

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold Germany

www.weidmueller.com







Sensor/actuator cables are used for wiring sensors and actuators and for transmitting data or power in various applications. The moulded cable offers connected and tested connection of the plug-in connector to the cable ex-works. The cables may be exposed to a wide range of conditions, such as humidity, dust, heat, cold, shock or

Our developers have focused specifically on this issue and designed a host of different M8 and M12 sensor-actuator cables so you are bound to find the solution you need for your application.

The M8 and M12 sensor-actuator cables are supplied as standard with brass nickel-plated nuts. However if you are looking to use our products in an extremely harsh environment, we can also supply a variant with a plastic nut. This enables use in environments where cables with nickel-plated M8 and M12 nuts would rust.

Is there something you have not managed to find or you feel needs explanation? Talk to us!

#### General ordering data

Version	Sensor/actuator line, Connecting line, M12 /	
	M12, Number of poles : 5, 1.5 m, Shielded: No,	
	LED: No, Sheath material: PUR, Halogen: No	
Order No.	2028150150	
Туре	SAIP-M12GM12SG-5-1.5U	
GTIN (EAN)	4050118423464	
Qty.	1 pc(s).	



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# **Technical data**

#### **Dimensions and weights**

Net weight 70 g

#### **Environmental Product Compliance**

REACH SVHC Lead 7439-92-1

#### **Technical specifications for cable**

Acceleration         5 m/s²           Bending cycles         12 Mio           Bending radius, min., moving         10 x cable diameter           Bending radius, min., stationary         5 x cable diameter           Cable length         1.5 m           Cool crossing         brown, white, blue, black, grey           Configurable cable length         No           Core cross-section         0.34 mm²           Core in accordance with UL AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         Yes           Insulation         PP           LABS-free         Yes           Number of poles         5           Outer cladding in accordance with UL AWM style         20233 (80 °C / 300 V)           Outer diameter         5.2 ± 0.2 mm           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to oils         in accordance with IEC 60811:404           Resistant to welding beads         No           Sheath material         PUR		
Bending radius, min., moving         10 x cable diameter           Bending radius, min., stationary         5 x cable diameter           Cable length         1.5 m           Colour coding         brown, white, blue, black, grey           Configurable cable length         No           Core cross-section         0.34 mm²           Core in accordance with UL AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         Yes           Insulation         PP           LABS-free         Yes           Number of poles         5           Outer cladding in accordance with UL         20233 (80 °C / 300 V)           AWM style         20233 (80 °C / 300 V)           Outside diameter         5 mm           Outside diameter         5 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with IEC 60811:404           Resistant to welding beads         No           Sheathing colour         black           Sheathing colour         black           Sheathing colour         black	Acceleration	5 m/s <sup>2</sup>
Bending radius, min., stationary         5 x cable diameter           Cable length         1.5 m           Colour coding         brown, white, blue, black, grey           Configurable cable length         No           Core in accordance with UL AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         Yes           Insulation         PP           LABS-free         Yes           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL AWM style         20233 (80 °C / 300 V)           Outer diameter         5.0 ± 0.2 mm           Outside diameter         5.0 ± 0.2 mm           Quiside diameter         5.0 ± 0.2 mm           Resistance to oils         in accordance with IEC 60311:404           Resistance to spread of flame         in accordance with UL 581 UL / CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-3, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheathing colour         black           Sheathing colour         black           Sheathing colour         black           Sheathing colour	Bending cycles	12 Mio
Cable length         1.5 m           Colour coding         brown, white, blue, black, grey           Configurable cable length         No           Core configurable cable length         No           Core in accordance with UL. AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         PP           LABS-free         Yes           Number of poles         5           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL. AWM style         20233 (80 °C / 300 V)           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with UL 1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-3, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-2, in accordance with IEC 6032-2-2           Resistant to welding beads         No           Sheathing colour         black           Sheathing co	Bending radius, min., moving	10 x cable diameter
Colour coding         brown, white, blue, black, grey           Configurable cable length         No           Core cross-section         0.34 mm²           Core in accordance with UL AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         Yes           Insulation         PP           LABS-free         Yes           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL         20233 (80 °C / 300 V)           AWM style         20233 (80 °C / 300 V)           Outer diameter         5.0 ± 0.2 mm           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60311:404           Resistance to spread of flame         In accordance with IEC 60311:404           Resistant to welding beads         No           Sheath material         PUR           Sheath material         PUR           Sheath material         PUR           Sheath material         PUR           Sheath material         No           Speed         5 m	Bending radius, min., stationary	5 x cable diameter
