



Hand in hand for tomorrow



Product data sheet

Inductive proximity switches IN 80-SL

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



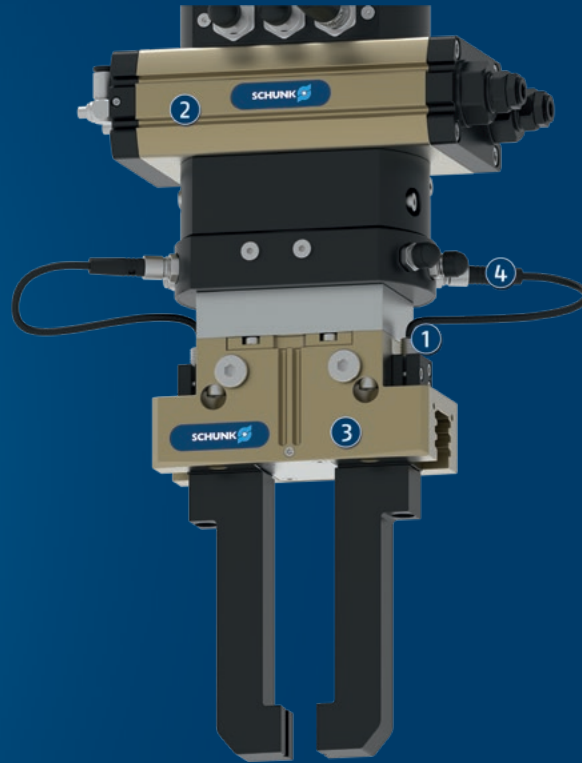
Options and special information

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](https://www.schunk.com).

IN 80-SL

Inductive proximity switches

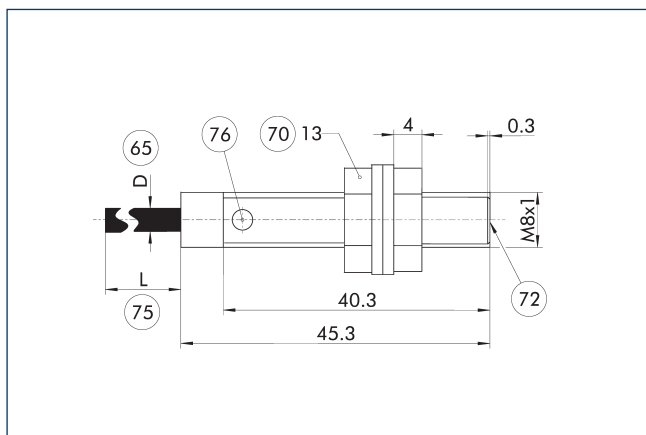


Technical data

Description		IN 80-SL-M12	IN 80-SL
ID		0301529	0301579
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]	3	3
Switching hysteresis from the nominal switching distance		< 10%	< 10%
Max. switching frequency	[Hz]	500	500
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]	1.5	1.5
Max. switching current	[A]	0.2	0.2
Short circuit protection		yes	yes
Protected against polarity reversal		yes	yes
Mechanical operating data			
Housing material		Brass, nickel-plated	Brass, nickel-plated
Cable connector/cable end		M12	open wire strands
Cable length L	[cm]	30	300
Cable diameter D	[mm]	3.5	3.5
Cable sheath material		PUR	PUR
Min. bending radius (dynamic)	[mm]	35	35
Min. bending radius (static)	[mm]	17.5	17.5
Weight	[kg]	0.031	0.085
Protection class IP (sensor, plugged)		67	67
Protection class		II	II
Drilling emulsion resistance *		yes	yes

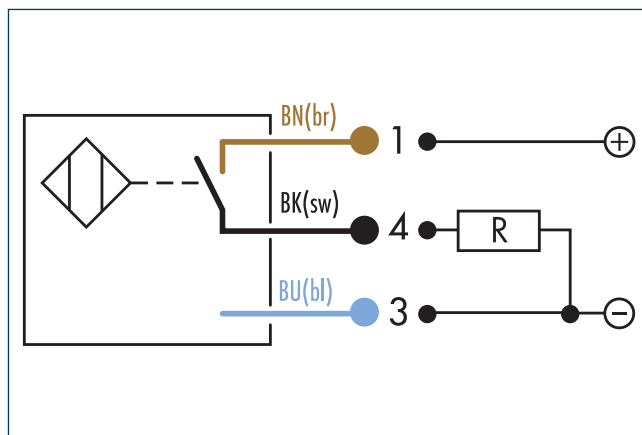
* *Tested cutting emulsions: r.rhenus TU 43P, Motorex Swisscool Magnum UX 550 and Oemeta 760 (1008339).

