

Data Sheet for Precision Potentiometer

Singleturn Wirewound Potentiometer

Series MUP



The MUP potentiometers in 22 mm housing are suitable for applications in which a compact sensor with good quality and reasonable price is important

- Economical and universal potentiometer
- Compact with only 8.6 mm housing depth
- With mechanical end stop (320° / 270°)
- A potentiometer with many options

Models with electrical rotation angle of 320° (MUP1300/1350) and 270° (MUP1307) are available.

Electrical Data	MUP1300	MUP1350	MUP1307
Effective electrical angle of rotation 1.)		320° ±5°	270° ±5°
Total resistance 1.)		0,1..10 kOhm	
Resistance tolerance	±10%	±5%	±10%
Independent linearity (best straight line) 1.)	±1%	±0,5%	±1%
Theoretical resolution	Depends on resistance value		
Rotational noise (ENR) 1.) (Method C)		100 Ohm	
Max. / recommended wiper current 1.)		34 mA / 1 µA	
Power rating @ 70°C (0W @ 105°C)		1,5 W	
Insulation Resistance 1.)		1000 MOhm @ 500 VDC	

Mechanical Data, Environmental Conditions, Miscellaneous	MUP1300	MUP1350	MUP1307
Mechanical angle of rotation		320° +10° with stop	270° +10° with stop
Lifetime (90% el. eff. angle half sine) 2.)		400.000 rotations	
Max. operational speed		10 rev. / min.	
Bearing		Sleeve bearing	
Operational torque @ ambient temperature 1.) 2.)		3 Nmm	
End stop torque 1.) 2.)		60 Ncm	
Operating temperature range		-30..+105°C	
Storage temperature range		-30..+105°C	
Protection grade (IEC 60529)		IP40	
Protection option D shaft sealing (IEC 60529)		IP65 optional	
Housing diameter		22 mm	
Housing depth		8,6 mm	
Shaft diameter		6 mm	
Shaft type		Solid shaft	

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Mechanical Data, Environmental Conditions, Miscellaneous	MUP1300	MUP1350	MUP1307
Connection type		Gold plated soldering lugs	
Connection position		Radial	
Sensor mounting		Bushing	
Mass		25 g	
Fastening parts included in delivery		Nut, toothed washer	
Fastening torque mounting nut		100 Ncm	
Material shaft		Stainless steel Stahl	
Material housing		Reinforced fibreglass PBT	

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

Number of wire turns / resolution							
Resistance value Ohm	100	200	500	1k	2k	5k	10k
Number of wire turns 320° Ø	363	360	479	666	636	829	1105
Number of wire turns 270° Ø				848		1151	1310

Ø Resolution in degree E.g. R5k = $320^\circ / 829 = 0,386^\circ$ per winding

Mounting Note: Soldering temperature max. 360°C, soldering time max. 5 s, soldering tip diameter max. 3 mm

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Order code									
Description									
Selection: standard=black/bold, possible options=grey/cursive									
Series	MUP								
Angle of rotation with mecha. stop: 320° 270°		1300 1307 1350					W10% W10% W5%	L1% L1% L0,5%	
Resistance value / option tandem: Option 100 Ohm Option 200 Ohm Option 500 Ohm 1 kOhm Option 2 kOhm 5 kOhm 10 kOhm			<i>Tandem</i> R100 /100 R200 /200 R500 /500 R1k /1k R2k /2k R5K /5K R10K /10K						
Option rear shaft: Standard Ø3,00 x 10 mm Shaft length in mm Shaft diameter in mm (≤3,00 mm)					RA RAxx,xx RADMx,xx				
Resistance tolerance: ±10% ±5%						see above			
Independent linearity: ±1% ±0,5%							see above		
Front shaft: Standard Ø6,00 x 20 mm Option Shaft length in mm Option Shaft diameter in mm (≤6,00 mm)								- Ax,xx DMx,xx	
Option center tap:									CT
Option screwdriver slot:									B
Shaft sealing: Standard is without sealing Option D with shaft sealing									- D

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

For Example: Multi ganged potentiometers, sealed housing case, 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.