Configurable cable length         No           Core in accordance with UL AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         Yes           Insulation         PP           LABS-free         Yes           Number of poles         5           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL         20233 (80 °C / 300 V)           AWM style         20233 (80 °C / 300 V)           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5 mm           Signs         ±           Tolerance         0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60311:404           Resistance to spread of flame         in accordance with UL 1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-3, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheath material         PUR           Sheathing colour         black           Shielded         No	Cable length	1.5 m
Core cross-section         0.34 mm²           Core in accordance with UL AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         Yes           Insulation         PP           LABS-free         Yes           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL AWM style         20233 (80 °C / 300 V)           Outer diameter         5.0 ± 0.2 mm           Outside diameter         5.0 ± 0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with IEC 60811:404           Resistant to welding beads         No           Sheath material         PUR           Sheath material         PUR           Sheathmag colour         black           Sheathing colour         black           Sheathing colour         black           Sheathing colour         black           Sheathing colour, accordance with growing in accordance with	Colour coding	brown, white, blue, black, grey
Core in accordance with UL AWM style         10493 (80 °C / 300 V)           Halogen         No           Housing main material         PUR           Hydrolysis and microbe resistant         Yes           Insulation         PP           LABS-free         Yes           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL.         20233 (80 °C / 300 V)           WMM style         5           Outer diameter         5.0 ± 0.2 mm           Outside diameter         5 inm           Signs         ±           Tolerance         0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheathing colour         black           Shielded         No           Speed         5 m/s           Suitable for cable carriers         Yes           Temperature range, moving, max.         80 °C           Temperature range, stationary, min.         -25 °	Configurable cable length	No
Halogen	Core cross-section	0.34 mm <sup>2</sup>
Housing main material	Core in accordance with UL AWM style	10493 (80 °C / 300 V)
Hydrolysis and microbe resistant   Yes	Halogen	No
Insulation         PP           LABS-free         Yes           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL. AWM style         20233 (80 °C / 300 V)           Outer diameter         5.0 ± 0.2 mm           Outside diameter         5 mm           Signs         ±           Tolerance         0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with UL 1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-3, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheathing colour         black           Shielded         No           Speed         5 m/s           Suitable for cable carriers         Yes           Temperature range, moving, max.         80 °C           Temperature range, moving, min.         -25 °C           Temperature range, stationary, min.         -4080 °C           Temperature range, stationary, min.         -4080 °C           Temperature range, stationary, min.         -4080 °C	Housing main material	PUR
LABS-free         Yes           Number of poles         5           Number of poles         5           Outer cladding in accordance with UL AWM style         20233 (80 °C / 300 V)           Outer diameter         5.0 ± 0.2 mm           Outside diameter         Diameter           Signs         ±           Tolerance         0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with UL 1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-3, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheathing colour         black           Shielded         No           Speed         5 m/s           Suitable for cable carriers         Yes           Temperature range, moving, max.         80 °C           Temperature range, moving, min.         -25 °C           Temperature range, stationary, max.         40 °C           Temperature range, stationary, min.         -40 °C	Hydrolysis and microbe resistant	Yes
Number of poles         5           Number of poles         5           Outer cladding in accordance with UL AWM style         20233 (80 °C / 300 V)           Outer diameter         5.0 ± 0.2 mm           Outside diameter         5 mm           Signs         ±           Tolerance         0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with UL 1581 UL / CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-3, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheathing colour         black           Shielded         No           Speed         5 m/s           Suitable for cable carriers         Yes           Temperature range, moving, max.         80 °C           Temperature range, moving, min.         -25 °C           Temperature range, stationary, max.         80 °C           Temperature range, stationary, max.         80 °C           Temperature range, stationary, min.         -40 °C	Insulation	PP
Number of poles         5           Outer cladding in accordance with UL AWM style         20233 (80 °C / 300 V)           Outside diameter         5.0 ± 0.2 mm           Outside diameter         Diameter         5 mm           Signs         ±           Tolerance         0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with UL1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-3, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheathing colour         black           Shielded         No           Speed         5 m/s           Suitable for cable carriers         Yes           Temperature range, moving, max.         80 °C           Temperature range, moving, min.         -25 °C           Temperature range, stationary, max.         80 °C           Temperature range, stationary, max.         80 °C           Temperature range, stationary, min.         -40 °C	LABS-free	Yes
Outer cladding in accordance with UL AWM style         20233 (80 °C / 300 V)           Outer diameter         5.0 ± 0.2 mm           Outside diameter         Diameter Signs ± Tolerance 0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with UL 1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheathing colour         black           Shielded         No           Speed         5 m/s           Suitable for cable carriers         Yes           Temperature range, moving, max.         80 °C           Temperature range, stationary, max.         80 °C           Temperature range, stationary, max.         80 °C           Temperature range, stationary, max.         60 °C	Number of poles	5
