

Geared Potentiometers

Series GP



Geared potentiometers of this series supply an analogue output signal proportional to the number of turns.

The potentiometer section is made up of standard elements from series P 6500 as shown in this catalogue. The gear mechanism comprises precision gear wheels, and the shaft is mounted in double ball bearings.

The gear mechanism and the potentiometer are mounted and pinned in the factory for minimum backlash. The shaft side of the gear mechanism case is provided with three M4 threaded holes offset by 120° for mechanical fixture of the transducer.

Special features

- reduction gearing
3:1, 5:1, 10:1
- very good linearity
0.1 % (standard)
- very long life typically
 100×10^6 movements

Environmental Data		
Temperature range	-40...+100	°C
Vibration	5...2000 $A_{max} = 0.75$ $a_{max} = 20$	Hz mm g
Shock	50 11	g ms
Life	100×10^6	movem.
Protection class	IP 40 (DIN 400 50 / IEC 529)	

Recommended accessories

Fork coupling Z 104 G 6
(backlash free),
Fork coupling Z 105 G 6
(backlash-free),
Process-controlled indicators
MAP... with display,
Signal conditioner MUP... /
MUK ... for standardized out-
put signals

Order designations		
Type	Art.no.	Ratio
GP10 P6501 A502	000893	Reduction 10:1
GP5 P6501 A502	000892	Reduction 5:1
GP3 P6501 A502	000891	Reduction 3:1

Important

All the values given in this data sheet for linearity, lifetime and temperature coefficient in the voltage dividing mode are quoted for the device operating with the wiper voltage driving on operational amplifier working as a voltage follower, where virtually no load is applied to the wiper ($I_e \leq 1 \mu A$).