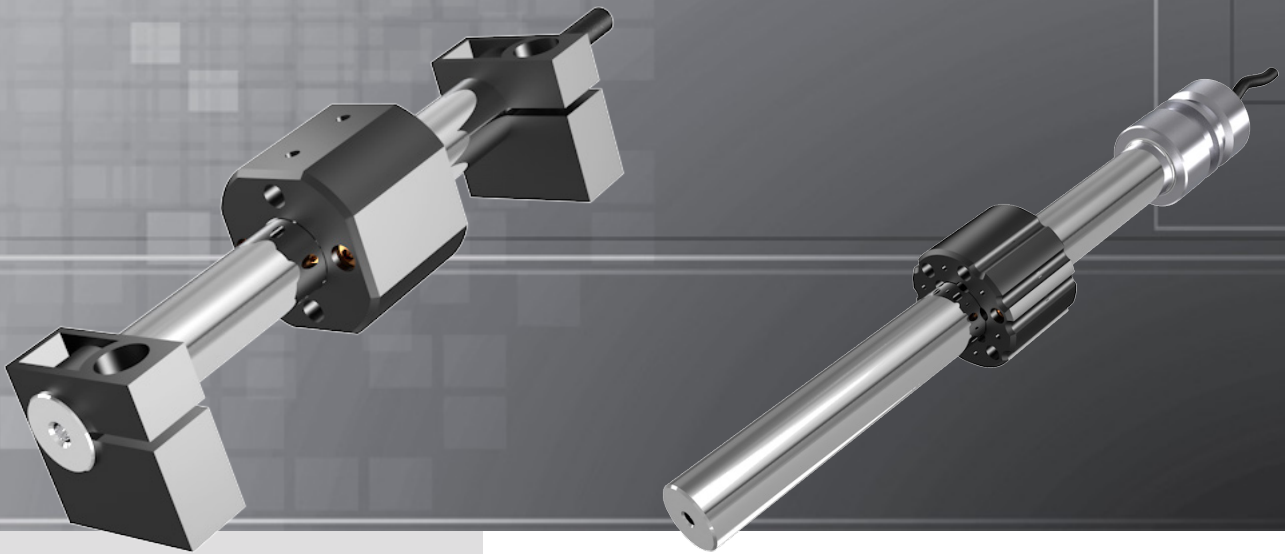


LINEAR POTENTIOMETER



Content:

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Series LME12 and LMI12

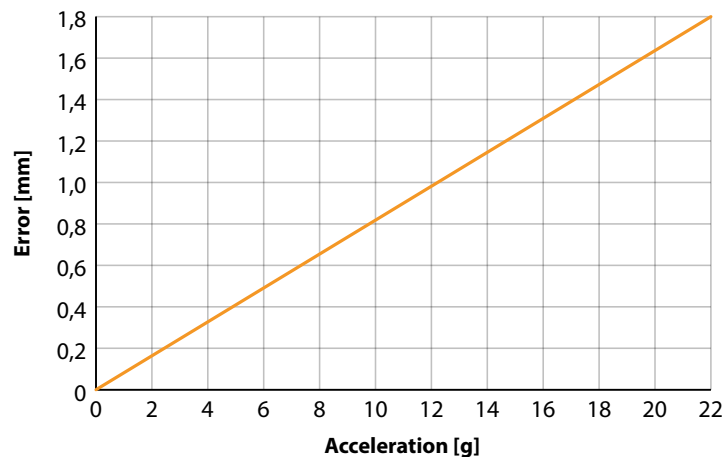
Key-Features:

- Linear displacement transducer with magnetic cursor drag
- Suitable for harsh environment applications (IP67)
- LME12: for pneumatic cylinders up to 20 bar
- LMI12: for hydraulic cylinders up to 250 bar
- Measurement ranges from 50 up to 1000 mm
- Displacement speed ≤ 5 m/s
- Linearity up to ± 0.05 %
- Working temperature $-30...+100$ °C
- Life cycle $>25 \times 10^6$ meter or 100×10^6 operations, whichever is less
- Simple apparatus according to the EN 60079-11 standard

