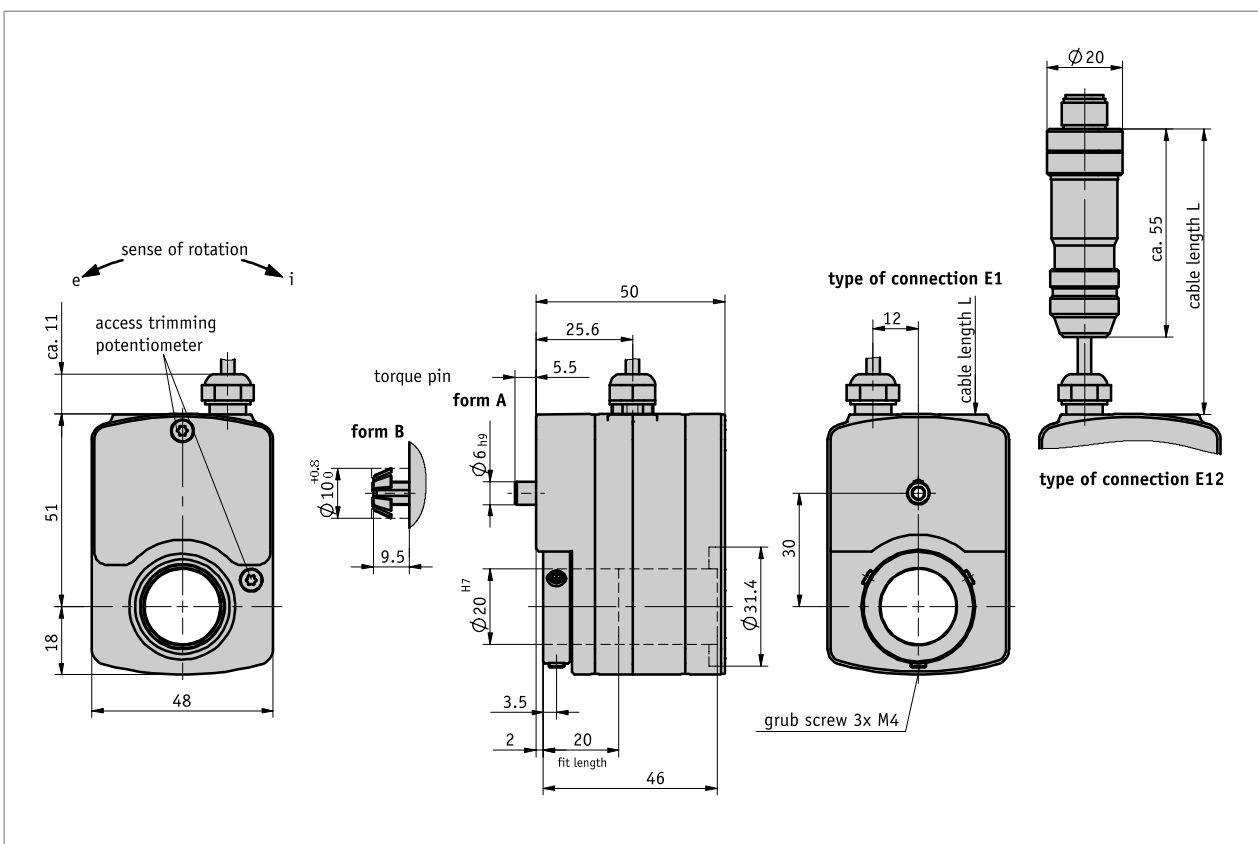


### Profile

- Resistant to external influences
- Through hollow shafts up to  $\varnothing 20$  mm
- Adaptation to various measurement distances owing to a wide range of gear ratios
- Integrated slip clutch to protect the potentiometer
- Compact design
- Potentiometer, power or voltage output
- IP68 protection class with oil filling possible
- Easy mounting



### Mechanical data

Feature	Technical data	Additional information
shaft	rustproof stainless steel	
Housing	zinc die-cast	
Gear ratio	0.2 ... 244	
Speed	$\leq 500$ min <sup>-1</sup>	depending on transmission
Shaft load rating	$\leq 400$ N	radial
	$\leq 150$ N	axial
Potentiometer service life	$1 \times 10^6$ 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 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 03/0.1, 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	±0.1 %	
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	

#### ■ Transducer, voltage output

Feature	Technical data	Additional information
Operating voltage	24 V DC ±20 %	
Output voltage	0 ... 10 V	

