



## Potentiometer

### Description

These up to 4 W potentiometers show that Ex potentiometers can be small and compact.

The external dimensions are approximately the same as those of standard industrial potentiometer enclosures. Central fixing in a single hole and the standard size of shaft have been included.

From the variety of resistors on the market we have chosen cemented wire-wound resistors and carbon film resistors and developed a standard-program range. The metal Ex d enclosures are tailored to the dimensions of the resistors and feature a standard 30 mm diameter. The potentiometers have been designed so that the stated nominal capacities can be fully exploited at temperature class T6 or T5 and be deployed in zones 1 and 2.

The potentiometer is fitted into an enclosure that meets the requirements of an approved type of protection in conformance to IEC/EN 60079-0.

### Explosion protection

#### Ex protection type

Ex II 2G Ex db IIC Gb  
Ex I M2 Ex db I Mb

#### Certification

PTB 03 ATEX 1025 U

#### Temperature class

T6 to T4

#### Ambient temperature

-55 °C to +40 °C/+60 °C/+80 °C

### Technical data

#### Protection class

min. IP 54/IEC 60529

#### Enclosure

nickel-plated brass (CuZn)

#### Tightening torque (for nuts)

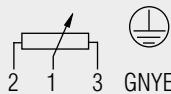
200 Ncm

#### Resistance characteristic

linear

#### Electrical connection

cores  
4GAF - 0.75



### Features

- High IP-protection class
- Small design
- Simple installation

#### ■ Cemented wire-wound resistors:

##### Resistance values/power ratings

see selection chart

##### Resistance tolerance

± 5 %

##### Linearity tolerance

max. 3 % of final value

##### Insulation resistance

≥ 100 MΩ

##### Rotation

electr./mech. 250°/270°

##### End stop strength

30 Ncm

##### Weight with cores (0.5 m)

180 g

#### ■ Carbon-film resistors on ceramic:

##### Resistance values/power ratings

see selection chart

##### Insulation resistance

≥ 100 MΩ

##### Rotation

electr./mech. 270°

##### End stop strength

100 Ncm

##### Weight with cores (0.5 m)

200 g

#### ■ Precision wire-wound resistors:

##### Resistance values/power ratings

see selection chart

##### Insulation resistance

≥ 1000 MΩ

##### Resistance tolerance

± 5 %

##### Linearity tolerance

to 500 Ω ± 1 %  
> 500 Ω ± 0.5 %

##### Rotation

electr./mech. 320°

##### End stop strength

100 Ncm

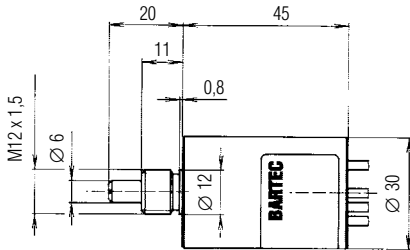
##### Weight with cores (0.5 m)

170 g

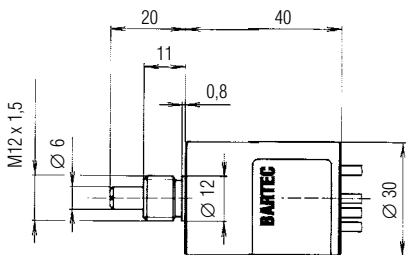


Dimensions in mm

Cemented wire-wound resistors for high power ratings



Carbon-film resistors  
Precision wire-wound resistors

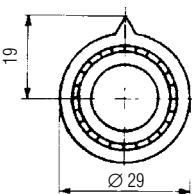


Selection chart

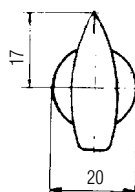
Resistor type/ standard resistance values <small>(stock items printed bold)</small>	Temperature class/ power rating	Complete order no. <small>(indicate resistance values in plain text)</small>																																								
<p><b>Cemented wire-wound resistors higher power ratings</b></p> <table border="0"> <tr> <td>10 Ω</td> <td>68 Ω</td> <td><b>470 Ω</b></td> <td>3.3 k Ω</td> </tr> <tr> <td>12 Ω</td> <td>82 Ω</td> <td><b>560 Ω</b></td> <td>3.9 k Ω</td> </tr> <tr> <td>15 Ω</td> <td><b>100 Ω</b></td> <td><b>680 Ω</b></td> <td><b>4.7 k Ω</b></td> </tr> <tr> <td>18 Ω</td> <td>120 Ω</td> <td>820 Ω</td> <td><b>5.6 k Ω</b></td> </tr> <tr> <td>22 Ω</td> <td>150 Ω</td> <td><b>1 k Ω</b></td> <td><b>6.8 k Ω</b></td> </tr> <tr> <td>27 Ω</td> <td>180 Ω</td> <td>1.2 k Ω</td> <td>8.2 k Ω</td> </tr> <tr> <td>33 Ω</td> <td><b>220 Ω</b></td> <td>1.5 k Ω</td> <td><b>10 k Ω</b></td> </tr> <tr> <td>39 Ω</td> <td><b>270 Ω</b></td> <td>1.8 k Ω</td> <td></td> </tr> <tr> <td>47 Ω</td> <td><b>330 Ω</b></td> <td><b>2.2 k Ω</b></td> <td></td> </tr> <tr> <td>56 Ω</td> <td>390 Ω</td> <td><b>2.7 k Ω</b></td> <td></td> </tr> </table>	10 Ω	68 Ω	<b>470 Ω</b>	3.3 k Ω	12 Ω	82 Ω	<b>560 Ω</b>	3.9 k Ω	15 Ω	<b>100 Ω</b>	<b>680 Ω</b>	<b>4.7 k Ω</b>	18 Ω	120 Ω	820 Ω	<b>5.6 k Ω</b>	22 Ω	150 Ω	<b>1 k Ω</b>	<b>6.8 k Ω</b>	27 Ω	180 Ω	1.2 k Ω	8.2 k Ω	33 Ω	<b>220 Ω</b>	1.5 k Ω	<b>10 k Ω</b>	39 Ω	<b>270 Ω</b>	1.8 k Ω		47 Ω	<b>330 Ω</b>	<b>2.2 k Ω</b>		56 Ω	390 Ω	<b>2.7 k Ω</b>		<p><b>T6/2.5 W</b> resp. <b>T4/4 W</b></p>	<p><b>07-6612-</b> <input type="checkbox"/> <b>111</b> resp. <b>07-6613-</b> <input type="checkbox"/> <b>111</b></p>
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<p><b>Special versions - please indicate particulars in plain text</b></p> <ul style="list-style-type: none"> <li>■ Anti-rotation pin on front of enclosure</li> <li>■ Threaded holes on front of enclosure</li> <li>■ Side entry of leads</li> <li>■ Other resistance values</li> </ul>																																										

Accessories/Order no.

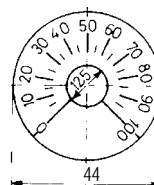
Rotary knob shaft Ø 6 mm  
**Order no. 03-5401-0001**



Pointer knob shaft Ø 6 mm  
**Order no. 03-5401-0002**



Scale 0 to 100  
**Order no. 05-0144-0112** (270°)  
**Order no. 05-0144-0127** (320°)



Slip clutch adjustable to 50 Ncm, shaft Ø 6 mm  
**Order no. 03-5600-0001**

