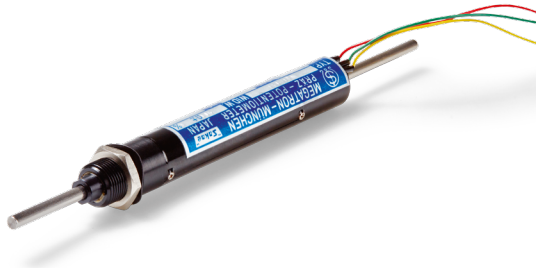


Data Sheet for Linear Sensors

Oil filled Potentiometric Linear Transducer (Wirewound)

Series WGO10



The series WGO10 are hermetically sealed linear potentiometers (wirewound) with oil filling. The transducer is largely insensitive to environmental influences and therefore ideally suited for use under extreme environmental conditions.

Electrical Data	WGO1030	WGO1050	WGO10100
Effective electrical travel 1.)	30 ±1 mm	50 ±1 mm	100 ±1 mm
Total resistance 1.)	100 Ohm..5 kOhm	100 Ohm..10 kOhm	100 Ohm..20 kOhm
Resistance tolerance	±5% (±3%)		
Independent linearity (best straight line) 1.)	±1% (±0,5%)	±0,7% (±0,4%)	±0,5% (±0,25%)
Theoretical resolution 1.)	Depends on resistance value (see table)		
Backlash (Hysteresis) 1.)	≤ 0,1 mm		
Rotational noise (ENR) (IEC60393 Method C)	100 Ohm		
Max. / recommended wiper current 1.)	1 mA (@ 40°C, 1 min in case of failure) / 2 µA		
Power rating @ 40°C (0W @ 55°C)	≤ 0,5 W	≤ 0,75 W	≤ 1 W
Insulation voltage1.)	500 VAC, 1min		
Isolation resistance 1.)	100 MOhm @ 500 VDC		

Mechanical Data, Environmental Conditions, Miscellaneous	WGO1030	WGO1050	WGO10100
Mechanical stroke 1.)	ca. 32 mm	ca. 52 mm	ca. 102 mm
Lifetime (90% effective electrical travel) 2.)	1 Mio. movements		
Max. operational speed	< 2 m/s		
Operational force @ RT 1.) 2.)	< 6 N		
End stop force in case of failure	< 90 N		
Operational temperature	-30..+60°C		
Storage temperature	-30..+60°C		
Protection grade (IEC60529)	IP55		
Vibration (IEC 68-2-6, Test Fc)	15 g (10..2000 Hz, 0,75mm, 12h)		
Shock (IEC 68-2-27, Test Ea)	50 g, halfsine, 11 ms (18x)		
Housing length	85 ±1 mm	105 ±1 mm	155 ±1 mm
Mass	ca. 40 g	ca. 50 g	ca. 50 g
Mounting parts (included in delivery)	1 x washer, 1 x nut		
Material housing	Aluminium		
Material push rod	Stainless steel		
Electrical connection	Single strands Ø0,8 mm x 150 mm		

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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Series WGO10

Number of wire turns / resolution

Resistance Ohm	100	200	500	1k	2k	5k	10k	20k
Number of wire turns WGO1030	220	280	380	470	590	830	1000	-
Number of wire turns WGO1050	430	390	530	660	830	1150	1450	1800
Number of wire turns WGO10100	710	870	830	1050	1300	1800	2300	2900

Order Code

Description	Selection: standard=black/bold, possible options=grey/cursive				
Series:	WGO10				
Effective electrical travel:					
30 mm		30			L1% (L0,5%)
50 mm		50			L0,7% (L0,4%)
100 mm		100			L0,5% (L0,25%)
Total resistance:					
<i>Option 100 Ohm</i>				<i>R100</i>	
<i>Option 200 Ohm</i>				<i>R200</i>	
<i>Option 500 Ohm</i>				<i>R500</i>	
1 kOhm				R1k	
<i>Option 2 kOhm</i>				<i>R2k</i>	
5 kOhm				R5k	
10 kOhm				R10k	
<i>Option 20 kOhm (nicht WGO1030)</i>				<i>R20k</i>	
Resistance tolerance:					
±5%					W5%
<i>Option ±3 kOhm</i>					<i>W3%</i>
Independent linearity:					
Standard depends on travel					see above
<i>Option depends on travel</i>					<i>see above</i>

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

For example:

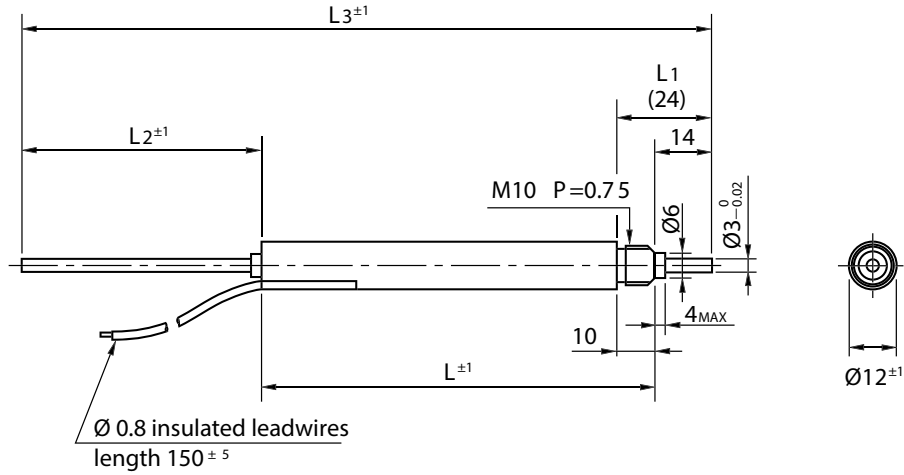
- Assembled leads and cables with / without connector
- Probe, special axis length and much more

Data Sheet for Linear Sensors

Oil filled Potentiometric Linear Transducer (Wirewound)

Series WGO10

Drawing



Connection diagram

Model .	L	L ₁	L ₂	L ₃
WGO1030	85	24	46	145
WGO1050	105	24	66	185
WGO10100	155	24	116	285

