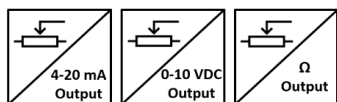
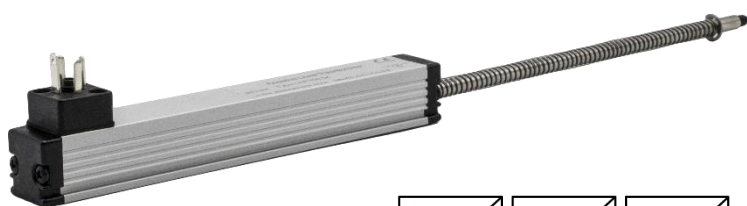


LINEAR POSITION TRANSDUCERS

“Spring System, Compact Body”

LFR



GENERAL FEATURES

- Spring system
- Potentiometric measurement
- Potentiometric, 4-20 mA or 0-10V analog output options
- Body mouting or front nut mounting
- Standard IP40, optional IP65 protection
- Optionally cable or DIN 43650-C socket connection
- Measurement lengths between 10 mm and 150 mm
- Long life up to 100 million movements
- High accuracy
- Operating speed up to 5 m/s

LFR series is the industry proven system on both actuator shaft and spring. There are 2 types, which are mounting from the body and mounting with a nut from the front.

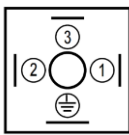
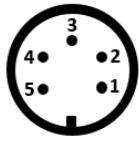
They work as ABSOLUTE because they are measuring with the potentiometric principle, that is, they do not lose their position in case of power off. Potentiometric, 4-20 mA (optional 0-20 mA) or 0-10V analog output options are available.

Because of their linearized conductive plastic resistance alloy and special contacts, they are not affected by wear and operate for a long time with a life cycle of up to 100 million. They are stable by being linear and they measure evenly.

TECHNICAL SPECIFICATIONS

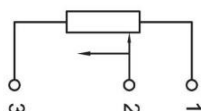
Model	LFR 010	LFR 025	LFR 050	LFR 075	LFR 100	LFR 125	LFR 150
Electrical Stroke (mm)	10	25	50	75	100	125	150
Mechanical Stroke (mm)	12	27	52	77	102	127	152
Independent Linearity	±%1	±%0,5	±%0,4	±%0,25	±%0,2	±%0,2	±%0,2
Repeatability	0.01 mm						
Max Operating Speed	5 m/s						
Resistance Element	Conductive Plastic						
Output Signal	Potentiometric		4-20 mA (opt. 0...20 mA) or 0-10V				
Supply Voltage	42V max.		12...30 VDC				
Resistance	5K, 10K (optional other)		-				
Resistance Tolerance (±%)	20		-				
Resolution	Infinite						
Electrical Connection	DIN 43650-C connector, M16 connector or 3 x 0,14 mm² shielded PVC cable						
Operating Temperature	-30°C...+100°C						
IP Protection Class	LFR: IP40 (optional IP65)		LFR2: IP65				
Life	100 million movements						
Rod Material	Stainless Steel						
Body Material	Aluminum						

ELECTRICAL CONNECTION

SIGNAL	CABLE		
		DIN 43650-C CONN.	M16/5 PIN MALE CONN.
+VDC	Red	Pin 1	Pin 1
Out Signal*	Yellow	Pin 2	Pin 2
-VDC	Black	Pin 3	Pin 3

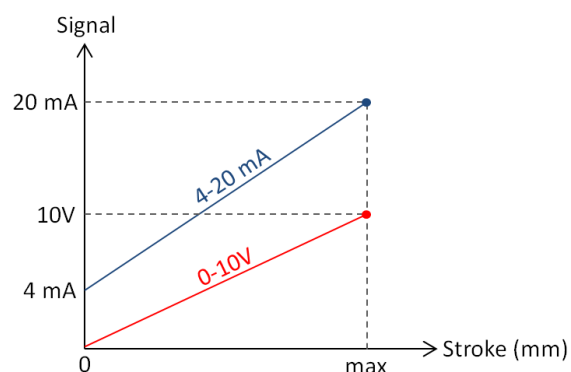
* Output Signal may be potentiometric, 0-10 VDC or 4-20 mA depending on the model (See Product code table).

