



Superior Clamping and Gripping



## Product data sheet

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

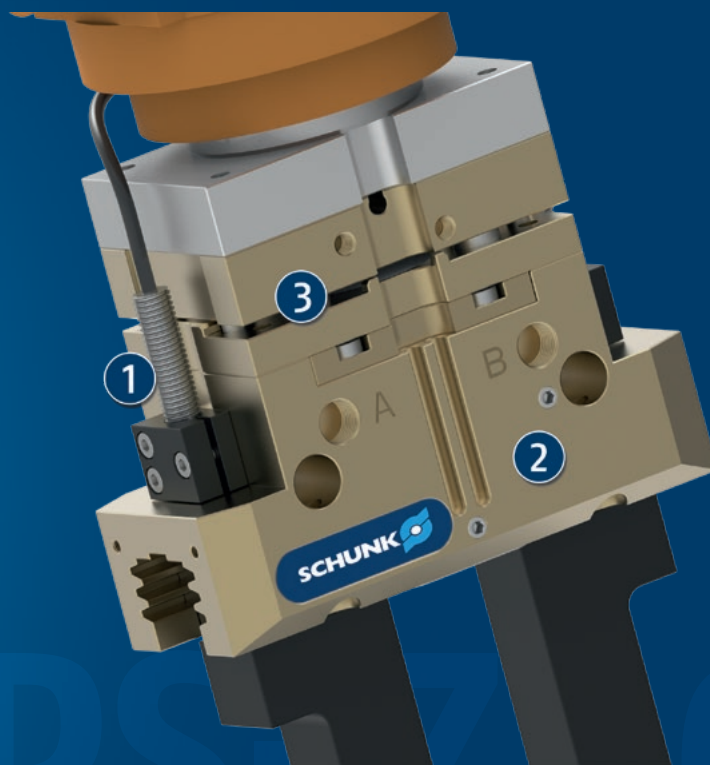
**Versions with connector or cable end:** The sensor is available in the versions with a plug connector (30 cm cable, M8 connector) or open cable outlet (2 m cable, open strands).

**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 2-finger parallel gripper PGN-plus

- 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.



