

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 flush-type socket, Ethernet, 8-pos., M12, shielded, rear/screw mounting with M16 thread, with 0.5 m bus cable,  $4 \times 2 \times 0.26 \text{ mm}^2$ 



#### Ethernet

## **Key Commercial Data**

Packing unit	1 STK
GTIN	4 046356 162340
GTIN	4046356162340

## Technical data

#### **Dimensions**

Length of cable	0.5 m

## Ambient conditions

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

## General

Rated current at 40°C	2 A
Rated voltage	30 V
Number of positions	8
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Status display	No
Overvoltage category	Ш
Degree of pollution	3

## Material

Flammability rating according to UL 94	V0



## Technical data

## Material

Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	FKM

## Standards and Regulations

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

#### Cable

Cable type	Ethernet, flexible, CAT5
Cable type (abbreviation)	94B
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT5 (IEC 11801), 1 Gbps
Cable structure	4x2xAWG26/7; SF/UTP
Conductor cross section	4x 2x 0.14 mm²
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	0.96 mm
Wire colors	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Twisted pairs	2 cores to the pair
Overall twist	4 pairs for core
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	1.05 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 GRP	≤ 100 N
Cable weight	47 kg/km
Outer sheath, material	PUR
Material conductor insulation	Foamed PE
Conductor material	Bare Cu litz wires
Insulation resistance	$\geq 500 \text{ M}\Omega^*\text{km}$
Loop resistance	$\leq 290.00 \ \Omega/\text{km}$
Cable capacity	48 nF/km (at 1 kHz)
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Near end crosstalk attenuation (NEXT)	71.3 dB (with 1 MHz)
	62.3 dB (at 4 MHz)
	08/18/2018 Page 2 / 6



