Electronic Clinometer

Variohm Eurosensor

- **Ratiometric, analogue and digital output options**
- **Range +/- 60º, resolution 0.001º**
- **Typical accuracy +/- 0.25% FSO**

Variohm EuroSensor's electronic clinometer is a high performance yet low cost angle measurement sensor. It combines proven technology with state-of-the-art electronics and the result is reliable operation and low power consumption. The CMOS electronics convert the sensor's inherently linear resistance changes into easy to interpret analog or ratiometric outputs. The clinometer is compact, rugged and lightweight and is easy to integrate mechanically. This highly accurate device, with no moving parts, will give designers new freedom both technically and economically.

General specifications

Range	+/- 60º
Resolution	0.001º
Linearity	0 to 10 degrees: +/- 0.1 degree 10 to 45 degrees: +/-1% of Angle 45 to 60 degrees: Monotonic
Null Repeatablity	0.05º
Cross Axis Error	<1% to 45 degrees

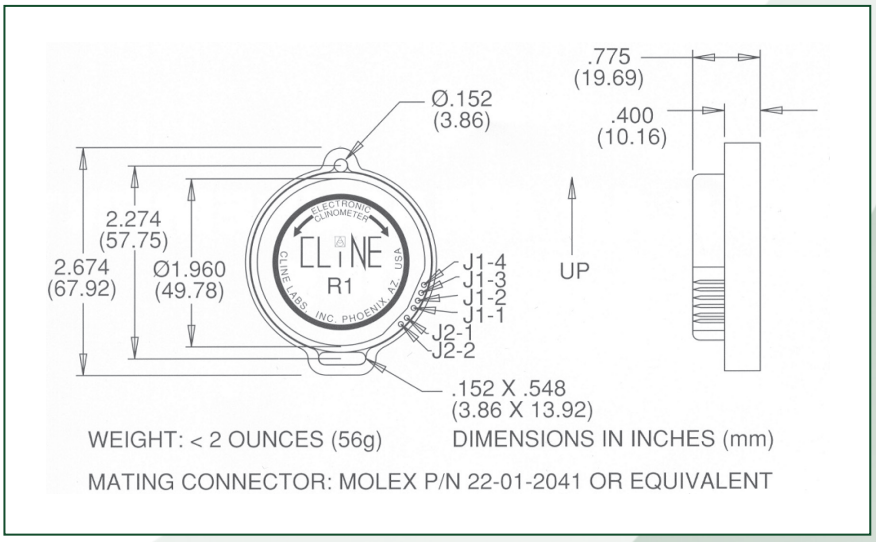
Typical Accuracy	+/- 0.25% FSO
Temperature:	Operating: -40 to +85ºC Storage: -55 to +85ºC
Tc of Null	0.008 arc-deg per ºC
Tc of Scale	0.1% per ºC
Time Constant	0.3 Sec
Freq. Response	0.5 Hz

Electrical specifications

	Ratiometric (R1)	Analogue (A1)	Digital
Part Number	100010-02*	100013-01*	100105-01*
Pin assignments:			
J1-1	VDC Regulated (nom)	+12 VDC (nom)	5 VDC Regulated
J1-2	Ground	-12 VDC (nom)	Ground
J1-3	Signal Reference	Pwr & Sig Common	Signal Reference
J1-4	Signal Output	Signal Output	Radiometric Output
J2-1, J2-2 Condition:			J2-2: PWM, TTL Output Scale: 100 µs/deg Null: 7.5 ms (50%) Freq: 66.6 Hz
Shorted	60 mV/deg, +/-45 degrees linear range**	60 mV/deg, +/- 45 degrees linear range	
Open	200 mV/deg, +/-10 degrees linear range**	200 mV/deg, +/-10 degrees linear range	J2-1: PWM, TTL Ref
Supply Voltage	5 to 16 VDC regulated	+/-8VDC to +/- 20 VDC	5 VDC regulated
Supply Current	3 mA	3 mA	3 mA

*Optional mounting and output variations are available on request
**Specified at 10 VDC Supply Voltage

Dimensions



Variohm Group

Variohm EuroSensor - Williams' Barn - Tiffield Road -Towcester - Northants -NN12 6HP - UK
sales@variohm.com • www.variohm.com • +44 (0) 1327 351004