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Sensor/actuator box, application: Standard, connection method: M12-SPEEDCON-socket Plastic, number of slots: 6, number of positions: 5, coding: A - standard, slot assignment: Double, status display: yes, pnp; master cable connection: Fixed connection 180°, PUR/PVC, cable length: 5 m, shielding: no

Your advantages

- Safety in the field, thanks to molded housing and high degree of protection
- Flexible, distributed bundling of signals in one master cable
- ☑ Convenient: increased machine availability thanks to quick and easy diagnostics
- Save space: distributor box with double occupancy for two sensors in one slot



Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 553964
GTIN	4046356553964

Technical data

General

Rated voltage	24 V DC
Max. operating voltage U _{max}	30 V DC
Current carrying capacity per I/O signal	2 A
Current carrying capacity per slot	4 A
Total rated current	12 A
Number of positions	5
Number of slots	6
Sensor/actuator connection system	M12-SPEEDCON-socket
Note	NOTE: Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties.



Technical data

General

	Unused slots are to be sealed off prior to commissioning. Suitable sealing elements are to be found under "Accessories".
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Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C 80 °C
	-40 °C 90 °C (for fixed installation)
	-5 °C 80 °C (for flexible installation)

Local diagnostics function

Local diagnostics	Supply voltage Green LED
	Status display I/O Yellow LED

Master cable connection data

Connection method	Fixed connection
Length of cable	5 m
Tightening torque slot sensor/actuator cable	0.4 Nm
Tightening torque of mounting screw for fixing the housing	0.5 Nm

Insulation material

Housing material	PBT
Material of the moulding mass	PUR
Contact material	Cu alloy
Contact surface material	gold-plated
Contact carrier material	PA
Material of threaded sleeve	PBT
O-ring material	NBR

Pin assignment

Slot/position = Wire color or connection	1 / 4 (A) = WH	
	1 / 2 (B) = GY/PK	
	2 / 4 (A) = GN	
	2 / 2 (B) = RD/BU	
	3 / 4 (A) = YE	
	3 / 2 (B) = WH/GN	
	4 / 4 (A) = GY	
	4 / 2 (B) = BN/GN	
	5 / 4 (A) = PK	
	5 / 2 (B) = WH/YE	
	6 / 4 (A) = RD	
	6 / 2 (B) = YE/BN	
	1-6 / 1 (+ 24 V) = BN	
	1-6 / 3 (0 V) = BU	



