

IXYZ1-5V

3-Dimensional Inclinometer

The IXYZ inclinometer is designed specifically for the solar industry, but could also be used in other applications. The IXYZ is a 3-dimensional inclinometer which is based on MEMS (Micro Electro Mechanical System) technology. It features a robust data protocol, voltage supply, and daisy chain feature when operating multiple inclinometers. It is capable of withstanding a wide temperature and voltage supply range.

Features

- RS232 interface, daisy chain capable
- Low latency protocol when daisy chained.
- Data compression, and error reporting with CRC16 data check
- Automatic axis resolution, reported as pitch and roll
- Integrated voltage polarity protection
- IP65 rated enclosure, outdoor rating
- Wide operating temperature range
- Accurate to within +/- 0.1 degree, angle reported in resolution of 0.01 degree.



Description

One Platform, Multiple Applications – The IXYZ inclinometer is a, high precision inclinometer, designed to operate as a singular inclinometer, or as part of a series of inclinometers.

Communication – Using a 9600 baud RS232 interface, the inclinometer may be connected singularly to a control system, or be part of a daisy chained multi-inclinometer system. When daisy chained, the RS232 input data is relayed to the output data and the local inclinometer data is appended to the data stream.

MEMS technology – The IXYZ is based on a smart low-power, three-axis, capacitive micro machined Accelerometer. The device is factory calibrated for sensitivity and Zero-g offset for each axis. In normal use, further calibration in the end application is not necessary.

Electrical Ratings

Parameter	Min	Typ	Max	Units
Voltage Supply	4.8	5.0	6.0	V
Power Consumption		0.15	0.2	W

Communication

Parameter	Value	Units
Baudrate	9600	baud
Data check	CRC16	

Thermal/Mechanical Characteristics

Parameter	Min	Typical	Max	Units
Storage Temperature	-40	40	120	°C
Operating Temperature	-40	40	85	°C
Dimensions (including flanges)		60 x 94		mm
Weight		0.10		kg

Enclosure

IP65, UV Stabilized Polycarbonate


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Lauritzen Inc.
 1725 Pilgrim Ave. Mountain View, Ca 94040
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