### System data

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

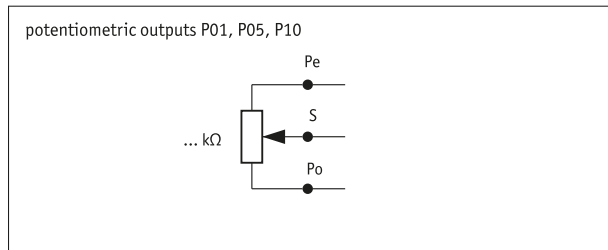
### Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-20 ... 80 °C	without oil fill
	-10 ... 80 °C	with oil fill
Relative humidity		condensation inadmissible
EMC	EN 61000-6-2	interference resistance / immission
	EN 61000-6-4	emitted interference / emission
Protection category	IP52, IP65, IP68	EN 60529

### pin assignment

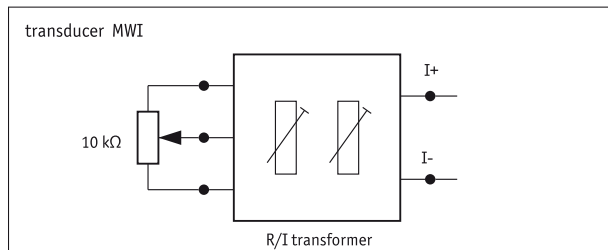
#### ■ without transducer

Signal	Cable color E1	PIN E12
Po	white	1
S	green	2
Pe	brown	3
nc	-	4



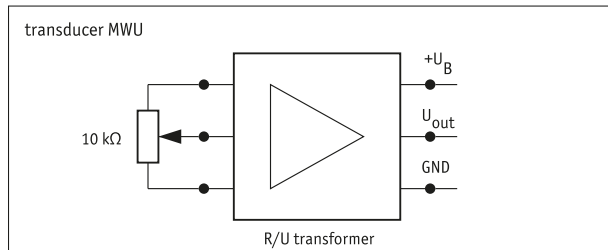
#### ■ MWI transducer

Signal	Cable color E1	PIN E12
I-	white	1
nc	-	2
I+	brown	3
nc	-	4



#### ■ MWU transducer

Signal	Cable color E1	PIN E12
GND	white	1
Uout	green	2
+24 V DC	Braun	3
nc	-	4



### Order

#### ■ Gear ratio calculation

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

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

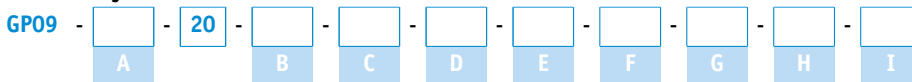
If the calculated ratio " $i_1$ " is the same as a value in the ordering table for the "ratio" feature, but this is not available, select the next highest ratio.

#### ■ Ordering table

Feature	Ordering data	Spezifikation	Additional information
gear ratio	A ...	0.184, 0.27, 0.361, 0.740, 1, 2, 2.503, 3.048, 4, 5.213, 6, 8.003, 10, 12, 15.238, 20, 24.167, 40.034, 45.494, 53.333, 58.333, 76.190, 100.392, 150.036 others on request	
torque pin/form	B A B	form A, cylindrical pin form B, for tolerance compensation	
potentiometer type	C 01 02 03/0.1	1 helix, hybrid 10 helices, wire 10 helices, hybrid, linear tolerance $\pm 0.1\%$	
analog output	D MWI	transducer 4 ... 20 mA	

Feature	Ordering data	Spezifikation	Additional information
	MWU P01 P05 P10	transducer 0 ... 10 V potentiometer 1 kΩ Potentiometer 5 kΩ potentiometer 10 kΩ	
Sense of rotation	E e i	no information required counter-clockwise ascending values clockwise ascending values	only for P01, P05, or P10 analog output only for MWI or MWU analog output only for MWI or MWU analog output
Type of connection	F E1 E12	open cable ends connector, M12	
Cable length	G ...	00.3 ... 20.0 m, in intervals of 0.1 m	
Protection category	H IP52 IP65 IP68	IP52 IP65 IP68	with oil filling, against condensation
number of revolutions	I ... ...	no information required, adjustable by customer 0.17, 0.25, 0.333, 0.6, 1, 2.5, 4, 5, 10, 12, 20, 24, 40, 60, 75, 100 others on request	except with IP68 only with IP68 type of protection and analog output MWI, MWU only with IP68 type of protection and analog output MWI, MWU

### Order key



**Accessories you can find:**  
 Overview Mating connector [www.siko-global.com](http://www.siko-global.com)  
 Measurement display MA50 [www.siko-global.com](http://www.siko-global.com)  
 Mating connector, 4-pole, socket [www.siko-global.com](http://www.siko-global.com)  
 Order key 83526