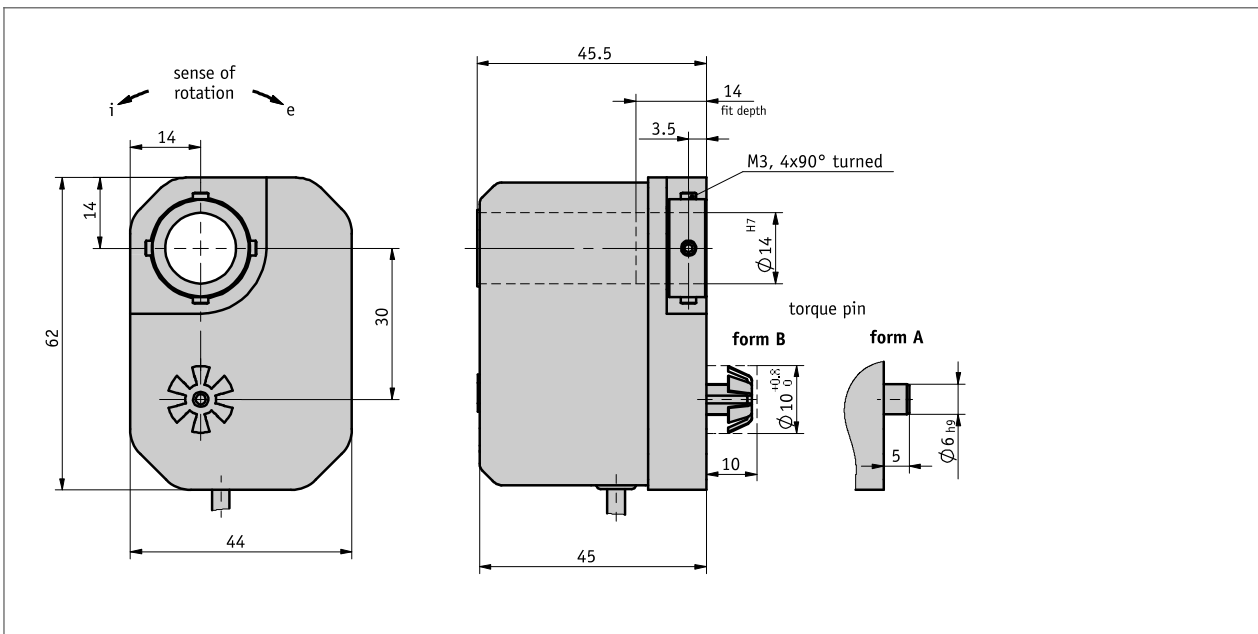


Geared potentiometer GP02

Compact design with through hollow shaft

Profile

- Through hollow shaft \varnothing 14 mm
- Adaptation to various measurement distances owing to wide range of gear ratios
- Compact, low-cost design
- Potentiometer or power output
- Easy mounting



Mechanical data

Feature	Technical data	Additional information
shaft	black-finished steel	
Housing	plastic	
Gear ratio	0.2 ... 128	
Speed	≤500 min ⁻¹	depending on transmission
Potentiometer service life	1 x 10 ⁶ rotation(s)	

Electrical data

■ Encoder potentiometer type 01,1 helix

Feature	Technical data	Additional information
Power rating	1 W at 70 °C	≤30 V
resistance	1, 5, 10 k Ω	
Resistance tolerance	±10 %	
Standard terminal resistance	0.5 %	
Linearity tolerance	±1 %	
Design	hybride	

Geared potentiometer GP02

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Encoder potentiometer type 02,10 helices

Feature	Technical data	Additional information
Power rating	2 W at 70 °C	≤30 V
resistance	1, 5, 10 kΩ	
Resistance tolerance	±5 %	
Standard terminal resistance	0.2 %	
Linearity tolerance	±0.25 %	
Design	wire	

Encoder potentiometer type 03, 10 helices

Feature	Technical data	Additional information
Power rating	2 W at 70 °C	≤30 V
resistance	1, 5, 10 kΩ	
Resistance tolerance	±5 %	
Standard terminal resistance	0.2 %	
Linearity tolerance	±0.25 %	
Design	hybride	

