



Hand in hand for tomorrow



Product data sheet

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 axes and robot accessories. Inductive SCHUNK sensors detect metals without contact, and are resistant to vibrations, 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



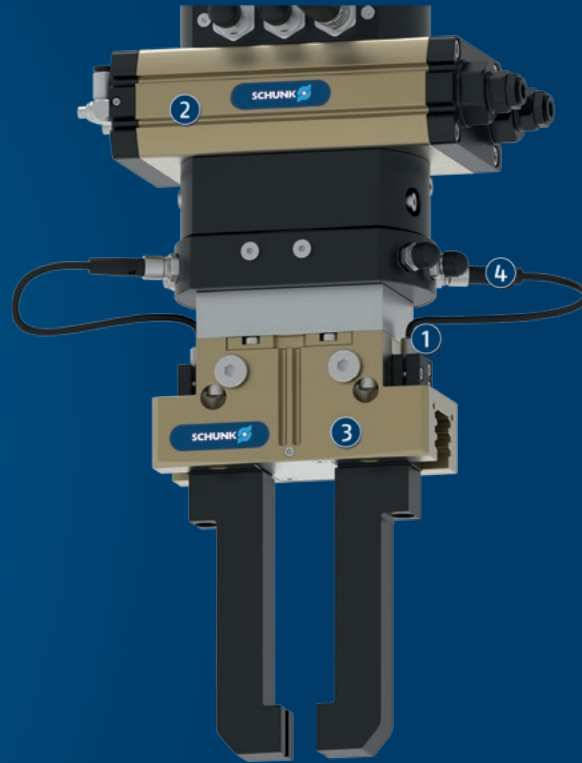
Options and special information

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.

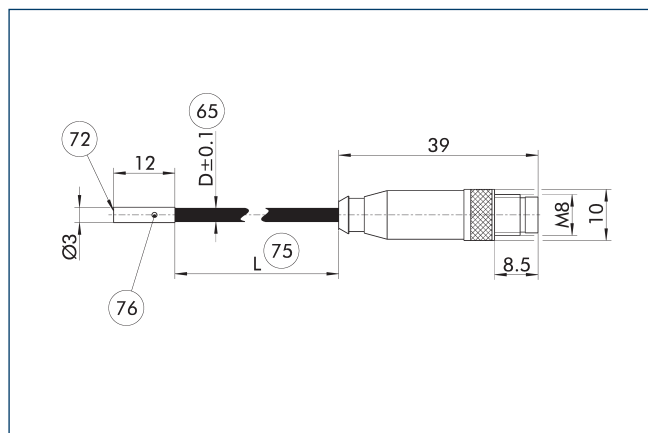


Technical data

Description		IN 30K-S-M8-PNP	IN 30L-S-M8-PNP
ID		1001272	1001274
Operating principle			
Measuring principle		inductive	inductive
Switching function		Closer	Closer
Type of switching		PNP	PNP
Number of switching points		1	1
Teach function		no	no
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			
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
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)		3 x 0,055mm ²	3 x 0,055mm ²
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		III	III
Drilling emulsion resistance *		no	no

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

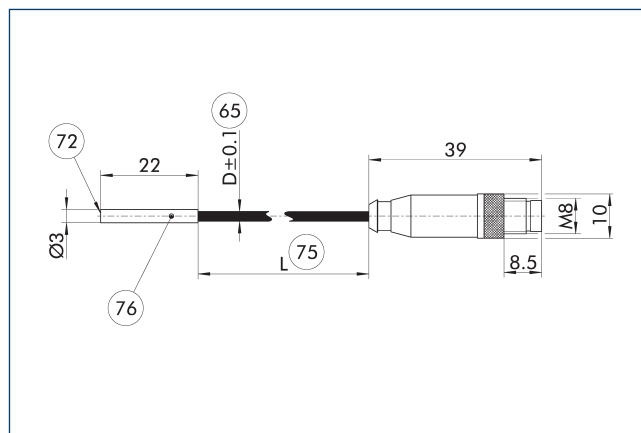
IN 30K main view



- 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.

