LINEAR POTENTIOMETER

LMS18 Series

Key-Features:

- *Self-supporting linear position transducer with magnetic pulling*
- *Recommended in all cases where the angle of the drive axle changes constantly*
- *Available measurement ranges from 50 to 1000 mm*
- *Protection class IP67*
- *Displacement speed ≤5 m/s*
- *Working temperature -30...+100 °C*
- *Life cycle >25 x 10^6 meter or >100 x 10^6 operations, whichever is less*
- *Simple apparatus according to the EN 60079-11 standard*

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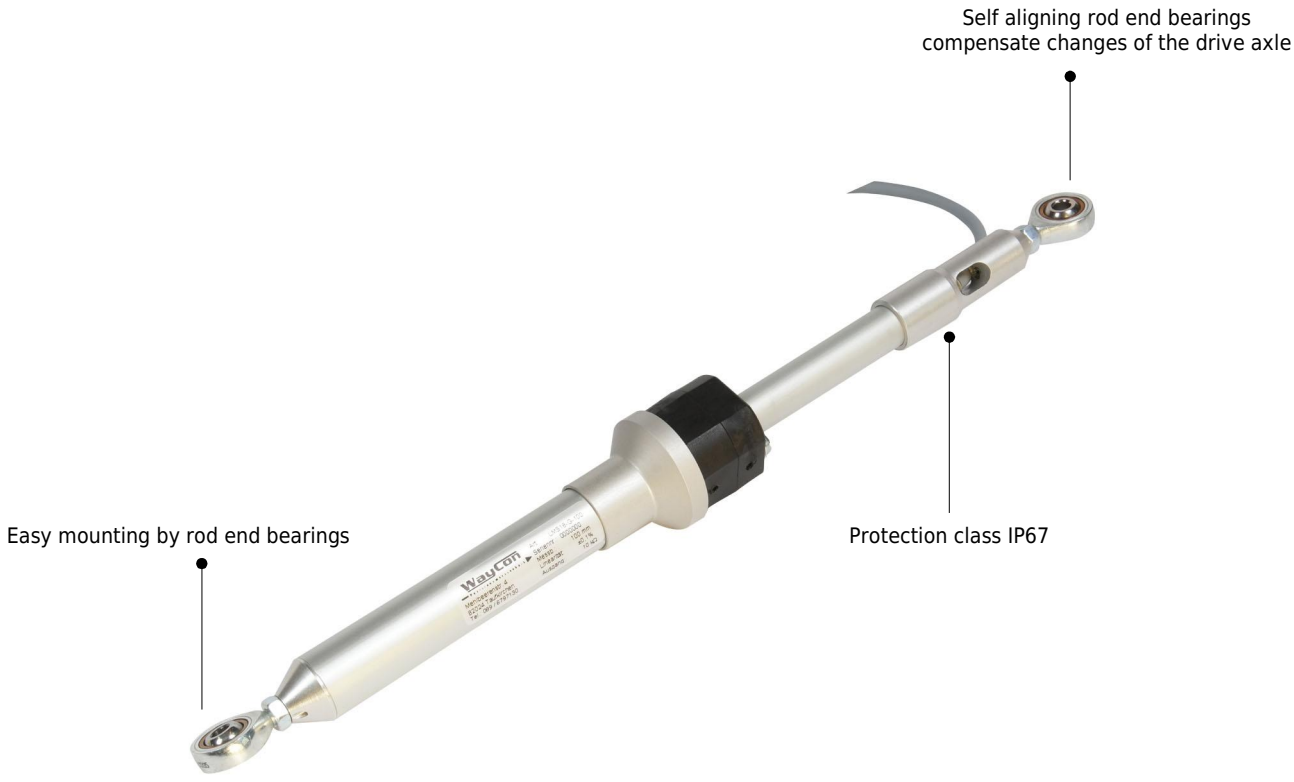
WayCon
Positionsmesstechnik

