

# Geared potentiometer GP44

Robust rotary encoder for absolute position sensing, optionally with solid or hollow shaft and integrated camshaft gear, potentiometer or current interface.



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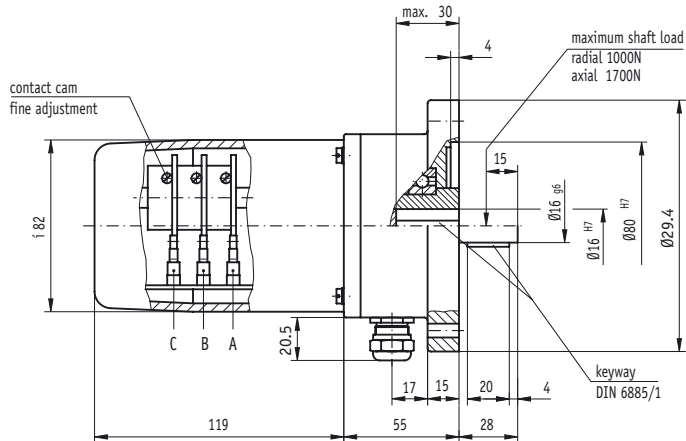
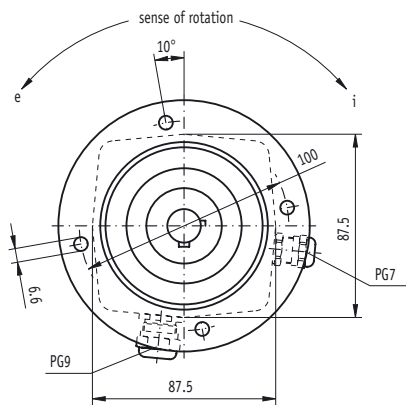
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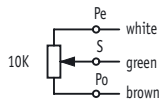


**Features:**

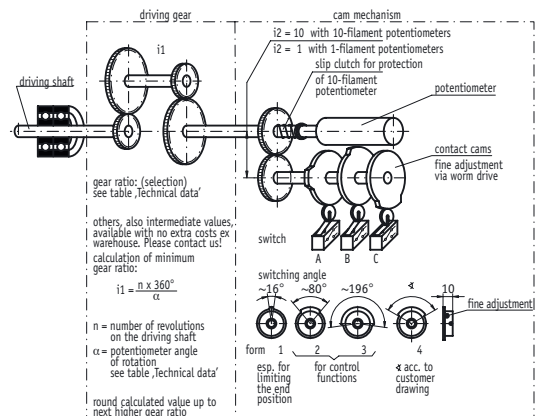
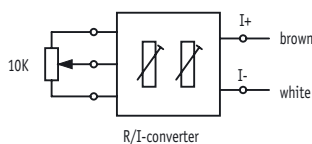
- solid / blind-hole hollow shaft max. 20 mm
- adaptation to various measurement distances thanks to the broad range of available gear ratios
- compact design
- integrated slip clutch for potentiometer protection
- optional current interface 4... 20 mA
- optional IP65 type of protection for critical environmental conditions
- up to 3 cam switch outputs freely adjustable



without transducer



transducer MWI



# Geared potentiometer GP44

| Feature                            | Order text | Technical data                             | Additional information               |
|------------------------------------|------------|--|--------------------------------------|
| Gear ratio                         |            | 0.2... 244                                 |                                      |
| Rotational speed                   |            | max. 500 min <sup>-1</sup>                 | depending on gear ratio              |
| Supply voltage                     |            | 24 V DC ± 20 %                             | transducer MWI (bei Bürde ≤ 500 Ohm) |
| Working temperature                |            | - 20 °C... + 80 °C                         |                                      |
| Condensation                       |            | not permitted                              |                                      |
| Service life - shaft movements     |            | 1 x 10 <sup>6</sup> (2 x 10 <sup>6</sup> ) |                                      |
| Test mark/interference prot. class |            | CE   | 3 acc. to IEC 801                    |
| Type of protection                 |            | IP52, IP65                                 | acc. to DIN VDE 0470                 |
| Housing                            |            | aluminium and plastic                      |                                      |
| Shaft                              |            | Nirosta stainless steel                    |                                      |

### Potentiometer electrical values

|                            |  |   |  |
|----------------------------|--|---|--|
| Resistance tolerance       |  | ± 5 %                                   |  |
| Linearity tolerance        |  | ± 0.25 %                                |  |
| Load rating                |  | 1 W at 70 °C (potentiometer type 01,02) | 2 W at 70 °C (potentiometer type 03)       |
| Range of rotation          |  | 340° ± 5°                               | 1 filament (mechanically straight through) |
|                            |  | 3600° + 10°                             | 10 filaments                               |
| Standard terminal resistor |  | 0.5 % or 1 kOhm                         | (the higher value applies)                 |

### Ordering data

|                                      |             |          |                      |   |
|--------------------------------------|-------------|----------|----------------------|---|
| Gear ratio                           | ...         | <b>A</b> | max. 256             | others on request   |
| Drive shaft                          | <b>V/16</b> | <b>B</b> | Solid shaft ø 16 mm  | <b>standard</b>   |
|                                      | <b>H/16</b> |          | hollow shaft ø 16 mm | <b>standard</b>   |
|                                      | H/14        |          | hollow shaft ø 14 mm |   |
|                                      | H/20        |          | hollow shaft ø 20 mm |   |
| Potentiometer type                   | 01          | <b>C</b> | 1 filament           |   |
|                                      | 02          |          | 10 filaments/ wire   |   |
|                                      | 03          |          | 10 filaments         |   |
| Resistance kOhm                      | 1           | <b>D</b> | 1 kOhm               |   |
|                                      | 2           |          | 2 kOhm               |   |
|                                      | 5           |          | 5 kOhm               |   |
|                                      | 10          |          | 10 kOhm              |   |
| Transducer                           | <b>OMW</b>  | <b>E</b> | without              | <b>standard</b>   |
|                                      | MMW         |          | with                 | current interface 4... 20 mA  |
| Sense of rotation                    | i           | <b>F</b> | see drawing          | only with transducer  |
|                                      | e           |          | see drawing          | only with transducer  |
| Contact cams/ form (A B C)           | ...         | <b>G</b> | e.g., 1 2 3          | 1 = switch. angle 16°; 2 = switch. angle 80°; 2 = switch. angle 196°<br>see drawing |
| Operating voltage of the contact cam | 1           | <b>H</b> | over 48 Volt         | max. voltage cam switches   |
|                                      | 2           |          | up to 48 Volt        |   |

Subject to technical alternation • 11/2002

Your ordering data: GP44 - A - B - C - D - E - F - G - H