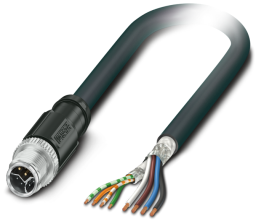
Hybrid cable - NBC-M12MSY/5,0-94H - 1276289

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Hybrid cable, Ethernet hybrid CAT5 (100 Mbps), 8-position, PUR halogen-free, black RAL 9005, shielded (Advanced Shielding Technology), Plug straight M12 / IP65/IP67, coding: Y, on free cable end, cable length: 5 m, Power with Ethernet (PWE)

RoHS

Ethernet

Key Commercial Data

Packing unit	1 pc
GTIN	4 063151 469511
GTIN	4063151469511
Custom tariff number	85444290
Country of origin	Poland

Technical data

Dimensions

Length of cable	5 m

Ambient conditions

Degree of protection	IP65
	IP67

General data

Rated current at 40°C	6 A (Power)
	0.5 A (Data)
Rated voltage	48 V AC (Power and data)
	50 V DC (Power and data)
Number of positions	8
Signal type/category	Ethernet hybrid CAT5 (IEC 11801), 100 Mbps

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Technical data

General data

Standards/regulations	M12 connector IEC 61076-2-113
Flammability rating according to UL 94	V0
Contact material	CuZn
Contact carrier material	PA 6.6
Contact surface material	Ni/Au
Transmission characteristics (category)	CAT5
Transmission speed	100 Mbps

Characteristics head 1

Head type	Plug straight M12 / IP65/IP67
No. of positions (pin connector pattern)	8 (4+4)
Coding	Y (Hybrid)
Color	black
Material (component)	CuZn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carrier, data)
	PA (Contact carrier, power)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
Shielded	yes
Insulation resistance	≥ 100 MΩ
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C

Characteristics head 2

Head type	free cable end

Standards and Regulations

Standards/specifications	M12 connector IEC 61076-2-113

Cable

Cable type	Ethernet hybrid
Cable type (abbreviation)	94H
UL AWM style	20233 (80°C/300 V)
Signal type/category	Ethernet hybrid CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4x AWG 26+1x4x AWG 18
Conductor cross section	4x 0.15 mm² (Data)
	4x 0.85 mm² (Power)

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Technical data

Cable

AWG signal line	26
AWG power supply	18
Conductor structure signal line	19x 0.10 mm
Conductor structure, voltage supply	19x 0.20 mm
Core diameter including insulation	1.05 mm (Data)
	1.4 mm (Power)
Wire colors	White/orange, orange, white/green, green, white, blue, brown, black
Overall twist	1 star quad and 4 wires with 2 fillers
Shielding	Tinned copper braided shield
Optical shield covering	85 %
External sheath, color	black RAL 9005
External cable diameter D	8.8 mm ±0.2 mm
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Number of bending cycles	2000000
Minimum bending radius, drag chain applications	15 x D
Traversing path	4.5 m
Traversing rate	3 m/s
Acceleration	3 m/s²
Ambient temperature (operation)	-20 °C ... 60 °C
Tensile strength GRP	85 N (in accordance with DIN EN 50565-1 for flexible installation)
	295 N (in accordance with DIN EN 50565-1 for fixed installation)
Outer sheath, material	PUR
Material conductor insulation	PP (Data)
	PP (Power)
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 5 GΩ*km
Loop resistance	≤ 280.00 Ω/km (Data)
	≤ 45.00 Ω/km (Power)
Working capacitance	nom. 50 nF (per kilometer)
Wave impedance	100 Ω ±15 Ω (4 MHz ... 100 MHz)
Near end crosstalk attenuation (NEXT)	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)

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Technical data

Cable

	35.3 dB (at 100 MHz)
Attenuation	6.2 dB (at 4 MHz)
	9.8 dB (at 10 MHz)
	12.4 dB (at 16 MHz)
	13.9 dB (at 20 MHz)
	17.6 dB (at 31.25 MHz)
	25.4 dB (at 62.5 MHz)
	32.8 dB (at 100 MHz)
Shield attenuation	≥ 80 dB (30 MHz ... 100 MHz)
Differential impedance	100 Ω ±5 % (at 100 MHz)
Nominal voltage, cable	≤ 125 V (Peak value, not for high-power applications)
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Special properties	Free of substances which would hinder coating with paint or varnish
	Silicone-free
Flame resistance	in accordance with UL 1581, Section 1060
	in acc. with UL 1581, section 1061
	in accordance with UL 2556, Section 9.3
Halogen-free	according to IEC 60754-1
	in accordance with DIN VDE 0472 part 815
Resistance to oil	in accordance with IEC 60811-404
	According to DIN EN 50363-10-2
Other resistance	Low adhesion
	Hydrolysis resistance DIN EN 50396
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-30 °C ... 70 °C (Cable, flexible installation)
Shielded	yes

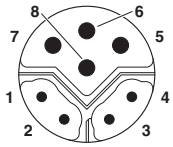
Environmental Product Compliance

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

Drawings

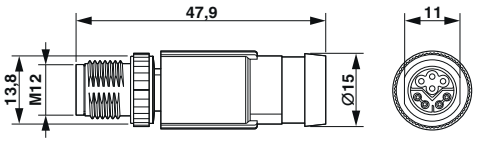
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Schematic diagram



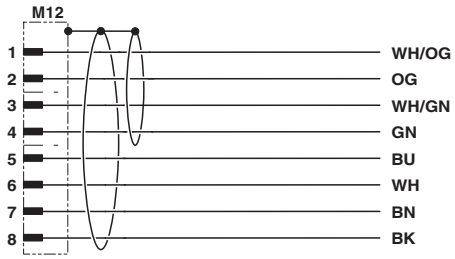
M12 hybrid plug pin assignment, 8-pos., Y-coded, pin side view

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 plug

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Cable cross section



Ethernet hybrid [94H]

Classifications

eCl@ss

eCl@ss 10.0.1	27060308
eCl@ss 11.0	27060307
eCl@ss 9.0	27060308

ETIM

ETIM 7.0	EC001855

Approvals

Approvals

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Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 335024

Nominal voltage UN	56.5 V
Nominal current IN	0.175 A

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 335024

Nominal voltage UN	56.5 V
Nominal current IN	0.175 A

cULus Listed	

Accessories

Accessories

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



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Accessories

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

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

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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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

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