IN 80-SL main view

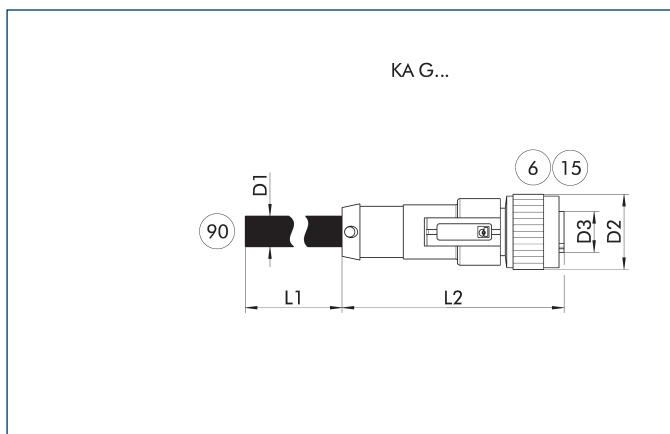


- ⑥⑤ Cable diameter
- ⑦⑤ Cable length
- ⑦⑦ Wrench size
- ⑦⑥ LED
- ⑦② Active sensor surface

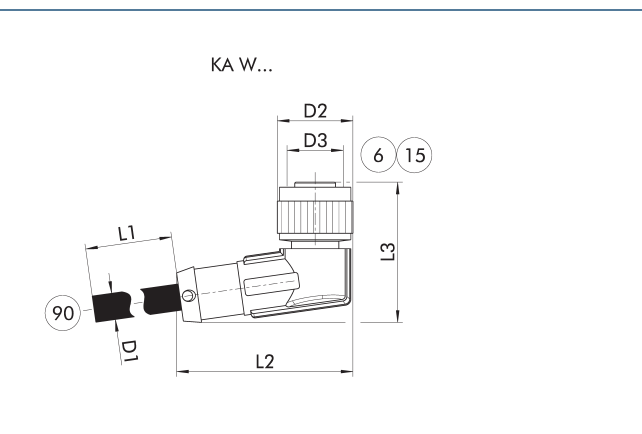
Wiring diagram closer PNP



Connection cable for control



- KA G... Connection cable with straight plug connector
- KA W... Connection cable with angled plug connector



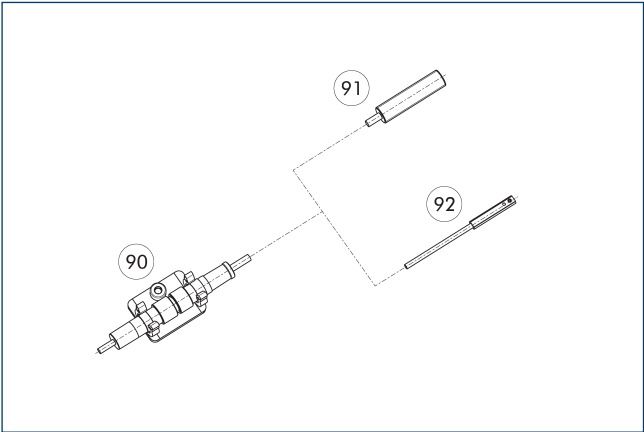
- ⑥ Connection module side
- ①⑤ Socket
- ⑨⑦ Cable end with open wire strands

The connection cables are used to control the SCHUNK product.

Description	ID	L1	D1
		[m]	[mm]
Connection cables			
KA BG12-L 3P-0500-PNP	30016369	5	1.5
KA BW12-L 3P-0300-PNP	0301503	3	1.5
KA BW12-L 3P-0500-PNP	0301507	5	1.5

- 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. Please refer to the product documentation for information about max. cable length and min. wire cross section.

Clip for connector/socket



- 90 CLI plug bracket
- 91 IN proximity switch
- 92 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 connector/socket		
CLI-M12	0301464	



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