

## Analog Linear Displacement Sensor



### FEATURES

- Conductive plastic potentiometer technology. Infinite resolution.
- Anodized light alloy housing
- Stainless steel floating shaft
- Flange mounting
- Wire outputs

### QUICK REFERENCE DATA

Sensor type	LINEAR, conductive plastic
Output type	Output by wires
Market appliance	Industrial
Dimensions	Diameter 1/2" (12.7 mm)

### ELECTRICAL SPECIFICATIONS

PARAMETER									
Theoretical electrical travel	UET +1 mm to 0 mm								
Independent linearity standard	± 0.5 %								
Independent linearity optional	± 0.1 % (UET ≥ 50 mm), ± 0.25 % (UET < 50 mm)								
Tolerance on R <sub>n</sub>	± 20 %								
Temperature coefficient	-300 ± 300 ppm/°C								
Wiper current	≤ 1 mA								
Recommended load impedance	≥ 1000 R <sub>n</sub>								
Dielectric strength	500 V <sub>RMS</sub> , 50 Hz, 1 min								
Insulation resistance	≥ 10 GΩ at 500 V <sub>DC</sub>								
Output smoothness	≤ 0.1 %								
Useful electrical travel (UET)	10 mm	25 mm	50 mm	75 mm	100 mm	150 mm	200 mm	250 mm	300 mm
Power rating at +70 °C (0.2 W/cm of travel)	0.2 W	0.5 W	1.0 W	1.5 W	2.0 W	3.0 W	4.0 W	5.0 W	6.0 W
Total resistance R <sub>n</sub>	2.2 kΩ	4.7 kΩ	4.7 kΩ	10 kΩ	10 kΩ	10 kΩ	10 kΩ	22 kΩ	22 kΩ

### MECHANICAL SPECIFICATIONS

PARAMETER										
Mechanical travel	UET + 4 mm									
Driving force	≤ 2 N									
Backlash	< 15 μm									
Protection class	IP 64									
Maximum displacement speed	1.5 m/s									
Mounting	1 block (UET < 100 mm) and 2 blocks (UET ≥ 100 mm)									
Useful electrical travel (UET)	10 mm	25 mm	50 mm	75 mm	100 mm	150 mm	200 mm	250 mm	300 mm	
Weight	Shaft + wiper	4 g	6 g	8 g	11 g	13 g	18 g	23 g	28 g	33 g
	Sensor	20 g	22 g	27 g	30 g	40 g	51 g	65 g	75 g	86 g