2-finger parallel gripper PGN-plus



3-finger centric gripper PZN-plus

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

# APS-Z80

Analog position sensor



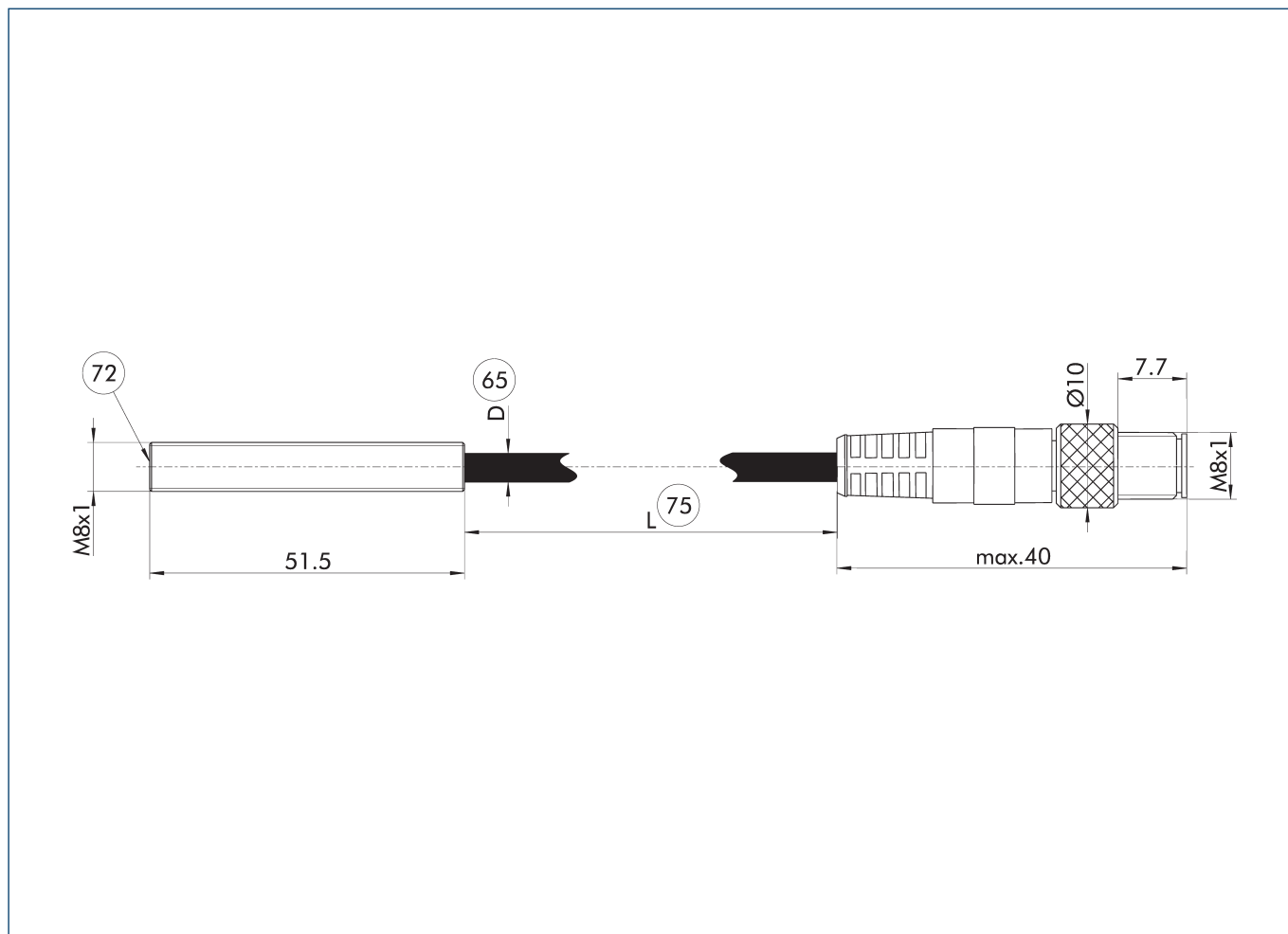
## Technical data

Description		APS-Z80-M8	APS-Z80-K
ID		0302070	0302072
General data			
Measuring principle		inductive	inductive
Teach function		no	no
Voltage output/current output		1/0	1/0
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/type. 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 connector, 3-pin	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
IP protection class		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. Values for PGN-plus-P may deviate. For further information see operating manual for the gripper.

## APS-Z80-M8 - main view



The drawing shows the basic version of the sensor.

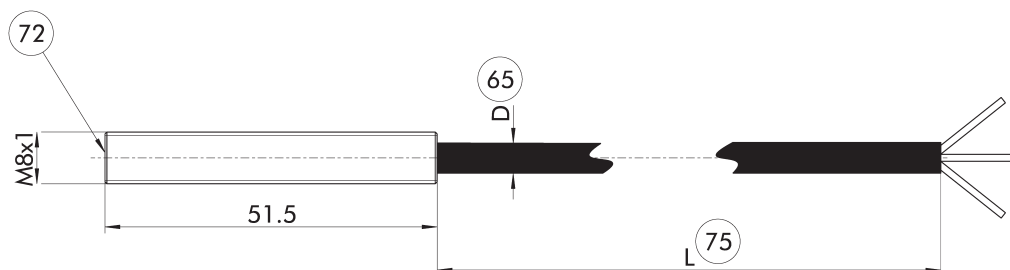
65 Cable diameter  
72 Active sensor surface

75 Cable length

# APS-Z80

Analog position sensor

## APS-Z80-K - main view

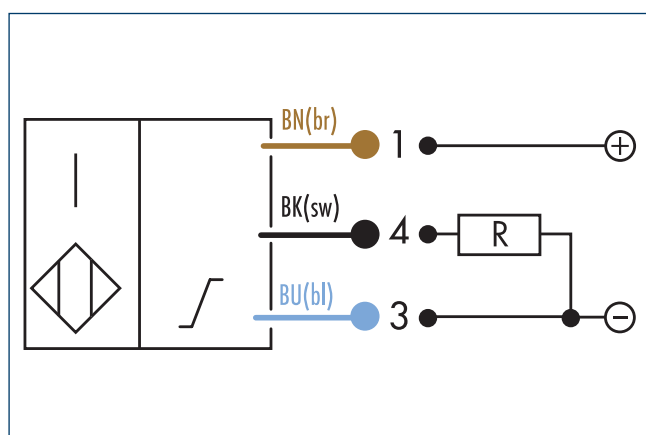


The drawing shows the basic version of the sensor.

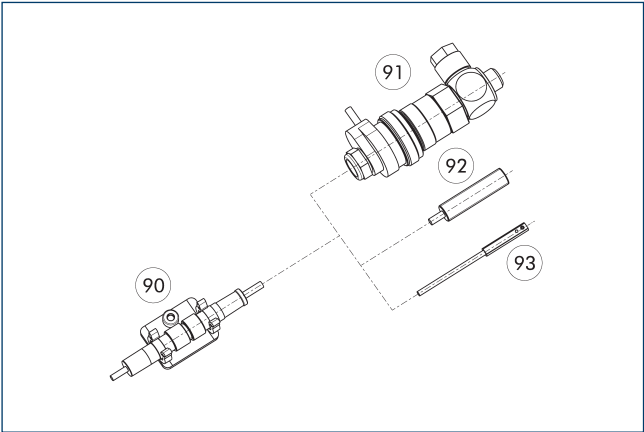
65 Cable diameter  
72 Active sensor surface

75 Cable length

## Wiring diagram analog output



Clip for connector/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 connector/socket		
CLI-M8	0301463	



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