

## Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Network cable, EtherCAT® CAT5 (100 Mbps), 4-position, PVC, green RAL 6018, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on free cable end, cable length: 5 m

RoHS



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 779661
GTIN	4046356779661

### Technical data

#### Dimensions

Length of cable	5 m
-----------------	-----

#### Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 85 °C (M12 connector)

#### General data

Rated current at 40°C	4 A
Rated voltage	48 V AC
	60 V DC
Number of positions	4
Signal type/category	EtherCAT® CAT5 (IEC 11801), 100 Mbps
Standards/regulations	M12 connector IEC 61076-2-101
Contact material	CuSn
Contact carrier material	TPU GF
Contact surface material	Ni/Au
Degree of protection	IP65/IP67

# Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

## Technical data

### General data

Transmission characteristics (category)	CAT5
---	------

### Characteristics head 1

Head type	Plug straight M12 SPEEDCON / IP67
No. of positions (pin connector pattern)	4
Coding	D (Data)
Color	black
Material (component)	CuSn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
Insulation resistance	≥ 100 MΩ
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C
Shielded	yes
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Type type, plug side	Plug straight
Type type, socket side	free cable end

### Characteristics head 2

Head type	free cable end
Color	black

### Standards and Regulations

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

### Cable

Cable type	EtherCAT®
Cable type (abbreviation)	93G
UL AWM style	21694
Signal type/category	EtherCAT® CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm²
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.55 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %

## Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

### Technical data

#### Cable

External sheath, color	green RAL 6018
Outer sheath thickness	approx. 0.9 mm
External cable diameter D	6.5 mm ±0.2 mm
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Cable weight	67 kg/km
Outer sheath, material	PVC
Material, inner sheath	PVC
Material conductor insulation	PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ (per km)
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Signal speed	0.66 c
Signal runtime	5.3 ns/m
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
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
Ambient temperature (storage/transport)	-50 °C ... 70 °C

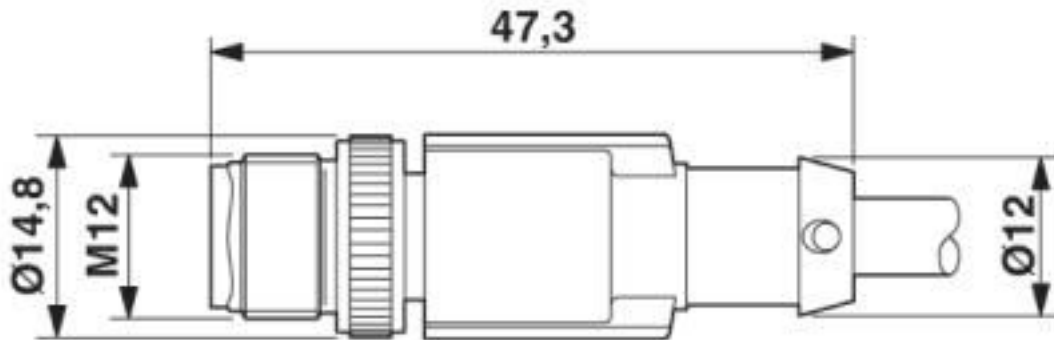
#### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

#### Drawings

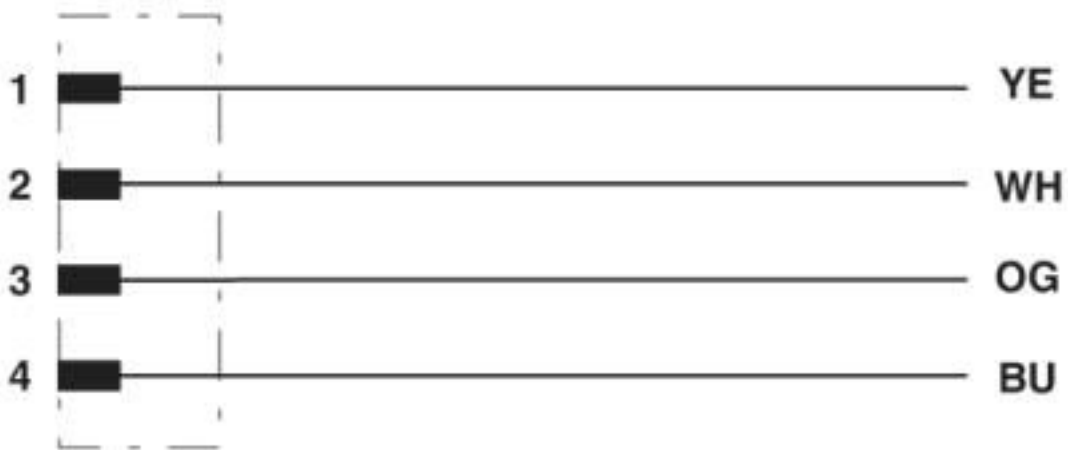
# Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

