



Superior Clamping and Gripping



## Product Information

Analog position sensor MMS 22-A

# MMS 22-A

Analog position sensor

**Flexible. Reliable. Intuitive.**

## MMS 22-A analog position sensor

The analog MMS 22-A magnetic sensor is used for monitoring the status of SCHUNK grippers. It detects the approach of a magnet without contact and returns a continuous output signal.

### Field of application

Used for monitoring SCHUNK grippers. The analog SCHUNK magnetic switch detects magnets without contact and wear, and is resistant to vibrations, dust, and humidity. The magnetic switch is installed in a C-slot and therefore does not produce any additional interfering contour.

### Advantages – Your benefits

**C-slot sensor** for insertion into the gripper, therefore no interference contour.

**Programmable within no time** due to the contactless, magnetic teach tool

**Stroke measuring ranges adjustable** for the analog position monitoring even at long strokes

**Integrated electronics** allows for flexible cable assembly despite the space-saving outer contour

**Version with LED display** for checking the switching state directly on the sensor

**Version with standard plug connector** for fast and easy exchangeability of the extension cable

**Very flexible cable in PUR version** for a long service life



### Options and special information

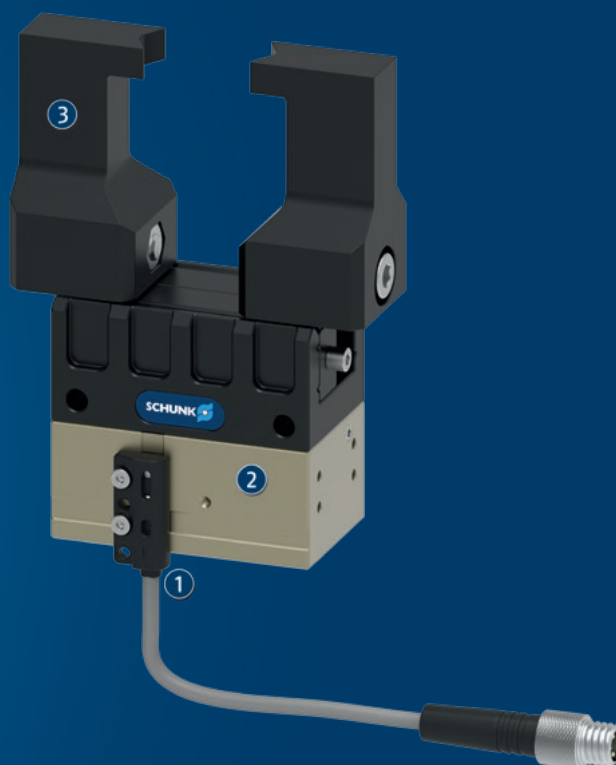
**5 or 10 V output voltage:** The MMS 22-A is available in versions with 5 or 10 V output voltage. The 5 V sensor is optimized for operation with the SCHUNK FPS system. The 10 V sensor, on the other hand, can be directly connected to an analog input, for example a PLC or a separate input card.

**Sources of interference:** Sensors can be influenced by other magnetic fields in the immediate vicinity. Disturbing magnetic fields can be generated by motors, electric welders, permanent magnets or magnetized material (so-called soft magnets) such as hexagon socket wrenches, chips, etc.

**High protection class:** IP67 when plugged in, for use in clean or dusty environments or in case of contact with water. Operability in case of contact with other media (coolant, acids, bases, etc.) is often given, however cannot be guaranteed by SCHUNK.

**Shielding of a cable extension:** Shielded cables are recommended if the analog signal is routed via cable extensions. The cable must be shielded on one end.

## Application example



The application example shows the analog MMS 22-A position sensor being used on an MPG-plus gripper for small

components.

① MMS 22-A magnetic switch

② 2-finger parallel gripper MPG-plus

③ Top jaw

## SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



FPS processor



2-finger parallel gripper PGN-plus



2-finger parallel gripper MPG-plus

① For more information on these products can be found on the following product pages or at [schunk.com](http://schunk.com).