Note: The GND line of the feed and signal output is common. Therefore it can be connected with 3-wire cable



Potentiometer Connection (Voltage Divider)

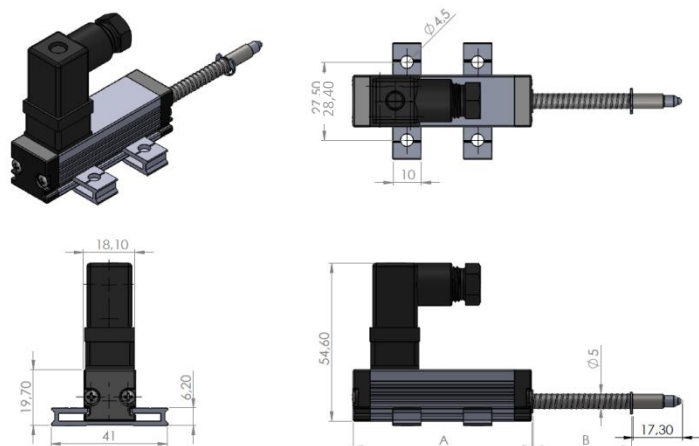
Analog Output Signal Graphic



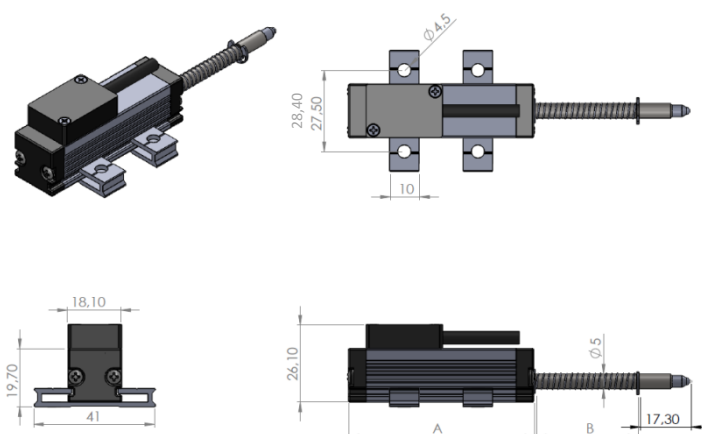
MECHANICAL DIMENSIONS (mm)

➤ LFR SERIES (IP40 or IP65)

