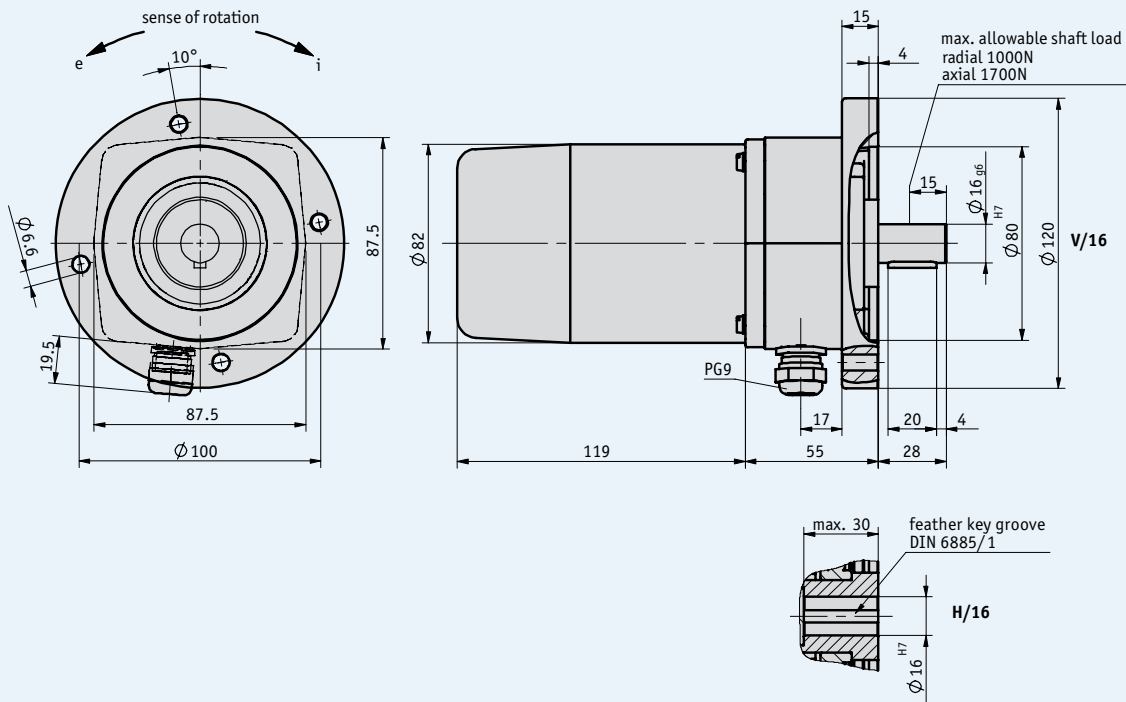


Profile

- Extremely resistant to external influence
- Solid or blind-hole shaft, max. \varnothing 20 mm
- Adaptation to various measurement paths owing to a wide range of gear ratios
- Integrated friction clutch to protect the potentiometer
- Potentiometer, power or voltage output
- IP65 protection category possible



Mechanical data

Feature	Technical data	Additional information
Gear ratio	0.2 ... 55	
Speed	max. 500 rpm	depending on gear ratio
Voltage supply	24 VDC \pm 20 % transducer MWI (with load \leq 500 Ω)	
Operating temperature	-20 ... +80 °C	
Condensation	inadmissible	
Service life of axial movement	1 x 10 ⁶ 2 x 10 ⁶	with P01, P02 with P03
Protection category	IP52, IP65	according to DIN VDE 0470
Maximum shaft load	radial 1000 N, axial 1700 N	
Shaft	aluminum (IP52) browned steel (IP65)	
Housing	aluminum	

Electrical data

Feature	Technical data	Additional information
Interference protection class	3	according to IEC 801

Analog outputs

Feature	Technical data	Voltage supply
Potentiometer output	0 ... 1 kΩ, 0 ... 5 kΩ, 0 ... 10 kΩ depending on the potentiometer type used	
Power output	4 ... 20 mA	24 V DC ±20 %, with load ≤500 Ω
Voltage output	0 ... 10 V	24 V DC ±20 %