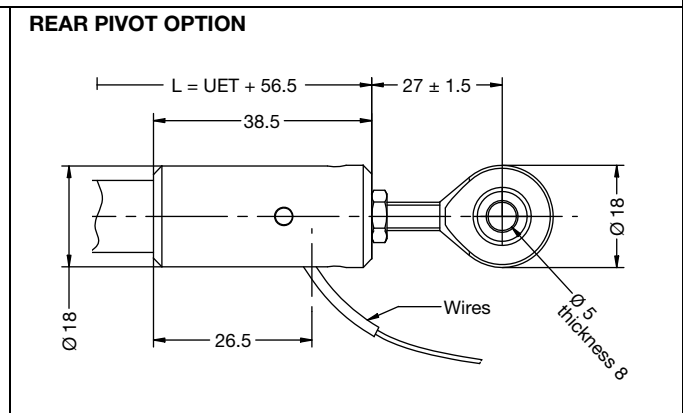
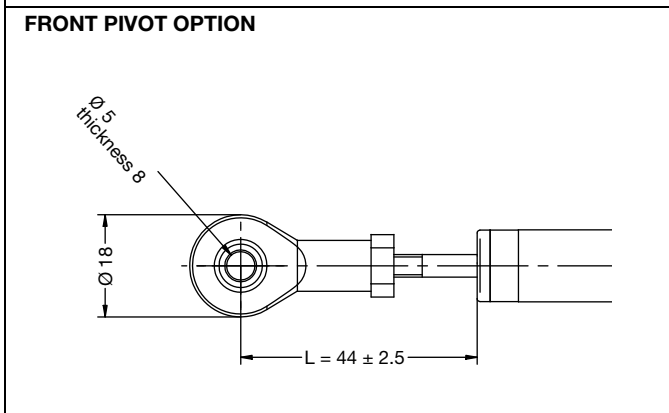
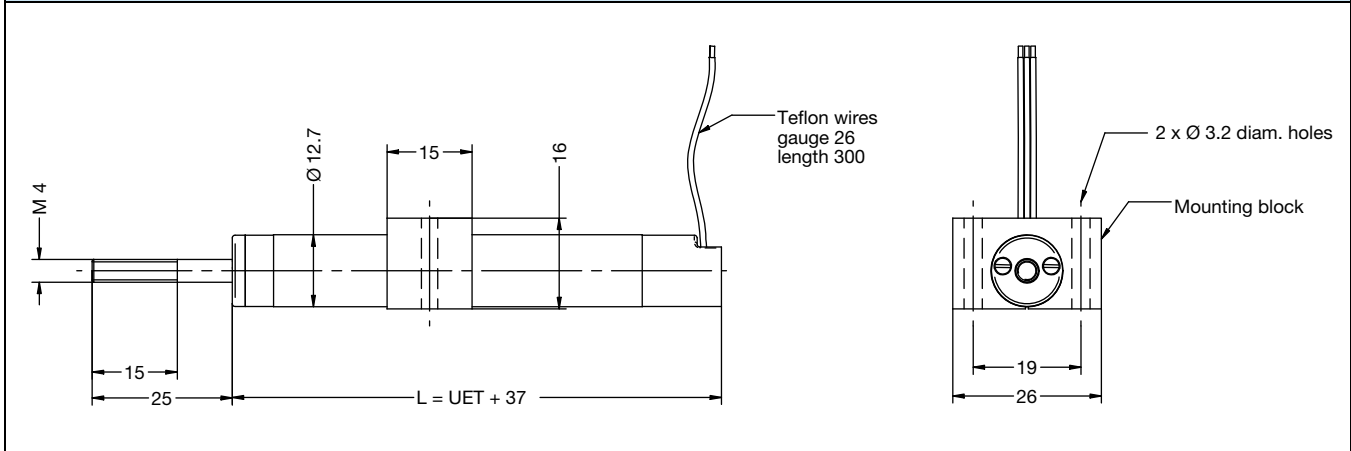
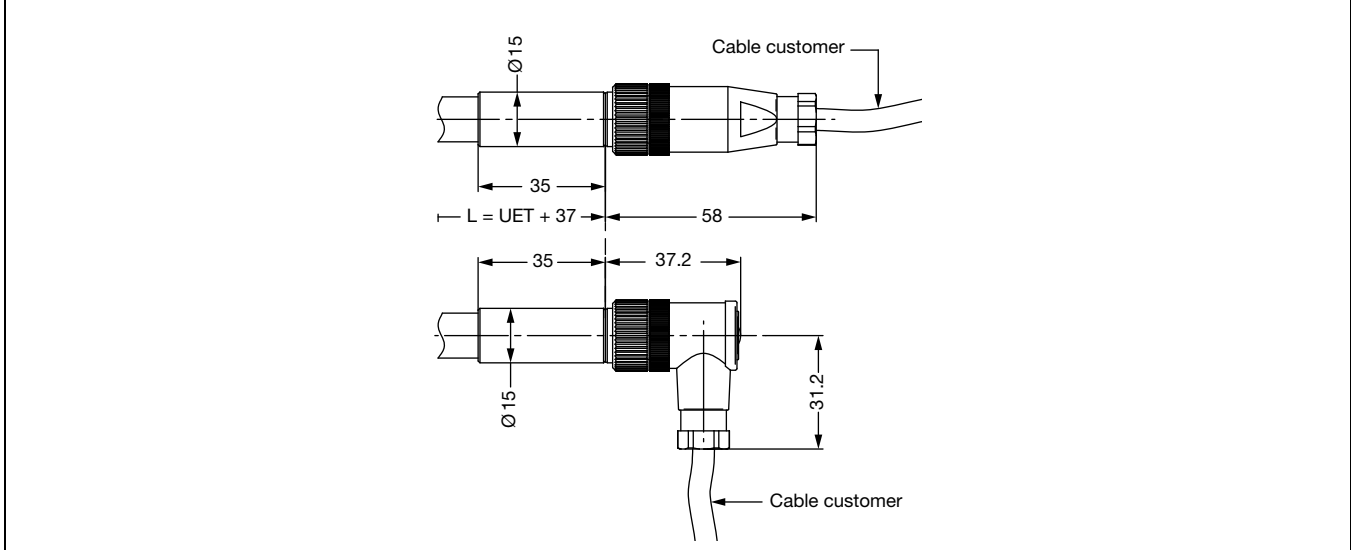
### PERFORMANCE

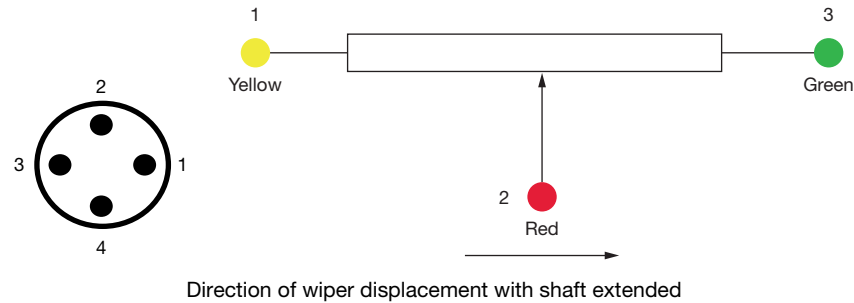
PARAMETER	
Operating temperature range	-40 °C to +105 °C
Storage temperature range	-55 °C to +125 °C
Life	20M cycles

#### Note

- Nothing stated herein shall be construed as a guarantee of quality or durability.

ORDERING INFORMATION / DESCRIPTION		
RP12	150	.....
SENSOR TYPE	USEFUL ELECTRICAL TRAVEL (mm)	SPECIAL FEATURE OR OPTION (Plain language)

**DIMENSIONS** in millimeters

**STRAIGHT OR RIGHT ANGLE CONNECTOR OPTION**


**ELECTRICAL DIAGRAM**

**CONNECTION**
**OPTIONS** (on request)

- Other linearity
- Probe version for UET < 100 mm (spring and tip)
- Low driving force version ( $\leq 30$  cN/ IP 50)
- Lateral or axial cable output
- Binder 713-M12 series straight connector output
- Binder 713-M12 series right angle connector output
- Male socket fitted on connector
- Additional mounting block
- Front pivot
- Rear pivot (only with lateral cable output)



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