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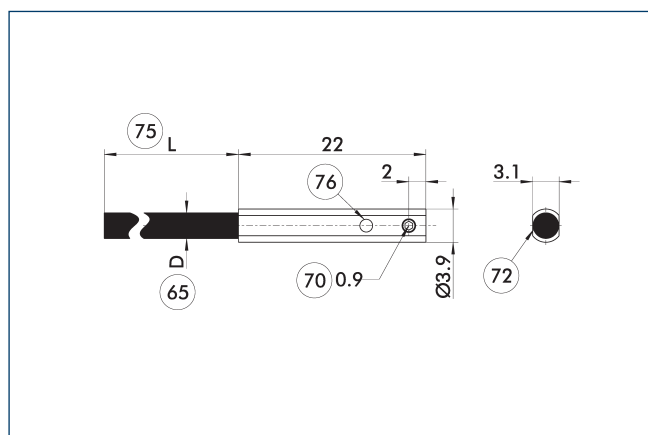


## Technical data

Description		MMS 22-A-05V-M08	MMS 22-A-10V-M08	MMS 22-A-10V-M12
ID		0315805	0315825	0315828
<b>General data</b>				
Measuring principle		magnetic	magnetic	magnetic
Teach function		yes	yes	yes
Voltage output / power output		1/0	1/0	1/0
Type Output voltage value	[V]	0/5	0.3/10	0.3/10
Linearity	[%]	15	15	15
Repeat accuracy R of final value maximum		< 3 %	< 3 %	< 3 %
Min./max. ambient temperature	[°C]	5/55	5/55	5/55
LED display in sensor		yes	yes	yes
Response time / typ. Switching time	[ms]	50	50	50
<b>Electrical operating data</b>				
Nominal voltage	[V]	5	24	24
Min./max. operating voltage	[V]	5/5.5	15/30	15/30
Max. ripple (% of Ue)		<2 % Vss	<2 % Vss	<2 % Vss
Type of voltage		DC	DC	DC
Nominal current	[mA]	10	15	15
Min. load resistance RL	[kΩ]		10	10
Short circuit protection		yes	yes	yes
Protected against polarity reversal		yes	yes	yes
<b>Mechanical operating data</b>				
Housing material		GV-5H (PA), black	GV-5H (PA), black	GV-5H (PA), black
Cable connector/cable end		M8 socket, 3-pin	M8 connector, 3-pin	M12 connector, 3-pin
Cable length	[m]	0.31	0.31	0.31
Cable diameter	[mm]	2.35	2.35	2.35
Cable sheath material		PUR	PUR	PUR
Cable shielding		yes	no	yes
Weight	[kg]	0.01	0.01	0.01
Protection class		3	3	3
Drilling emulsion resistance *		yes	yes	yes
<b>Approval / conformity</b>				
CE		yes	yes	yes

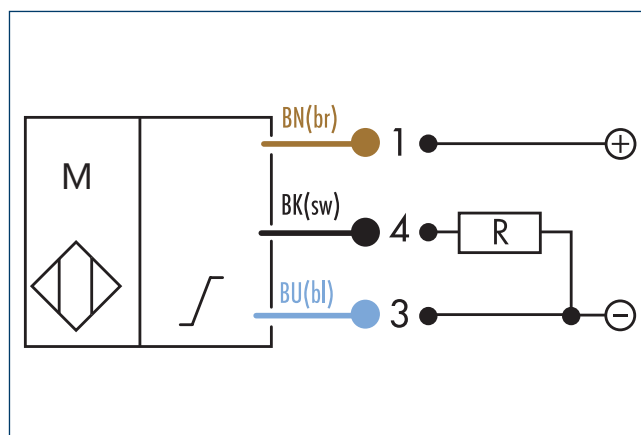
\* Tested cutting emulsions: r.rhenus TU 43P, Motorex Swisscool Magnum UX 550 and Oemeta 760 (1008339).

