

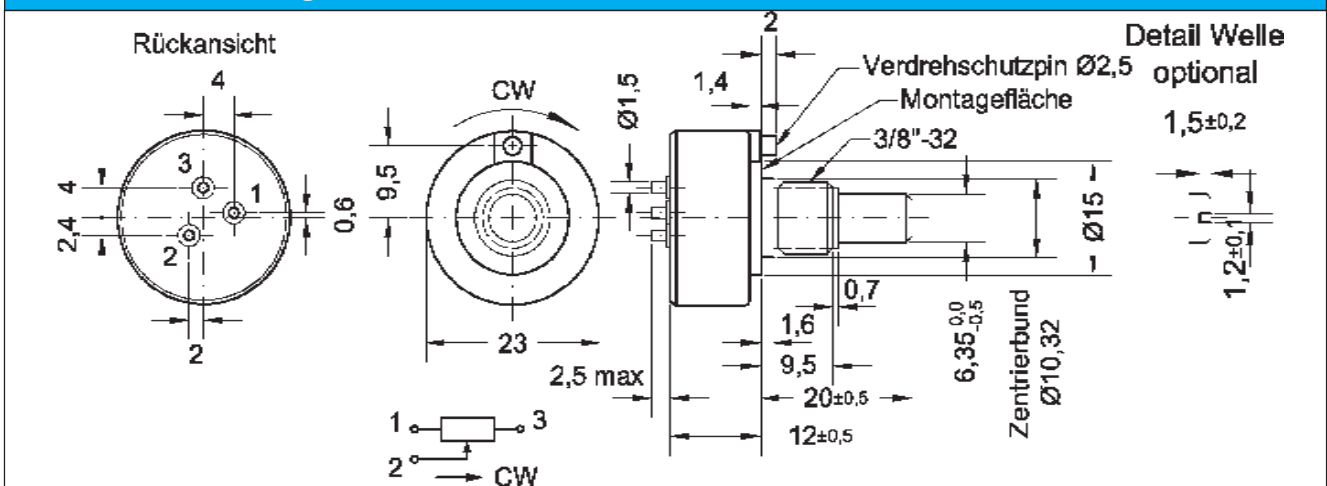
## Single-Turn, Conductive Plastic Potentiometer Series MUP190 / MUP191

- Body diameter 22 mm ((7/8"))
- Brass bushing, stainless steel shaft
- With or without mechanical stop
- Linearity tolerance  $\pm 2\%$  ( $\pm 1\%$ )
- Life expectancy 2 million turns

The MUP190/191 are reliable and rugged precision potentiometers. Their long life and various options make them suitable for a wide range of industrial applications. Preference types from stock.



### Dimensional Drawing



Electrical Specifications	MUP190	MUP191
Technology	Conductive plastic	
Electrical angle	340° $\pm 4^\circ$	320° $\pm 4^\circ$ (270° $\pm 5^\circ$ )
Resistance value	1..100 kOhms	
Resistance tolerance	$\pm 20\%$ ( $\pm 10\%$ opt.)	
Linearity tolerance	$\pm 2\%$ ( $\pm 1\%$ opt.)	
Output smoothness acc. MIL-R-39023	< 0,2%	
Min. voltage	< 0,5%	
Power at +70°C (0W at 105°C)	1 W	
Wiper current	100 $\mu\text{A}$ max. / 1 $\mu\text{A}$ recommended	
Insulation resistance	1000 MOhm at 500 VDC	

Mechanical Specifications	MUP190	MUP191
Mechanical angle	360° without stop	330° $\pm 5^\circ$ with stop (280° $\pm 5^\circ$ )
Max. rotational speed	100 rpm	
Life expectancy (turns)	2 x 10 <sup>6</sup>	
Bearing	sleeve bearing	
Max. running torque	0,25 Ncm	
Stopper strength	/	35 Ncm
Max. torque for fastening the mounting nut	100 Ncm	

# Single-Turn, Conductive Plastic Potentiometer Series MUP190 / MUP191

Environmental Specifications and Materials	
Housing Material	engineered plastic
Shaft	stainless steel
Terminals	gold-plated brass pins
Mounting Material (included in delivery)	hex-nut, inner teeth washer
Operating Temperature	-35°C .. +105°C
Protection grade of the shaf (optional)	IP 65
Weigth	20 g

Options and Order Descriptions										
Description	Options									
	Series									
Conductive plastic without stop	<u>MUP190</u>									
Conductive plastic with stop	<u>MUP191</u>									
Resistance value 1 kOhm		<u>R1K</u>								
Resistance value 2 kOhm		R2K								
Resistance value 5 kOhm		<u>R5K</u>								
Resistance value 10 kOhm		R10K								
Resistance value 20 kOhm		R20K								
Resistance value 50 kOhm		R50K								
Resistance value 100 kOhm		R100K								
Resistance tolerance ±10 %			W10%							
Resistance tolerance ±20 %			<u>W20%</u>							
Linearity tolerance ±2 %				<u>L2%</u>						
Linearity tolerance ±1 %				L1%						
Special shaft length xx (optional)					Axx					
screw driver slot (optional)						B				
Sealing ring in the bushing							D			
Elec. anlge 340° (standard MUP190)								<u>340</u>		
Elec. angle 320° (standard MUP191)								<u>320</u>		
Elec. angle xx (optional)								xx		
Example ordering description (standard)	<u>MUP190</u>	<u>R1K</u>	<u>W20%</u>	<u>L2%</u>						
Example ordering description (special version)	<u>MUP191</u>	<u>R100K</u>	<u>W10%</u>	<u>L1%</u>	A15	B	D	90		

Example\* (standard): MUP190 resistance value 1 kOhm, resistance tolerance 20%, linearity tolerance 2%  
 Example\*\* (special): MUP191 resistance value 100 kOhm, resistance tolerance 10%, linearity tolerance 1%,  
 shaft length 15 mm, screw driver slot, sealing ring, elec. angle 90°

**Please ask for more options**

Preference types underlined (available from stock)

A wide range of options on request for a reasonable prices already for small quantities
O-ring on shaft, special shaft (length, shape, flat, slot, etc.), special bushing, special electrical angles, center tap, assembling of cables and connectors.

Please note
All the specifications and informations in this datasheet can not consider the special demands that are caused by the application. Because of this, they are no general description of the properties of the product. Please consider also our detail specifications.

