

Superior Clamping and Gripping



Product Information

Inductive Proximity Switches IN 30

Reliable. Non-contact. Easy assembly. Inductive proximity switches IN

Inductive proximity switches are used to scan the current status of automation components. They are offered by SCHUNK in versions IN and INK. The version IN is directly pluggable or has a molded cable with plug connector. The INK version is suitable for direct wiring. It has a molded cable with an open end.

Field of application

Sensors are used for monitoring gripping and rotary modules, as well as linear modules, and robot accessories. Inductive SCHUNK sensors detect metals without contact, and are resistant to vibration, dust, and water. The sensors are suitable for connection to a digital input module.

Advantages – Your benefits

Mounting with brackets for easy and fast assembly

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

Proximity switches for flush mounting for minimal interfering contours in the application



Options and special information

Functional description: With their oscillator coil, inductive proximity switches produce a high-frequency, alternating magnetic field. This field occurs on the active surface of the sensor. If a metal object enters the field, it draws energy from the magnetic field, thereby reducing the oscillation amplitude. This change is detected, and the sensor switches.

Signal output and switching type: Depending on the size and design of the sensors, they are available with the signal outputs opener and closer, and in the switching modes PNP and NPN. Please contact us for assistance.

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.

Application example



Handling and rotary unit for components with sensor monitoring on the gripping module

- ① IN sensors
- 2 Universal rotary actuator SRM
- 3 2-finger parallel gripper PGN-plus-P
- (4) KST cable connector

SCHUNK offers more ...

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



2-finger parallel gripper



Rotary unit



Sensor cables



Sensor distributor

① For more information on these products can be found on the following product pages or at schunk.com.



