

Bus system cable - VS-M12MS-M12MS-93E-LI/8,0 - 1403420

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>)



Bus system cable, Ethernet CAT5 (100 Mbps), 4-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12, D-coded, on Plug straight M12, D-coded, cable length: 8 m

RoHS

Ethernet

Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	 4 046356 651561
GTIN	4046356651561

Technical data

Dimensions

Length of cable	8 m
-----------------	-----

Ambient conditions

Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
	IP67
	IP68

General

Rated current at 40°C	4 A
Rated voltage	48 V AC
	60 V DC
Number of positions	4
Insulation resistance	≥ 100 MΩ
Coding	D - data
Signal type/category	Ethernet CAT5, 100 Mbps
Status display	No
Overvoltage category	II

Bus system cable - VS-M12MS-M12MS-93E-LI/8,0 - 1403420

Technical data

General

Degree of pollution	3
Insertion/withdrawal cycles	≥ 100

Material

Flammability rating according to UL 94	V0
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated

Standards and Regulations

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

Cable

Cable type	Ethernet
Cable type (abbreviation)	93E
Cable abbreviation	J-LI02YS(ST) CH 2 x 2 x 26 AWG
Cable structure	2x2xAWG26/7; SF/UTP
Conductor cross section	2x 2x 0.14 mm ²
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	1 mm -0.2 mm
Wire colors	white/orange-orange, white/green-green
Twisted pairs	2 cores to the pair
Overall twist	Two pairs with two fillers to the core
Shielding	Plastic-coated aluminum foil, tinned copper braided shield
Optical shield covering	85 %
External sheath, color	water blue RAL 5021
External cable diameter D	5.75 mm ± 0.15 mm
Smallest bending radius, fixed installation	30 mm (cable, fixed installation)
Smallest bending radius, movable installation	78 mm (cable, flexible installation)
Cable weight	43 kg/km
Tensile strength GRP	≤ 50 N (temporary)
	≤ 10 N (Permanent)
Outer sheath, material	Halogen-free compound, HM 2 in acc. with VDE 0207
Material conductor insulation	Foam-Skin PE
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 5 G Ω *km
Conductor resistance	≤ 284 Ω /km
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Cable capacity	nom. 48 nF/km (At 800 Hz)

Bus system cable - VS-M12MS-M12MS-93E-LI/8,0 - 1403420

Technical data

Cable

Wave impedance	100 Ω $\pm 15\%$ (at 1 ... 100 MHz)
Near end crosstalk attenuation (NEXT)	66 dB/m (with 1 MHz)
	57 dB/m (at 4 MHz)
	52 dB/m (at 10 MHz)
	50 dB/m (at 16 MHz)
	47 dB/m (at 20 MHz)
	45 dB/m (at 31.25 MHz)
	40 dB/m (at 62.5 MHz)
	36 dB/m (at 100 MHz)
Attenuation	0.028 dB/m (with 1 MHz)
	0.06 dB/m (at 4 MHz)
	0.085 dB/m (at 10 MHz)
	0.115 dB/m (at 16 MHz)
	0.128 dB/m (at 20 MHz)
	0.162 dB/m (at 31.25 MHz)
	0.23 dB/m (at 62.5 MHz)
	0.29 dB/m (at 100 MHz)
Crosstalk attenuation (ACR)	6.57 dB/m (with 1 MHz)
	5.64 dB/m (at 4 MHz)
	5.12 dB/m (at 10 MHz)
	4.89 dB/m (at 16 MHz)
	4.57 dB/m (at 20 MHz)
	4.34 dB/m (at 31.25 MHz)
	3.77 dB/m (at 62.5 MHz)
	3.31 dB/m (at 100 MHz)
Signal speed	0.77 c
Signal runtime	4.3 ns/m
Interference suppression	approx. 65 dB (at 30 MHz)
Coupling resistance	$\leq 5.00 \text{ m}\Omega/\text{m}$ (at 20 MHz)
Nominal voltage, cable	50 V _{rms}
	125 V (Peak value, not for high-power applications)
Test voltage Core/Core	1000 V _{rms}
Test voltage Core/Shield	500 V _{rms}
Flame resistance	according to VDE 0482 Part 265-2-1
	according to IEC 332-1

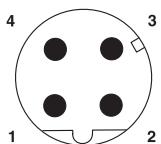
Environmental Product Compliance

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

Bus system cable - VS-M12MS-M12MS-93E-LI/8,0 - 1403420

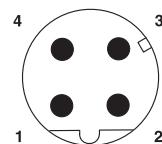
Drawings

Schematic diagram



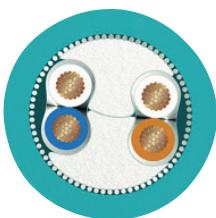
Pin assignment M12 male connector, 4-pos., D-coded, male side

Schematic diagram



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

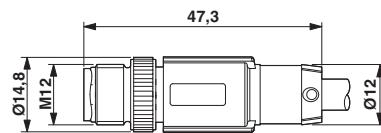
Cable cross section



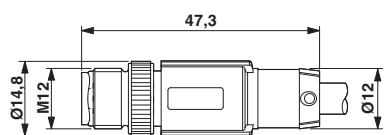
Ethernet [93E]

Plug, M12 x 1, straight, shielded

Dimensional drawing

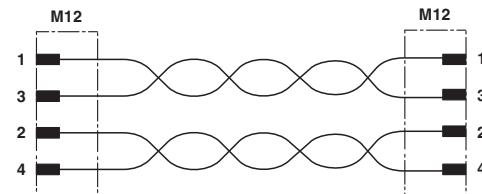


Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of M12 connector/socket

Phoenix Contact 2018 © - 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>