

VS-M12MSD/10,0-93X OD - Network cable



1454228

<https://www.phoenixcontact.com/us/products/1454228>

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 documentation. Our general terms of use for downloads are valid.



Network cable, Ethernet CAT5 (100 Mbps), PROFINET CAT5 (100 Mbps), 4-position, PE-X halogen-free, black RAL 9005, shielded (Plastic-coated aluminum foil, tinned copper braided shield), Plug straight M12, coding: D / IP69K, on free cable end, cable length: 10 m, for outdoor applications, with high-grade steel knurl

Commercial data

Item number	1454228
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	BF1CJN
Catalog page	Page 159 (C-4-2013)
GTIN	4046356568838
Weight per piece (including packing)	771.4 g
Weight per piece (excluding packing)	767.3 g
Customs tariff number	85444210
Country of origin	PL

1454228

<https://www.phoenixcontact.com/us/products/1454228>

Technical data

Product properties

Product type	Data cable preassembled
Application	External areas
Sensor type	Ethernet
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	D

Insulation characteristics

Degree of pollution	3
---------------------	---

Interfaces

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

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
-----------------------------	------------

Material specifications

Flammability rating according to UL 94	V0
--	----

Connector

Connection 1

Type	Plug straight M12 / IP69K
Number of positions	4 (4)
Coding type	D (Data)
Shielded	yes

VS-M12MSD/10,0-93X OD - Network cable



1454228

<https://www.phoenixcontact.com/us/products/1454228>

Handle color	black
Material	CuZn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
	FPM
Degree of protection	IP69K

Connection 2

Type	free cable end
------	----------------

Cable/line

Cable length	10 m
--------------	------

PROFINET outdoors [93X]

Dimensional drawing	
Cable weight	81 g/m
Shielded	yes
Cable type	PROFINET outdoors [93X]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal speed	66 c
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm ²
Wire diameter incl. insulation	1.95 mm
External cable diameter	7.25 mm ±0.3 mm
Outer sheath, material	PE-X
External sheath, color	black RAL 9005
Conductor material	silver-plated Cu litz wires
Material wire insulation	PE-X
Single wire, color	white-blue, orange-yellow
Thickness, outer sheath	≥ 0.80 mm
Overall twist	Star quad
Optical shield covering	100 %
Max. conductor resistance	≤ 54.4 Ω/km
Coupling resistance	200.00 mΩ/m (f ≤ 30 MHz)
Wave impedance	100 Ω ±5 Ω (f = 100 MHz)

VS-M12MSD/10,0-93X OD - Network cable



1454228

<https://www.phoenixcontact.com/us/products/1454228>

Working capacitance	≤ 65 pF (Line-line)
	≤ 100 pF (Line-shield)
Nominal voltage, cable	300 V AC
Test voltage	2000 V AC (50 Hz, 5 minutes)
Minimum bending radius, fixed installation	6 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	44 mm
Smallest bending radius, movable installation	73 mm
Shield attenuation	40.00 dB (30 MHz ≤ f ≤ 100 MHz)
Halogen-free	in accordance with EN 50267-2-1
Flame resistance	EN 60332-1-2
	EN 50266
	EN 60332-3-25
	NF C32-070, 2.1
	NF C32-070, 2.2
	UL 1685, 12 (FT4)
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Fume corrosiveness	EN 50267-2-2
Fume toxicity	BS 6853 B.1
	EN 50305, 9.2
Concentration of fumes	BS 6853 D.8.7
	EN 61034-2
	UL 1685, 12 (FT4)
Resistance to oil	according to IRM 902, 72 h at 100 °C
Fire protection in rail vehicles	BS 6853 (Category Ia, Ib, II)
	GM/RT 2130 (Category Ia, Ib, II)
	EN 45545 (Risk level HL1 - HL3)
	DIN 5510 (Fire protection level 1, 2, 3, 4)
	NF F16-101 (Category A1, A2, B)
	NF F16-101 (Class C/F0)
	NFPA 130
UNI CEI 11170 (Risk level LR1 - LR4)	
Other resistance	Resistance to fuels (according to IRM 903, 168 h at 70 °C)
Ambient temperature (operation)	-50 °C ... 90 °C (cable, fixed installation)
	-40 °C ... 90 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
	IP69K
	-40 °C ... 105 °C

VS-M12MSD/10,0-93X OD - Network cable



1454228

<https://www.phoenixcontact.com/us/products/1454228>

Ambient temperature (operation)	-40 °C ... 90 °C (cable, fixed installation)
	-25 °C ... 90 °C (Cable, flexible installation)
	-40 °C ... 85 °C (On sudden changes in temperature (according to IEC 60512-11-4))

