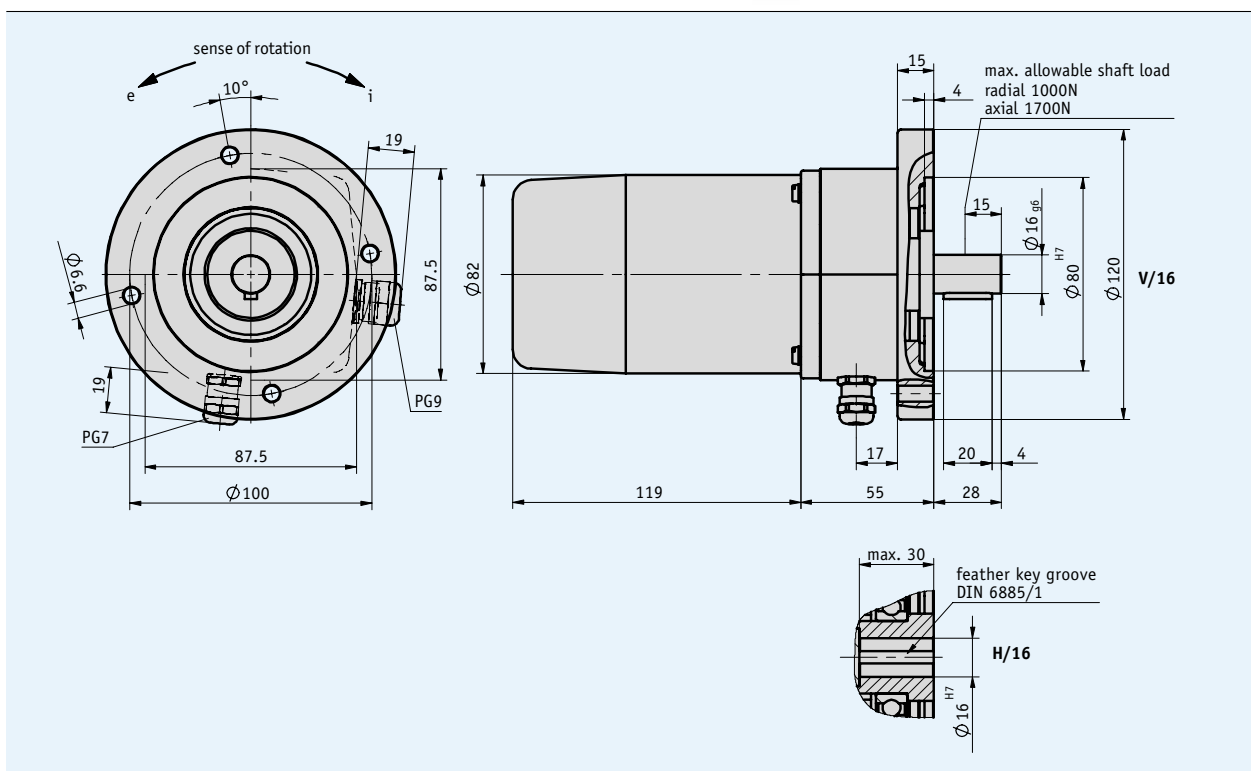


### Profile

- Extremely resistant to external influences
- Solid or blind-hole hollow 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 or power output
- IP65 protection category possible
- Up to 3 switching cam outputs, freely adjustable



2.3

### Mechanical data

Feature	Technical data	Additional information
Gear ratio	0.2 ... 512	
Speed	max. 500 rpm	depending on gear ratio
Operating temperature	-20 ... +80 °C	
Condensation	inadmissible	
Service life of axial movement	1 x 10 <sup>6</sup> 2 x 10 <sup>6</sup>	with P01, P02 with P03
Protection category	IP52, IP65	according to DIN VDE 0470
Maximum shaft load	radial 1000 N axial 1700 N	with solid shaft
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 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

### Potentiometer type

Characteristic/Specification	01	02	03/0,1
Design	hybrid	wire	hybrid
Resistance	1 kΩ, 5 kΩ, 10 kΩ	1 kΩ, 5 kΩ, 10 kΩ	1 kΩ, 5 kΩ, 10 kΩ
Resistance tolerance	±5 %	±5 %	±5 %
Linearity tolerance	±0.25 %	±0.25 %	±0.1 %
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

