

Superior Clamping and Gripping



Product Information

Analog position sensor APS-Z80

APS-Z80

Analog position sensor

Precise. Flexible. Reliable.

APS-Z80 analog position sensor

The analog sensor APS-Z80 is used to query the jaw position of SCHUNK grippers. It inductively detects the course of an inclined plane and gives back a continuous output signal.

Field of application

Used for monitoring SCHUNK grippers. The analog position sensor from SCHUNK detects the gripping jaw position without contact and wear, and is resistant to vibration, dust, and humidity.

Advantages – Your benefits

Analog multi position monitoring for any desired positions for flexibility in all automation solutions

Exact measuring system for reliable part handling in compact machines

Compact design for space-saving handling without interfering contours

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

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

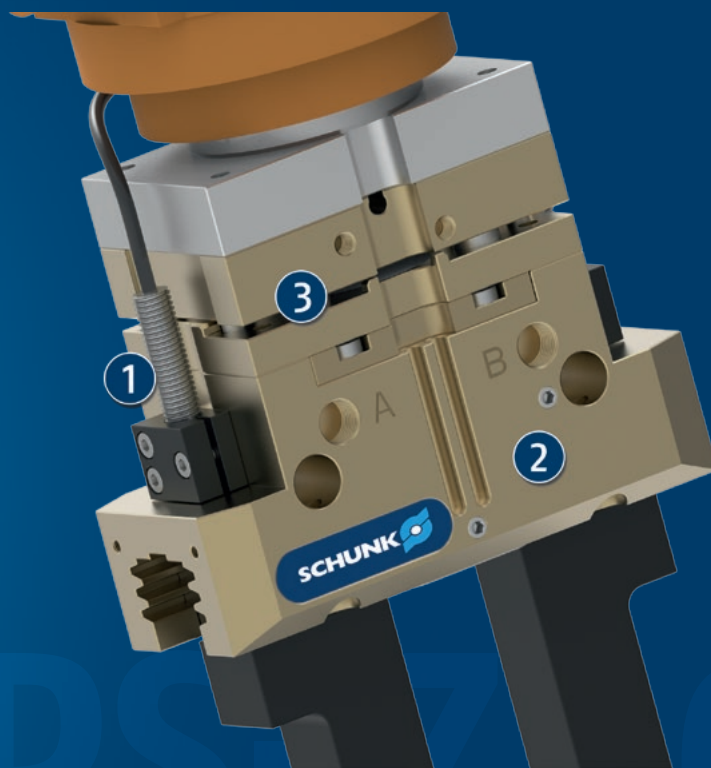
Versions with connector or cable end: The sensor is available in the versions with a plug connector (30 cm cable, M8 connector) or open cable outlet (2 m cable, open strands).

Attachment kits: One attachment kit is required per gripper for the APS system. A suitable attachment kit can be found in the relevant section of the catalog for the gripper in question.

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



Unit for handling and detection of different component sizes

- ① APS-Z80 analog position sensor
- ② PGN-plus 2-finger parallel gripper
- ③ TCU-P tolerance compensation unit

SCHUNK offers more ...

The following components make the product APS-Z80 even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



PGN-plus 2-finger parallel gripper



PZN-plus 3-finger centric gripper

- ① Additional information regarding the products can be found on the following product pages or at www.schunk.com. Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