AWM style         5.0 ± 0.2 mm           Outside diameter         5 mm           Signs         ±           Tolerance         0.2 mm           Outside diameter         5 mm ± 0.2 mm           Resistance to oils         in accordance with IEC 60811:404           Resistance to spread of flame         In accordance with UL 1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2           Resistant to welding beads         No           Sheath material         PUR           Sheathing colour         black           Shielded         No           Speed         5 m/s           Suitable for cable carriers         Yes           Temperature range, moving, moving, max.         80 °C           Temperature range, stationary, max.         80 °C           Temperature range, stationary, min.         -40 °C	Number of poles	5
Outside diameter    Diameter   5 mm     Signs		20233 (80 °C / 300 V)
Signs ± Tolerance 0.2 mm  Outside diameter 5 mm ± 0.2 mm  Resistance to oils in accordance with IEC 60811:404  Resistance to spread of flame In accordance with UL1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2  Resistant to welding beads No Sheath material PUR Sheathing colour black Shielded No Speed 5 m/s Suitable for cable carriers Yes Temperature range, moving -2580 °C Temperature range, moving, max. 80 °C Temperature range, stationary, max. 80 °C	Outer diameter	$5.0 \pm 0.2 \text{ mm}$
Tolerance 0.2 mm  Outside diameter 5 mm ± 0.2 mm  Resistance to oils in accordance with IEC 60811:404  Resistance to spread of flame In accordance with UL1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2  Resistant to welding beads No Sheath material PUR Sheathing colour black Shielded No Speed 5 m/s Suitable for cable carriers Yes Temperature range, moving -2580 °C Temperature range, moving, min25 °C Temperature range, stationary, max. 80 °C Temperature range, stationary, max. 80 °C Temperature range, stationary, min40 °C Temperature range, stationary, min40 °C	Outside diameter	Diameter 5 mm
Outside diameter 5 mm ± 0.2 mm  Resistance to oils in accordance with IEC 60811:404  Resistance to spread of flame In accordance with UL1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2  Resistant to welding beads No Sheath material PUR Sheathing colour black Shielded No Speed 5 m/s  Suitable for cable carriers Yes  Temperature range, moving -2580 °C  Temperature range, moving, min25 °C  Temperature range, stationary, max. 80 °C  Temperature range, stationary, max. 80 °C  Temperature range, stationary, min40 °C		Signs ±
Resistance to oils in accordance with IEC 60811:404 Resistance to spread of flame In accordance with UL1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2 Resistant to welding beads No Sheath material PUR Sheathing colour black Shielded No Speed 5 m/s Suitable for cable carriers Yes Temperature range, moving -2580 °C Temperature range, moving, max. 80 °C Temperature range, stationary -4080 °C Temperature range, stationary, max. 80 °C		Tolerance 0.2 mm
Resistance to spread of flame  In accordance with UL1581 UL/ CUL FT1, in accordance with IEC 60332-1-2, in accordance with IEC 60332-1-2, in accordance with IEC 60332-2-2  Resistant to welding beads  No  Sheath material  PUR  Sheathing colour  black  Shielded  No  Speed  5 m/s  Suitable for cable carriers  Yes  Temperature range, moving  -2580 °C  Temperature range, moving, min.  -25 °C  Temperature range, stationary  -4080 °C  Temperature range, stationary, min.  -40 °C	Outside diameter	5 mm ± 0.2 mm
Resistant to welding beads No Sheath material PUR Sheathing colour Shielded No Speed Som/s Suitable for cable carriers Temperature range, moving Temperature range, moving, max. Temperature range, moving, min. Temperature range, stationary Temperature range, stationary, min.	Resistance to oils	in accordance with IEC 60811:404
Sheath material PUR Sheathing colour black Shielded No Speed 5 m/s Suitable for cable carriers Yes Temperature range, moving -2580 °C Temperature range, moving, max. 80 °C Temperature range, moving, min25 °C Temperature range, stationary -4080 °C Temperature range, stationary, max. 80 °C Temperature range, stationary, min40 °C	Resistance to spread of flame	
Sheathing colour  Shielded  No  Speed  5 m/s  Suitable for cable carriers  Yes  Temperature range, moving  -2580 °C  Temperature range, moving, max.  80 °C  Temperature range, moving, min.  -25 °C  Temperature range, stationary  -4080 °C  Temperature range, stationary, max.  80 °C  Temperature range, stationary, min.  -40 °C	Resistant to welding beads	No
Shielded No Speed 5 m/s Suitable for cable carriers Yes Temperature range, moving -2580 °C Temperature range, moving, max. 80 °C Temperature range, moving, min25 °C Temperature range, stationary -4080 °C Temperature range, stationary, max. 80 °C Temperature range, stationary, max. 80 °C Temperature range, stationary, min40 °C	Sheath material	PUR
Speed 5 m/s  Suitable for cable carriers Yes  Temperature range, moving -2580 °C  Temperature range, moving, max. 80 °C  Temperature range, moving, min25 °C  Temperature range, stationary -4080 °C  Temperature range, stationary, max. 80 °C  Temperature range, stationary, max. 80 °C  Temperature range, stationary, min40 °C	Sheathing colour	black
Suitable for cable carriers  Yes  Temperature range, moving  -2580 °C  Temperature range, moving, max.  80 °C  Temperature range, moving, min.  -25 °C  Temperature range, stationary  -4080 °C  Temperature range, stationary, max.  80 °C  Temperature range, stationary, max.  80 °C  Temperature range, stationary, min.  -40 °C	Shielded	No
Temperature range, moving -2580 °C  Temperature range, moving, max. 80 °C  Temperature range, moving, min25 °C  Temperature range, stationary -4080 °C  Temperature range, stationary, max. 80 °C  Temperature range, stationary, min40 °C	Speed	5 m/s
Temperature range, moving, max. 80 °C  Temperature range, moving, min25 °C  Temperature range, stationary -4080 °C  Temperature range, stationary, max. 80 °C  Temperature range, stationary, min40 °C	Suitable for cable carriers	Yes
Temperature range, moving, min25 °C  Temperature range, stationary -4080 °C  Temperature range, stationary, max. 80 °C  Temperature range, stationary, min40 °C	Temperature range, moving	-2580 °C
Temperature range, stationary -4080 °C Temperature range, stationary, max. 80 °C Temperature range, stationary, min40 °C	Temperature range, moving, max.	80 °C
Temperature range, stationary, max. 80 °C Temperature range, stationary, min40 °C	Temperature range, moving, min.	-25 °C
Temperature range, stationary, min40 °C	Temperature range, stationary	-4080 °C
	Temperature range, stationary, max.	80 °C
Torsion resistance 360 °/m	Temperature range, stationary, min.	-40 °C
	Torsion resistance	360 °/m



