



Superior Clamping and Gripping



Product Information

Electronic magnetic switch MMS

Non-contact. Reliable. Easy assembly.

Electronic magnetic switch MMS

A magnetic switch is used for monitoring the status of automation components. They detect the approach of a magnet without contact and above a certain switching value, they put out a digital signal.

Field of application

Used for monitoring gripping and rotary modules, as well as linear modules, and robot accessories. Magnetic switches from SCHUNK detect magnets without contact or wear, and are resistant to vibrations, dust and humidity. Magnetic switches are installed in slots, and thus do not produce any additional interfering contours. For connection with a digital input module (utilization category DC-12).

Advantages – Your benefits

Installation into the sensor groove for space-saving, easy, and fast assembly on the product

Version with LED display for control of the switching position directly at 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

ATEX version EX: for explosive environments

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.

Power supply: 10 – 30 V DC at < 10% residual ripple

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.

Application example



① Magnetic switch MMS

② 2-finger parallel gripper
PGN-plus-P

③ Tolerance compensation unit
TCU-P

SCHUNK offers more ...

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



Sensor cables



Connector clip



Sensor distributor



SST sensor tester

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

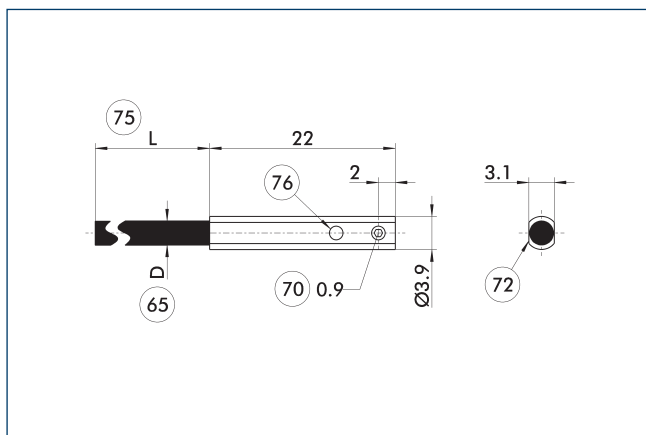


Technical data

Description		MMS 22-S-M8-PNP	MMS 22-S-M8-NPN	MMSK 22-S-PNP	MMSK 22-S-NPN
ID		0301032	0301033	0301034	0301035
Principle of function					
Measuring principle		magnetic	magnetic	magnetic	magnetic
Switching function		Closer	Closer	Closer	Closer
Type of switching		PNP	NPN	PNP	NPN
Number of switching points		1	1	1	1
Teach function		no	no	no	no
General data					
Min./max. ambient temperature	[°C]	-20/80	-20/80	-20/80	-20/80
LED display in sensor		yes	yes	yes	yes
Electrical operating data					
Type of voltage		DC	DC	DC	DC
Nominal voltage	[V]	24	24	24	24
Min./max. operating voltage	[V]	10/30	10/30	10/30	10/30
Voltage drop	[V]	2	2	2	2
Max. switching current	[A]	0.05	0.05	0.05	0.05
Short circuit protection		yes	yes	yes	yes
Protected against polarity reversal		yes	yes	yes	yes
Mechanical operating data					
Housing material		PA	PA	PA	PA
Cable connector/cable end		M8 connector, 3-pin	M8 connector, 3-pin	open wire strands	open wire strands
Cable length L	[cm]	30	30	200	200
Cable diameter D	[mm]	2.2	2.2	2.2	2.2
Cable design (wire cross section / number of wires)		3x 0,05mm ²	3x 0,05mm ²	3x 0,05mm ²	3x 0,05mm ²
Cable sheath material		PUR	PUR	PUR	PUR
Min. bending radius (dynamic)	[mm]	22	22	22	22
Min. bending radius (static)	[mm]	11	11	11	11
Weight	[kg]	0.01	0.01	0.02	0.02
Protection class IP (sensor, plugged)		67	67	67	67
Protection class		III	III	III	III
Drilling emulsion resistance *		yes	yes	yes	yes
Options and their characteristics					
Version with lateral cable outlet		MMS 22-S-M8-PNP-SA	MMS 22-S-M8-NPN-SA	MMSK 22-S-PNP-SA	MMSK 22-S-NPN-SA
ID		0301042	0301043	0301044	0301045
LED display in sensor		yes	yes	yes	yes

