



Potentiometer

Description

This standard range of up to 8 W potentiometers with wire-wound resistors 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 the most commonly used types 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.

In addition to the standard models all other versions such as tandem potentiometers, potentiometers with microswitches, non-standard shafts or larger resistor diameters can be encapsulated in enclosures of up to 120 mm diameter.

Explosion protection

Ex protection type

ATEX II 2G Ex d e IIC T6 resp. T5 Gb
 II 2D Ex tb IIIC
T80 °C resp. T95 °C Db

Certification

EPS 14 ATEX 1696

IECEX

Ex d e IIC T6 resp. T5 Gb
Ex tb IIIC T80 °C resp. T95 °C Db

Certification

IECEX EPS 14.0042

Other approvals and certificates, see www.bartec-group.com

Ambient temperature

-20 °C to +70 °C

Technical data

Protection class

min. IP 54/IEC 60529

Enclosure

metal

Tightening torque (for nuts)

200 Ncm

Resistance characteristic

linear

Electrical connection

cable
H05VV-F4G 0.75



■ 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°

Features

- High IP-protection class
- Simple installation
- No further approvals required

End stop strength

30 Ncm

Weight with cable (1 m)

2.5 W	6 W	8 W
250 g	320 g	550 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 cable (1 m)

240 g

■ Precision wire-wound resistors

Resistance values/power ratings

see selection chart

Resistance tolerance

1 turn ± 5 % / 10 turns > 50 Ω ± 3 %

Linearity tolerance

1 turn to 500 Ω ± 1 %
> 500 Ω ± 0.5 %

10 turns potentiometer ± 0.25 %

Insulation resistance

min. 1 000 MΩ

Rotation

electr./mech. 1 turn 320° ± 2°
10 turns 10 x 360° + 10°

Weight with cable (1 m)

1 turn 210 g/10 turns 300 g

End stop strength

1 turn 100 Ncm/10 turns 30 Ncm



Dimensions in mm						Selection chart					
						Resistor type/ standard resistance values (stock items printed bold)			Temperature class/ power rating	Complete order no. (indicate resistance values in plain text)	
a	b	c	d	e	f	Cemented wire-wound resistors higher power ratings			T6/2,5 W resp. T5/3 W	07-6622- <input type="checkbox"/> 111 resp. 07-6623- <input type="checkbox"/> 111	
∅ 30	55	∅ 6	11	M12 x 1,5	∅ 12	10 Ω 180 Ω 3,3 kΩ bis 12 Ω 220 Ω 3,9 kΩ 10 k Ω 15 Ω 270 Ω 4,7 k Ω 18 Ω 330 Ω 5,6 k Ω 22 Ω 390 Ω 6,8 k Ω 27 Ω 470 Ω 10 k Ω 33 Ω 560 Ω 12 k Ω 39 Ω 680 Ω 15 k Ω 47 Ω 820 Ω 18 k Ω 56 Ω 1 k Ω 20 k Ω 68 Ω 1,2 k Ω 22 k Ω 82 Ω 1,5 k Ω 27 k Ω 100 Ω 1,8 k Ω 30 k Ω 120 Ω 2,2 k Ω 150 Ω 2,7 k Ω			bis 20 k Ω bis 30 k Ω	T6/5 W resp. T5/6 W	07-6624- <input type="checkbox"/> 111 resp. 07-6625- <input type="checkbox"/> 111
∅ 45	90	∅ 6	11	M12 x 1,5	∅ 12	Carbon-film resistors			T6/2 W	07-6622- <input type="checkbox"/> 113	
∅ 60	87	∅ 6	11	M12 x 1,5	∅ 12	Precision wire-wound resistors			T6/1,2 W	07-6622- <input type="checkbox"/> 112	
∅ 30	45	∅ 6	11	M12 x 1,5	∅ 12	100 Ω 1 k Ω 10 k Ω 100 k Ω 220 Ω 2,2 k Ω 22 k Ω 220 k Ω 470 Ω 4,7 k Ω 47 k Ω 470 k Ω 1 M Ω			T6/2 W	07-6622- <input type="checkbox"/> 112	
∅ 38	50	∅ 6,35	8	3/8-32	∅ 10,3	10 turns potentiometer*			T6/2 W	07-6624- <input type="checkbox"/> 102 Lead length: 5 = standard 500 mm 0 = length in plain text	
						Special versions, Please indicate particulars in plain text					
						<ul style="list-style-type: none"> ■ Anti-rotation pin on front of enclosure ■ Threaded holes on front of enclosure ■ Side entry of cabl ■ Other resistance values 					

➔ Accessories/Order no.

Rotary knob shaft ∅ 6 mm Order no. 03-5401-0001	Pointer knob shaft ∅ 6 mm Order no. 03-5401-0002	scale 0 - 100 Order no. 05-0144-0112 (270 °) 05-0144-0127 (320 °)	More turn drive* shaft ∅ 6.35 mm Order no. 03-5425-0001	Slip clutch,adjustable to 50 Ncm, shaft ∅ 6 mm Order no. 03-5600-0001

*Max. wall thickness for installing a switch panel = 2.5 mm