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# **Technical data**

#### **General technical data**

AF size	12 mm	Connection thread	M12 / M12
Contact surface	Gold-plated	Housing main material	PUR
Insulation strength	10 <sup>8</sup> Ω	LED	No
Plugging cycles	≥ 100	Pollution severity	3
Protection degree	IP65, IP66, IP67, IP68, when screwed in	Rated current	4 A
Rated voltage	125 V	Temperature range of housing	-25+80 °C
Threaded ring material	Plastic	jumpered	No
Classifications ETIM 6.0	EC001855	ETIM 7.0	EC001855
ECLASS 9.0	27-06-03-11	ECLASS 9.1	27-06-03-11
ECLASS 10.0	27-06-03-11	ECLASS 11.0	27-06-03-11
Approvals			

ROHS	Conform	

## **Downloads**

Product Change Notification	Technical change to M12 plastic nuts - EN	
	Technical change to M12 plastic nuts - DE	



Weidmüller Interface GmbH & Co. KG

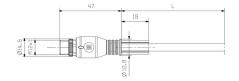
Klingenbergstraße 26 D-32758 Detmold Germany

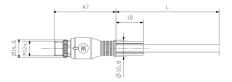
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# **Drawings**

#### **Dimensioned drawing**

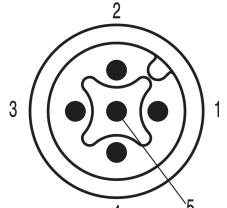
#### **Dimensioned drawing**



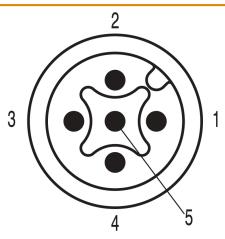


#### Pole scheme

# Poie scheme

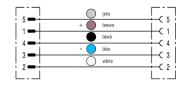


#### Pole scheme



### Wiring diagram







Light, securely screwed-in round plug-in connectors. Screwty set DM / VPE: 1 / Order No.: 1920000000 Adapters: M12, M12 F, M8, M8 F