PHŒNIX CONTACT

Network cable - NBC-MSX/ 1,0-94F SCO - 1407467

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Network cable, Ethernet CAT6$_A$ (10 Gbps) CAT6$_A$ (10 Gbps), 8-position, PUR, water blue RAL 5021, shielded, Plug straight M12 SPEEDCON / IP67, coding: X, on free cable end, cable length: 1 m

RoHS CAT6$_A$ 10 Gigabit/s Ethernet SPEEDCON LOCKING CC-Link IE

Key Commercial Data

Packing unit	1 STK
GTIN	4 046356 775885
GTIN	4046356775885
Weight per Piece (excluding packing)	80.000 g
Custom tariff number	85444210
Country of origin	Poland

Technical data

Dimensions

Length of cable	1 m

Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C (M12 connector)

General data

Note	Further products with variable cable type and variable cable length can be found in the accessories section
Rated current at 40°C	0.5 A

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Technical data

General data

Rated voltage	48 V AC
	60 V DC
Number of positions	8
Signal type/category	Ethernet CAT6$_A$, 10 Gbps
Standards/regulations	M12 connector IEC 61076-2-109
Transmission characteristics (category)	CAT6$_A$
Transmission speed	10 Gbps

Characteristics head 1

Head type	Plug straight M12 SPEEDCON / IP67
No. of positions (pin connector pattern)	8
Coding	X (Data)
Color	black
Material (component)	CuZn (Contact)
	Ni/Au (Contact surface)
	PP (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
Insulation resistance	$\geq$ 100 MΩ
Insertion/withdrawal cycles	$\geq$ 100
Torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C

Characteristics head 2

Head type	free cable end

Standards and Regulations

Standard designation	M12 connector
Standards/regulations	IEC 61076-2-109

Cable

Cable type	Ethernet 10 Gbit
Cable type (abbreviation)	94F
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT6$_A$, 10 Gbps
Cable structure	4x2xAWG26/7; S/FTP
Conductor cross section	4x 2x 0.14 mm²
AWG signal line	26
Conductor structure signal line	7x 0.16 mm

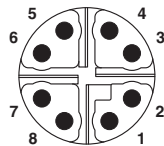# Network cable - NBC-MSX/ 1,0-94F SCO - 1407467

Technical data

Cable

Core diameter including insulation	1.04 mm
Wire colors	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Twisted pairs	2 cores to the pair
Type of pair shielding	Aluminum-lined foil
Overall twist	4 pairs for core
Shielding	Tinned copper braided shield
Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	0.65 mm
External cable diameter D	6.4 mm ±0.2 mm
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Tensile strength short-term/long-term	≤ 100 N
Cable weight	42 kg/km
Outer sheath, material	PUR
Material conductor insulation	Foamed PE
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 290 Ω (per km)
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Signal runtime	5.13 ns/m
Shield attenuation	≥ 80 dB (at 30 ... 100 MHz)
Nominal voltage, cable	≤ 100 V
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Flame resistance	according to IEC 60332-1-2
Halogen-free	According to IEC 60754-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 80 °C
Ambient temperature (storage/transport)	-20 °C ... 80 °C

Drawings

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Network cable - NBC-MSX/ 1,0-94F SCO - 1407467

Schematic diagram

Cable cross section

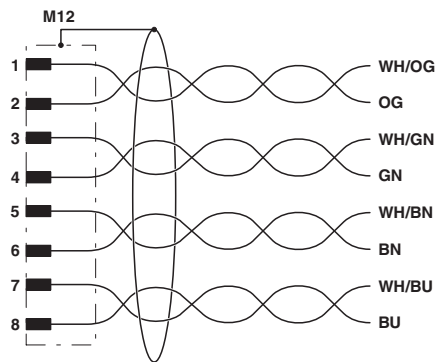Pin assignment of M12 plug, 8-pos., X-coded, pin side view

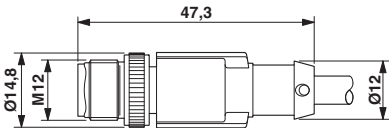Ethernet 10 Gbit [94F]

Circuit diagram

Dimensional drawing

1	WH/OG
2	OG
3	WH/GN
4	GN
5	WH/BN
6	BN
7	WH/BU
8	BU

M12

47,3

Ø14,8

M12

Ø12

Plug, M12 x 1, straight, shielded

Contact assignment of the M12 plug

Classifications

eCl@ss

eCl@ss 4.0	27060307
eCl@ss 4.1	27060307
eCl@ss 5.0	27060307
eCl@ss 5.1	27060307
eCl@ss 6.0	27060390
eCl@ss 7.0	27060390
eCl@ss 8.0	27279218
eCl@ss 9.0	27060308

ETIM

ETIM 3.0	EC000830
ETIM 4.0	EC001855
ETIM 5.0	EC001855
ETIM 6.0	EC000830

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Classifications

UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	31261501
UNSPSC 13.2	31251501

