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Sensor/actuator cable, 3-position, Variable cable type, shielded, free cable end, on Socket angled M12 SPEEDCON, A-coded, cable length: Free input (0.2 ... 40.0 m)

Why buy this product

- Flexible solutions configurable materials with variable cable types and cable lengths
- Reliable signal transmission 360° shielding in environments with electromagnetic interference



Key Commercial Data

Packing unit	1 STK
Minimum order quantity	25 STK

Technical data

Dimensions

Length of cable	Free input (0.2 40.0 m)
Stripping length of the free conductor end	50 mm

Ambient conditions

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

General

Rated current at 40°C	4 A
Rated voltage	250 V AC
	250 V DC
Number of positions	3
Insulation resistance	\geq 100 M Ω
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101



Technical data

General

Status display	No
Protective circuit/component	Unwired
Overvoltage category	П
Degree of pollution	3
Test voltage	2500 V
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

Material

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

Line characteristics

Note	This item is a sensor/actuator cable with a freely selectable cable type. The technical data for all possible cable types is listed in the table below.
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Standards and Regulations

Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101
Flammability rating according to UL 94	НВ

PUR/PVC shielded, gray [100]

Cable type	PUR/PVC shielded, gray
Cable type (abbreviation)	100
Cable abbreviation	LiYV1CY11Y
Conductor cross section	0.34 mm²
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.5 mm ±0.05 mm
Thickness, insulation	≥ 0.23 mm (Core insulation)
	≥ 0.38 mm (Outer cable sheath)
	approx. 0.3 mm (Inner sheath)
Wire colors	brown, blue, black
Overall twist	3 wires, twisted
Shielding	Braided copper wires
Optical shield covering	85 %
External sheath, color	gray RAL 7001
External cable diameter D	5.2 mm ±0.2 mm



Technical data

PUR/PVC shielded, gray [100]

Smallest bending radius, fixed installation	52 mm
Smallest bending radius, movable installation	52 mm
Number of bending cycles	2000000
Bending radius	52 mm
Traversing path	5 m
Traversing rate	3 m/s
Cable weight	38 kg/km
Outer sheath, material	PUR
Material, inner sheath	PVC
Material conductor insulation	PVC
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 100 MΩ*km (at 20 °C)
Conductor resistance	max. 58 Ω/km (at 20 °C)
Nominal voltage, cable	≤ 300 V
Test voltage, cable	≥ 3000 V
Test voltage Core/Shield	≥ 2000 V
Ambient temperature (operation)	-25 °C 80 °C (cable, fixed installation)
	-5 °C 80 °C (cable, flexible installation)

PVC gray [500]

Cable type	PVC gray
Cable type (abbreviation)	500
Conductor cross section	0.34 mm²
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.4 mm ±0.02 mm
Thickness, insulation	≥ 0.23 mm (Core insulation)
	≥ 0.76 mm (Outer cable sheath)
Wire colors	brown, blue, black
Overall twist	3 wires, twisted
Shielding	Tinned copper braided shield
Optical shield covering	85 %
External sheath, color	gray RAL 7001
External cable diameter D	5.2 mm ±0.2 mm
Cable weight	40 kg/km
Outer sheath, material	PVC
Material conductor insulation	PVC
Conductor material	Bare Cu litz wires
Insulation resistance	\geq 1 G Ω *km (at 20 °C)
Conductor resistance	max. 58 Ω/km (at 20 °C)
Nominal voltage, cable	≤ 300 V



Technical data

PVC gray [500]

Test voltage, cable	≥ 3000 V
Ambient temperature (operation)	-25 °C 80 °C (cable, fixed installation)
	-5 °C 80 °C (cable, flexible installation)

PUR halogen-free black [PUR]

