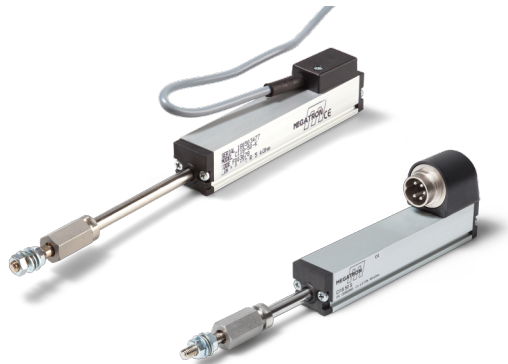


Data Sheet for Linear Sensors

Potentiometric Linear Transducer (Conductive Plastic)

Series CI18



The CI18 linear transducers are used in industrial applications which requiring a compact sensor with ball joints, long lifespan, high accuracy and a front guided push rod in measuring lengths from 25 to 150 mm.

- In a compact industrial design
- Front guided push rod and ball joints
- Long lifespan and accuracy
- Linear potentiometer with almost infinite resolution
- Measuring lengths from 25 mm to 150 mm

The CI18 sensor is available with plug or cable connection.

Electrical Data	CI18 25	CI18 50	CI18 75	CI18 100	CI18 125	CI18 150
Effective electrical travel 1.)	25 +1 mm	50 +1 mm	75 +1 mm	100 +1 mm	125 +1 mm	150 +1 mm
Total electrical travel 1.)	26 ±1 mm	51 ±1 mm	76 ±1 mm	101 ±1 mm	126 ±1 mm	151 ±1 mm
Total resistance 1.)	1 kOhm	5 kOhm				
Resistance tolerance	±20 %					
Independent linearity (best straight line) 1.)	±0.2 %	±0.1 %			±0.05 %	
Theoretical resolution 1.)	Almost infinite					
Backlash (Hysteresis) 1.)	≤ 0.02 mm					
Max. / recommended wiper current1.)	1 mA (@40 °C, 1 min in case of failure) / 2 µA					
Power rating @40 °C (0 W @120 °C)	≤ 0.6 W	≤ 1.2 W	≤ 1.8 W	≤ 2.5 W	≤ 3 W	≤ 3.6 W
Isolation voltage 1.)	< 100 µA@500 VAC, 1bar, 2s					
Isolation resistance 1.)	100 MOhm@500 VDC, 1bar, 2s					

Mechanical Data, Environmental Conditions, Miscellaneous	CI18 25	CI18 50	CI18 75	CI18 100	CI18 125	CI18 150
Mechanical stroke 1.)	30 mm	55 mm	80 mm	105 mm	130 mm	155 mm
Lifetime (90 % effective electrical travel) 2.)	> 25 million meters or 100 million movements (the smaller value applies)					
Max. operational speed	< 5 m/s					
Operational force @ RT 1.) 2.)	< 1.2 N					
Operational temperature	-30..+100 °C					
Storage temperature	-50..+120 °C					
Protection grade (IEC60529)	IP40					
Vibration (IEC 68-2-6, Test Fc)	20 g (5..2000 Hz, 0.75 mm)					
Shock (IEC 68-2-27, Test Ea)	50 g, halvesine, 11 ms (18x)					
Housing length	74.5 ±1	99.5 ±1	124.5 ±1	149.5 ±1	174.5 ±1	199.5 ±1
Mass (connector version)	ca. 72 g	ca. 88 g	ca. 103 g	ca. 119 g	ca. 134 g	ca. 150 g
Mounting parts (included in delivery)	1 set clamps (4 pc.)					
Material housing	Aluminium / plastic					
Material pushrod	Stainless steel AISI 303					
Connection type	Round cable 3-pole 1 m, 5-pole connector DIN 43322					
Ball joint (included in delivery)	1 pc. WKM8 (not mounted)					

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

Data Sheet for Linear Sensors

Potentiometric Linear Transducer (Conductive Plastic)

Series C118

Order Code

Description	Selection: standard=black/bold, possible options=grey/cursive				
Series:	C118				
Effective electrical travel:					
25 mm	25		R1k		L0,2%
50 mm	50		R5k		L0,1%
75 mm	75		R5k		L0,1%
100 mm	100		R5k		L0,1%
125 mm	125		R5k		L0,05%
150 mm	150		R5k		L0,05%
Electrical connection:					
3-pole cable 1 m			K		
5-pole connector			S		
Total resistance:					
Standard depends on electrical travel				see above	
Resistance tolerance :					
±20 %				W20%	
Independent linearity:					
Standard depends on electrical travel					see above

Accessory (not included in delivery):

- Mating connector (STEM16) #110906: M16 thread, 5-pole, IP67, straight, shielded (STE M16 5POL IP67 G S)
- Mating connector (STEM16) #114462: M16 thread, 5-pole, IP67, angled, shielded (STE M16 5POL IP67 W S)
- Mating connector with cable (STKM16) #127664: M16 thread, 5-pole, IP67, straight, shielded, 2 m (STK M16 5POL IP67 G GS 2M AWG24)
- Mating connector with cable (STKM16) #127665: M16 thread, 5-pole, IP67, angled, shielded, 2 m (STK M16 5POL IP67 W GS 2M AWG24)

More connectors with and without cable on request. Take a look at data sheet STEM16 for connector without cable or STKM16 for connector with cable.

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

Note: When calibrating the linear transducer, be careful to set the stroke so that the output does not drop below 1% or rise beyond 99% of the supply voltage.