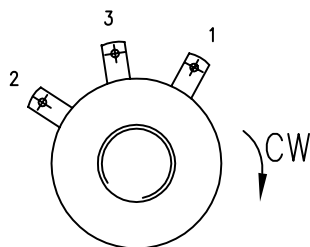
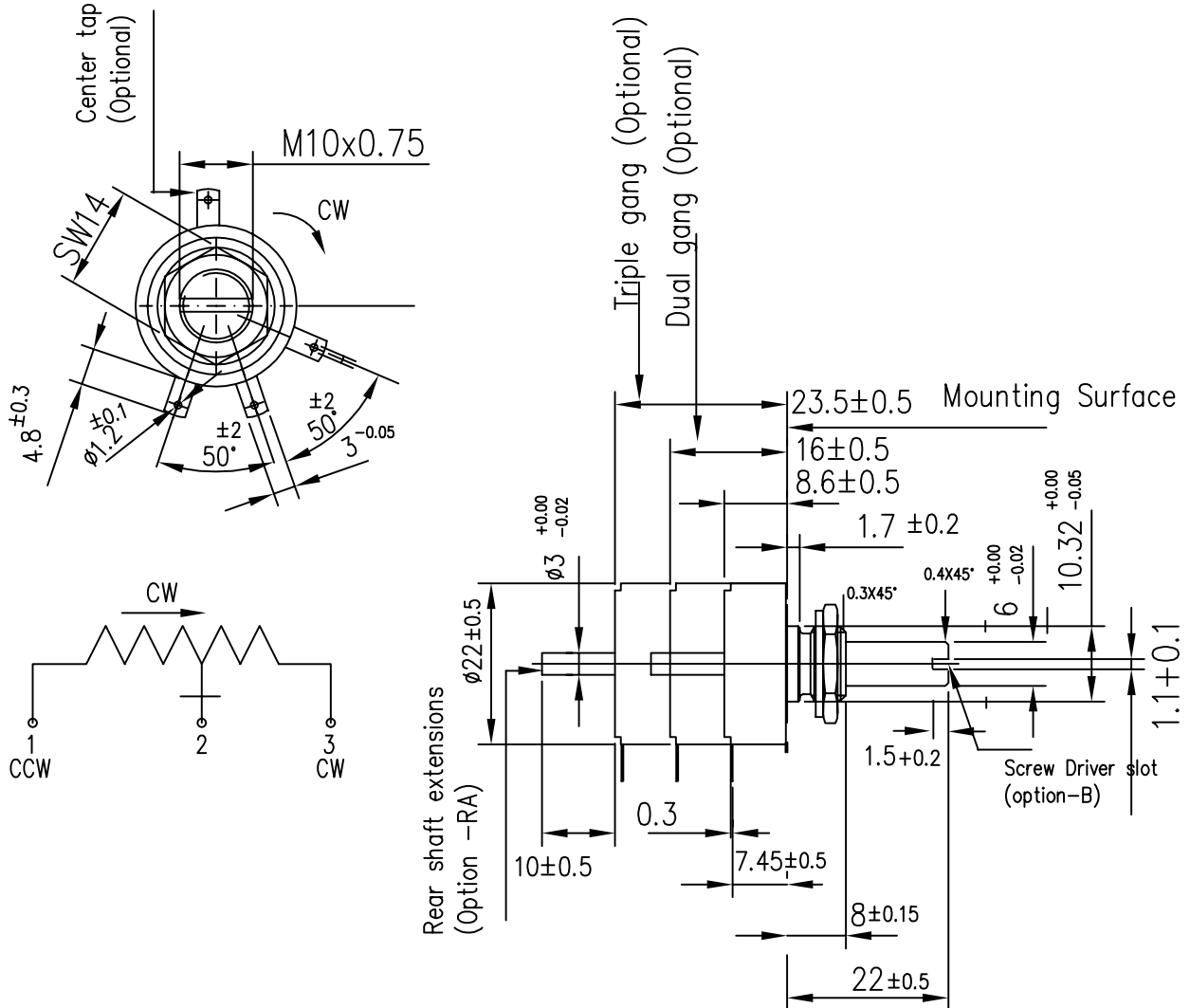
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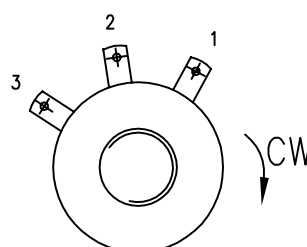
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Drawing



MUP1300/MUP1350
320°



MUP1307 270°

Dimension in mm