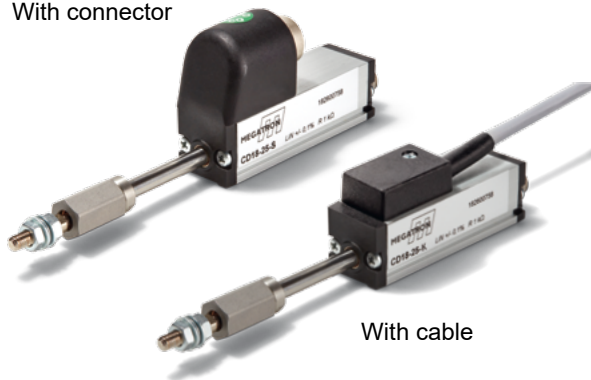


Data Sheet for Linear Sensors

Potentiometric Linear Transducer (Conductive Plastic)

Series CD18

With connector



With cable

The CD18 linear potentiometers have a guided push rod on both sides and are available in stroke lengths from 25 to 150 mm. The sensors are fitted with a coupling (WKM8 1 piece supplied) to facilitate mounting and to compensate for lateral misalignment. A set of mounting clamps is supplied.

Electrical Data	CD18 25	CD18 50	CD18 75	CD18 100	CD18 150
Effective electrical travel 1.)	25 +3 mm	50 +3 mm	75 +3 mm	100 +3 mm	150 +3 mm
Total electrical travel 1.)	26 ±1 mm	51 ±1 mm	76 ±1 mm	101 ±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	≤ 3.6 W
Isolation voltage 1.)	< 100 µA@500 VAC, 1bar, 2s				
Isolation resistance 1.)	100 MOhm@500 VDC, 1bar, 2s				

Mechanical Data, Environmental Conditions, Miscellaneous	CD18 25	CD18 50	CD18 75	CD18 100	CD18 150
Mechanical stroke 1.)	30 mm	55 mm	80 mm	105 mm	155 mm
Lifetime (90 % effective electrical travel) 2.)	> 25 million meters or 100 million movements (the smaller value applies)				
Max. operational speed	< 10 m/s				
Operational force @ RT 1.) 2.)	< 0.3 N				
Operational temperature	-30 °C up to +100 °C				
Storage temperature	-50 °C up to +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, halfsine, 11 ms (18x)				
Housing length	63 ±1	88 ±1	113 ±1	138 ±1	188 ±1
Mass	ca. 83 g	ca. 102 g	ca.121 g	ca. 140 g	ca. 178 g
Mounting parts (included in delivery)	4 x mounting clamps				
Material housing	Aluminium				
Material pushrod	Stainless steel				
Connection type	Round cable 3-pole 1 m, plug DIN 43322				

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 CD18

Order Code

Description	Selection: standard=black/bold , possible <i>options=grey/italic</i>		
Series:	CD18		
Effective electrical travel:			
25 mm		25	
50 mm		50	
75 mm		75	
100 mm		100	
150 mm		150	
Electrical connection:			
Plug			S
Round cable 1 m			K
<i>Option customer-specific cable length in m</i>			<i>Kxx</i>

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

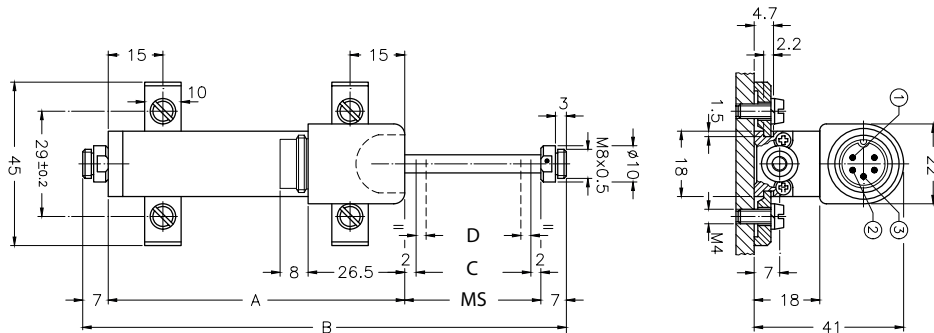
For example:

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

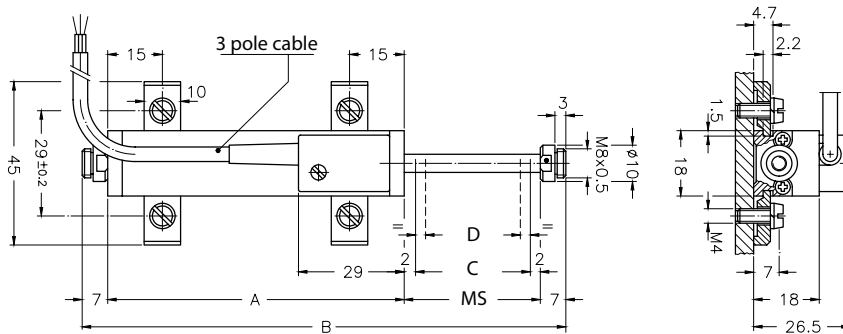
Note: When calibrating the linear transducer, be careful to set the stroke so that the output does not drop below 1 % or rise beyond 99 % of the supply voltage.

Drawing

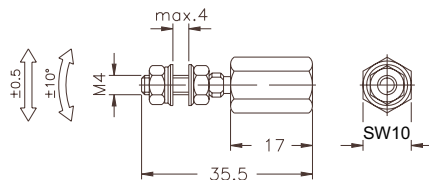
Connector Version



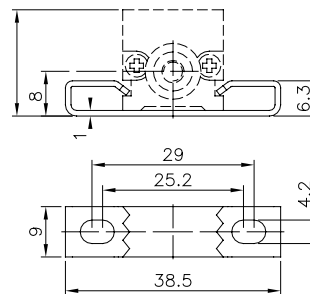
Cable Version



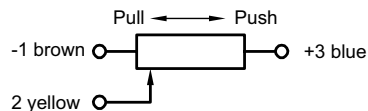
Coupling



Mounting clamps



Connection diagram



Dimensions in mm

	CD18 25	CD18 50	CD18 75	CD18 100	CD18 150
C	25 +3	50 +3	75 +3	100 +3	150 +3
D	26 ±1	51 ±1	76 ±1	101 ±1	151 ±1
MS	30	55	80	105	155
A	63 ±1	88 ±1	113 ±1	138 ±1	188 ±1
B	107 ±1	157 ±1	207 ±1	257 ±1	357 ±1