

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Assembled Ethernet cable,  $CAT6_A$ , shielded, 4-pair, AWG 26 stranded (7-wire), RAL 5021 (water blue), M12 plug on RJ45 plug, SPEEDCON, length 2 m





## Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	120.0 GRM
Custom tariff number	85444290
Country of origin	Poland

## Technical data

#### **Dimensions**

Length of cable	2 m

#### Ambient conditions

Degree of protection	IP65 (M12 connector)
	IP67 (M12 connector)
	IP20 (RJ45 connector)

#### General data

Rated current at 40°C	0.5 A
Rated voltage	48 V
Number of positions	8
Signal type/category	Ethernet CAT6 <sub>A</sub>
Surge voltage category	I
Pollution degree	1



## Technical data

#### Characteristics head 1

Head type	Plug Straight M12 SPEEDCON / IP65
No. of positions (pin connector pattern)	8 (8)
Coding	X (Data)
Color	black
Shielded	Yes

## Characteristics head 2

Head type	Plug Straight RJ45 / IP20
No. of positions (pin connector pattern)	8 (8)
Color	Gray
Shielded	Yes

## Cable

Cable type	Ethernet 10 Gbit
Cable type (abbreviation)	94F
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT6 <sub>A</sub> , 10 Gbps
Cable structure	4x2xAWG26/7; S/FTP
Conductor cross section	4x 2x 0.14 mm²
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	1.04 mm
Wire colors	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Twisted pairs	2 cores to the pair
Type of pair shielding	Aluminum-lined foil
Overall twist	4 pairs for core
Shielding	Tinned copper braided shield
Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	0.65 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 short-term/long-term	≤ 100 N
Cable weight	42 kg/km
Outer sheath, material	PUR
Material conductor insulation	Foamed PE
Conductor material	Bare Cu litz wires 08/27/2014 Page 2 / 5

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## Technical data

## Cable

Insulation resistance	$\geq 500 \text{ M}\Omega^*\text{km}$
Conductor resistance	≤ 290 Ω/km
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Signal runtime	5.13 ns/m
Shield attenuation	≥ 80 dB (at 30 100 MHz)
Nominal voltage, cable	≤ 100 V
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Flame resistance	According to IEC 60332-1-2
Halogen-free	According to IEC 60754-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-20 °C 80 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C 80 °C
Ambient temperature (storage/transport)	-20 °C 80 °C

## Classifications

## eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27060307
eCl@ss 6.0	27060390
eCl@ss 7.0	27060390
eCl@ss 8.0	27060390

## **ETIM**

ETIM 2.0	EC000830
ETIM 3.0	EC000830
ETIM 4.0	EC002599
ETIM 5.0	EC001855

## UNSPSC

UNSPSC 6.01	26121609
UNSPSC 7.0901	26121609
UNSPSC 11	26121609
UNSPSC 12.01	26121609



## Classifications

UNSPSC 13.2	26121609
Approvals	
Approvals	
Approvals	
UL Listed / cUL Listed / cULus Listed	
Ex Approvals	
Approvals submitted	
Approval details	
UL Listed (II)	
Nominal current IN	0.5 A
Nominal voltage UN	30 V
cUL Listed **	
Nominal current IN	0.5 A
Nominal voltage UN	30 V
cULus Listed <sup>®</sup>	

## Drawings



Schematic diagram



M12 Cat6<sub>A</sub>, 8-pos. plug pin assignment, pin side view

Schematic diagram



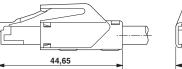
Connector pin assignment plug RJ45

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Cable cross section



Dimensioned drawing

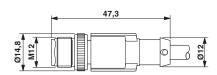




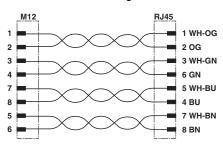
Ethernet 10 Gbit [94F]

RJ45 connector dimensional drawing

Dimensioned drawing



#### Circuit diagram



M12 connector dimensional drawing

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