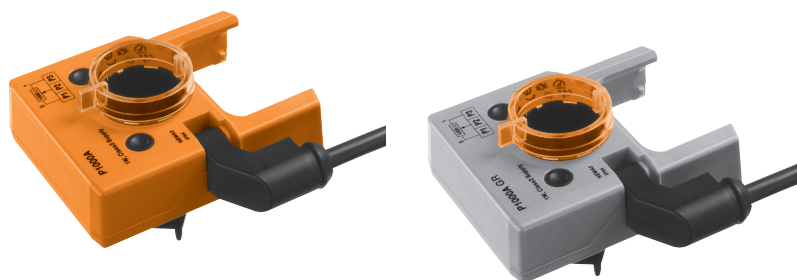


Feedback potentiometer for damper actuators and rotary actuators

- Resistances 140, 200, 500, 1000, 2800, 5000 or 10000 Ω


**Overview of types**

	Type	Resistance	Material	Type	Resistance	Material
Housing colour, orange	P140A	140 Ω	FRNC	P2800A	2800 Ω	FRNC
	P200A	200 Ω	FRNC <sup>1)</sup>	P5000A	5000 Ω	FRNC
	P500A	500 Ω	FRNC	P10000A	10000 Ω	FRNC
	P1000A	1000 Ω	FRNC			
Housing colour, grey	P140A GR	140 Ω	FRNC <sup>1)</sup>	P2800A GR	2800 Ω	FRNC <sup>1)</sup>
	P500A GR	500 Ω	FRNC <sup>1)</sup>	P5000A GR	5000 Ω	FRNC <sup>1)</sup>
	P1000A GR	1000 Ω	FRNC <sup>1)</sup>	P10000A GR	10000 Ω	FRNC <sup>1)</sup>

<sup>1)</sup> FRNC for RobustLine and IP66/NEMA4 actuators necessary

**Overview of actuators**

	Standard actuators		RobustLine actuators	Very fast running actuators	SuperCap actuators	IP66/NEMA4 actuators
Damper actuators	TM..A..	SM..A..	NM..P..	LMQ..A.. <sup>2)</sup>	GK..A.. <sup>2)</sup>	GM..G..
	LM..A..	GM..A..	SM..P..	NMQ..A.. <sup>2)</sup>	NKQ..A.. <sup>3)</sup>	SMQ..G..
	NM..A..			SMQ..A.. <sup>2)</sup>		
Rotary actuators				SMD..A..		
	TR..A..	SR..A..	SR..P..	LRQ..A..	GRK..A..	GR..G..
	LR..A..	GR..A..		NRQ..A..		DR..G..
	NR..A..	DGR..A..				

<sup>2)</sup> For spindle clamp installation on the rear side of the actuator, it is imperative that a Z-SPA adapter be ordered (see «Accessories»)

<sup>3)</sup> It is imperative that a Z-SPA adapter be ordered for all installations (see «Accessories»)

**Technical data**

<b>Functional data</b>	Resistances	See «Overview of types»	
	Tolerance	±5%	
	Loading capacity	max. 1 W	
	Linearity	±2%	
	Resolution	Min. 1%	
	Residual resistance	Max. 5% on both sides	
	Connection	Cable 1 m, 3 x 0.75 mm <sup>2</sup>	
	<b>Safety</b>	Protection class	III Safety extra-low voltage UL Class 2 Supply
Degree of protection		IP54 NEMA 2, UL Enclosure Type 2	
Certification		Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14 CULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02	
Mode of operation		Type 1	
Rated current voltage		0.8 kV	
Control pollution degree		3	
Ambient temperature		-30 ... +50 °C	
Non-operating temperature		-40 ... +80 °C	
Ambient humidity		95% r.h., non-condensating	
Maintenance		Maintenance-free	
<b>Dimensions / Weight</b>		Dimensions	See «Dimensions» on page 3
		Weight	Approx. 190 g

## Safety notes



- The device must not be used outside the specified field of application, especially not in aircraft or in any other airborne means of transport.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during installation.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- The cable must not be removed from the device.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