TECHNICAL DATA

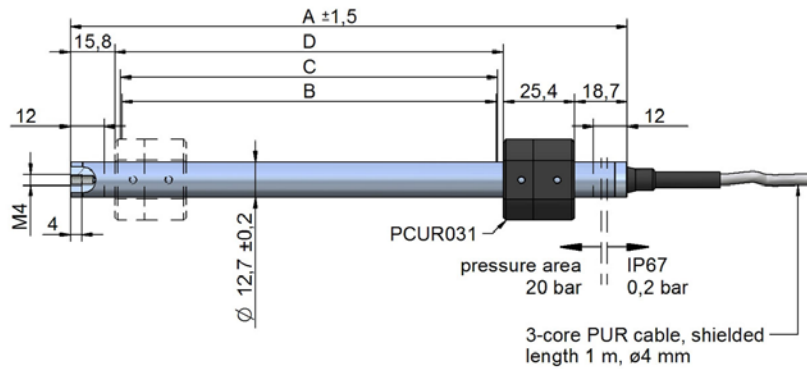
		LME12	LMI12
Measurement range	[mm]	50 / 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 550 / 600 / 650 / 700 / 750 / 800 / 850 / 900 / 950 / 1000	
Linearity	[%]	Measurement ranges up to 100 mm: ± 0.1 Measurement ranges above 150 mm: ± 0.05	
Repeatability	[mm]	≤ 0.08	
Resolution		depends on the signal quality of the reference voltage respectively supply voltage	
Displacement sensitivity	[mm]	0.05...0.1 (hysteresis not considered)	
Hysteresis	[mm]	< 0.25	
Cursor dragging force	[N]	≤ 0.5	
Displacement speed	[m/s]	≤ 5	
Acceleration max.	[m/s ²]	≤ 10	
Resistance	[k Ω]	Measurement ranges up to 300 mm: 5 Measurement ranges 350 to 600 mm: 10 Measurement ranges above 650 mm: 20	
Tolerance on resistance	[%]	± 20	
Dissipation at 40 °C (0 W at 120 °C)	[W]	Measurement range 50 mm: 1 Measurement range 100 mm: 2 Measurement ranges above 150 mm: 3	
Applicable voltage max.	[V]	Measurement range 50 mm: 40 Measurement ranges above 100 mm: 60	
Recommended cursor current	[μ A]	< 0.1	
Permitted dissipation max.	[mA]	10	
Cursor current in case of bad performances max.	[mA]	10	
Electrical isolation		$> 100 \text{ M}\Omega$ at 500 V = 1 bar, 2 s	
Dielectric strength		$< 100 \mu\text{A}$ at 500 V ~ 1 bar, 2 s	
Protection class		IP67	
Operating temperature	[°C]	-30...+100	
Storage temperature	[°C]	-50...+120	
Temperature coefficient of resistance	[ppm/°C]	± 200	
Temperature coefficient of output voltage	[ppm/°C]	< 5	
Operating pressure max.	[bar]	20	250
Vibration DIN IEC68T2-6		12 g, 10...2000 Hz	
Shock DIN IEC68T2-27		50 g, 11 ms, single shock	
Housing		anodised aluminium, PSU	high grade steel AISI 316
Mounting		brackets	flange

TRACKING ERROR



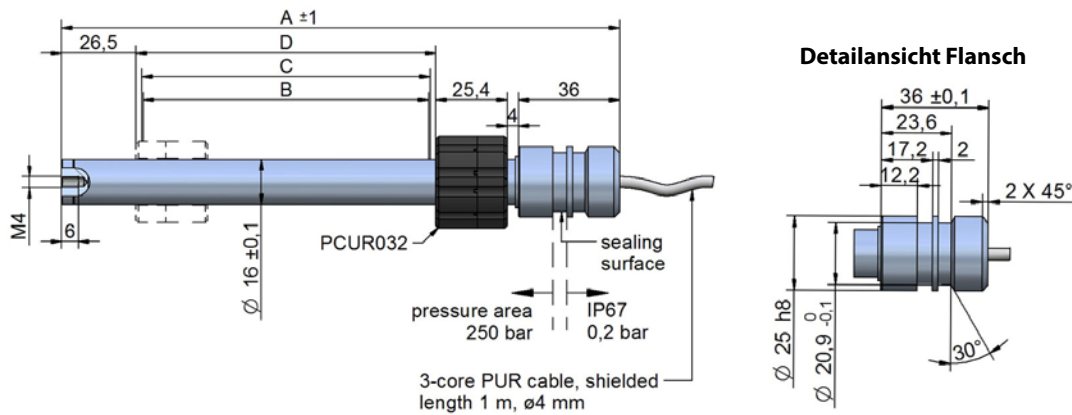
TECHNICAL DRAWING

LME12



A	Housing length	B + 65 mm
B	Measurement range / useful electrical stroke	see „ Technical Data “
C	Theoretical electrical stroke	B + 1 mm
D	Mechanical stroke	B + 5 mm

