

## L12J0101 I.S Inclinometer Module IECEx TSA 23.0005X with Marking Ex ib I Mb

Type L12J Ex ib I Mb Machine Mounted Inclinometer is an industrialised module designed for the rigours of underground mobile mining machinery.

Designed to exacting requirements of IEC 60079.0 and IEC 60079.11 and MSHA CFR 30, this Ex I inclinometer module is designed and approved under certificate number IECEx TSA 23.0005X for world-wide explosive atmosphere regulatory approval allowing it to be installed into any underground environment after certification assessment.

- The L12J\*\* I.S. Inclinometer is a high-performance inclinometer component featuring three-axis inclinometer sensor with angle output based on capacitive 3D-MEMS technology designed to be used on mining machines such as continuous miners, bolter miners, road headers, loaders, trucks etc.
- The L12J\*\* provides high stability, reliability and quality and has extremely stable output over wide range of temperatures and vibration that guarantees reliable operation over product's lifetime.
- Designed to interface with Pempek Systems L12E barrier to integrate with non-I.S. systems using



RS422 communication interface, the Type L12J\*\* I, S. Inclinometer can be integrated into almost any control system with relative ease.

- Highly ruggedised, industrial design using all brass and PTFE industrial grade components.
- Three-axis inclinometer sensor with angle output based on capacitive 3D-MEMS technology.
- A nominal operating temperature range spanning -20°C. +40°C class with an IP66/67 ingress protection rating.
- Simplifies machine installation.

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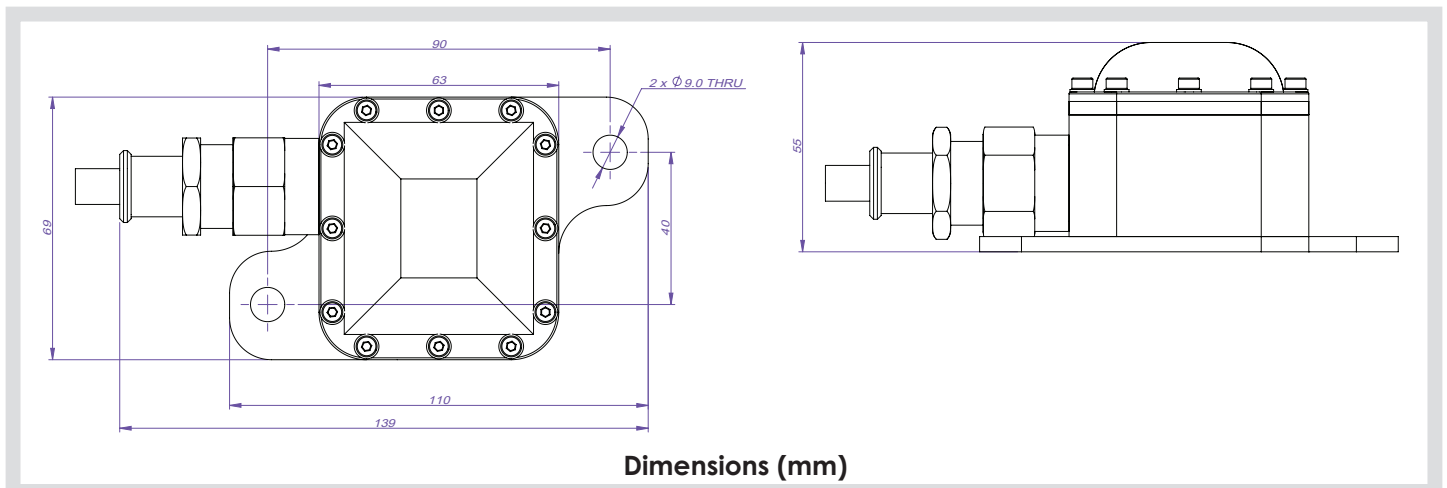
### Specifications

Power	
Un	3.5-5.5V
In	< 30mA
Li	0uH
Ci	< 10uF
Electronics	
Interfaces	RS-422
Inclinometer	3-axis (XYZ)
Measurement range	±90°
Long term Accuracy	<0.2° after calibration
Linearity error	+/-2mg (at -1g to 1g)
Integrated noise	0.13mg(rms)
Lifetime drift	+/-4mg (~0.3deg)
Offset temperature error	+/-0.005deg/degC
Mechanical	
Material	Brass / Teflon / Stainless Steel
Width	110mm
Height	55mm
Depth	69mm
Mass	715g
Environmental	
Operating Temperature	-20°C. +40°C
Ingress Protection	IP66/67
Operating relative humidity	10-90% non-condensing
Approvals	
IEC Australia	IECEx TSA 23.0005X Group I
MA China	Pending
MSHA USA	Pending
ATEX Europe	Pending

### Wiring

Item	B12J3 Board	External Wiring
	PIN	LABEL
1	J1-1	+ VIS
2	J1-2	OVIS
3	J1-3	RS422-Rx+
4	J1-4	RS422-Rx-
5	J1-5	RS422-Tx+
6	J1-6	RS422-Tx-
7	J1-7	OVIS

### Dimensions (mm)



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