

Data Sheet for Precision Potentiometer

Oil-filled multiturn Hybrid Potentiometer

Series OFH



The potentiometers OFH are filled with oil. The oil has a heat-dissipating function, cleans the resistance element of abrasion and protects it from moisture and aggressive substances.

- Long life span
- Optional center tap

Electrical Data	OFH3005	OFH3010
Effective electrical angle of rotation 1.)	1800° ±5°	3600° ±5°
Total resistance 1.)	2..100 kOhm	
Resistance tolerance	±5%	
Independent linearity (best straight line) 1.)	±0.25% (±0.1%)	
Theoretical resolution 1.)	Nearly infinite	
Backlash (Hysteresis) 1.)	≤ 2°	
Max. / recommended wiper current 1.)	10 µA / 2 µA	
Power rating @ 40°C (0W @ 60°C)	2 W	
Insulation Voltage 1.)	1000 VAC, 1min	
Insulation Resistance 1.)	100 MOhm @ 1000 VDC	

Mechanical Data, Environmental Conditions, Miscellaneous	OFH3005	OFH3010
Mechanical angle of rotation	1080° +10° with stop	3600° +10° with stop
Lifetime (90% el. eff. angle half sine) 2.)	2.5 Mio. rotations	5 Mio. rotations
Max. operational speed	40 rev. / min.	
Bearing	Sleeve bearing	
Operational torque @ ambient temperature 1.) 2.)	20 Nmm	
End stop torque 1.) 2.)	90 Ncm	
Operating temperature range	-30 °C up to +60 °C	
Storage temperature range	-30 °C up to +60 °C	
Protection grade (IEC 60529)	IP65	
Vibration (IEC 68-2-6, Test Fc)	15g 10Hz to 2000Hz x 12h	
Shock (IEC 68-2-27, Test Ea)	49g @ 11 ms x 18	
Housing diameter	32 mm	
Housing depth	40 mm	
Shaft diameter	6.00 mm (optional 6.35 mm)	
Shaft type	Solid shaft	

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Mechanical Data, Environmental Conditions, Miscellaneous	OFH3005	OFH3010
Max. radial load	≤1 N	
Max. axial load	≤1 N	
Connection type	Soldering lugs	
Connection position	Axial	
Sensor mounting	Bushing	
Mass	100 g	
Fastening parts included in delivery	Nut, toothed washer	
Fastening torque mounting nut	150 Ncm	
Material shaft	Stainless steel	
Material housing	Metal	

1.) According IEC 60393

2.) Determined by climatic conditions according to IEC 68-1, para. 5.3.1 without load collectives

Please note: Max. permissible supply voltage <75 VDC respectively <50 VAC in addition the max. power rating must be observed

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Order code

Description		Selection: standard=black/bold , possible options=grey/italic						
Series	OFH							
Revolutions with stop:								
<i>Option 5-turn</i>		3005						
10-turn		3010						
Resistance value:								
<i>Option 2 kOhm</i>			R2k					
5 kOhm			R5k					
10 kOhm			R10k					
<i>Option 20 kOhm</i>			R20K					
<i>Option 50 kOhm</i>			R50K					
<i>Option 100 kOhm</i>			R100K					
Resistance tolerance:								
±5%					W5%			
Independent linearity:								
±0,25%						L0,25%		
<i>Option ±0,10%</i>						L0,1%		
<i>Option center tap:</i>							CT	
Front shaft:								
Standard Ø6,00 x 20,6 mm							-	
<i>Option Ø6,35 mm</i>							DM6,35	
<i>Option shaft length in mm</i>							Ax,xx	
<i>Option shaft diameter in mm (≤6,35 mm)</i>							DMx,xx	
<i>Option screwdriver slot:</i>								B

For higher quantities or on-going demand, additional options are available as described below on request

For Example: Special electrical and mechanical angles of rotation, and special resistance and linearity tolerances. Furthermore we can mount gear wheels or attach cable assemblies with or without connectors and much more.