APS-Z80 Sensor

Analog position sensor

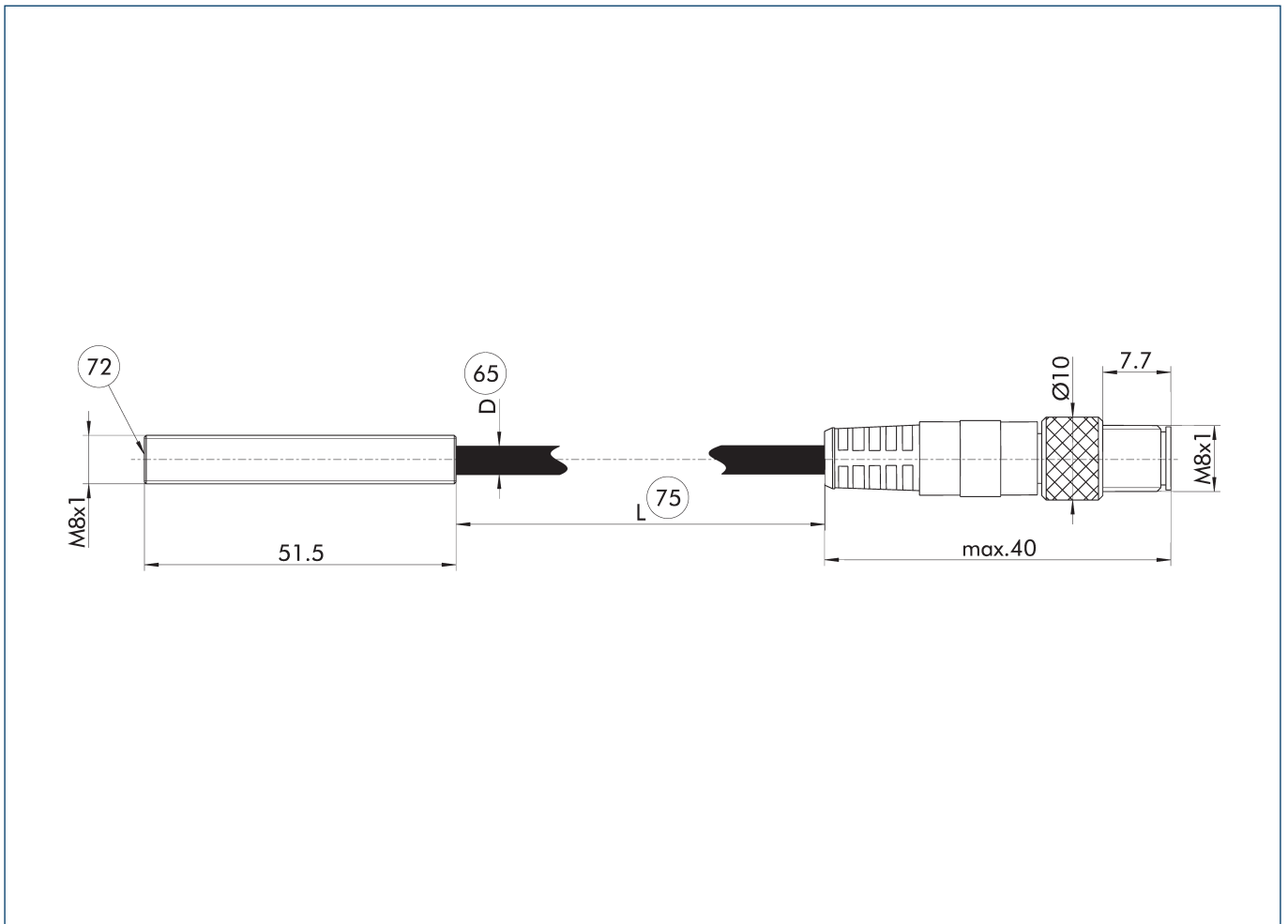


Technical data

Description		APS-Z80-M8	APS-Z80-K
ID		0302070	0302072
General data			
Measuring principle		inductive	inductive
Teach function		no	no
Voltage output / power output		yes/no	yes/no
Type Output voltage value	[V]	0.5/9.5	0.5/9.5
Linearity	[%]	± 5	± 5
Repeat accuracy R of final value maximum		±3%	±3%
Limit frequency	[Hz]	1000	1000
Min./max. ambient temperature	[°C]	-10/70	-10/70
LED display in sensor		no	no
Max. measuring speed	[m/s]	20	20
Response time / typ. Switching time	[ms]	0.5	0.5
Electrical operating data			
Nominal voltage	[V]	24	24
Min./max. operating voltage	[V]	15/30	15/30
Max. ripple (% of Ue)		±15%	±15%
Type of voltage		DC	DC
Nominal current	[mA]	8	8
Min. load resistance RL	[kΩ]	2	2
Short circuit protection		yes	yes
Protected against polarity reversal		yes	yes
Mechanical operating data			
Housing material		Steel, rustproof	Steel, rustproof
Material of the active surface		PBT	PBT
Cable connector/cable end		M8, 3-pin Male Connector	open wire strands
Cable length	[m]	0.3	3
Cable diameter	[mm]	3.1	3.1
Cable sheath material		PUR	PUR
Cable shielding		no	no
Protection class IP		67	67
Protection class		2	2
Approval / conformity			
CE		yes	yes

- ① The typical voltage value at the output ranges between 0.5 and 9.5 volts. Depending on the gripper and gripper size, the voltage value may be higher or lower.
The stated linearity value refers to the overall system consisting of gripper and sensor.

APS-Z80-M8 - main view



The drawing shows the basic version of the sensor.