Accessories

Accessories

Cable connector

Conductor connectors - SACC-CC-8QO SH ETH - 1414412

Cable connector, Ethernet CAT6$_A$ (10 Gbps), 8-pos., halogen-free, shielded, insulation displacement connection, housing material: zinc die-cast, nickel-plated, outer cable diameter of 5 mm ... 9.7 mm

Circular connector (cable-side)

Connector - SACC-MSX-8QO SH ETH SCO - 1411043

Connector, Ethernet CAT6$_A$ (10 Gbps), 8-position, halogen-free, shielded, Plug straight M12 SPEEDCON, X-coded, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

Connector - SACC-FSX-8QO SH ETH SCO - 1414586

Connector, Ethernet CAT6$_A$ (10 Gbps), 8-position, halogen-free, shielded, Socket straight M12 SPEEDCON, X-coded, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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Accessories

Bus system connector - VS-08-M12MS-10G-P SCO - 1417430

Bus system connector, Ethernet CAT6$_A$ (10 Gbps), 8-position, shielded, Plug straight M12 SPEEDCON, X-coded, Piercecon®, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Bus system connector - VS-08-M12MR-10G-P SCO - 1417443

Bus system connector, Ethernet CAT6$_A$ (10 Gbps), 8-position, shielded, Plug angled M12 SPEEDCON, X-coded, Piercecon®, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12MSX-8CT-CL SH - 1422844

Connector, Ethernet/PROFINET CAT6$_A$ (10 Gbps), 8-position, shielded, Plug straight M12 Screw locking, X-coded, Crimp connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 6.5 mm ... 10 mm, without crimp contacts

Connector - SACC-M12MRX-8CT-CL SH - 1422845

Connector, Ethernet/PROFINET CAT6$_A$ (10 Gbps), 8-position, shielded, Plug angled M12 Screw locking, X-coded, Crimp connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 6.5 mm ... 10 mm, without crimp contacts

Corrugated pipe

Protective hose - WP-PA HF 13,0 BK - 3240681

Polyamide protective hose, inflammability class V0, UV resistant

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Accessories

Protective hose - WP-PA HF-HB 13,0 BK - 3240839

Polyamide protective hose, inflammability class HB, UV resistant

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Cutting tools

Cable-cutting tool - CUTFOX 12 - 1212128

Cable cutter, for copper and aluminum up to 12 mm diameter (up to 35 mm²)

Diagonal cutter - CUTFOX-S VDE - 1212207

Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

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Data cable preassembled

Network cable - NBC-MSX SCO-10G/.../... - 1408648

Network cable, Ethernet CAT6$_A$ (10 Gbps) CAT6$_A$ (10 Gbps), 8-position, Variable cable type, shielded, Plug straight M12 SPEEDCON / IP67, coding: X, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Data plug

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Accessories

RJ45 connector - VS-08-RJ45-10G/Q - 1419001

RJ45 connector, IP20, CAT6$_A$, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

RJ45 connector - CUC-IND-C1ZNI-S/R4IE8 - 1421607

RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 26-24, cable outlet: straight

RJ45 connector - CUC-IND-C1ZNI-T/R4IE8 - 1421877

RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 26-24, cable outlet: angled

RJ45 connector - CUC-IND-C1ZNI-B/R4IE8 - 1421876

RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 26-24, cable outlet: angled

RJ45 connector - CUC-V06-C1PGY-S/R4CEA:1 - 1414406

RJ45 connector, degree of protection: IP67, 10 Gbps, CAT6$_A$, material: PA, connection method: Crimp connection, connection cross section: AWG 24-27, cable outlet: straight, color: gray

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Accessories

RJ45 connector - CUC-V06-C1PBK-S/R4CEA:1 - 1414410

RJ45 connector, degree of protection: IP67, number of positions: 8, 10 Gbps, CAT6$_A$, material: PA, connection method: Crimp connection, connection cross section: AWG 24-27, cable outlet: straight, color: black

RJ45 connector - VS-PPC-C1-RJ45-POBK-8I10G - 1422205

RJ45 connector, IP67, with push/pull interlocking (Version 14), plastic housing, for 10 Gbps, for 24 ... 27 AWG stranded conductors

Electronics pliers

Diagonal cutter - MICROFOX-SP-1 - 1212487

Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version

Protective cap

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

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

Safety locking

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Accessories

Locking clip - 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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Screwdriver tools

Adapter insert - 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

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Tool - 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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Stripping tool

Stripping tool - WIREFOX 4 - 1212156

Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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Stripping tool - WIREFOX-E 4 - 1212704

Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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Accessories

Stripping tool - WIREFOX 10 - 1212150

Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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Torque tool

Torque screwdriver - TSD 04 SAC - 1208429

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

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Torque screwdriver - 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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Stripping tool - VS-CABLE-STRIP-VARIO - 1657407

Stripping tool, for the multi-level stripping of shielded cables

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Protective hose adapter - WP-CTA POM 13,0 BK - 1422884

Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

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Accessories