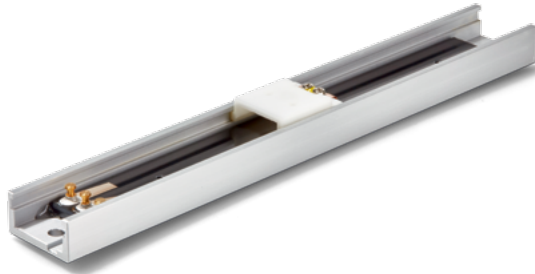


Data Sheet for Linear Sensors



Potentiometric Linear Transducer (Conductive Plastic)

Series CFL



The CFL series has a high-resolution conductive plastic resistance element with cursor for measuring strokes 100..1000 mm.

Electrical Data	CFL 100	CFL 200	CFL 300	CFL 400	CFL 500	CFL 700	CFL1000
Effective electrical travel 1.)	100 ±1	200 ±1	300 ±1	400 ±1	500 ±1	700 ±1	1000 ±1
Total resistance 1.)	2..10 kOhm		5..20 kOhm	5..100 kOhm		10..200 kOhm	10..500 kOhm
Resistance tolerance	±20% (±10%)						
Independent linearity (best straight line) 1.)	±0.5% (±0,1%)						
Theoretical resolution 1.)	Almost infinite						
Backlash (Hysteresis) 1.)	≤ 0.1 mm						
Max. / recommended wiper current1.)	1 mA (@ 40°C, 1 min in case of failure) / 2 µA						
Power rating @ 70°C (0W @ 105°C)	≤ 1 W	≤ 2 W	≤ 2.5 W	≤ 3 W	≤ 4 W	≤ 5 W	≤ 6 W
Isolation voltage 1.)	500 VAC, 1min						
Isolation resistance 1.)	1000 MOhm @ 500 VDC						

Mechanical Data, Environmental Conditions, Miscellaneous	CFL 100	CFL 200	CFL 300	CFL 400	CFL 500	CFL 700	CFL1000
Mechanical stroke 1.) in mm	ca. 103	ca. 203	ca. 303	ca. 403	ca. 505	ca. 705	ca. 1005
Lifetime (90% effective electrical travel) 2.)	20 Mio. movements						
Max. operational speed	< 5 m/s						
Operational force @ RT 1.) 2.)	< 0.2 N						
Operational temperature	-30 °C up to +105 °C						
Storage temperature	-30 °C up to +105 °C						
Protection grade (IEC60529)	IP40						
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	150 ±1	250 ±1	350 ±1	450 ±1	550 ±1	750 ±1	1050 ±1
Mass	50 g	70 g	100 g	130 g	160 g	230 g	300 g
Mounting parts (included in delivery)	None						
Material housing	Aluminium						
Electrical connection	Soldering pins						

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 CFL

Order Code

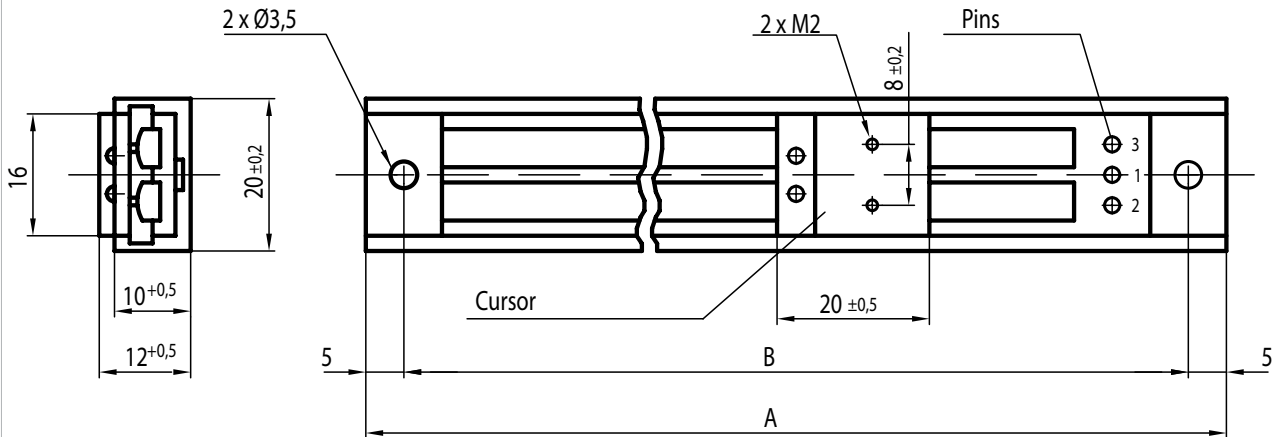
Description	Selection: standard=black/bold , possible <i>options=grey/italic</i>				
Series:	CFL				
Effective electrical travel:					
100 mm		100			
200 mm		200			
300 mm		300			
400 mm		400			
500 mm		500			
700 mm		700			
1000 mm		1000			
Total resistance:					
<i>Option 2 kOhm (only for 100 mm and 200 mm)</i>			<i>R2K</i>		
<i>Option 5 kOhm (not for 700 mm and 1000 mm)</i>			<i>R5K</i>		
10 kOhm			R10K		
<i>Option 20 kOhm (not for 100 mm and 200 mm)</i>			<i>R20K</i>		
<i>Option 50 kOhm (only for 400 mm up to 1000 mm)</i>			<i>R50K</i>		
<i>Option 100 kOhm (only for 400 mm up to 1000 mm)</i>			<i>R100K</i>		
<i>Option 200 kOhm (only for 700 mm and 1000 mm)</i>			<i>R200K</i>		
<i>Option 500 kOhm (only for 1000 mm)</i>			<i>R500K</i>		
Resistance tolerance:					
±20%				W20%	
<i>Option ±10%</i>				<i>W10%</i>	
Independent linearity:					
±0,5%					L0,5%
<i>Option ±0,1%</i>					<i>L0,1%</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 and much more

Drawing



	CFL 100	CFL 200	CFL 300	CFL 400	CFL 500	CFL 700	CFL1000
A	150 ±1	250 ±1	350 ±1	450 ±1	550 ±1	750 ±1	1050 ±1
B	140 ±0,5	240 ±0,5	340 ±0,5	440 ±0,5	540 ±0,5	740 ±0,5	1040 ±0,5

Dimensions in mm

Connection diagram