Dimensional drawing



Plug, M12 x 1, straight, shielded

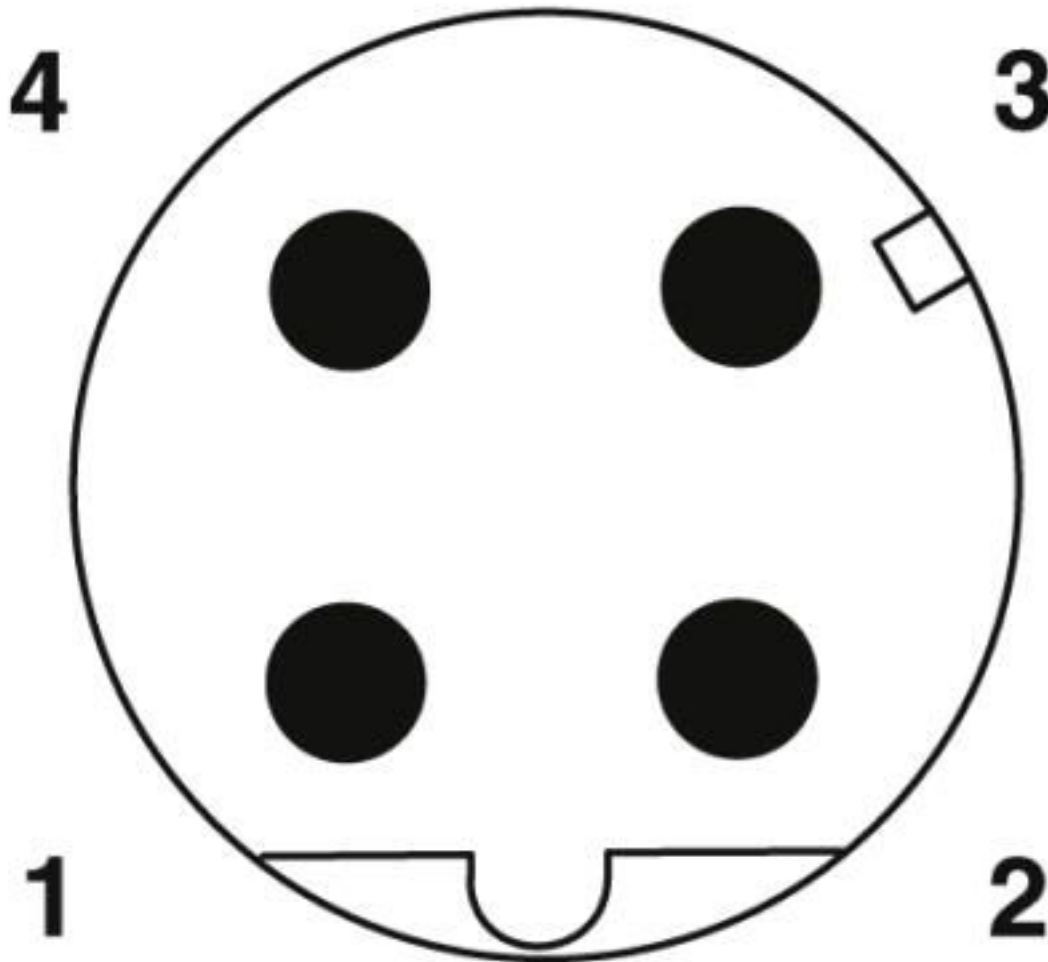
Circuit diagram



Contact assignment of the M12 plug

## Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

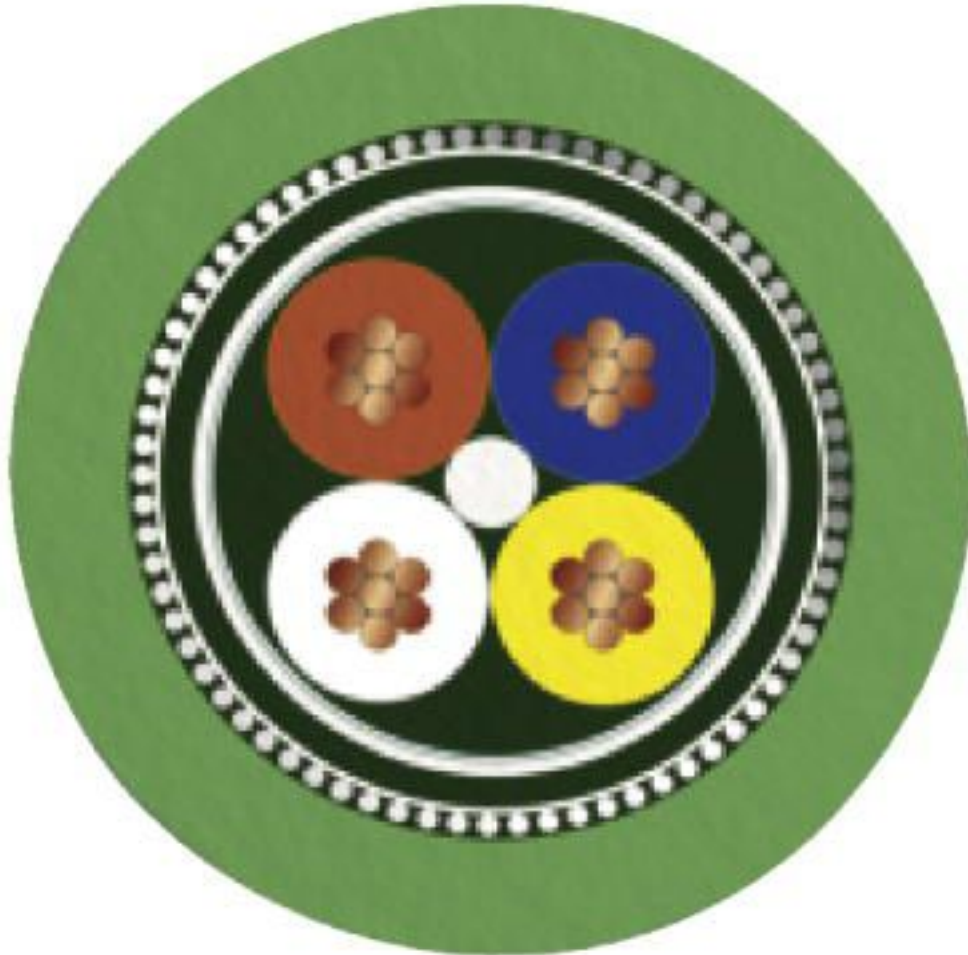
Schematic diagram



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

# Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

Cable cross section



EtherCAT® [93G]

## Classifications

eCl@ss

eCl@ss 4.0	27060307
eCl@ss 4.1	27060307
eCl@ss 5.0	27061801
eCl@ss 5.1	27060300
eCl@ss 6.0	27279200
eCl@ss 7.0	27279218
eCl@ss 8.0	27279218
eCl@ss 9.0	27060308

## Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

### Classifications

#### ETIM

ETIM 3.0	EC000830
ETIM 4.0	EC001855
ETIM 5.0	EC002599
ETIM 6.0	EC000830

#### UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	26121616
UNSPSC 13.2	31251501
UNSPSC 19.0	31251501

### Accessories

#### Accessories

##### Corrugated pipe

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



Polyamide protective hose, inflammability class V0, UV resistant

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



Polyamide protective hose, inflammability class HB, UV resistant

#### Cutting tools

Cable-cutting tool - CUTFOX 12 - 1212128



Cable cutter, for copper and aluminum up to 12 mm diameter (up to 35 mm<sup>2</sup>)

## Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

### Accessories

Diagonal cutter - CUTFOX-S VDE - 1212207



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

---

### 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 plugs



### Safety locking

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

---

### 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

---



## Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

### Accessories

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