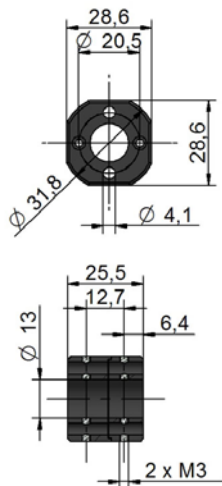
LMI12



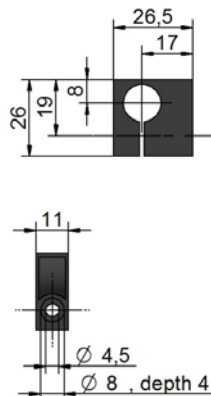
A	Housing length	B + 97 mm
B	Measurement range / useful electrical stroke	see „ Technical Data “
C	Theoretical electrical stroke	B + 1 mm
D	Mechanical stroke	B + 5 mm

TECHNICAL DRAWING ACCESSORIES

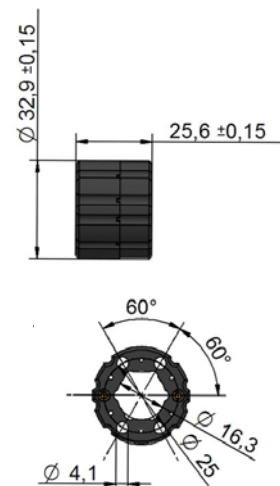
Magnetic cursor PCUR031 for LME12 (1 pc. included in delivery)



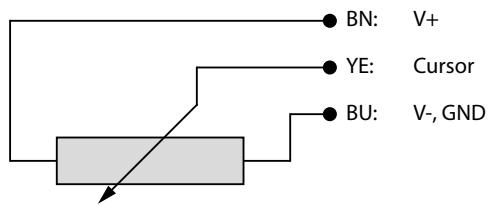
Bracket STA001 for LME12 (2 pcs. included in delivery)



Magnetic cursor PCUR032 for LMI12 (1 pc. included in delivery)

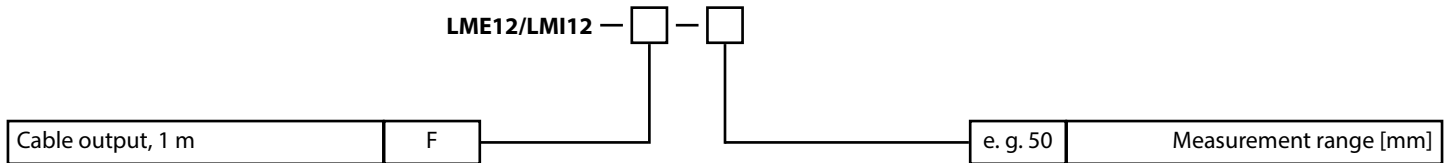


ELECTRICAL CONNECTION



- Sensor is to be used as voltage divider only, using a maximum cursor current of $I_c \leq 0.1 \mu\text{A}$. Do **NOT** use the sensor as variable resistance!
- When calibrating the transducer, be careful to set the stroke so that the output does not drop below 1% or rise above 99% of the voltage level.

ORDER CODE



Scope of delivery:

LME12: Sensor, 2 brackets STA001, 1 magnetic cursor PCUR0321

LMI12: Sensor, 1 magnetic cursor PCUR032

ACCESSORIES

Magnetic cursors and brackets

STA001	1 bracket for LME12
PCUR031	1 magnetic cursor for LME12
PCUR032	1 magnetic cursor for LMI12

Signal conditioner

PMX-24 Output signals: 4...20 mA, 0...10 V, 0...5 V, ± 10 V, ± 5 V

For more information and options please refer to the [PMX-24 data sheet](#).

Digital displays for sensors with analog output, 2 channel

WAY-AX-S	touch screen, supply: 18...30 VDC
WAY-AX-S-AC	touch screen, supply: 115...230 VAC

For more information and options please refer to the [WAY-AX data sheet](#).

Subject to change without prior notice.

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