Potentiometer type

Characteristic/Specification	01	02	03
Design	hybrid	wire	hybrid
Resistance	5 kΩ, 10 kΩ	1 kΩ, 5 kΩ, 10 kΩ	1 kΩ, 5 kΩ, 10 kΩ
Resistance tolerance	±10 %	±5 %	±5 %
Linearity tolerance	±1 %	±0.25 %	±0.25 %
Load rating	1 W at 70 °C	1 W at 70 °C	2 W at 70 °C
Range of rotation	340° ±5° (mechanically straight-through)	3600° ±10°	3600° ±10°
Standard terminal resistor (the higher value is always valid)	0.5 % or 1 Ω	0.5 % or 1 Ω	0.5 % or 1 Ω

Note: Characters highlighted in orange color are order features.

Pin assignment

Potentiometric outputs P01, P05, P10

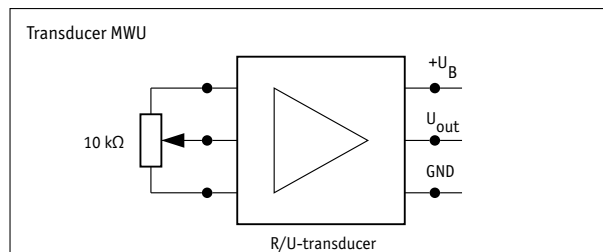
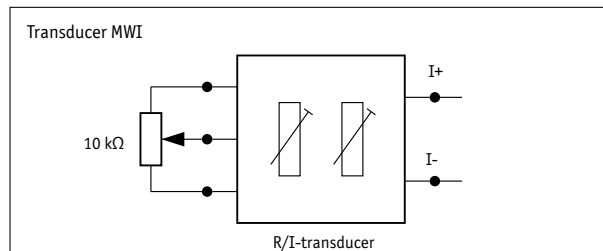
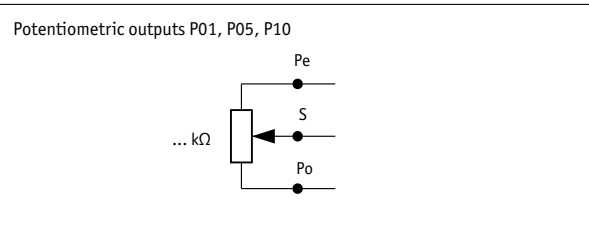
Signal	Terminal
Po	3
Pe	1
S	2

Transducer MWI

Signal	Terminal
I+	1
I-	2

Transducer MWU

Signal	Terminal
+24 V DC	1
GND	2
U _{out}	3



Order

■ **Ratio calculation (order table, feature A)**

$$\text{Formula: } i1 = \frac{n \times 360^\circ}{\alpha}$$

n = number of revolutions on the driving shaft
 α = potentiometer angle of rotation
 340° with 1-coil potentiometer
 3600° with 10-coil potentiometer
 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.

■ **Order table**

Feature	Order data	Specifications	Additional information
Gear ratio	... A	0.1, 0.166, 0.166, 0.25, 0.333, 0.5, 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 24, 30, 40, 55 others on request	
Driving shaft	H/20	hollow shaft Ø 20 mm	
	H/16	hollow shaft Ø 16 mm	
	V/20	solid shaft Ø 20 mm	
	V/16	solid shaft Ø 16 mm	
Potentiometer type	01	1 coil, hybrid	
	02	10 coils, wire	
	03	10 coils, hybrid	
Analog output	MWI	transducer 4 ... 20 mA	only with P10
	MWU	transducer 0 ... 10 V	only with P10
	P01	potentiometer 1 kΩ	only with potentiometer type 02 or 03
	P05	potentiometer 5 kΩ	
Sense of rotation	ODR	without indication of sense of rotation	with P01, P05 or P10
	e	counter-clockwise ascending values	with MWI or MWU
	i	clockwise ascending values	with MWI or MWU
Protection category	IP52		
	IP65		

■ **Order code**



Scope of delivery: GP04/1, User information

Accessories:
 Electronic display MA50 Catalog 6 DisplayLine

Additional information:
 General information and areas of application Page 60 cont.