Cable abbreviation PUR Cable abbreviation Li9Y-VI-C-VI-11Y UL, AWM style 20549 Conductor cross section 3x 0.34 mm² (Signal line) AWG signal line 22 Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.27 mm ±0.02 mm (Signal line) Thickness, insulation 9.021 mm (Core insulation) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, fixed installation 47 mm Vumber of bending cycles 10 mm Bending radius, movable installation 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material Bare Cu litz wires Insulation resistance ≥ 100 GC/km (at 20 °C) <	Cable type	PUR halogen-free black		
UL AWM style 20549 Conductor cross section 3x 0.34 mm² (Signal line) AWG signal line 22 Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.27 mm ±0.02 mm (Signal line) Thickness, insulation ≥ 0.21 mm (Core insulation) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External sheath, color 45 mm ±0.15 mm External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, fixed installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 3 lkg/km Outer sheath, material PUR Material conductor insulation PP Conductor resistance	Cable type (abbreviation)	PUR		
Conductor cross section 3x 0.34 mm² (Signal line) AWG signal line 22 Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.27 mm ±0.02 mm (Signal line) Thickness, insulation ≥ 0.21 mm (Core insulation) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External sheath, color black-gray RAL 7021 External cable diameter D 4.55 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor metrial insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance ≥ 100 GΩ*km (at 20 °C) Nominal voltage, cable ≥ 300 V Special properties	Cable abbreviation	Li9Y-VI-C-VI-11Y		
AWG signal line 22 Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.27 mm ±0.02 mm (Signal line) Thickness, insulation 2 0.21 mm (Core insulation) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External sheath, color black-gray RAL 7021 External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor resistance > 100 GΩ*km (at 20 *C) Nominal voltage, cable < 300 V	UL AWM style	20549		
Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.27 mm ±0.02 mm (Signal line) Thickness, insulation ≥ 0.21 mm (Core insulation) approx. 0.5 mm (Outer cable sheath) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External sheath, color black-gray RAL 7021 External sheath, color 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Smallest bending radius, movable installation 47 mm Traversing path 10 m Traversing pate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance ≥ 100 GΩ*km (at 20 °C) Norminal voltage, cable ≥ 3	Conductor cross section	3x 0.34 mm² (Signal line)		
Core diameter including insulation 1.27 mm ±0.02 mm (Signal line) Thickness, insulation ≥ 0.21 mm (Core insulation) approx. 0.5 mm (Outer cable sheath) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External sheath, color black-gray RAL 7021 External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Smallest bending cycles 100000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PP Conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance ≥ 3000 V Conductor resistance ≥ 3000 V Test voltage, cable <td>AWG signal line</td> <td colspan="3">22</td>	AWG signal line	22		
Thickness, insulation ≥ 0.21 mm (Core insulation) approx. 0.5 mm (Outer cable sheath)	Conductor structure signal line	42x 0.10 mm		
approx. 0.5 mm (Outer cable sheath)	Core diameter including insulation	1.27 mm ±0.02 mm (Signal line)		
Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External sheath, color black-gray RAL 7021 External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≥ 300 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Flame resistance in accordance with U	Thickness, insulation	≥ 0.21 mm (Core insulation)		
Overall twist 3 wires, twisted Shielding Braided copper wires Optical shield covering 80 % External sheath, color black-gray RAL 7021 External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Smallest bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2		approx. 0.5 mm (Outer cable sheath)		
Shielding Braided copper wires Optical shield covering 80 % External sheath, color black-gray RAL 7021 External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ°km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Conductor sollaye, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Wire colors	brown, blue, black		
Optical shield covering 80 % External sheath, color black-gray RAL 7021 External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Overall twist	3 wires, twisted		
External sheath, color black-gray RAL 7021 External cable diameter D 4.65 mm ±0.15 mm Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Shielding	Braided copper wires		
External cable diameter D Smallest bending radius, fixed installation Smallest bending radius, movable installation At mm Number of bending cycles Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 0uter sheath, material Material conductor insulation PP Conductor material Insulation resistance Description Conductor resistance Son W Test voltage, cable Secial properties Flexible cable conduit dapable Flame resistance 4.65 mm ±0.15 mm 4.65 mm ±0.15 mm 4.7	Optical shield covering	80 %		
Smallest bending radius, fixed installation 23 mm Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Flame resistance in accordance with UL 758/1581 FT2	External sheath, color	black-gray RAL 7021		
Smallest bending radius, movable installation 47 mm Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	External cable diameter D	4.65 mm ±0.15 mm		
Number of bending cycles 10000000 Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≥ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Flame resistance in accordance with UL 758/1581 FT2	Smallest bending radius, fixed installation	23 mm		
Bending radius 47 mm Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Flexible cable conduit would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Smallest bending radius, movable installation	47 mm		
Traversing path 10 m Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Number of bending cycles	10000000		
Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Special properties Flexible cable conduit capable Flame resistance Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Bending radius	47 mm		
Acceleration 10 m/s² Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance $\geq 100 \text{ G}\Omega^*\text{km}$ (at 20 °C) Conductor resistance max. 58 Ω /km (at 20 °C) Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage, cable $\geq 3000 \text{ V}$ Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Traversing path	10 m		
Cable weight 31 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Traversing rate	3 m/s		
Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Acceleration	10 m/s ²		
Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Flame resistance in accordance with UL 758/1581 FT2	Cable weight	31 kg/km		
Conductor material Bare Cu litz wires Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Flame resistance in accordance with UL 758/1581 FT2	Outer sheath, material	PUR		
Insulation resistance ≥ 100 GΩ*km (at 20 °C) Conductor resistance max. 58 Ω /km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Flame resistance in accordance with UL 758/1581 FT2	Material conductor insulation	PP		
Conductor resistance $\max. 58 \ \Omega/km \ (at 20 \ ^{\circ}C)$ Nominal voltage, cable $\le 300 \ V$ Test voltage, cable $\ge 3000 \ V$ Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Conductor material	Bare Cu litz wires		
Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Flame resistance in accordance with UL 758/1581 FT2	Insulation resistance	\geq 100 G Ω *km (at 20 °C)		
Test voltage, cable ≥ 3000 V Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Conductor resistance	max. 58 Ω/km (at 20 °C)		
Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Nominal voltage, cable	≤ 300 V		
Silicone-free Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Test voltage, cable	≥ 3000 V		
Free of substances which would hinder coating with paint or varnish in accordance with UL 758/1581 FT2	Special properties	Flexible cable conduit capable		
Flame resistance in accordance with UL 758/1581 FT2		Silicone-free		
		Free of substances which would hinder coating with paint or varnish		
DIN EN 60332-2-2 (20 s)	Flame resistance	in accordance with UL 758/1581 FT2		
		DIN EN 60332-2-2 (20 s)		