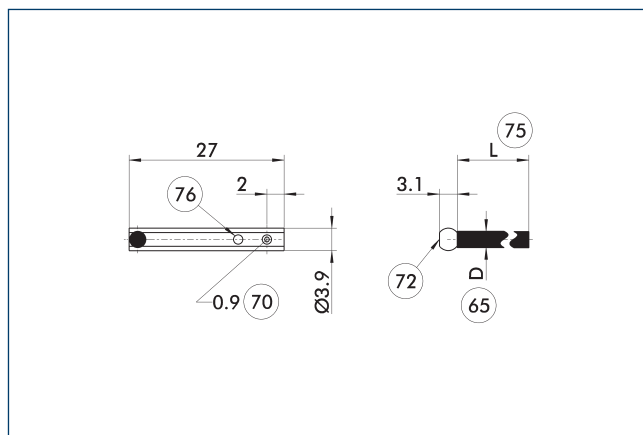
* Tested cutting emulsions: r.rhenus TU 43P, Motorex Swisscool Magnum UX 550 and Oemeta 760 (1008339).

MMS 22 main view



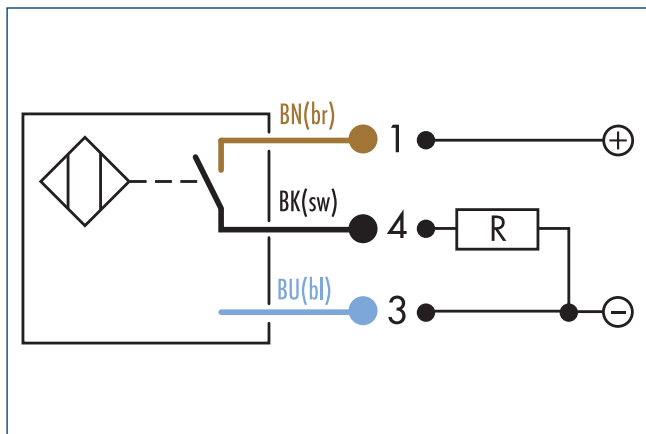
- 65 Cable diameter
- 70 Wrench size
- 72 Active sensor surface
- 75 Cable length
- 76 LED

MMS 22-SA main view

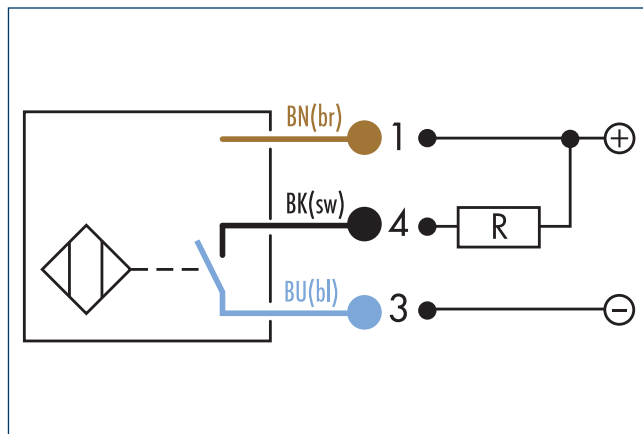


- 65 Cable diameter
- 70 Wrench size
- 72 Active sensor surface
- 75 Cable length
- 76 LED

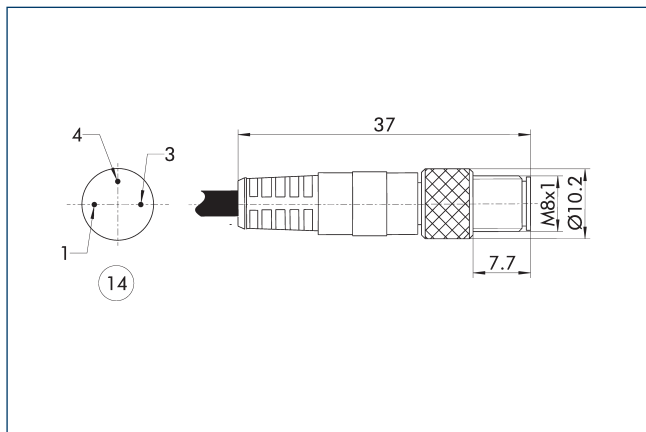
Wiring diagram closer PNP



Circuit diagram of NPN closer



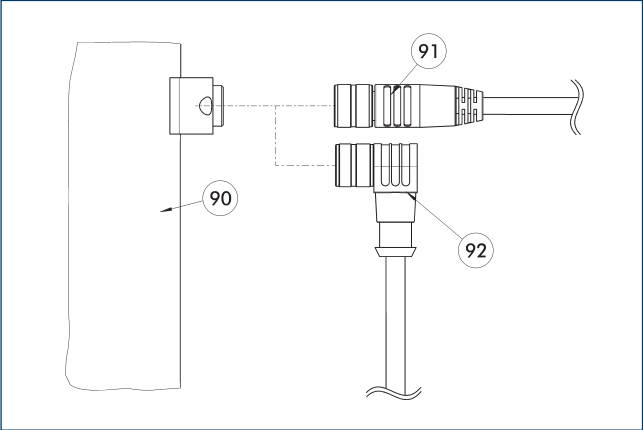
View of M8 connector (3-pin)