Technical data

Pin assignment

M12 connector		1-6 / 5 (PE) = GN/YE		
EC 61076-2-101	Standards and Regulations			
Connection in acc. with standard CUL	Standard designation	M12 connector		
Apable	Standards/regulations	IEC 61076-2-101		
Cable type PUR/PVC black Cable type (abbreviation) PUR Cable abbreviation LiYY11Y-HF UL AWM style 20549 Conductor cross section 12x 0.5 mm² (Signal line) AWG signal line 20 AWG power supply 17 Conductor structure signal line 28x 0.15 mm Conductor structure, voltage supply 56x 0.15 mm Core diameter including insulation 1.5 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (power line) 2.1 mm ±0.1 mm (power line) Thickness, insulation > 0.15 mm (Inner sheath) Wire colors brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/ pink, red/fube, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External able dameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, fixed installation 10 x D Number of bending cycles 1500000 Bending radius 9.4 mm Traversing path 2 m Traversing path 2 m Traversing rate <t< td=""><td>Connection in acc. with standard</td><td>CUL</td></t<>	Connection in acc. with standard	CUL		
Cable type (abbreviation) PUR Cable abbreviation LiYY11Y-HF UL AWM style 20549 Conductor cross section 3x 1 mm² (power line) AWG signal line 20 AWG signal line 20 AWG power supply 17 Conductor structure signal line 28x 0.15 mm Conductor structure, voltage supply 58x 0.15 mm Cord diameter including insulation 1.5 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (power line) 2.1 mm ±0.1 mm (power line) Thickness, insulation ≥ 0.15 mm (Inner sheath) Wire colors brown, blue, greenlyellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate	Cable			
Cable abbreviation LiYY11Y-HF UL AWM style 20549 Conductor cross section 12x 0.5 mm² (Signal line) 3x 1 mm² (power line) 3x 1 mm² (power line) AWG signal line 20 AWG power supply 17 Conductor structure signal line 28x 0.15 mm Conductor structure, voltage supply 56x 0.15 mm Core diameter including insulation 1.5 mm ±0.1 mm (Signal line) 2 1 mm ±0.1 mm (power line) 2.1 mm ±0.1 mm (power line) Thickness, insulation > 0.76 mm (Outer cable sheath) Wire colors brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/ pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, fixed installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m/s Cable weight 150.9 kg/km Outer sheath, material PVC Ma	Cable type	PUR/PVC black		
Conductor cross section	Cable type (abbreviation)	PUR		
Conductor cross section 12x 0.5 mm² (Signal line) AWG signal line 20 AWG power supply 17 Conductor structure signal line 28x 0.15 mm Conductor structure, voltage supply 56x 0.15 mm Core diameter including insulation 1.5 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (power line) 2.1 mm ±0.1 mm (power line) Thickness, insulation ≥ 0.76 mm (Outer cable sheath) Wire colors brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, fixed installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Conductor	Cable abbreviation	LiYY11Y-HF		
3x 1 mm² (power line)	UL AWM style	20549		
AWG signal line 20 AWG power supply 17 Conductor structure signal line 28x 0.15 mm Conductor structure, voltage supply 56x 0.15 mm Cord diameter including insulation 1.5 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (power line) 2.0 .76 mm (Outer cable sheath) brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, fixed installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Everial rough 200 V Special properties Silicone-free	Conductor cross section	12x 0.5 mm² (Signal line)		
AWG power supply 17 Conductor structure signal line 28x 0.15 mm Conductor structure, voltage supply 56x 0.15 mm Core diameter including insulation 1.5 mm ±0.1 mm (power line) Thickness, insulation 2.1 mm ±0.1 mm (power line) Thickness, insulation ≥ 0.15 mm (uner sheath) ≥ 0.76 mm (Outer cable sheath) brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color Backernal sheath, color Backernal cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath PVC Material, inner sheath PVC Conductor material Bare Cu litz wires Nominal voltage, cable Special properties Silicone-free		3x 1 mm² (power line)		
Conductor structure signal line 28x 0.15 mm Conductor structure, voltage supply 56x 0.15 mm Core diameter including insulation 1.5 mm ±0.1 mm (Signal line) Thickness, insulation ≥ 0.15 mm (Inner sheath) Thickness, insulation ≥ 0.15 mm (Inner sheath) Wire colors brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material, inner sheath PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Special properties Silicone-free	AWG signal line	20		
Conductor structure, voltage supply 56x 0.15 mm Core diameter including insulation 1.5 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (power line) 2.1 mm ±0.1 mm (power line) Thickness, insulation ≥ 0.15 mm (Inner sheath) ≥ 0.76 mm (Outer cable sheath) brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Special properties Silicone-free	AWG power supply	17		
Core diameter including insulation 1.5 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (power line) 2.1 mm ±0.1 mm (power line) Thickness, insulation ≥ 0.15 mm (Inner sheath) Vire colors brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m/s Cable weight 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUC Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Special properties Silicone-free	Conductor structure signal line	28x 0.15 mm		
2.1 mm ±0.1 mm (power line) Thickness, insulation ≥ 0.15 mm (Inner sheath) ≥ 0.76 mm (Outer cable sheath) brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color External cable diameter D Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation Number of bending cycles Bending radius 94 mm Traversing path 2 m Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable Special properties Silicone-free	Conductor structure, voltage supply	56x 0.15 mm		
Thickness, insulation ≥ 0.15 mm (Inner sheath) ≥ 0.76 mm (Outer cable sheath) brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation Number of bending cycles Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Conductor material PVC Conductor material Nominal voltage, cable Special properties Silicone-free	Core diameter including insulation	1.5 mm ±0.1 mm (Signal line)		
≥ 0.76 mm (Outer cable sheath) brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color black RAL 9005 External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable Special properties Silicone-free		2.1 mm ±0.1 mm (power line)		
brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/ pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers External sheath, color External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Nominal voltage, cable Special properties Silicone-free	Thickness, insulation	≥ 0.15 mm (Inner sheath)		
pink, red/blue, white/green, brown/green, white/yellow, yellow/brown Overall twist Wires twisted in layers black RAL 9005 External sheath, color By 4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing path 2 m/S Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable Special properties Silicone-free		≥ 0.76 mm (Outer cable sheath)		
External sheath, color External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Special properties Silicone-free	Wire colors			
External cable diameter D 9.4 mm ±0.2 mm Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Special properties Silicone-free	Overall twist	Wires twisted in layers		
Minimum bending radius, fixed installation 7.5 x D Minimum bending radius, flexible installation 10 x D Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Special properties Silicone-free	External sheath, color	black RAL 9005		
Minimum bending radius, flexible installation Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable Silicone-free	External cable diameter D	9.4 mm ±0.2 mm		
Number of bending cycles 1500000 Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Minimum bending radius, fixed installation	7.5 x D		
Bending radius 94 mm Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Minimum bending radius, flexible installation	10 x D		
Traversing path 2 m Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Number of bending cycles	1500000		
Traversing rate 2 m/s Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Bending radius	94 mm		
Cable weight 150.9 kg/km Outer sheath, material PUR Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Traversing path	2 m		
Outer sheath, material Material, inner sheath PVC Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Traversing rate	2 m/s		
Material, inner sheath Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Cable weight	150.9 kg/km		
Material conductor insulation PVC Conductor material Bare Cu litz wires Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Outer sheath, material	PUR		
Conductor material Bare Cu litz wires 300 V Test voltage, cable 2000 V Special properties Silicone-free	Material, inner sheath	PVC		
Nominal voltage, cable 300 V Test voltage, cable 2000 V Special properties Silicone-free	Material conductor insulation	PVC		
Test voltage, cable 2000 V Special properties Silicone-free	Conductor material	Bare Cu litz wires		
Special properties Silicone-free	Nominal voltage, cable	300 V		
	Test voltage, cable	2000 V		
Flame resistance DIN EN 50265	Special properties	Silicone-free		
	Flame resistance	DIN EN 50265		