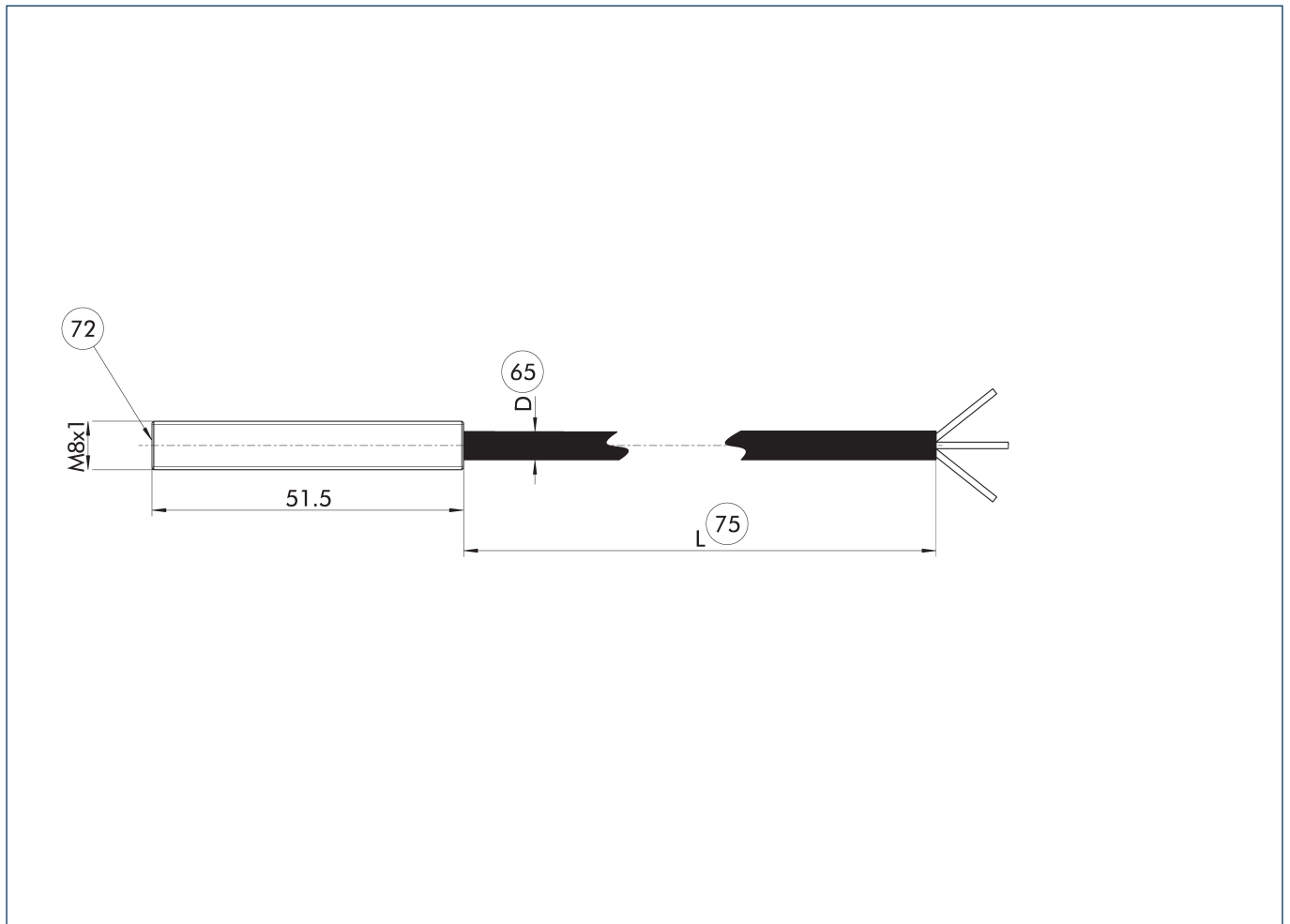
⑥⑤ Cable diameter
⑦② Active sensor surface

⑦⑤ Cable length

APS-Z80 Sensor

Analog position sensor

APS-Z80-K - main view

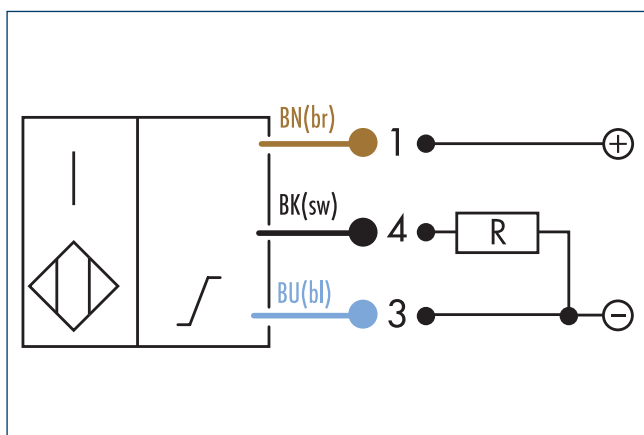


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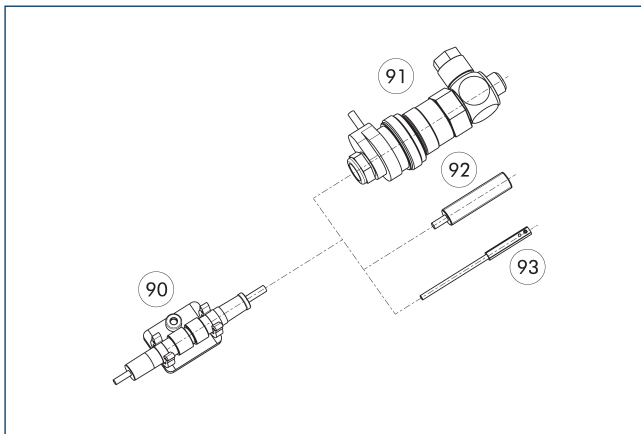
65 Cable diameter
72 Active sensor surface

75 Cable length

Wiring diagram analog output



clip for plug/socket






- ⑨⑩ CLI plug bracket
- ⑨① MV micro valve
- ⑨② IN proximity switch
- ⑨③ MMS magnetic 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 plug/socket	
CLI-M8	0301463

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J. Lehmann

Jens Lehmann, German goalkeeper legend, SCHUNK brand ambassador since 2012 for safe, precise gripping and holding.
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