---

### Stripping tool

Stripping tool - WIREFOX 4 - 1212156



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

---

Stripping tool - WIREFOX-E 4 - 1212704



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

---

Stripping tool - WIREFOX 10 - 1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

---

### 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

---

## Network cable - NBC-MSD/ 5,0-93G SCO - 1407559

### Accessories

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



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

---

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



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

---

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

---

---

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for* [Ethernet Cables / Networking Cables](#) *category:*

*Click to view products by* [Phoenix Contact](#) *manufacturer:*

Other Similar products are found below :

[73-6670-7](#) [73-6680-15](#) [73-7797-25](#) [MCJB2-10P6Q7-120](#) [84909-0204](#) [1200700174](#) [1200860368](#) [E16A06002M030](#) [E200102-009-S1](#)  
[AX105346-EW](#) [MT14-187L](#) [17-103530](#) [ERWPAB3002M005](#) [190-038045-01](#) [NK5EPC18RDY](#) [NK5EPC18VLY](#) [NK5EPC18YLY](#)  
[NK5EPC1GRY](#) [NK5EPC4Y](#) [NK5EPC6YLY](#) [NK5EPC8BLY](#) [NK5EPC9YLY](#) [1969343-6](#) [C501100010](#) [C501106002](#) [C501106007](#)  
[C501106015](#) [C501106025](#) [C601102010](#) [C601104010](#) [C601106007](#) [C601106015](#) [2142758-2](#) [2168427-2](#) [CAT1106007](#) [21949-1](#) [2J1866A](#)  
[RJF SFTP 5E 0500](#) [AX100351](#) [MN14CEC/ST](#) [C501100015](#) [C501106004](#) [C501106010](#) [C5F1108007](#) [C601104004](#) [C601106004](#)  
[CA21106004](#) [CA21106010](#) [CA21106015](#) [CA21109007](#)