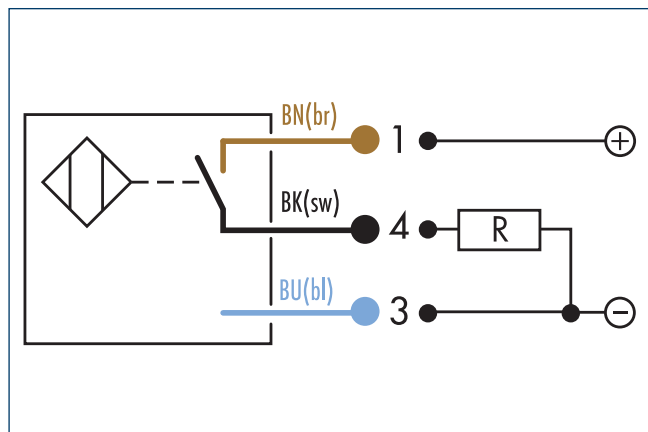
IN 30L main view



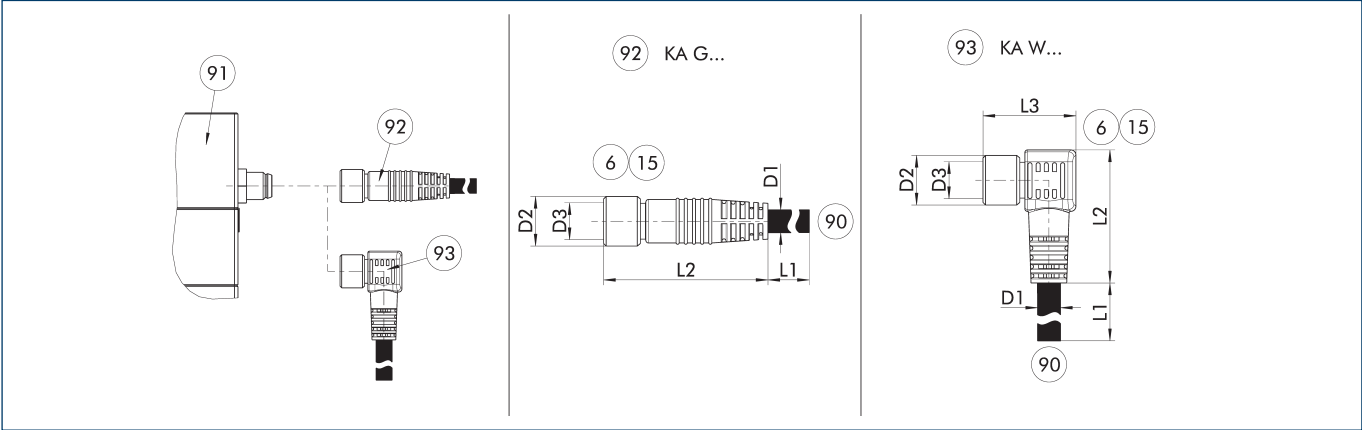
- ⑥⑤ Cable diameter
- ⑦⑤ Cable length
- ⑦② Active sensor surface
- ⑦⑥ LED

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.

Wiring diagram closer PNP



Voltage supply/signals connection cable



- KA G...