## MMS 22-A main view

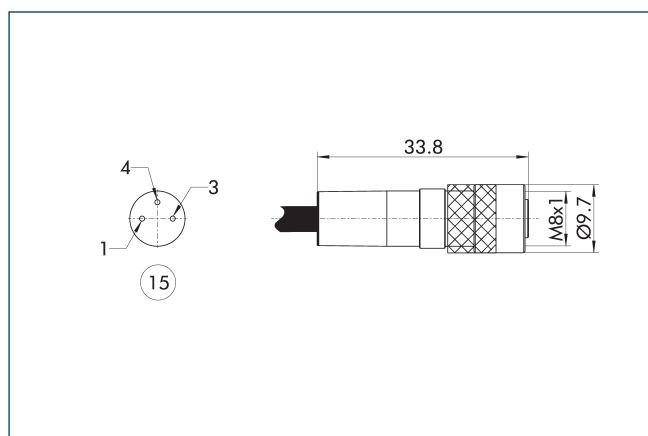


- 65 Cable diameter
- 70 Wrench size
- 72 Active sensor surface
- 75 Cable length
- 76 LED

## Wiring diagram analog output



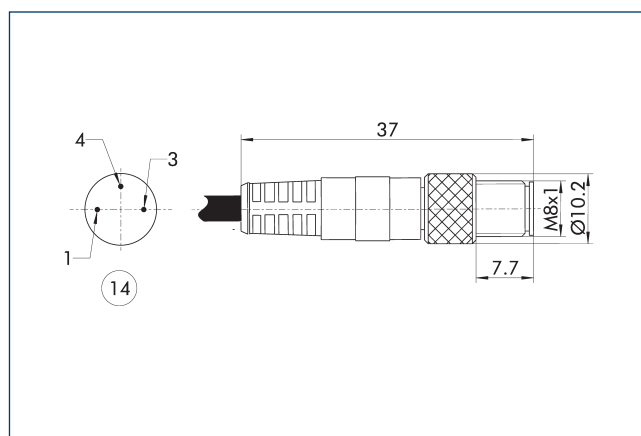
## View of M8 socket (3-pin)



- 15 Socket

This view shows the plug connector on the cable end of the sensor.

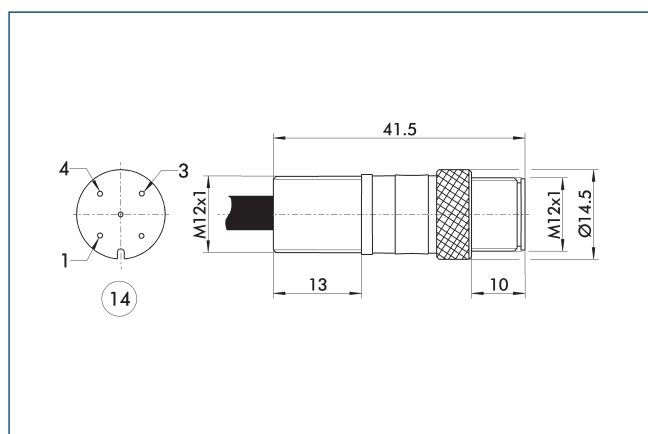
## View of M8 connector (3-pin)



- 14 Connector

This view shows the plug connector on the cable end of the sensor.

## View of M12 connector (4-pin)



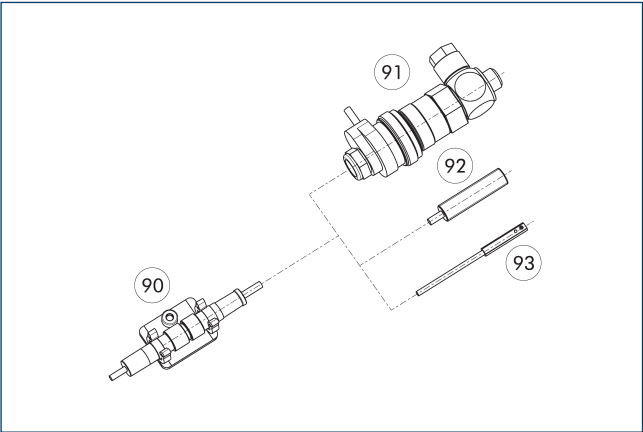
- 14 Connector

This view shows the plug connector on the cable end of the sensor.

# MMS 22-A

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## clip for plug/socket



- 90 CLI plug bracket
- 91 MV micro valve
- 92 IN proximity switch
- 93 Magnetic switch MMS

The CLI clip is used for fastening and strain relief for the plug connectors. For example for the sensor and cable extension connection.

Description	ID	
clip for plug/socket		
CLI-M12	0301464	
CLI-M8	0301463	





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