- 14 Connector

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

Connection cables

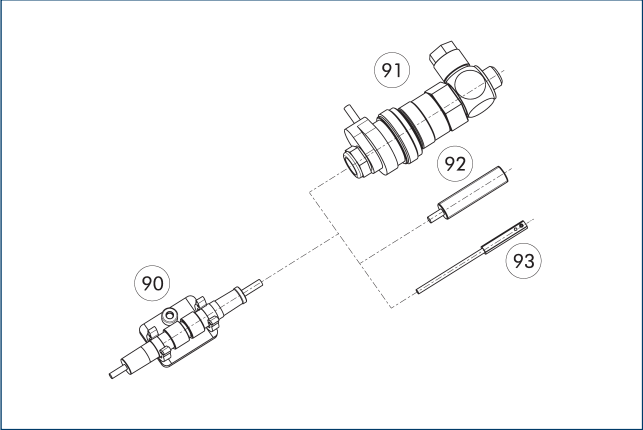


- 90 Electrical connection component
- 91 Cable with straight connector
- 92 Cable with angled connector

Description	ID	Length	Often combined
		[m]	
Connection cables			
KA BG08-L 3P-0300-PNP	0301622	3	●
KA BG08-L 3P-0500-PNP	0301623	5	
KA BW08-L 3P-0300-PNP	0301594	3	
KA BW08-L 3P-0500-PNP	0301502	5	
Cable extension			
KV BW08-SG08 3P-0030-PNP	0301495	0.3	
KV BW08-SG08 3P-0100-PNP	0301496	1	
KV BW08-SG08 3P-0200-PNP	0301497	2	●

① BG stands for a connection cable with a straight female connector and BW for an angled female connector. SG stands for a connection cable with a straight male connector and SW for an angled male connector.

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-M8	0301463	

MMS 30

Electronic magnetic switch

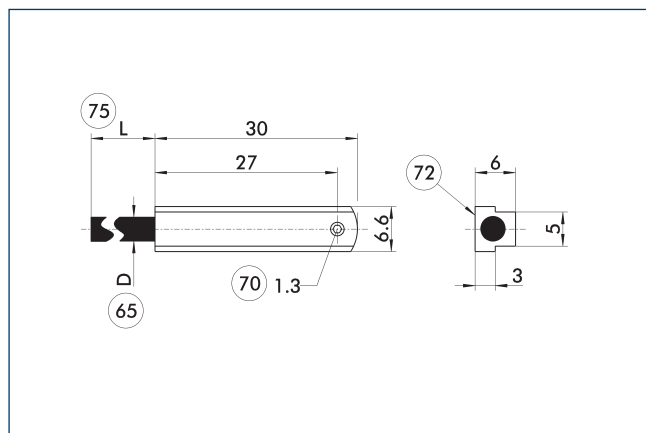


Technical data

Description		MMS 30-S-M8-PNP	MMS 30-S-M12-PNP	MMSK 30-S-PNP
ID		0301471	0301571	0301563
Principle of function				
Measuring principle		magnetic	magnetic	magnetic
Switching function		Closer	Closer	Closer
Type of switching		PNP	PNP	PNP
Number of switching points		1	1	1
Teach function		no	no	no
General data				
Min./max. ambient temperature	[°C]	-25/70	-25/70	-25/70
LED display in sensor		no	no	no
Electrical operating data				
Type of voltage		DC	DC	DC
Nominal voltage	[V]	24	24	24
Min./max. operating voltage	[V]	10/30	10/30	10/30
Voltage drop	[V]	1.5	1.5	1.5
Max. switching current	[A]	0.2	0.2	0.2
Short circuit protection		no	no	no
Protected against polarity reversal		no	no	no
Mechanical operating data				
Cable connector/cable end		M8	M12	open wire strands
Cable length L	[cm]	30	30	200
Cable diameter D	[mm]	3.5	3.5	3.5
Min. bending radius (dynamic)	[mm]	35	35	35
Min. bending radius (static)	[mm]	17.5	17.5	17.5
Weight	[kg]	0.04	0.02	0.1
Protection class IP (sensor, plugged)		67	67	67
Drilling emulsion resistance *		no	no	no

