

Data Sheet for Linear Sensors

Potentiometric Linear Transducer (Conductive Plastic)

Series CFL



The CFL series is equipped with a high resolution conductive plastic resistor element with cursor. It is suitable for measuring lengths of 100...500 mm.

Electrical Data	CFL 100	CFL 200	CFL 300	CFL 400	CFL 500
Effective electrical travel 1.)	100 ±1	200 ±1	300 ±1	400 ±1	500 ±1
Total resistance 1.)	2..10 kOhm		5..20 kOhm	5..100 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 current 1.)	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
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
Mechanical stroke 1.) in mm	ca. 103	ca. 203	ca. 303	ca. 403	ca. 505
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..+105°C				
Storage temperature	-30..+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
Mass	50 g	70 g	100 g	130 g	160 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

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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			
Total resistance:					
Option 2 kOhm (only for 100 mm and 200 mm)			<i>R2K</i>		
Option 5 kOhm			<i>R5K</i>		
10 kOhm			R10K		
Option 20 kOhm (not for 100 mm and 200 mm)			<i>R20K</i>		
Option 50 kOhm (only for 400 mm and 500 mm)			<i>R50K</i>		
Option 100 kOhm (only for 400 mm and 500 mm)			<i>R100K</i>		
Resistance tolerance:					
±20%				W20%	
Option ±10%				<i>W10%</i>	
Independent linearity:					
±0.5%					L0,5%
Option ±0.1%					<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

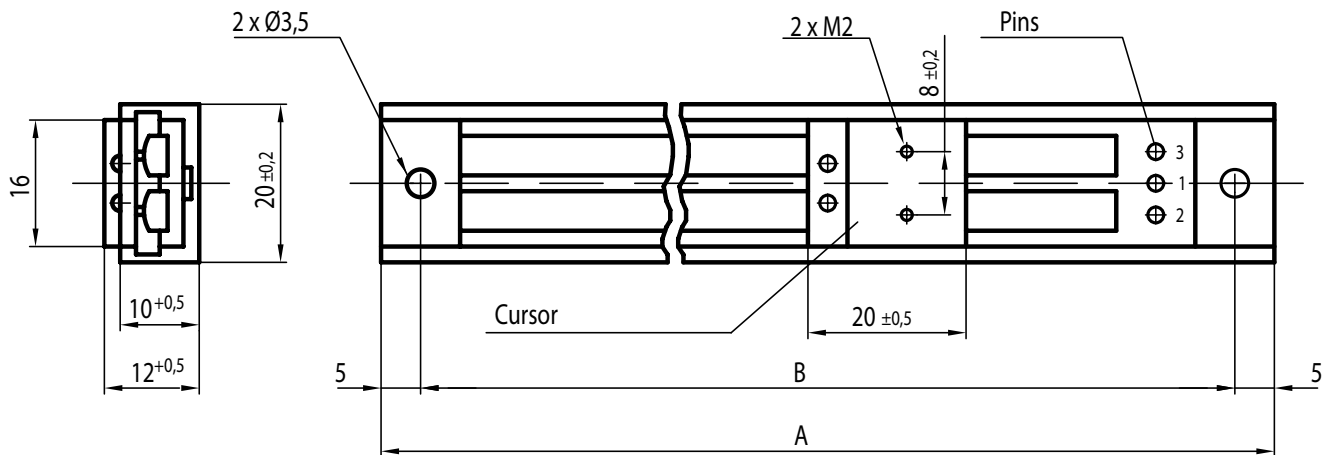
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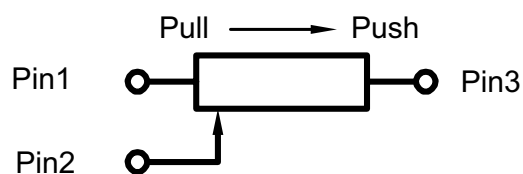
Series CFL

Drawing



	CFL 100	CFL 200	CFL 300	CFL 400	CFL 500
A	150 ± 1	250 ± 1	350 ± 1	450 ± 1	550 ± 1
B	140 ± 0,5	240 ± 0,5	340 ± 0,5	440 ± 0,5	540 ± 0,5

Connection diagram



Dimensions in mm



TDS Precision Products GmbH
Industriestrasse 1a
CH-8157 Dielsdorf

T + 41 44 885 30 80
info@tds-pp.com
www.tds-pp.com