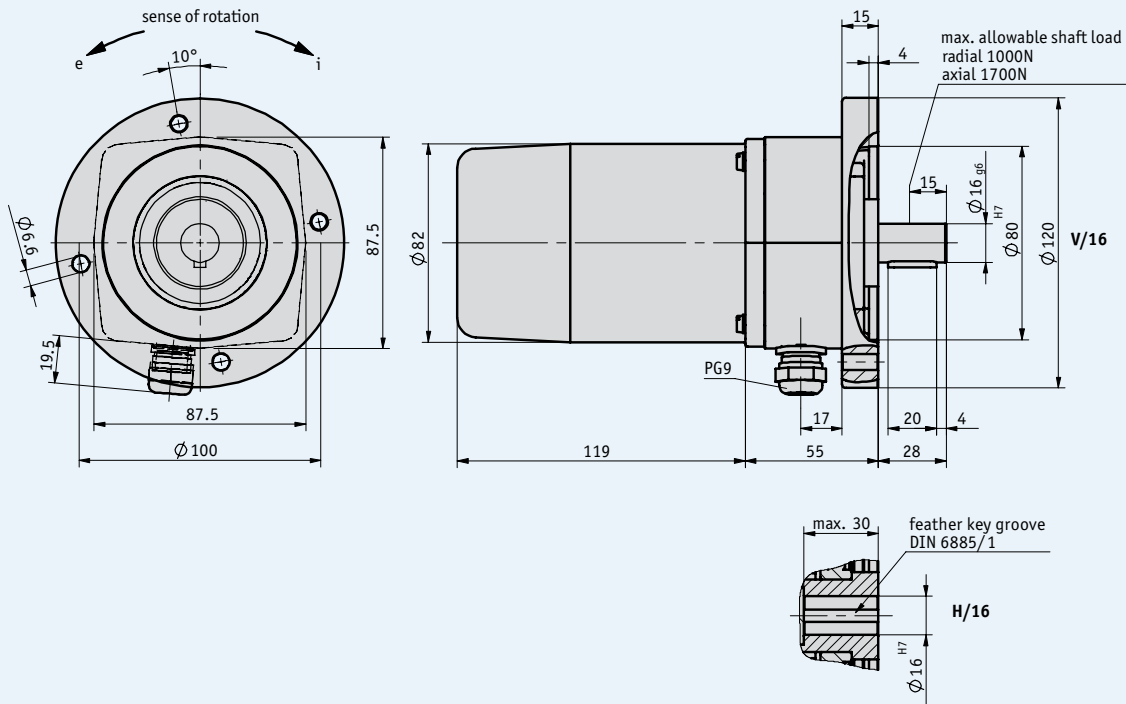


Profile

- 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 |
| 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 | Operating voltage |
|----------------------|---|---|
| Potentiometer output | 0 ... 1 k Ω , 0 ... 5 k Ω , 0 ... 10 k Ω depending on the potentiometer type used | |
| Power output | 4 ... 20 mA | 24 V DC \pm 20 %, with load \leq 500 Ω |
| Voltage output | 0 ... 10 V | 24 V DC \pm 20 % |

Potentiometer type

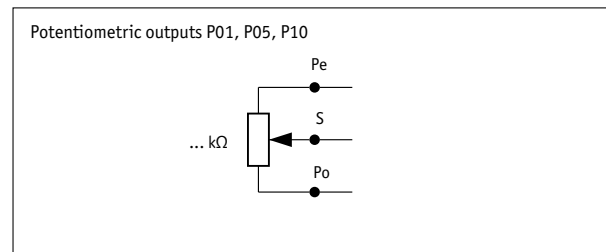
| Characteristic/Specification | 01 | 02 | 03 |
|--|--|---|---|
| Design | hybrid | wire | hybrid |
| Resistance | 5 k Ω , 10 k Ω | 1 k Ω , 5 k Ω , 10 k Ω | 1 k Ω , 5 k Ω , 10 k Ω |
| Resistance tolerance | \pm 10 % | \pm 5 % | \pm 5 % |
| Linearity tolerance | \pm 1 % | \pm 0.25 % | \pm 0.25 % |
| Load rating | 1 W at 70 °C | 1 W at 70 °C | 2 W at 70 °C |
| Range of rotation | 340° \pm 5° (mechanically straight-through) | 3600° \pm 10° | 3600° \pm 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

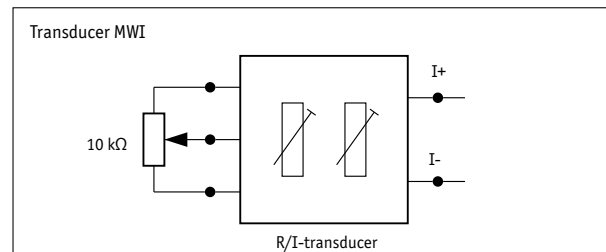
Potentiometric outputs P01, P05, P10

| Signal | Terminal |
|--------|----------|
| Po | 3 |
| Pe | 1 |
| S | 2 |



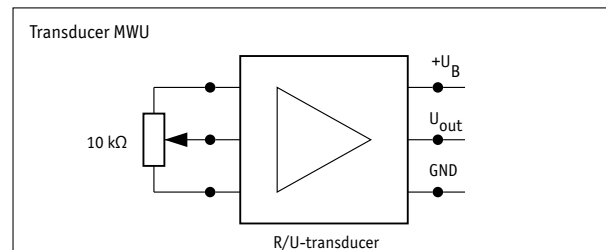
Transducer MWI

| 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)

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

n = number of revolutions on the driving shaft
 α = potentiometer angle of rotation
 340° with 1-coil potentiometer
 3600° with 10-coil potentiometer
 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 | B hollow shaft Ø 20 mm hollow shaft Ø 16 mm solid shaft Ø 20 mm solid shaft Ø 16 mm | |
| | H/16 | | |
| | V/20 | | |
| | V/16 | | |
| Potentiometer type | 01 | C 1 coil, hybrid 10 coils, wire 10 coils, hybrid | |
| | 02 | | |
| | 03 | | |
| Analog output | MWI | D transducer 4 ... 20 mA transducer 0 ... 10 V potentiometer 1 kΩ potentiometer 5 kΩ potentiometer 10 kΩ | only with potentiometer type 02 or 03 |
| | MWU | | only with potentiometer type 02 or 03 |
| | P01 | | only with potentiometer type 02 or 03 |
| | P05 | | |
| | P10 | | |
| Sense of rotation | ODR | E without indication of sense of rotation counter-clockwise ascending values clockwise ascending values | with P01, P05 or P10 |
| | e | | with MWI or MWU |
| | i | | with MWI or MWU |
| Protection category | IP52 | F | |
| | IP65 | | |

Order code

GP04/1 - - - - - -

A B C D E F

Scope of delivery: GP04/1, User information

Accessories:

Electronic display MA50

Page 92

Additional information:

General information and areas of application

Page 64 cont.