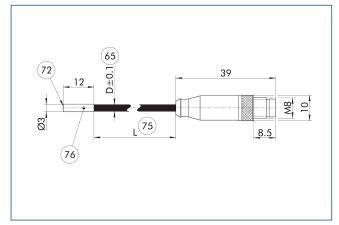
Technical data

Principle of function	Description		IN 30K-S-M8-PNP	IN 30L-S-M8-PNP
Measuring principle inductive Inductive Switching function Closer Closer Number of switching PNP PNP Rumber of switching points 1 1 Teach function no no General data Image: Common of the	ID		1001272	1001274
Closer C	Principle of function			
Type of switching PNP PNP Number of switching points 1 1 Each function no no General data W W Switching distance [mm] 0.9 1 Max. switching frequency [Hz] 3000 3000 Max. switching frequenty [Yz] 25770 25770 LED display in sensor yes yes yes Electrical operating data yes yes W Vilyope of voltage D DC DC Nominal voltage [V] 24 24 A Min./max. operating voltage [V] 24 2 A Voltage drop [V] 2 2 A Short circuit protection yes yes yes Protected against polarity reversal yes yes Housing material 1 3 tainless steel 3 tainless steel Cable connector/cable end M8 connector, 3-pin M8 connector, 3-pin M8 connector, 3-pin </td <td>Measuring principle</td> <td></td> <td>inductive</td> <td>inductive</td>	Measuring principle		inductive	inductive
Max. witching points 1 1 1 1 1 1 1 1 1	Switching function		Closer	Closer
Teach function	Type of switching		PNP	PNP
General data Switching distance [mm] 0.9 1 Max. switching frequency [Hz] 8000 3000 Min./max. ambient temperature [°C] -25/70 -25/70 LED display in sensor yes yes Electrical operating data V V Type of voltage DC DC Nominal voltage [V] 24 24 Min./max. operating voltage [V] 20 2 Nominal voltage [V] 2 2 Win./max. switching current [A] 0.1 0.1 Nort circuit protection yes yes Protected against polarity reversal yes yes Mechanical operating data yes yes Housing material Stainless steel stainless steel Cable connector/table end M8 connector, 3-pin M8 connector, 3-pin Cable design (wire cross section / number of wires) 3 x 0,055mm2 3 x 0,055mm2 Cable design (wire cross section / number of wires) <	Number of switching points		1	1
Switching distance [mm] 0.9 1 Max. switching frequency [Hz] 8000 3000 Min./max. ambient temperature [°C] -25/70 -25/70 LED display in sensor yes yes Electrical operating data Type of voltage DC DC Nominal voltage [V] 24 24 Min./max. operating voltage [V] 10/30 10/30 Voltage drop [V] 2 2 Max. switching current [A] 0.1 0.1 Short circuit protection yes yes Protected against polarity reversal yes yes Mechanical operating data Housing material Stainless steel Stainless steel Gable dength L [cm] 20 20 Cable diameter D [mm] 2.6 2.6 Cable diameter D [mm] 3 x 0,055mm2 3 x 0,055mm2 Cable disgin (wire cross section / number of wires) 3 x 0,055mm2 3 x 0,055mm2	Teach function		no	no
Max. switching frequency [Hz] 8000 3000 Min./max. ambient temperature [°C] -25/70 -25/70 LED display in sensor yes yes Electrical operating data DC DC Nominal voltage [V] 24 24 Min./max. operating voltage [V] 10/30 10/30 Voltage drop [V] 2 2 Max. switching current [A] 0.1 0.1 Short circuit protection yes yes Protected against polarity reversal yes yes Mechanical operating data yes yes Housing material stainless steel stainless steel Gable dength L [cm] 20 20 Cable diameter D [cm] 2.6 2.6 Cable design (wire cross section / number of wires) 3 x 0,055mm2 3 x 0,055mm2 Cable design (wire cross section / number of wires) PUR PUR Min. bending radius (dynamic) [mm] 26 26 Min. ben	General data			
Min./max. ambient temperature (°C) -25/70 -25/70 LED display in sensor yes yes Electrical operating data C DC Type of voltage DC DC Monimal voltage [V] 24 24 Min./max., operating voltage [V] 10/30 10/30 Voltage drop [V] 2 2 Max. switching current [A] 0.1 0.1 Short circuit protection yes yes Protected against polarity reversal yes yes Mechanical operating data Yes Yes Housing material Stainless steel Stainless steel Cable connector/cable end M8 connector, 3-pin M8 connector, 3-pin M8 connector, 3-pin Cable diameter D [mm] 2.6 2.6 2.6 Cable diameter D [mm] 3 x 0,055mm2 3 x 0,055mm2 3 x 0,055mm2 Cable dispin (wire cross section / number of wires) 3 x 0,055mm2 PUR PUR Min. bending radius (dynamic)	Switching distance	[mm]	0.9	1
LED display in sensor yes yes Electrical operating data University of voltage DC Nominal voltage IV 24 24 Nominal voltage IV 24 24 Min./max. operating voltage IV 10/30 10/30 Voltage drop IV 2 2 Max. switching current IA 0.1 0.1 Short circuit protection yes yes Protected against polarity reversal yes yes Mechanical operating data Housing material stainless steel stainless steel Cable connector/cable end M8 connector, 3-pin M8 connector, 3-pin Cable legight L [cm] 2.6 2.6 Cable daimeter D [mm] 2.6 2.6 Cable daising (wire cross section / number of wires) 3 x 0,055mm2 3 x 0,055mm2 Cable daining radius (dynamic) [mm] 26 26 Min. bending radius (dynamic) [mm] 26 26 Min. bending radius (dynamic) [mm] 26 26 Weight [kg] 0.08 Protection class IP (sensor, plugged) 67 67 67 Protection class III III III <td>Max. switching frequency</td> <td>[Hz]</td> <td>8000</td> <td>3000</td>	Max. switching frequency	[Hz]	8000	3000
Comparing data Comparing data Comparing data Comparing voltage Comparing vol	Min./max. ambient temperature	[°C]	-25/70	-25/70
Type of voltage DC DC Nominal voltage [V]	LED display in sensor		yes	yes
Nominal voltage [V] 24 24 24 24 24 24 24 24 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	Electrical operating data			
Min./max. operating voltage [V] 10/30 2 2 Max. switching current [A] 0.1 0.1 Short circuit protection yes yes Protected against polarity reversal Housing material Cable connector/cable end Cable length L Cable design (wire cross section / number of wires) number of wires) Cable sheath material Min. bending radius (dynamic) Min. bending radius (static) [mm] 26 Weight [kg] 0.08 Protection class IP (sensor, plugged) Protection class [W] 20 20 20 20 20 20 20 20 20 20	Type of voltage		DC	DC