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

MMS 30 main view



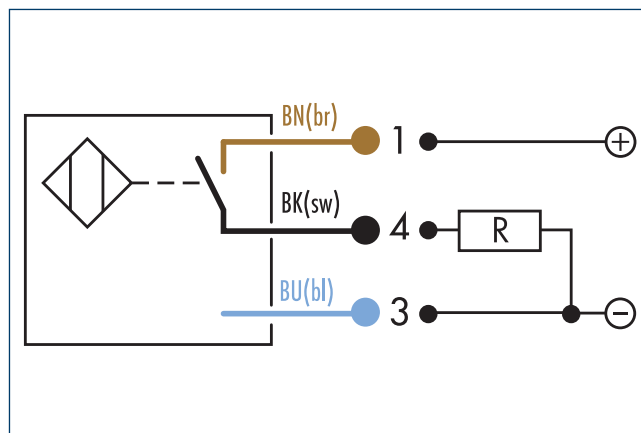
65 Cable diameter

72 Active sensor surface

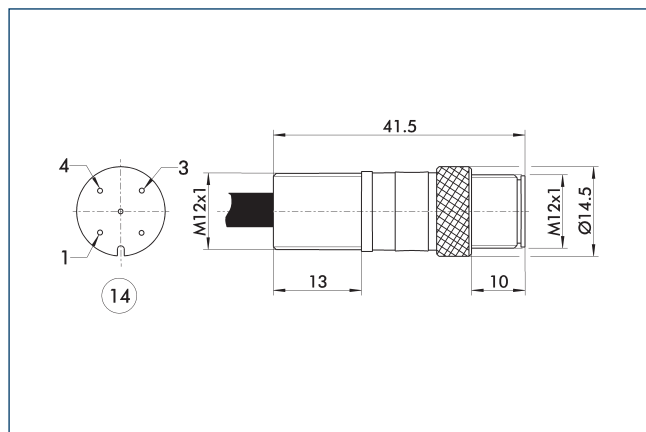
70 Wrench size

75 Cable length

Wiring diagram closer PNP



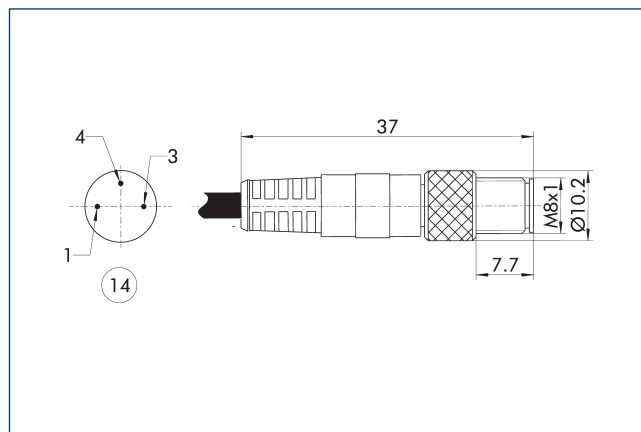
View of M12 connector (4-pin)



14 Connector

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

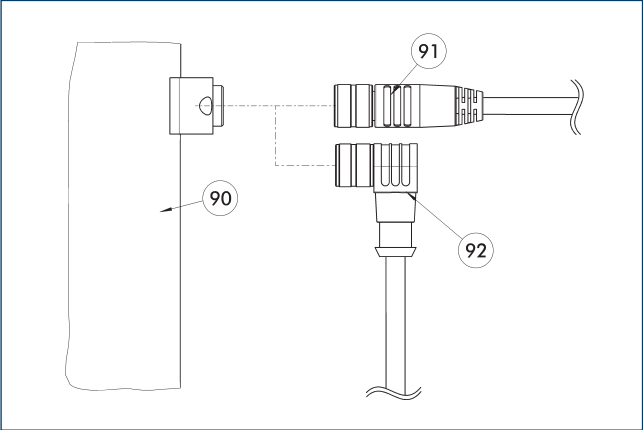
View of M8 connector (3-pin)



14 Connector

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

Connection cables

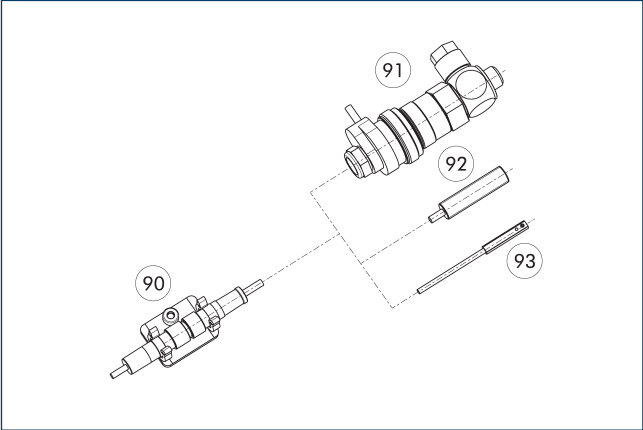


- 90 Electrical connection component
- 91 Cable with straight connector
- 92 Cable with angled connector