Encoder potentiometer type 03/0.1, 10 helices

Feature	Technical data	Additional information
Power rating	2 W at 70 °C	≤30 V
resistance	5 kΩ	
Resistance tolerance	±5 %	
Standard terminal resistance	0.2 %	
Linearity tolerance	±0.1 %	
Design	hybride	

Transducer, power output

Feature	Technical data	Additional information
Operating voltage	24 V DC ±20 %	
Output current	4 ... 20 mA at load 500 Ω	

System data

Feature	Technical data	Additional information
Measuring range	340° ±5°, (mechanical full-length)	potentiometer type 01
	3600° +10°	potentiometer types 02, 03, 03/0.1

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	0 ... 80 °C	
Relative humidity		condensation inadmissible
EMC	EN 61000-6-2	interference resistance / immission
	EN 61000-6-4	emitted interference / emission
Protection category	IP52	EN 60529

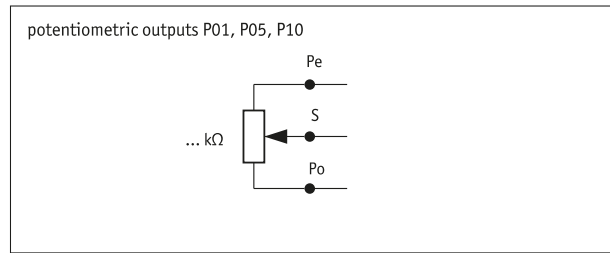
Geared potentiometer GP02

Compact design with through hollow shaft

pin assignment

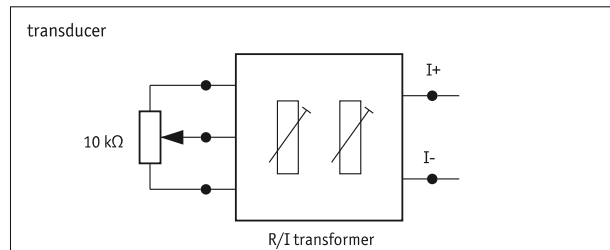
■ Potentiometric outputs P01, P05, P10

Signal	
Po	brown
Pe	white
S	green



■ MMW transducer

Signal	Cable color
I+	brown
I-	white



Order

■ Gear ratio calculation

$$\text{Formula: } i_1 = \frac{n \times 360^\circ}{\alpha}$$

n = number of revolutions on the driving shaft
 α = potentiometer angle of rotation
 340° with 1-coil potentiometer
 3600° with 10-coil potentiometer
 i_1 = order feature for gear ratio

If the calculated ratio "i1" is the same as a value in the ordering table for the "ratio" feature, but this is not available, select the next highest ratio.

■ Ordering table

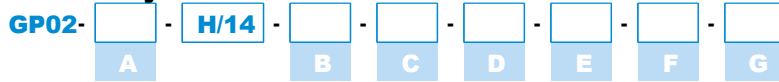
Feature	Ordering data	Spezifikation	Additional information
Gear ratio	A ...	0.2, 0.25, 0.333, 0.5, 1, 2, 3, 4, 6, 7, 9, 10, 12, 16, 20, 20.3636, 24, 28, 30, 36, 48, 68, 112, 128 others on request	
torque pin/form	B A B	form A, cylindrical pin form B, for tolerance compensation	
potentiometer type	C 01 02 03 03/0.1	1 helix, hybrid 10 helices, wire 10 helices, hybrid 10 helices, hybrid, linear tolerance $\pm 0.1\%$	only at resistance 5
resistance	D 1 5 10	potentiometer 1 kΩ Potentiometer 5 kΩ potentiometer 10 kΩ	
transducer	E mit	with no information required	only for resistance 10 and potentiometer type 02 or 03
Sense of rotation	F e i	no information required counter-clockwise ascending values clockwise ascending values	only for resistance 1, 5, 10 only for MWI analog output only for MWI analog output
Cable length	G ...	00.2, 00.5, 00.6 in m	

Geared potentiometer GP02

Compact design with through hollow shaft

Feature	Ordering data	Spezifikation	Additional information
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■ **Order key**



 Scope of delivery: GP02, Installation Instructions
 Accessories you can find: Measurement display MA50

Subject to technical alterations and errors | 2024/06/17 | 11:35