Voltage drop [V] 2 2 2 2 Max. switching current [A] 0.1 0.1 Short circuit protection yes yes Protected against polarity reversal yes yes Mechanical operating data Housing material stainless steel stainless steel Cable connector/cable end M8 connector, 3-pin M8 connector, 3-pin Cable length L [cm] 20 20 Cable daisenter D [mm] 2.6 Cable design (wire cross section I number of wires) Cable sheath material PUR Min. bending radius (dynamic) [mm] 26 Min. bending radius (static) [mm] 26 Weight [kg] 0.08 Protection class IP (sensor, plugged) 67 Protection class III III	Nominal voltage	[V]	24	24
Max. switching current [A] 0.1 0.1 Short circuit protection yes yes Protected against polarity reversal yes yes Mechanical operating data Housing material stainless steel stainless steel Cable connector/cable end M8 connector, 3-pin M8 connector, 3-pin Cable length L [cm] 20 20 Cable diameter D [mm] 2.6 2.6 Cable design (wire cross section / number of wires) Cable sheath material PUR PUR Min. bending radius (dynamic) [mm] 26 26 Min. bending radius (static) [mm] 26 Weight [kg] 0.08 Protection class IP (sensor, plugged) Protection class III III	Min./max. operating voltage	[V]	10/30	10/30
Short circuit protection yes yes yes Protected against polarity reversal yes yes Mechanical operating data Housing material stainless steel stainless steel Cable connector/cable end M8 connector, 3-pin M8 connector, 3-pin Cable length L [cm] 20 20 Cable diameter D [mm] 2.6 2.6 Cable design (wire cross section / number of wires) Cable sheath material PUR PUR Min. bending radius (dynamic) [mm] 26 26 Min. bending radius (static) [mm] 26 26 Weight [kg] 0.08 0.08 Protection class IP (sensor, plugged) 67 67 Protection class	Voltage drop	[V]	2	2
Protected against polarity reversal Mechanical operating data Housing material Cable connector/cable end Cable connector/cable end Cable length L Cable diameter D Cable design (wire cross section / number of wires) Cable sheath material Min. bending radius (dynamic) Min. bending radius (static) Mingh Min (kg) Min (k	Max. switching current	[A]	0.1	0.1
Mechanical operating dataStainless steelStainless steelHousing materialStainless steelM8 connector, 3-pinCable connector/cable endM8 connector, 3-pinM8 connector, 3-pinCable length L[cm]2020Cable diameter D[mm]2.62.6Cable design (wire cross section / number of wires)3 x 0,055mm23 x 0,055mm2Cable sheath materialPURPURMin. bending radius (dynamic)[mm]2626Min. bending radius (static)[mm]2626Weight[kg]0.080.08Protection class IP (sensor, plugged)6767Protection classIIIIII	Short circuit protection		yes	yes
Housing material Cable connector/cable end M8 connector, 3-pin Cable length L Cable diameter D Cable design (wire cross section / number of wires) Cable sheath material Min. bending radius (dynamic) Min. bending radius (static) Min. bending radius (static) [kg] O.08 Protection class IP (sensor, plugged) M8 connector, 3-pin M9 con	Protected against polarity reversal		yes	yes
Cable connector/cable end M8 connector, 3-pin Cable length L Cable diameter D Cable design (wire cross section / number of wires) Cable sheath material Min. bending radius (dynamic) [mm] 26 Min. bending radius (static) [mm] 26 Weight [kg] 0.08 Protection class IP (sensor, plugged) M8 connector, 3-pin 20 20 2.6 2.6 2.6 2.7 3 x 0,055mm2 9 UR PUR PUR 26 26 40 26 40 40 40 40 40 40 40 40 40 4	Mechanical operating data			
Cable length L [cm] 20 20 2.6 Cable diameter D [mm] 2.6 2.6 Cable design (wire cross section / number of wires) 3 x 0,055mm2 3 x 0,055mm2 Cable sheath material PUR PUR Min. bending radius (dynamic) [mm] 26 26 Min. bending radius (static) [mm] 26 26 Weight [kg] 0.08 0.08 Protection class IP (sensor, plugged) 67 67 Protection class	Housing material		stainless steel	stainless steel
Cable design (wire cross section / number of wires) Cable sheath material Min. bending radius (dynamic) Min. bending radius (static) Min. bending radius	Cable connector/cable end		M8 connector, 3-pin	M8 connector, 3-pin
Cable design (wire cross section / number of wires) Cable sheath material PUR Min. bending radius (dynamic) [mm] 26 Min. bending radius (static) [mm] 26 Weight [kg] 0.08 Protection class IP (sensor, plugged) Frotection class III PUR PUR 26 26 26 27 47 47 47 47 47 47 47 47 47	Cable length L	[cm]	20	20
number of wires) 3 x 0,055mm2 3 x 0,055mm2 PUR PUR Min. bending radius (dynamic) [mm] 26 Min. bending radius (static) [mm] 26 Weight [kg] 0.08 Protection class IP (sensor, plugged) 67 Protection class III III	Cable diameter D	[mm]	2.6	2.6
Min. bending radius (dynamic) [mm] 26 26 Min. bending radius (static) [mm] 26 26 Weight [kg] 0.08 0.08 Protection class IP (sensor, plugged) 67 67 Protection class III III III	Cable design (wire cross section <i>I</i> number of wires)		3 x 0,055mm2	3 x 0,055mm2
Min. bending radius (static) [mm] 26 26 Weight [kg] 0.08 0.08 Protection class IP (sensor, plugged) 67 67 Protection class III III III	Cable sheath material		PUR	PUR
Weight [kg] 0.08 0.08 Protection class IP (sensor, plugged) 67 67 Protection class III III	Min. bending radius (dynamic)	[mm]	26	26
Protection class IP (sensor, plugged) 67 67 Protection class III III III	Min. bending radius (static)	[mm]	26	26
Protection class III III	Weight	[kg]	0.08	0.08
	Protection class IP (sensor, plugged)		67	67
Drilling emulsion resistance * no no	Protection class		III	III
	Drilling emulsion resistance *		no	no

