

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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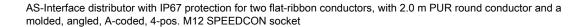








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### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	94.5 GRM
Custom tariff number	85444290
Country of origin	Vietnam

#### Technical data

#### Mechanical characteristics

Number of positions	4
Shielded	No
Insertion/withdrawal cycles	≥ 100 (M12 connector)
Connection method	AS-i penetration technique
Cable diameter	4.70 mm
Type of cable	Round cable
Cable structure	4x 0.34 mm²
Duty cycle testing	Flexible cable conduit capable
Length of cable	2 m
Color	black
Tightening torque, min.	1.65 Nm

#### Ambient conditions

Ambient temperature (operation)	-25 °C 75 °C (Distributor)
	-25 °C 75 °C (cable, fixed installation)



## Technical data

#### Ambient conditions

	-5 °C 75 °C (cable, flexible installation)
Ambient temperature (storage/transport)	-25 °C 80 °C
Degree of protection	IP65/67

#### Material data

Housing material	PA-GF
Contact carrier material	TPE-U
Contact material	CuZn
Contact surface material	Ni/Au
Material	CuSn (M12 contact)
	TPU GF (M12 contact carrier)
	Ni/Au (M12 contact surface)
	TPU (M12 handle)
Cable gland material	Zinc die-cast, nickel-plated
Outer sheath, material	PUR
External sheath, color	deep black RAL 9005

#### Electrical characteristics

Rated voltage (III/3)	≤ 35 V
Rated current	≤ 4 A

#### Line characteristics

Cable type	PUR halogen-free black
Cable abbreviation	Li9Y11Y-HF
UL AWM style	20549 / 10493 (80°C/300 V)
Conductor cross section	4x 0.34 mm²
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.27 mm ±0.02 mm
Thickness, insulation	≥ 0.21 mm
External cable diameter	4.7 mm ±0.15 mm
Wire colors	brown, white, blue, black
External sheath, color	Black-gray RAL 7021
Transmission medium	Copper
Insulation resistance	$\geq 1 \text{ G}\Omega^*\text{km}$
Conductor resistance	≤ 58000000 Ω/km
Nominal voltage, cable	≤ 300 V
Test voltage, cable	≥ 3000 V
Overall twist	4 wires, twisted



## Technical data

#### Line characteristics

Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires
Cable weight	30 kg/km
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Max. bending cycles	4000000
Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s <sup>2</sup>
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	Flexible
Flame resistance	in accordance with DIN UL-Style 20549
	in accordance with FT1 as per UL 758
Halogen-free	in accordance with DIN VDE 0472 part 815
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	Highly resistant to acids, alkaline solutions and solvents
	hydrolysis and microbe resistant
	partly UV-resistant in accordance with DIN EN ISO 4892-2-A
	Low adhesion
	abrasion-resistant
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-25 °C 80 °C (cable, flexible installation)

## Classifications

### eCl@ss

eCl@ss 4.0	27140815
eCl@ss 4.1	27140815
eCl@ss 5.0	27143423
eCl@ss 5.1	27143423
eCl@ss 6.0	27143423
eCl@ss 7.0	27449001
eCl@ss 8.0	27449001



### Classifications

#### **ETIM**

ETIM 2.0	EC000200
ETIM 3.0	EC001856
ETIM 4.0	EC000313
ETIM 5.0	EC000313

### **UNSPSC**

UNSPSC 6.01	31261501
UNSPSC 7.0901	31261501
UNSPSC 11	31261501
UNSPSC 12.01	31261501
UNSPSC 13.2	31261501

## Drawings

#### Schematic diagram



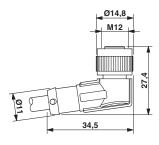
Pin assignment M12, PIN 1: AS-i +, PIN 2: AUX -, PIN 3: AS-i -, PIN 4: AUX +, PIN 5: Not used

#### Cable cross section



PUR halogen-free black [PUR]

#### Dimensioned drawing



M12 x 1 socket, angled

#### Dimensioned drawing