Description	ID	Length	Often combined
		[m]	
Connection cables			
KA BG08-L 3P-0300-PNP	0301622	3	●
KA BG08-L 3P-0500-PNP	0301623	5	
KA BG12-L 3P-0500-PNP	30016369	5	
KA BW08-L 3P-0300-PNP	0301594	3	
KA BW08-L 3P-0500-PNP	0301502	5	
Cable extension			
KV BG12-SG12 3P-0030-PNP	0301999	0.3	
KV BG12-SG12 3P-0060-PNP	0301998	0.6	
KV BW08-SG08 3P-0030-PNP	0301495	0.3	
KV BW08-SG08 3P-0100-PNP	0301496	1	
KV BW08-SG08 3P-0200-PNP	0301497	2	●
KV BW12-SG12 3P-0030-PNP	0301595	0.3	
KV BW12-SG12 3P-0100-PNP	0301596	1	
KV BW12-SG12 3P-0200-PNP	0301597	2	

① BG stands for a connection cable with a straight female connector and BW for an angled female connector. SG stands for a connection cable with a straight male connector and SW for an angled male connector.

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	

MMS 65

Electronic magnetic switch

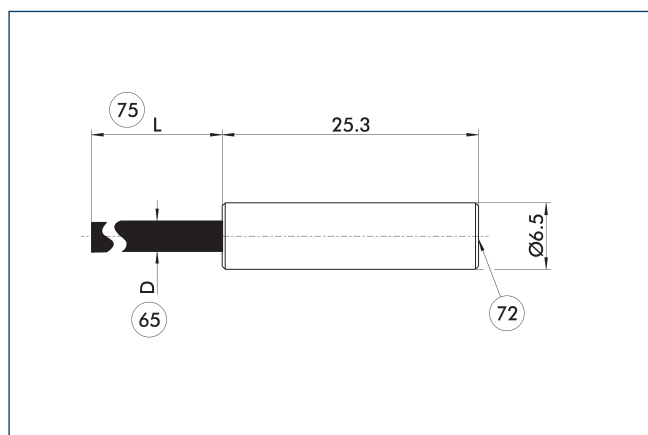


Technical data

Description		MMSK 65-S-PNP
ID		0301423
Principle of function		
Measuring principle		magnetic
Switching function		Closer
Type of switching		PNP
Number of switching points		1
Teach function		no
General data		
Min./max. ambient temperature	[°C]	-20/70
LED display in sensor		no
Electrical operating data		
Type of voltage		DC
Nominal voltage	[V]	24
Min./max. operating voltage	[V]	10/30
Voltage drop	[V]	1.5
Max. switching current	[A]	0.2
Short circuit protection		no
Protected against polarity reversal		no
Mechanical operating data		
Cable connector/cable end		open wire strands
Cable length L	[cm]	200
Cable diameter D	[mm]	3.3
Min. bending radius (dynamic)	[mm]	21
Min. bending radius (static)	[mm]	10.5
Weight	[kg]	0.035
Protection class IP (sensor, plugged)		67
Drilling emulsion resistance *		no

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

MMS-K 65 main view

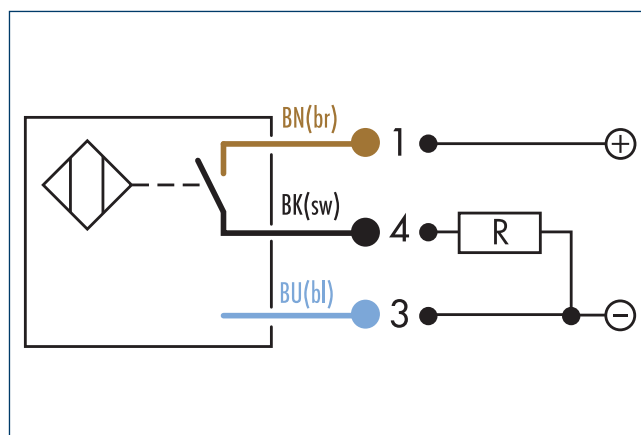


65 Cable diameter

75 Cable length

72 Active sensor surface

Wiring diagram closer PNP





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