Technical data

Cable

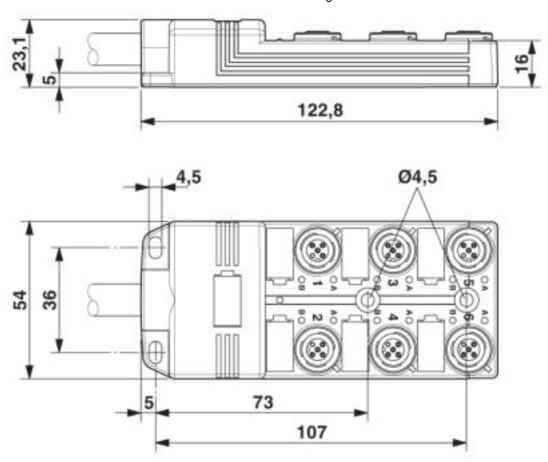
Resistance to oil	according to VDE 0472 Part 803
Other resistance	Highly resistant to acids, alkaline solutions and solvents
Ambient temperature (operation)	-40 °C 90 °C (cable, fixed installation)
	-5 °C 80 °C (cable, flexible installation)

Environmental Product Compliance

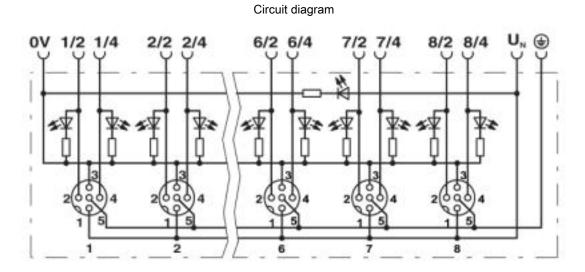
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

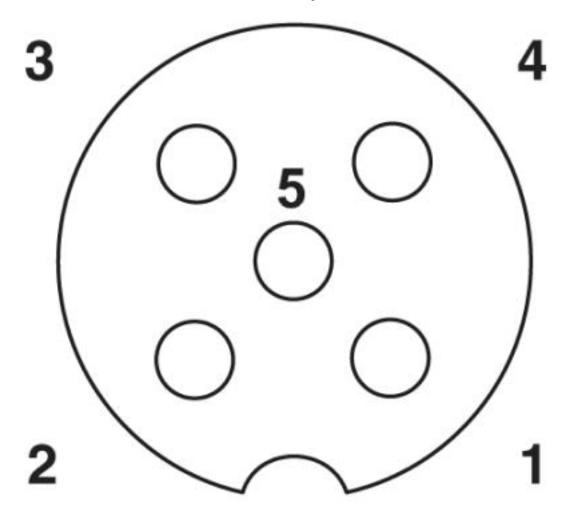
Dimensional drawing







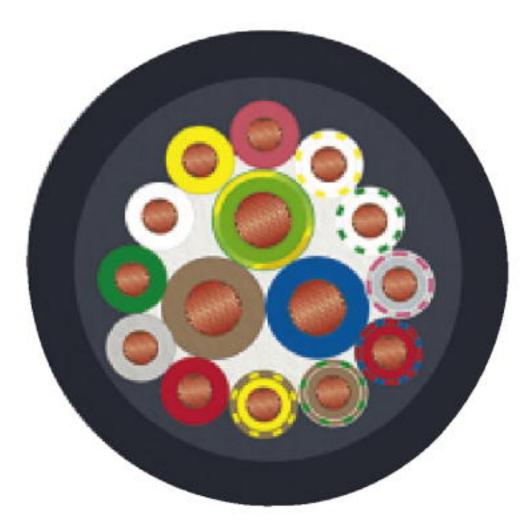
Schematic diagram



M12 slot, socket, 5-pos.



Cable cross section



PUR/PVC black [PUR]

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

Ex Approvals

Approval details



Approvals

UL Recognized	<i>9</i> 1	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm		FILE E 118976
Nominal voltage UN			24 V	
Nominal current IN			4 A	

cUL Recognized	. 71	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm		FILE E 118976
Nominal voltage UN			24 V	

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