Technical data

PUR halogen-free black [PUR]

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	
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)	
	-25 °C 80 °C (cable, flexible installation)	

PVC shielded black [PVC]

Cable type PVC shielded black Cable type (abbreviation) PVC Conductor cross section 3x 0.34 mm² AWG signal line 22 Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.4 mm ±0.02 mm Thickness, insulation ≥ 0.23 mm (Core insulation) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Tinned copper braided shield Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm ±0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≥ 3000 V Test voltage, cable ≥ 3000 V Test resistance As per UL-Style 2464 Ambient temperature (coveration) 25 °C 80 °C (cable, fixed i				
Conductor cross section $3x 0.34 \text{ mm}^2$ AWG signal line 22 Conductor structure signal line $42x 0.10 \text{ mm}$ Core diameter including insulation $1.4 \text{ mm} \pm 0.02 \text{ mm}$ Thickness, insulation $2.0.76 \text{ mm}$ (Outer cable sheath) Wire colors $2.0.76 \text{ mm}$ (Outer cable sheath) Overall twist $2.0.76 \text{ mm}$ (Outer cable sheath) Optical shield covering $2.0.76 \text{ mm}$ (Outer sheath) External sheath, color $2.0.76 \text{ mm}$ (Outer sheath) External cable diameter $2.0.76 \text{ mm}$ (Outer sheath, material sheath, material $2.0.76 \text{ mm}$ (Outer sheath, material $2.0.76 \text{ mm}$ (Outer sheath, material $2.0.76 \text{ mm}$ (Outer sheath) Outer sheath, material $2.0.76 \text{ mm}$ (Outer sheath) Conductor insulation $2.0.76 \text{ mm}$ (Outer sheath) Conductor insulation $2.0.76 \text{ mm}$ (Outer sheath) Conductor material $2.0.76 \text{ mm}$ (Outer sheath) Conductor resistance $2.0.00 \text{ mm}$ (Mark at 20 °C) Conductor resistance $2.0.00 \text{ mm}$ (Mark at 20 °C) Nominal voltage, cable $2.0.00 \text{ mm}$ (As per UL-Style 2464	Cable type	PVC shielded black		
AWG signal line 22 Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.4 mm ±0.02 mm Thickness, insulation ≥ 0.23 mm (Core insulation) ½ 0.76 mm (Outer cable sheath) \$ 0.00 mm (Outer cable sheath) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Tinned copper braided shield Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm ±0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Flame resistance As per UL-Style 2464	Cable type (abbreviation)	PVC		
Conductor structure signal line 42x 0.10 mm Core diameter including insulation 1.4 mm ±0.02 mm Thickness, insulation ≥ 0.23 mm (Core insulation) ½ 0.76 mm (Outer cable sheath) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Tinned copper braided shield Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm ±0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≥ 300 V Flame resistance As per UL-Style 2464	Conductor cross section	3x 0.34 mm²		
Core diameter including insulation 1.4 mm ±0.02 mm Thickness, insulation ≥ 0.23 mm (Core insulation) Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Tinned copper braided shield Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm ±0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Flame resistance As per UL-Style 2464	AWG signal line	22		
Thickness, insulation ≥ 0.23 mm (Core insulation)	Conductor structure signal line	42x 0.10 mm		
≥ 0.76 mm (Outer cable sheath)	Core diameter including insulation	1.4 mm ±0.02 mm		
Wire colors brown, blue, black Overall twist 3 wires, twisted Shielding Tinned copper braided shield Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm \pm 0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance $\geq 100 \text{ M}\Omega^*\text{km}$ (at 20 °C) Conductor resistance $\approx 300 \text{ V}$ Test voltage, cable $\approx 300 \text{ V}$ Flame resistance As per UL-Style 2464	Thickness, insulation	≥ 0.23 mm (Core insulation)		
Overall twist 3 wires, twisted Shielding Tinned copper braided shield Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm ±0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464		≥ 0.76 mm (Outer cable sheath)		