KA W...
- Connection cable with straight socket

Connection cable with angular socket
- 6

15

90
- Connection module side

Socket

SAC connection cable with open wire strands
- 91

92

93
- Connection plug component

Cable with straight female connector

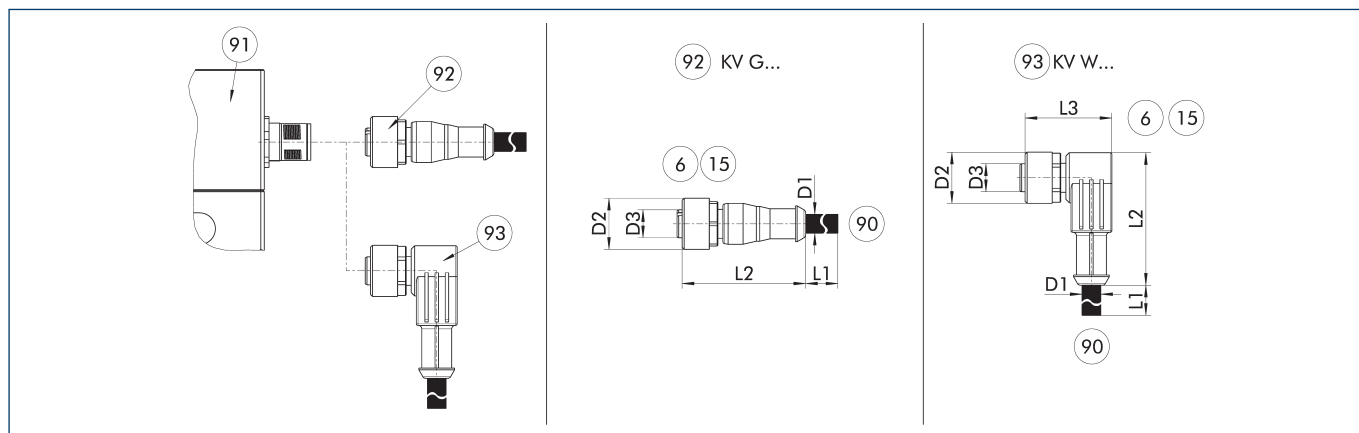
Cable with angled female connector

The connection cable is ideal for connecting the corresponding components to the controller or the power supply unit. The connection cable has an M8 socket on one side and an open wire strand on the other side for individual connections. The connection cables are suitable for use both in the cable track as well as in torsion applications.

Description	ID	L1	D1	D3	Often combined
		[m]	[mm]		
Connection cables					
KA BG08-L 3P-0300-PNP	0301622	3	4.5		●
KA BG08-L 3P-0500-PNP	0301623	5	4.5	M8	
KA BW08-L 3P-0300-PNP	0301594	3	4.5		
KA BW08-L 3P-0500-PNP	0301502	5	4.5	M8	

ⓘ Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

IO-Link cable extension



The cable extensions are ideal for connecting the relevant components to the control system, or for use as extension cables. The cable extensions have a 4-pin M8 socket with a straight or angled design on the module side and a 4-pin M8 connector with a straight design on the other side. The cable extensions are suitable for use in the cable track and in torsion applications.

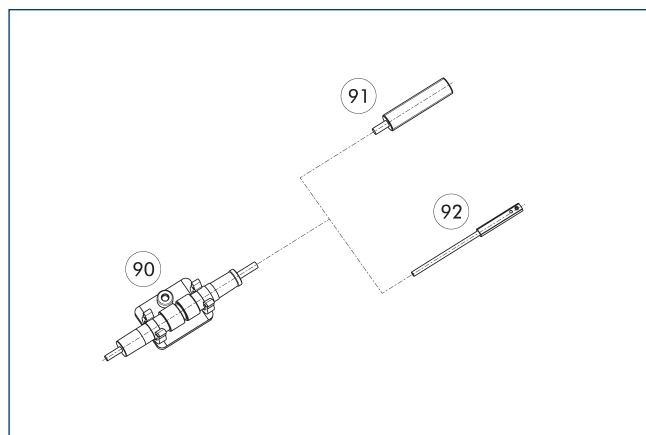
- ⑥ Connection module side
- ⑮ Socket
- ⑨ Cable end with straight connector

- ⑨ Connection plug component
- ⑨ Cable with straight female connector
- ⑨ Cable with angled female connector

Description	ID	L1 [m]	D1 [mm]	Often combined
Cable extension				
KV BW08-SG08 3P-0030-PNP	0301495	0.3	1.25	
KV BW08-SG08 3P-0100-PNP	0301496	1	1.25	
KV BW08-SG08 3P-0200-PNP	0301497	2	1.25	●

① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

Clip for connector/socket



- ⑨ CLI plug bracket
- ⑨ Magnetic switch MMS
- ⑨ IN proximity switch

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 connector/socket	
CLI-M8	0301463



SCHUNK SE & Co. KG

Spanntechnik

Greiftechnik

Automatisierungstechnik

Bahnhofstr. 106 - 134

D-74348 Lauffen/Neckar

Tel. +49-7133-103-0

Fax +49-7133-103-2399

info@de.schunk.com

schunk.com

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