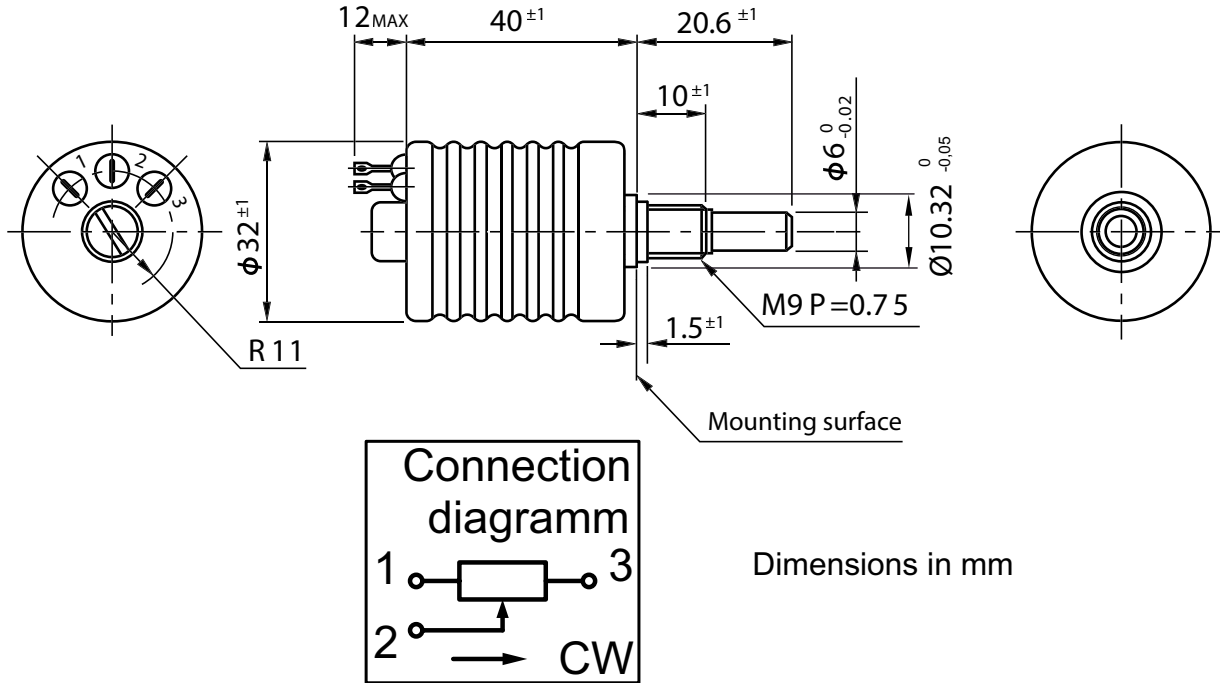
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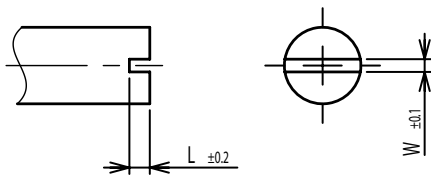
Series OFH

Drawing

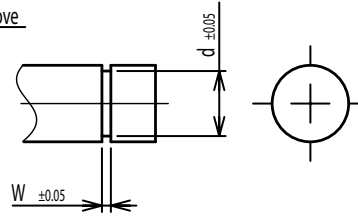


On Request: Special machining on shaft

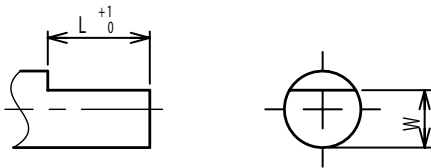
Slot



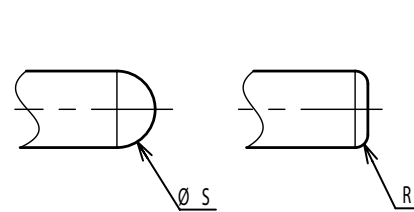
Groove



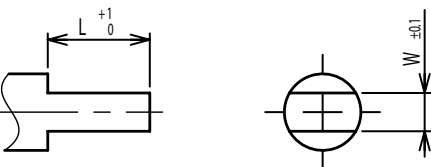
Flat



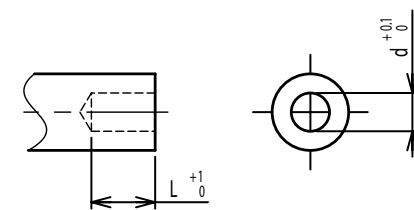
Round top



Double side flat



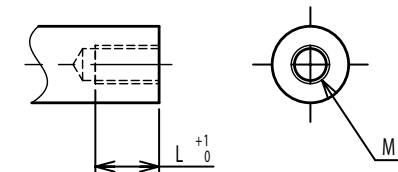
Counterbore hole



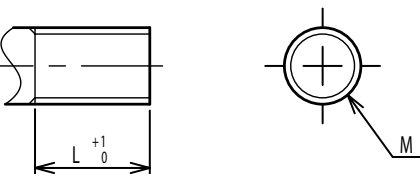
Step



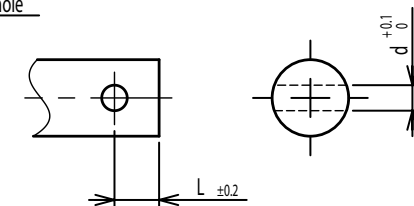
Counterbore screw hole



Screw Thread



Pin hole



Knurled(Parallel)



Screw thread inside hole

