

MT31 Distance sensor

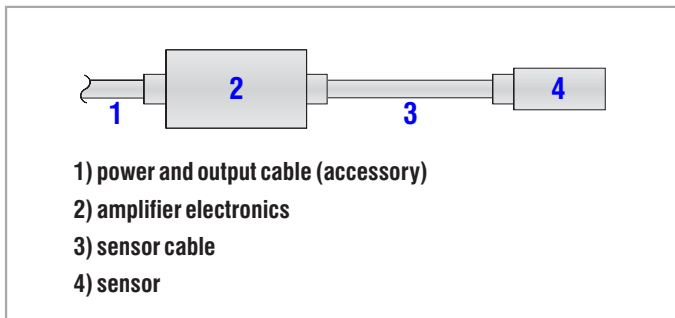
ADVANTAGES

- Wear and maintenance free
- Excellent linearity <0.25 % FSO
- Active temperature compensation (<150 ppm/F)
- Flexible field calibration
- Multi-channel applications by synchronization

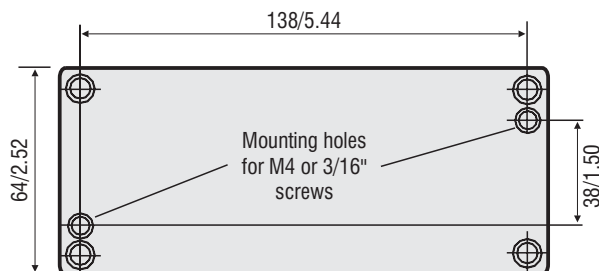
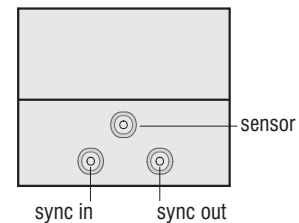
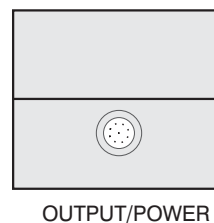
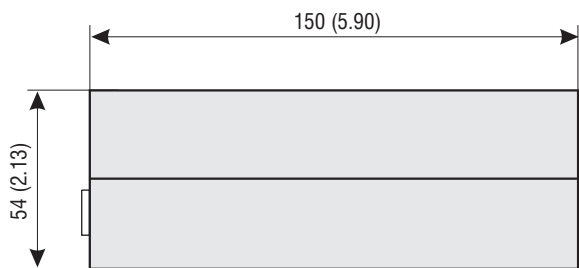


TYPICAL APPLICATIONS

- 1 - vibration, amplitude, clearance, run-out
- 2 - displacement, distance, position, elongation
- 3 - deflection, deformation, waviness, tilt
- 4 - dimensions, measuring tolerances, sorting, part recognition
- 5 - stroke, deformation, axial shaft oscillation
- 6 - bearing oscillations, lubricating gap, wear, displacement



Electronics dimensions



Sensor model		A05	A1	B1	B2	A3	A6	A15
MT31-A	Non-ferromagnetic target (reference target: alu)							
MT31-M	Ferromagnetic target (reference target: ST37)							
Measuring range *	mm	0.5	1	1	2	3	6	15
	inch	0.02	0.04	0.04	0.08	0.12	0.25	0.60
Offset distance	mm	0.05	0.1	0.1	0.2	0.3	0.6	1.5
	inch	0.002	0.004	0.004	0.008	0.012	0.025	0.060
Linearity	≤±0.25% FSO							
Static repeatability	μm	0.05	0.1	0.1	0.2	0.3	0.6	1.5
Resolution	0.005 % FSO							
Frequency response	25 kHz (-3dB)							
Temperature range	Operation: -50 to 150 °C / -60 to 300 °F							
Sensors and cables	Storage: -50 to 150 °C / -60 to 300 °F							
Temperature stability	≤0.025% FSO / °C • ≤0.015% FSO / °F							
Sensors (≤ midrange)								
Temperature Compensation range	10 to 65 °C / 50 to 150 °F							
Temperature range	Operation: 10 to 50 °C / 50 to 125 °F							
Electronics	Storage: -25 to 75 °C / -15 to 170 °F							
Temperature stability	≤0.05% FSO / °C • ≤0.03% FSO / °F							
Electronics (≤ midrange)								
Signal output	0 ... 10 V / 10 mA and 4 ... 20 mA							
Power supply	24 VDC (9 ... 30 V) / 205 mA							
Electromagnetic Compatibility (EMC)	acc. EN 50081-2 • EN 50082-2							
Synchronization	with cable							
Protection class	Electronics IP 54 Sensors IP 65							

FSO = Full Scale Output

Sensor model *		A05	A1	B1	B2	A3	A6	B15
Shielded Sensors				•	•			
Unshielded Sensors		•	•			•	•	•
Sensor weight (appr.) without cable	g	0.6	1.5	5	9	7.5	22	24
	ounce	0.02	0.05	0.2	0.3	0.25	0.8	0.85
Standard Sensor cable length	m	3	3	3	3	3	3	3
	ft	10	10	10	10	10	10	10
Optional Sensor cable length	m	6	6	6	6	6	6	6
	ft	20	20	20	20	20	20	20

* customized sensors / ranges available

dimensions (mm/inch)

