



Displacement sensors based on strain gauge technology for monitoring of cracks, joints, and deflection of buildings / structures

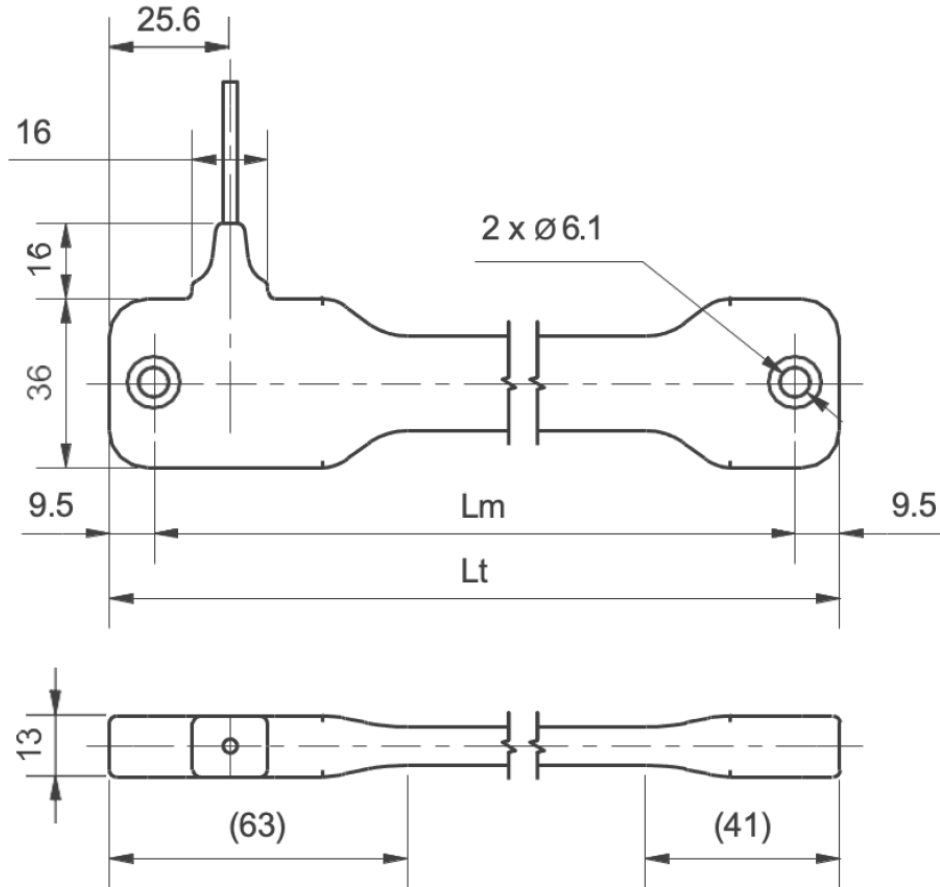
- Strain gauge sensor completely encapsulated in the elastomer, making it extremely robust
- Very easy installation with bolts, pins or super-magnets by doweling or gluing to the surface
- Integrated signal conditioner with standard output signals 4... 20mA / 0... 5V / 0... 10V
- Protection class IP68 with high resistance against a variety of chemicals
- Cable length up to 200m acc. to requirement

Technical data

Nominal measuring range	5mm / 20mm / 50mm / 100mm / 250mm
Resolution	5µm / 10µm / 25µm / 50µm / 125µm
Overload / critical elongation	> 150% of nominal stroke
Linearity error / accuracy	< 0,5% FSO
Supply voltage	12...24VDC (standard) / 2,5...5,25VDC (option)
Power consumption	max. 45mA _{eff} @12V
Output signal	4...20 mA (standard) 0...5V (option) 0...10V (option)
Sampling Rate	1000/s
Dynamic bandwidth	100Hz (3dB) / recommended up to 10Hz
Temperature coefficient	< 0,01 % / K (for Δt ≤ 1 K/Min.)
Operating temperature	-40...+85°C
Storage temperature	-40...+85°C
Protection class	IP68 / IP69K
Electromagnetic compatibility	DIN EN 61326-1
Color	black (Standard) other colors upon request
Cable connection	PE cable Ø3.4mm / 1m long, open leads (standard) Other cable length up to 100m upon request
Installation	eyelet / hole ID Ø6.1mm x 13mm aluminum accessories for installation upon request
Weight	approx.65g / 76g / 84g / 97g / 136g
Dimensions	according to datasheet drawing
Force at end position	appr. 120N

Elastomere Sensors ES

Dimensional Drawings



Dimensions

Version	Nominal stroke	Lt	Lm*	Le	W	Ca
ES 5	5mm	80	61	9,5	36	18.5
ES 20	20mm	116	97	22	40	18.5
ES 50	50mm	159	140	22	40	18.5
ES 100	100mm	244	225	20	36	16.0
ES 250	250mm	474	455	22	40	18.5





*Dimension Lm refers to the middle position of the sensor, where the signal output is at 50%.

Wiring details

Color	Signal
Black (BK)	GND
Red (RD)	Supply +
White (WT)	Signal A _{out}
Blue (BL)	Signal A _{GND}
Yellow / Green	reserved / programming

Elastomere Sensors ES

Accessories

Description	Material	Picture
Set of M6 anchor bolt Ø6 x 50mm for screw mounting including washer and nut	stainless steel	
Set of M6 pins Ø25mm for surface mounting (gluing) including self-locking nut	stainless steel	
Extension plate 40...80mm x 25mm for position adjustment of up to ±20mm	stainless steel	
2K fast bonding high strength adhesive glue for surface mounting, suitable for low temperature applications, 25ml	special 2K fast curing adhesive	
Set of special cleaner 20ml and primer 15ml for surface preparation for surface mounting	special cleaner and primer with bonding agent	