TECHNICAL DATA

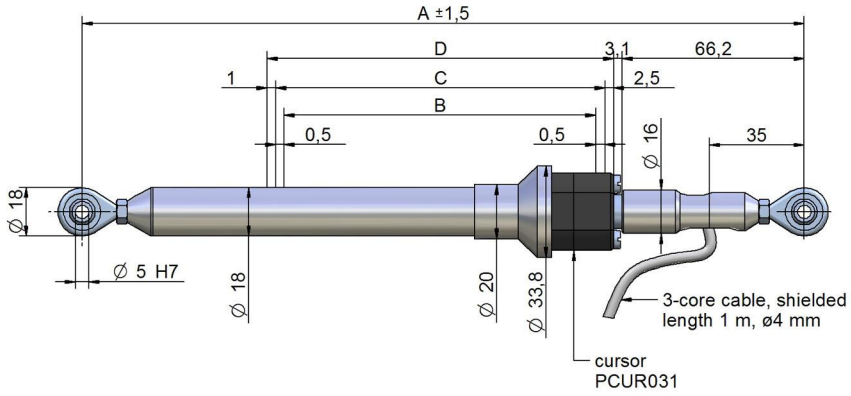
Measurement range	[mm]	50 / 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 550 / 600 / 650 / 700 / 750 / 800 / 850 / 900 / 950 / 1000
Resolution		Resolution depends on the signal quality of the reference voltage respectively supply voltage.
Repeat accuracy	[mm]	≤0.08
Hysteresis	[mm]	≤0.25
Displacement sensitivity (without hysteresis)	[mm]	0.05 to 0.1
Linearity		see table on page 3
Displacement speed	[m/s]	≤5
Maximal acceleration	[m/s²]	≤10
Dragging force	[N]	≤0.5
Tolerance on resistance	[%]	±20
Recommended cursor current	[µA]	<0.1
Maximum cursor current	[mA]	10
Maximum voltage	[V]	60 (40 at measurement range 50 mm)
Temperature coefficient of resistance	[ppm/°C]	±200
Temperature coefficient of output voltage	[ppm/°C]	<5
Electrical isolation		>100 MOhm at 500 V=, 1 bar, 2 s
Dielectric strength		<100 µA at 500 V~, 50 Hz, 1 bar, 2 s
Working temperature	[°C]	-30…+100
Storage temperature	[°C]	-50…+120
Protection class		IP67
Shock test DIN IEC68T2-27		50 g, 11 ms single stroke
Vibrations DIN IEC68T02-6		20 g, 5…2000 Hz
Material of sensor housing		anodised aluminium, PSU
Material of cursor		POM
Mounting		rod end bearings



DIMENSIONS AND ELECTRICAL DATA

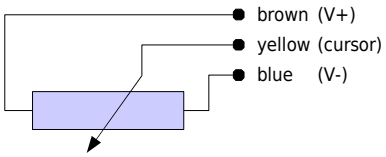
Useful electrical stroke (B)	[mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Theoretical electrical stroke (C) ±1	[mm]	B + 1																			
Resistance	[kOhm]	5						10						20							
Linearity	[%]	± 0.1		± 0.05																	
Dissipation at 40 °C	[W]	1	2	3																	
Mechanical stroke (D)	[mm]	B + 3,5																			
Case length (A)	[mm]	B + 155																			

TECHNICAL DRAWING



ELECTRICAL CONNECTION AND ACCESSORIES

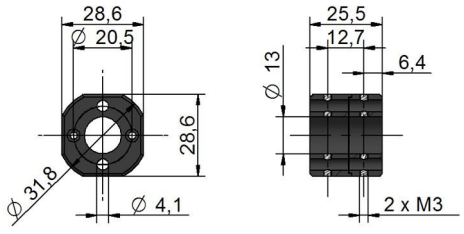
Electrical connection



Installation instructions

- Please pay attention that the sensor is not used as a variable resistor.
- Please be careful while calibrating the sensor to set the stroke so that the output signal does not drop below 1 % or exceed 99 % of the supply voltage.

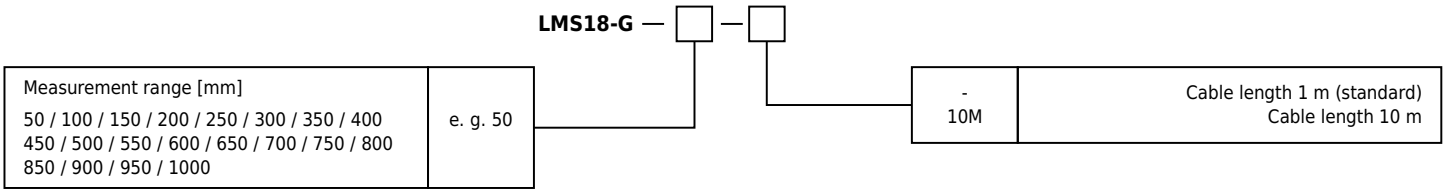
Cursor PCUR031



Signal Converter PMU / PMI

- PMU-10V: output signal 0...10 V
- PMI-420A: output signal 4...20 mA
- DIN-Rail-Mounting with face-side connector
- (For further information see separate data sheet PMUI.pdf)

ORDER CODE



OPTIONS AND ACCESSORIES

Options	
-10M	cable length 10 m

Cursor	
PCUR031	cursor with 2 drill-holes (included in delivery)

Signal converter	(DIN-Rail Mounting)
PMU-10V	output 0…10 V
PMI-420A	output 4…20 mA

Please contact WayCon for further information or download the data sheet.

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