1558988

Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



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