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

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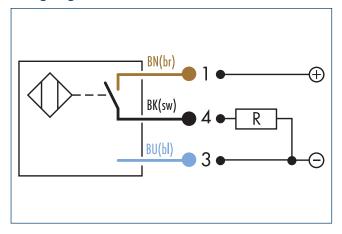
IN 30K main view



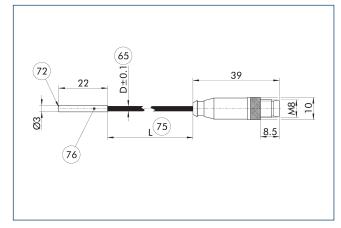
- 65 Cable diameter
- (72) Active sensor surface
- 75 Cable length
- 76 LED

The drawing shows the sensor with a connection cable and plug connector. For further information, for example on cable diameter and cable length, see the technical data table.

Wiring diagram closer PNP



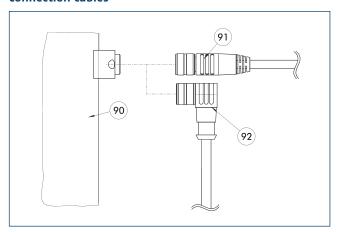
IN 30L main view



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

The drawing shows the sensor with a connection cable and plug connector. For further information, for example on cable diameter and cable length, see the technical data table.

Connection cables

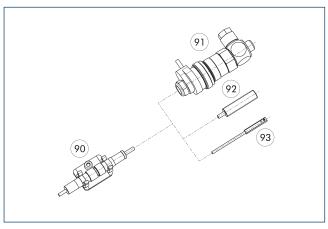


- 90 Electrical connection component
- (91) Cable with straight connector
- (92) Cable with angled connector

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	•

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
- **92** IN proximity switch
- 91) MV micro valve
- 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	
CII-M8	0301463

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