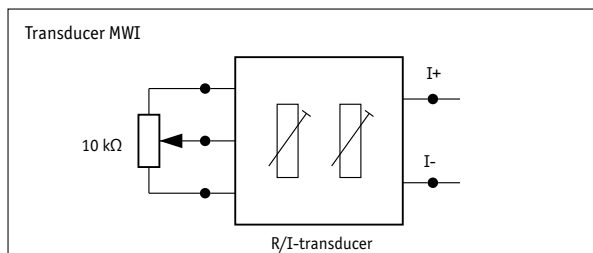
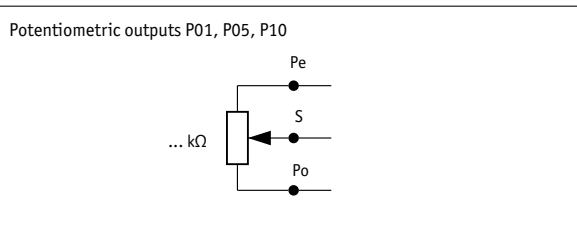
Signal	Terminal
Po	11
Pe	13
S	12

### Transducer MWI

Signal	Terminal
I+	12
I-	11
N.C.	13

### Switching cam

Assignment	Switching cam 1 Terminal	Switching cam 2 Terminal	Switching cam 3 Terminal
	1	4	7
	2	5	8
	3	6	9



### Order

#### Ratio calculation (order table, feature A)

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

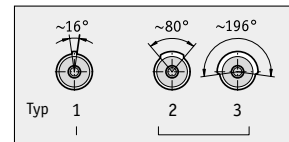
n = number of revolutions on the driving shaft  
 α = potentiometer angle of rotation  
 340° with 1-coil potentiometer  
 3600° with 10-coil potentiometer  
 i1 = order feature for gear ratio

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.

#### Switching cam order (example of order table, feature F)

Digit 1	Digit 2	Digit 3	Order data
cam form 2			2
cam form 1	cam form 3		13
cam form 1	cam form 2	cam form 3	123

**!** Order switching cams!  
 1-3 switching cams can be ordered. Therefore, the order element can have 1 to 3 digits.



Actuating angle of the 3 switching cams: specifically for end position limiter (1), for control functions (2, 3).

#### Order table

Feature	Order data	Specifications	Additional information
Gear ratio	... A	0.1/10, 0.134/10, 0.15/10, 0.1666/10, 0.2/10, 0.25/10, 0.333/10, 0.5/10, 0.5/2.5, 1, 1.125, 1/3.0357, 2, 2.14, 2.5, 3, 4, 5, 6.5, 7, 8, 10, 12, 12.25, 14, 15, 20, 24, 25, 30, 33, 35, 40, 48, 55, 64, 70, 80, 101.5, 121, 150, 176, 256, 291.156, 348.8, 360, 384, 3.830, 512 others on request	
Driving shaft	H/16 H/20 V/16 V/20	B hollow shaft Ø 16 mm hollow shaft Ø 20 mm solid shaft Ø 16 mm solid shaft Ø 20 mm	
Potentiometer type	01 02 03 03/0.1	C 1 coil, hybrid 10 coils, wire 10 coils, hybrid 10 coils, hybrid, linear tolerance ±0.1 %	
Resistance	P01 P05 P10	D potentiometer 1 kΩ potentiometer 5 kΩ potentiometer 10 kΩ	
Transducer	MMW OMW	E transducer 4 ... 20 mA without	only with P10 and potentiometer type 02 or 03
Sense of rotation	ODR e i	F without indication of sense of rotation counter-clockwise ascending values clockwise ascending values	with P01, P05 or P10 with MMW with MMW
Switching cam/form	... G	1, 2, 3, 11, 12, 13, 22, 23, 33, 111, 112, 113, 122, 123, 221, 222, 223, 233, 331, 333 others on request	
Operating voltage of switching cam	1 2	H above 48 V dielectric strength up to 48 V dielectric strength	

#### Order code

GP44 -  -  -  -  -  -  -  -  -

A B C D E F G H

Scope of delivery: GP44, User information

#### Accessories:

Electronic display MA50

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#### Additional information:

General information and areas of application

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