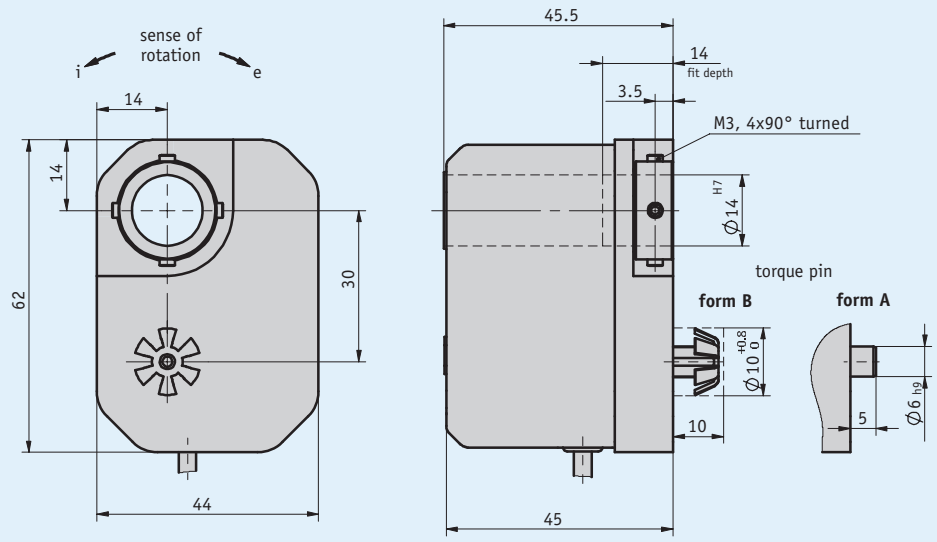
Profile

- Through hollow shaft Ø 14 mm
- Adaptation to various measurement distances owing to a 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 rpm	depending on the transmission
Potentiometer service life	1 x 10^6 revolution(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 kΩ	
Resistance tolerance	±10 %	
Standard terminal resistance	0.5 %	
Linearity tolerance	±1 %	
Design	hybride	

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, 10 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	with ≤500 Ω load

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

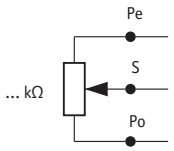
Feature	Technical data	Additional information
Ambient temperature	0 ... 80 °C	
Relative humidity		condensation inadmissible
EMC	EN 61000-6-2	interference resistance / immission
	EN 61000-6-4	emitted interference / emission
Protection category	IP52	EN 60529

Pin assignment

Potentiometric outputs P01, P05, P10

Signal	Cable color
Po	brown
Pe	white
S	green

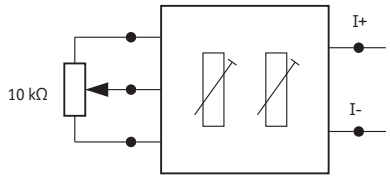
potentiometric outputs P01, P05, P10



MMW transducer

Signal	Cable color
I+	brown
I-	white

transducer



Order

Gear ratio calculation

Formula: $i1 = \frac{n \times 360°}{\alpha}$

n = number of revolutions on the driving shaft
α = potentiometer angle of rotation
340° with 1-coil potentiometer
3600° with 10-coil potentiometer
i1 = 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		Specification	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	A	B	form A, cylindrical pin	
	B		form B, for tolerance compensation	
Potentiometer type	01	C	1 helix, hybrid	
	02		10 helices, wire	
	03		10 helices, hybrid	
	03/0.1		10 helices, hybrid, linear tolerance ±0.1 %	only only for resistance 5 or 10
Resistance	1	D	potentiometer 1 kΩ	
	5		potentiometer 5 kΩ	
	10		potentiometer 10 kΩ	
Transducer	mit	E	with	only only for resistance 10 and potentiometer type 02 or 03
			without	
Sense of rotation		F	no information required	only for resistance 1, 5, 10
	e		counter-clockwise ascending values	only for MWI analog output
	i		clockwise ascending values	only for MWI analog output
Cable length	...	G	00.2 ... 15.0 m, in intervals of 1 m	

Order key

GP02 - [ ] - H/14 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]
A B C D E F G