Shielding Tinned copper braided shield Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm ±0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464	Wire colors	brown, blue, black		
Optical shield covering 85 % External sheath, color black RAL 9005 External cable diameter D 5.2 mm ±0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464	Overall twist	3 wires, twisted		
External sheath, color External cable diameter D 5.2 mm \pm 0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance $\geq 100 \text{ M}\Omega^*\text{km}$ (at 20 °C) Conductor resistance max. $58 \Omega/\text{km}$ (at 20 °C) Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage, cable $\geq 3000 \text{ V}$ Flame resistance As per UL-Style 2464	Shielding	Tinned copper braided shield		
External cable diameter D 5.2 mm ± 0.2 mm Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance $\geq 100 \text{ M}\Omega^*\text{km}$ (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage, cable $\geq 3000 \text{ V}$ Flame resistance As per UL-Style 2464	Optical shield covering	85 %		
Cable weight 40 kg/km Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance $\geq 100 \text{ M}\Omega^*\text{km}$ (at 20 °C) Conductor resistance max. $58 \Omega/\text{km}$ (at 20 °C) Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage, cable $\geq 3000 \text{ V}$ Flame resistance As per UL-Style 2464	External sheath, color	black RAL 9005		
Outer sheath, material PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464	External cable diameter D	5.2 mm ±0.2 mm		
Material conductor insulationPVCConductor materialBare Cu litz wiresInsulation resistance≥ 100 MΩ*km (at 20 °C)Conductor resistancemax. 58Ω /km (at 20 °C)Nominal voltage, cable≤ 300 VTest voltage, cable≥ 3000 VFlame resistanceAs per UL-Style 2464	Cable weight	40 kg/km		
Conductor material Bare Cu litz wires Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω /km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464	Outer sheath, material	PVC		
Insulation resistance ≥ 100 MΩ*km (at 20 °C) Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464	Material conductor insulation	PVC		
Conductor resistance max. 58 Ω/km (at 20 °C) Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage, cable $\geq 3000 \text{ V}$ Flame resistance As per UL-Style 2464	Conductor material	Bare Cu litz wires		
Nominal voltage, cable ≤ 300 V Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464	Insulation resistance	≥ 100 MΩ*km (at 20 °C)		
Test voltage, cable ≥ 3000 V Flame resistance As per UL-Style 2464	Conductor resistance	max. 58 Ω/km (at 20 °C)		
Flame resistance As per UL-Style 2464	Nominal voltage, cable	≤ 300 V		
	Test voltage, cable	≥ 3000 V		
Ambient temperature (operation) 25 °C 80 °C (cable fixed installation)	Flame resistance	As per UL-Style 2464		
Ambient temperature (operation)	Ambient temperature (operation)	-25 °C 80 °C (cable, fixed installation)		
-5 °C 80 °C (cable, flexible installation)		-5 °C 80 °C (cable, flexible installation)		

Environmental Product Compliance

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

Drawings



Schematic diagram



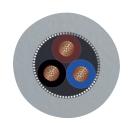
Pin assignment M12 socket, 3-pos., A-coded, view female side

Cable cross section



PUR/PVC shielded, gray [100]

Cable cross section

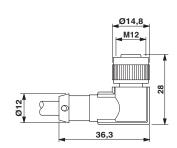


PVC gray [500]

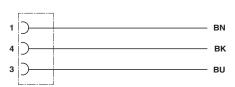
Cable cross section



PVC shielded black [PVC]



Dimensional drawing



Circuit diagram

Contact assignment of the M12 socket

M12 x 1 socket, angled, shielded

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

Approval details



Approvals

UL Listed	UL LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm		FILE E 221474
Nominal voltage UN			300 V	
Nominal current IN			4 A	

cUL Listed	CUL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm		FILE E 221474
Nominal voltage UN			300 V	
Nominal current IN			4 A	

EAC	EAC	EAC-Zulassung

cULus Listed	c UL us				
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