

WIRE WINDING

FSG-DESIGN

PW45d

Wire wound precision Potentiometer

- High-resolution resistive element with ring winding
- Short-circuit distances, additional taps and special windings available on request
- Resistance value and active angle can be customized as desired

CE – konform



TECHNICAL DATA

Mechanical specifications

Housing material	thermoplastic
Housing diameter	45 mm
IP code of housing up to	IP30
Shaft diameter	6 mm
Adjustment speed	max. 360 U/min
Torque	0.3 Ncm / 3 Ncm
Wiper without limit stops	yes
Multiple execution	twice
Resistance to compression	5–200 Hz, 10 g
Shock resistance	50 g, 6 ms
Bearing	needle bearing
Connection	screw connection / solder-type terminals
Fastening	threaded hole 2x M4, distance 32 mm

Electrical specifications

Resistance element	ring
Active angle	max. 345°
Resistance values	to 20 kΩ
Resistance tolerance	±0.3 %
Linearity tolerance	±0.3 %
Resolution in turns	max. 2321
Capacity	2.5 W
Temperature coefficient	0.0017 % / °C
Temperature range	-30 °C to +80 °C
Lifetime	typical 10–50 Mio. Cycles*

* The lifetime depends on the application and environmental conditions.

Article master number 1500Z05

Typical

APPLICATION AREAS



Ship



Rails



Automation



Logistics



Medicine



Industry

Optionally available

PROTECTIVE HOUSING

To protect against mechanical damage and extreme environmental conditions, as well as for necessary adaptation gears and additional switches, suitable housings are available in various designs.



For more information on protective housings, click here: www.fsg-sensors.de

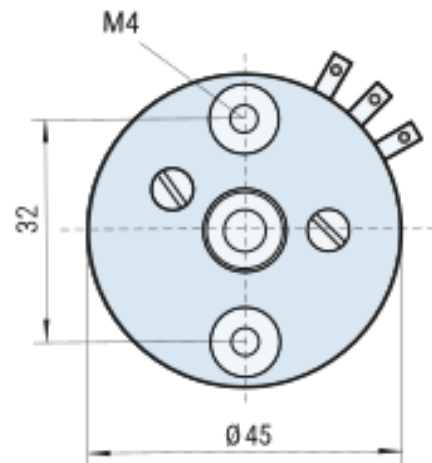
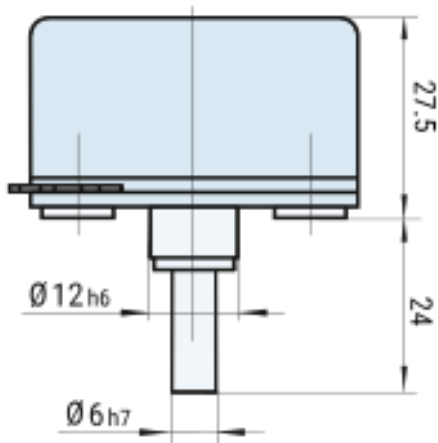


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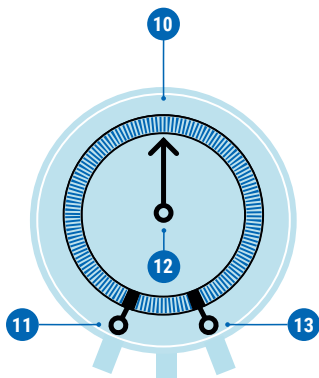
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DIMENSIONAL DRAWINGS



CONNECTION



Standard

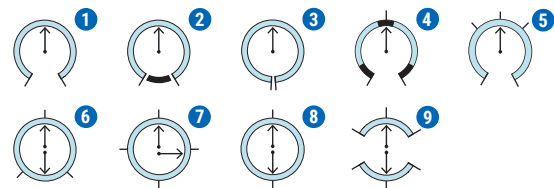
- 11 Resistance start
- 12 Wiper
- 13 Resistance end

Optional

- 10 Additional tap

CIRCUIT VARIATIONS

Wire-wound resistive elements as **ring winding** on an anodized aluminum ring body can be executed in various circuit configurations, angle ranges, and resistance values.



- 1 Wiper limited by stops
- 2 Wiper continues rotation over 360° with dummy winding
- 3 Wiper continues rotation over 360° without reactive winding (sawtooth curve)
- 4 Free arrangement of shorted sections
- 5 Free arrangement of taps
- 6/7/8 Special windings with linear or sin/cos characteristic curves
- 9 Two electrically isolated windings on a winding body, angle ≤175°

CONTACT

If you have any questions about this or any other FSG product, please do not hesitate to contact us.

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