MODEL WITH DIN 43650-C SOCKET



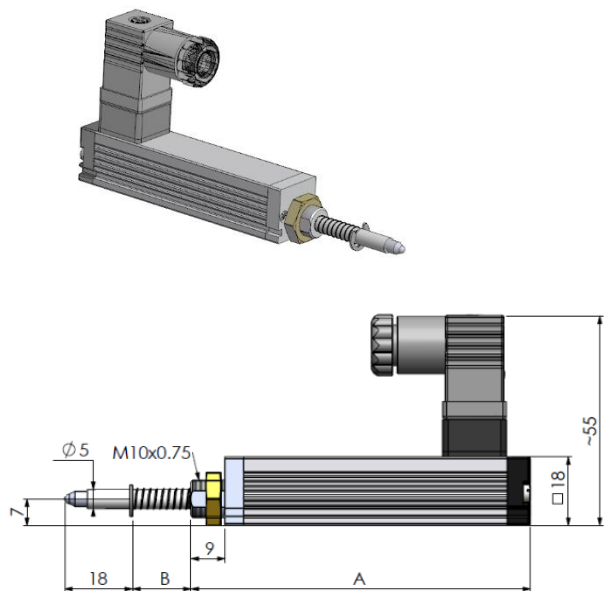
MODEL WITH 3 x 0,14 mm² CABLE



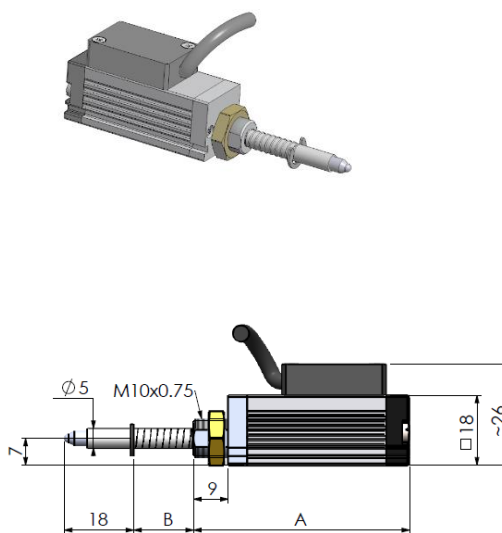
	Stroke (mm)		10	25	50	75	100	125	150
Potentiometric Output (with cable or socket)	A	For IP40	48	63	88	113	138	163	188
		For IP65	58	73	98	123	148	173	198
	B		15,5	34,5	65,5	96,5	127,5	161,5	192,5
0-10 V or 4-20 mA Output (with cable)	A	For IP40	48	63	88	113	138	163	188
		For IP65	58	73	98	123	148	173	198
	B		15,5	34,5	65,5	96,5	127,5	161,5	192,5
0-10 V or 4-20 mA Output (with socket)	A	For IP40	82	97	122	147	172	197	222
		For IP65	92	107	132	157	182	207	232
	B		15,5	34,5	65,5	96,5	127,5	161,5	192,5

➤ LFR 2 SERIES (IP65)

MODEL WITH DIN 43650-C SOCKET



MODEL WITH 3 x 0,14 mm² CABLE



	Strok (mm)		10	25	50	75	100	125	150
	A		56	71	96	121	146	171	196
Potentiometric Output (with cable or socket)	B		19	40	70	103	136	171	206
0-10 V or 4-20 mA Output (with cable)	A		56	71	96	121	146	171	196
	B		19	40	70	103	136	171	206
0-10 V or 4-20 mA Output (with socket)	A		90	105	130	155	180	205	230
	B		19	40	70	103	136	171	206

SAMPLE APPLICATION FIELDS

- Measuring /control technology
- Manufacturing engineering like woodwork machines, riveting machines, packaging machines and welding machines etc.
- Assembly / test devices
- Medical applications
- Building technology

ORDER CODE

Order Code for Analog Output

Model

LFR : Body mounting
LFR2 : Front nut mounting

Output Signal

A: 4-20 mA (*Optional 0-20 mA)
V: 0-10 VDC

Protection

No code: IP40
E065: IP65
*The LFR IP class is standard IP40, optional IP65
*The LFR2 IP class is standard IP65

LFRX	-	XXX	-	X	-	XX	-	XXXX
Measuring Lengths (stroke) Different measuring lengths between 10 mm and 150 mm				Electrical Connection No Code : DIN43650-C connector S80 : M16 5 pin male connector 2M : 2 meters PVC cable (standard) *Optional different cable lengths				

Order Code for Potentiometric Output

Model

LFR : Body mounting
LFR2 : Front nut mounting

Resistance Value

5K: 5K Ω
10K: 10K Ω

Protection

No code: IP40
E065: IP65
*The LFR IP class is standard IP40, optional IP65
*The LFR2 IP class is standard IP65

LFRX	-	XXX	-	XXX	-	XX	-	XXXX
Measuring Lengths (stroke) Different measuring lengths between 10 mm and 150 mm				Electrical Connection No Code : DIN43650-C connector S80 : M16 5 pin male connector 2M : 2 meters PVC cable (standard) *Optional different cable lengths				

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