## Product features

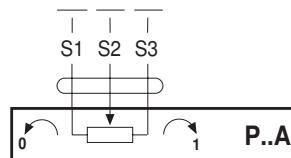
<b>Application</b>	The feedback potentiometers are used for modulating damper controls in conjunction with rigid feedback controllers. In combination with standard systems, these potentiometers are also used as damper position or valve position indicators or as positioners for actuators operated in parallel.
<b>Mode of operation</b>	A form-fit engagement is created between a driver disc and the spindle clamp (Damper actuators) or on the position indicator (Rotary actuators), causing the rotary movement of the actuator to be directly transferred to the feedback potentiometer.
<b>Installation</b>	The feedback potentiometers are attached directly to the spindle clamp (Damper actuators) or on the position indicator (Rotary actuators). The guiding grooves between the housing and the switch ensure a tightly sealing fit.

## Accessories

	Description
<b>Mechanical accessories</b>	<p>Adapter Z-SPA</p> <p>It is imperative that this adapter be ordered if a feedback potentiometer is required for the damper actuators (Very fast running actuators and SuperCap actuators) and if at the same time the spindle clamp is installed on the rear side of the actuator (e.g. with short-axis installation). An adapter must be ordered for all installations with the NKQ..A.. actuators.</p>

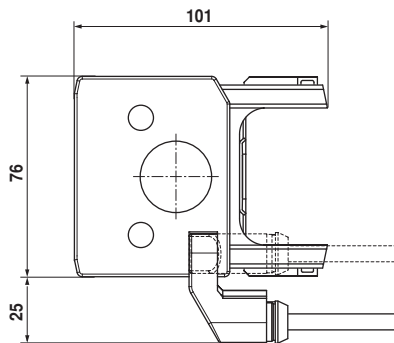
## Electrical installation

Wiring diagram



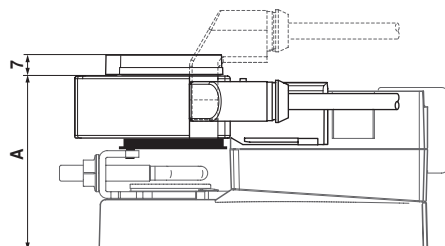
Dimensions [mm]

Dimensional drawings



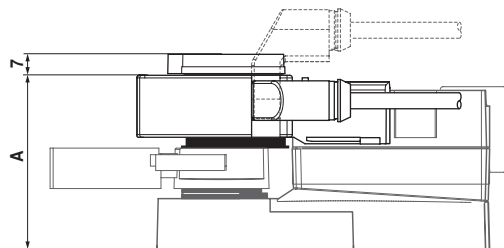
with damper actuators

Damper actuator	A	Damper actuator	A
TM..A., LM..A..	66	LMQ..A..	80
NM..A..	69	NMQ..A..	83
SM..A..	71	SMQ..A..	89
SMD..A..	71	NKQ..A..	87
GM..A..	78	GK..A..	94

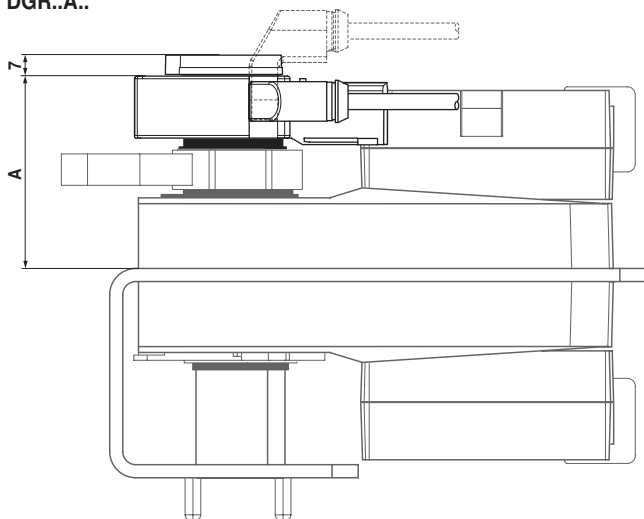


with rotary actuators

Rotary actuator	A	Rotary actuator	A
TR..A., LR..A..	66	LRQ..A..	80
NR..A..	69	NRQ..A..	83
SR..A..	71	DR..A..	78
GR..A..	78	GRK..A..	94
DGR..A..	78		



DGR..A..



DR..A..