Standards and regulations

M12

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

VS-M12MSD/10,0-93X OD - Network cable

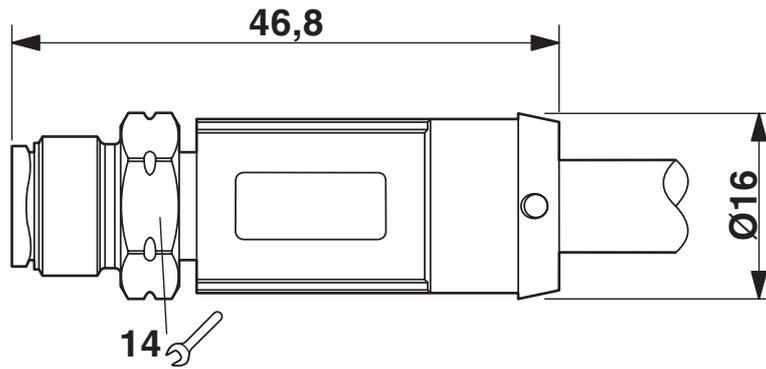


1454228

<https://www.phoenixcontact.com/us/products/1454228>

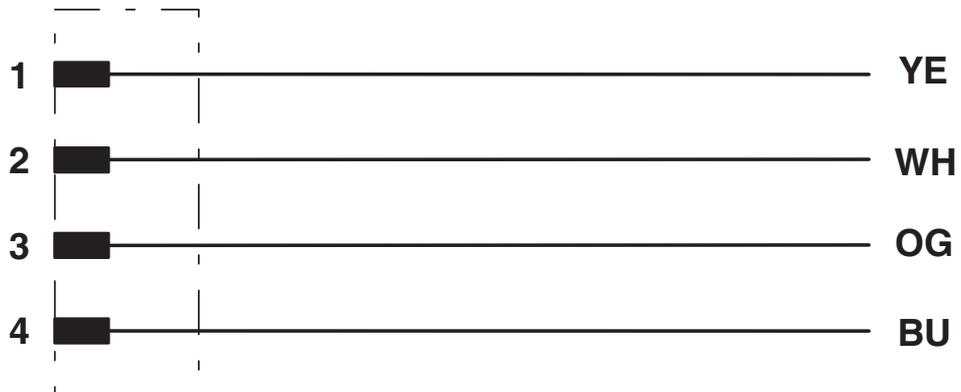
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



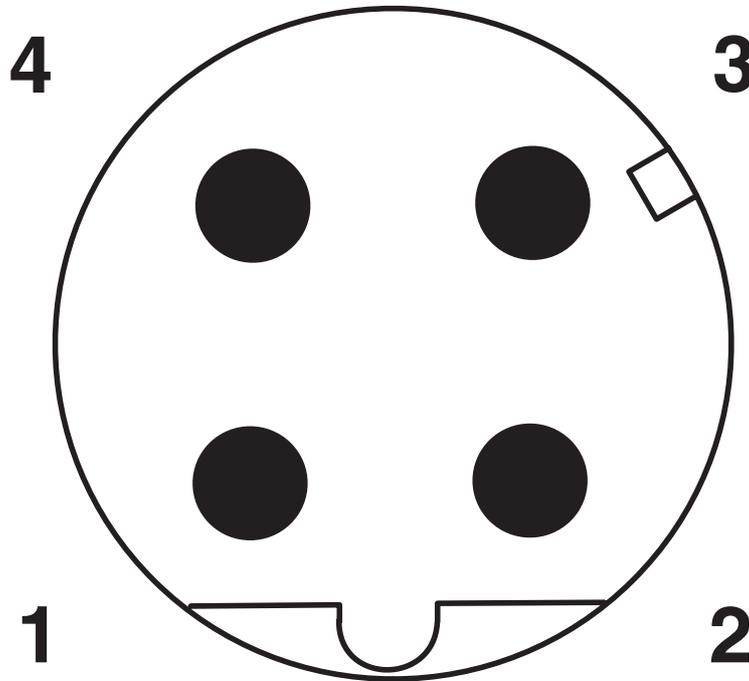
VS-M12MSD/10,0-93X OD - Network cable

1454228

<https://www.phoenixcontact.com/us/products/1454228>



Schematic diagram



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

VS-M12MSD/10,0-93X OD - Network cable



1454228

<https://www.phoenixcontact.com/us/products/1454228>

Classifications

ECLASS

ECLASS-11.0	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307

ETIM

ETIM 9.0	EC001855
----------	----------

UNSPSC

UNSPSC 21.0	26121600
-------------	----------

VS-M12MSD/10,0-93X OD - Network cable



1454228

<https://www.phoenixcontact.com/us/products/1454228>

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
---	--------------------

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%
-------------------------------------	----------------------------

VS-M12MSD/10,0-93X OD - Network cable



1454228

<https://www.phoenixcontact.com/us/products/1454228>

Accessories

TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



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

TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



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

VS-M12MSD/10,0-93X OD - Network cable

1454228

<https://www.phoenixcontact.com/us/products/1454228>



TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



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

SAC BIT M12-W14 - Tool

1212513

<https://www.phoenixcontact.com/us/products/1212513>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive

Phoenix Contact 2024 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com