## Technical data

## Cable

53.2 dl 51.8 dl 48.9 dl 44.4 dl 41.3 dl Power-summated near end crosstalk attenuation (PSNEXT) 53.3 dl 47.3 dl 42.8 dl 39.9 dl 35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (6 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	8 (at 10 MHz) 8 (at 16 MHz) 8 (at 20 MHz) 8 (at 31.25 MHz) 8 (at 62.5 MHz) 8 (at 100 MHz) 8 (at 100 MHz) 8 (at 4 MHz) 8 (at 4 MHz) 8 (at 10 MHz) 8 (at 10 MHz) 8 (at 10 MHz) 8 (at 10 MHz) 8 (at 31.25 MHz) 8 (at 31.25 MHz)
51.8 dl 48.9 dl 44.4 di 41.3 dl Power-summated near end crosstalk attenuation (PSNEXT) 62.3 dl 47.3 dl 47.3 dl 42.8 dl 39.9 dl 35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	3 (at 20 MHz) 3 (at 31.25 MHz) 3 (at 62.5 MHz) 3 (at 100 MHz) 3 (with 1 MHz) 3 (at 4 MHz) 3 (at 10 MHz) 3 (at 10 MHz) 3 (at 10 MHz) 3 (at 10 MHz) 3 (at 31.25 MHz)
48.9 dl 44.4 dl 41.3 dl Power-summated near end crosstalk attenuation (PSNEXT) 62.3 dl 47.3 dl 47.3 dl 42.8 dl 39.9 dl 35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	3 (at 31.25 MHz) 3 (at 62.5 MHz) 3 (at 100 MHz) 3 (at 100 MHz) 4 (at 4 MHz) 5 (at 4 MHz) 5 (at 10 MHz) 6 (at 16 MHz) 6 (at 20 MHz) 6 (at 31.25 MHz)
44.4 di 41.3 di Power-summated near end crosstalk attenuation (PSNEXT) 62.3 di 47.3 di 47.3 di 42.8 di 39.9 di 35.4 di 32.3 di Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 di 13.6 di 17.1 di 24.8 di	B (at 62.5 MHz) B (at 100 MHz) B (with 1 MHz) B (at 4 MHz) B (at 10 MHz) B (at 10 MHz) B (at 10 MHz) B (at 31.25 MHz)
41.3 display="1"   Power-summated near end crosstalk attenuation (PSNEXT)   62.3 display="1"   62.3 display="1"   62.3 display="1"   62.3 display="1"   62.3 display="1"   62.8 display="1"   62.8 display="1"   62.8 display="1"   62.3 displa	3 (at 100 MHz) 3 (with 1 MHz) 3 (at 4 MHz) 3 (at 10 MHz) 3 (at 16 MHz) 3 (at 20 MHz) 3 (at 31.25 MHz)
Power-summated near end crosstalk attenuation (PSNEXT) 62.3 db 53.3 db 47.3 db 44.2 db 42.8 db 39.9 db 35.4 db 32.3 db Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 db 13.6 db 17.1 db 24.8 db	B (with 1 MHz) B (at 4 MHz) B (at 10 MHz) B (at 16 MHz) B (at 20 MHz) B (at 31.25 MHz)
53.3 dl 47.3 dl 47.3 dl 44.2 dl 42.8 dl 39.9 dl 35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (a) 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	B (at 4 MHz) B (at 10 MHz) B (at 16 MHz) B (at 20 MHz) B (at 31.25 MHz)
47.3 dl 44.2 dl 42.8 dl 39.9 dl 35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	3 (at 10 MHz) 3 (at 16 MHz) 3 (at 20 MHz) 5 (at 31.25 MHz)
44.2 di 42.8 di 39.9 di 35.4 di 32.3 di Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 di 13.6 di 17.1 di 24.8 di	3 (at 16 MHz) 3 (at 20 MHz) 3 (at 31.25 MHz)
42.8 dl 39.9 dl 35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	3 (at 20 MHz) 3 (at 31.25 MHz)
39.9 dl 35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	3 (at 31.25 MHz)
35.4 dl 32.3 dl Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	
32.3 dl Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 dl 13.6 dl 17.1 dl 24.8 dl	
Attenuation 3.2 dB 6 dB (a 9.5 dB 12.1 db 13.6 db 17.1 db 24.8 db	3 (at 62.5 MHz)
6 dB (a 9.5 dB 12.1 di 13.6 di 17.1 di 24.8 di	3 (at 100 MHz)
9.5 dB 12.1 di 13.6 di 17.1 di 24.8 di	(with 1 MHz)
12.1 dl 13.6 dl 17.1 dl 24.8 dl	t 4 MHz)
13.6 dl 17.1 dl 24.8 dl	(at 10 MHz)
17.1 di 24.8 di	3 (at 16 MHz)
24.8 di	3 (at 20 MHz)
	3 (at 31.25 MHz)
32 dB	3 (at 62.5 MHz)
	at 100 MHz)
Return loss (RL) 23 dB	at 4 MHz)
24.1 dl	3 (at 8 MHz)
25 dB	at 10 MHz)
25 dB	at 16 MHz)
25 dB	at 20 MHz)
23.6 dl	3 (at 31.25 MHz)
21.5 dl	3 (at 62.5 MHz)
20.1 dl	3 (at 100 MHz)
Signal runtime 5.3 ns/	n
Coupling resistance ≤ 100.0	0 mΩ/m (at 10 MHz)
Nominal voltage, cable ≤ 100 V	
Test voltage Core/Core 700 V	
Test voltage Core/Shield 700 V	/ 50 Hz, 1 min.)
Flame resistance accord	
Halogen-free accord	50 Hz, 1 min.)
Resistance to oil accord	50 Hz, 1 min.) 50 Hz, 1 min.)
Ambient temperature (operation) -40 °C	50 Hz, 1 min.) 50 Hz, 1 min.) ng to IEC 60332-1-2



## Technical data

## Cable

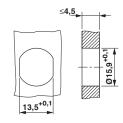
	-20 °C 80 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C 80 °C
Ambient temperature (storage/transport)	-20 °C 80 °C

## **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"

## **Drawings**

#### Dimensional drawing



## Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

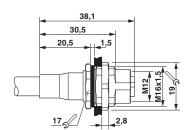
Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with area as anti-rotation protection for panel thicknesses > 2 mm up to max. 4.5 mm)

#### Cable cross section



Ethernet, flexible, CAT5 [94B]

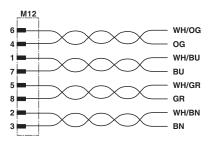
#### Dimensional drawing



M12 flush-type connector



## Circuit diagram



Contact assignment of the M12 plug and the M12 socket

Approvals	
Approvals	
Approvals	
EAC / UL Recognized	
Ex Approvals	
Approval details	
EAC [H[	B.00767

UL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 118976
Nominal voltage UN	30 V
Nominal current IN	2 A
mm²/AWG/kcmil	24



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