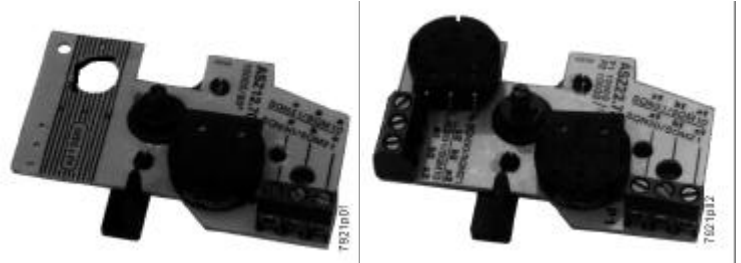


Potentiometers

ASZ...



Single potentiometer

Double potentiometer

For attachment to air damper actuators SQM... and SQN... for electrically signalling the positions of the actuator drive shaft.
Single and double potentiometers in wire or conductive plastic design.

Use

The potentiometers are designed specifically for fitting to the drive shafts of the air damper actuators SQM... and SQN... . They can be used for position indication as well as for position feedback. The **wire potentiometers** are suitable for **general** applications. For use with air damper actuators in combination with electronic air/fuel ratio control RVW20..., or fitted to SQM5... together with the electronic function modules AGA56..., **conductive plastic potentiometers** are mandatory (extended life and better resolution).

Type summary

Single potentiometers

Material	Angular rotation	Resistance/Ω	Type reference
Wire	90 °	135	ASZ16.703
		220	ASZ8.703
		1000	ASZ12.703
	135 °	135	ASZ16.733¹⁾
		220	ASZ8.733
		1000	ASZ12.733
Conductive plastic	90 °	1000	ASZ12.803
	135 °	1000	ASZ12.833

Double potentiometers

Material	Angular rotation	Resistance/Ω	Type reference
Wire	90 °	2 x 1000	ASZ22.703
	135 °	2 x 135	ASZ66.733¹⁾
		2 x 220	ASZ88.733¹⁾
		1000/220	ASZ82.733¹⁾
		2 x 1000	ASZ22.733
Conductive plastic	90 °	2 x 1000	ASZ22.803
	135 °	2 x 1000	ASZ22.833
Wire/Conductive plastic	90 °	1000/1000	ASZ22.903

¹⁾ Only available on demand

Accessories

- Conversion kit **AGA32:** For retrofitting a SQN3.../SQN4... with a potentiometer type ASZ...7... or ASZ...8...
- Service kit **AGA33:** For replacement of potentiometer old/new in case of failure or replacement of the former potentiometer (for SQM... / SQN...)
- Potentiometer fixing **AGA09:** For use with SQN9...

Ordering

When ordering, please give type reference according to "Type summary".

Mechanical design

The potentiometers, consisting of a wire or conductive plastic resistance track, are accommodated in a dustproof housing and are mounted onto a printed circuit board. The movement from the actuator's drive shaft to the potentiometer's spindle is transmitted by plastic gearwheels with hardly any mechanical play or hysteresis. The electrical connection is established via triple-pole screw terminal strips. The potentiometers have no mechanical limitation of angular rotation.

Technical data

General

Operating voltage	DC 10 V	Connection terminal strip	3-pole
Permissible hysteresis	0.2 % of 90 ° or 135 °	for cross-sectional areas of	0.5... 1 mm ²
Permissible ambient temperature:		Adjusting torque	
- Operation	-20 °C ... +70 °C	of potentiometer	≤ 0.025 Nm
- Storage	-50 °C ... +75 °C	Mounting position	optional
Total resistance tolerance	± 20 %	Weight:	
Mechanical angular rotation	360 °, no end stops	- Single potentiometer	27 g
Effective angular rotation	90 ° or 135 °	- Double potentiometer	41 g
Total resistance (R _{ges}):			
- < 0 °	infinite		
- > 90 ° or > 135 °	infinite		

Wire potentiometers

Max. load	1 W at 70 °C max.	Transfer resistance (R _ü)	
Wiper current rating	1 mA min., 100 mA max.	of wiper contact	R _ü ≤ 2 % of R _{ges} at 1 mA
		Life	approx. 250 000 switching cycles

Conductive plastic potentiometers

Wiper current rating	100 µA max.	Linearity (referred to R _{ges} =1000 Ω)	± 1 %
Transfer resistance of wiper contact	R _ü ≤ 100 Ω max.	Smoothness (Alpha = 10 °)	< 0.1 %
Total resistance	1000 Ω ±20 %	Life	approx. 2 mio. switching cycles

Connection diagram

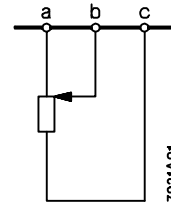
Potentiometer shown in start position.

Terminal markings:

a = Pick-up at the end of the potentiometer

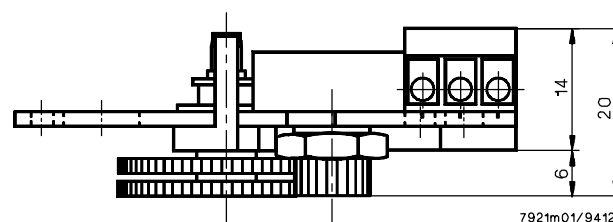
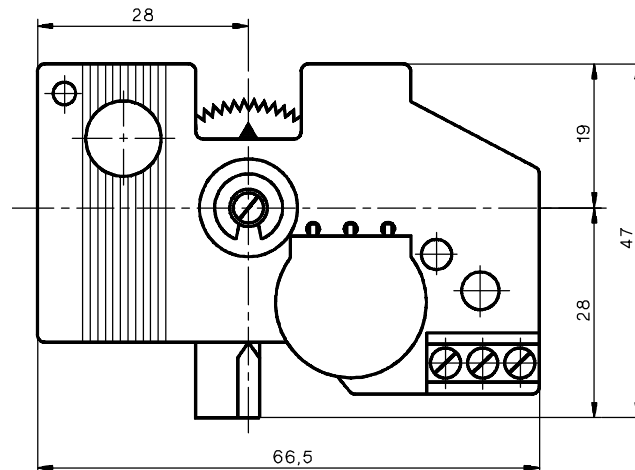
b = Potentiometer wiper

c = Pick-up at the end of the potentiometer



Dimensions

Dimensions in mm



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