



The IS-2-30 is a dual axis inclinometer sensor with an RS232 output suitable for interfacing with embedded systems or with a PC for data acquisition. It measures angles between ±30° in the pitch and roll axis, and can transmit the data continuously, or when polled to do so. It is small, lightweight, rugged and sealed to work in a variety of applications.

Features

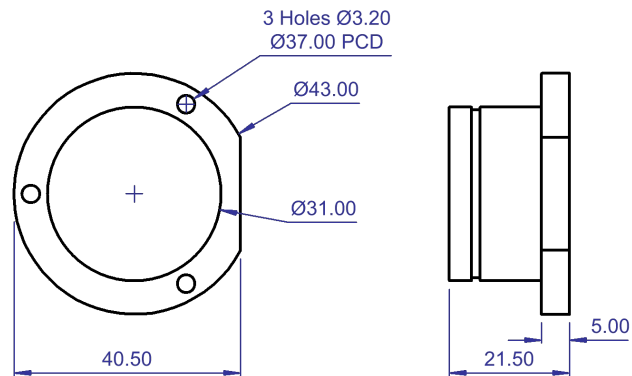
- Dual axis simultaneous measurement
- High accuracy, 0.01° resolution, ±30° range
- RS232C digital interface (ASCII 9600-N-8-1)
- Continuous or polled output
- Sealed Aluminium housing Ø43mm
- Precision 3D MEMS Sensor

Specifications

| | |
|-------------------|-------------------------------------|
| Range | ±30° - Dual Axis |
| Resolution | 0.01° |
| Accuracy | ±0.05° or 1% (whichever is greater) |
| Output Format | RS232 (ASCII) |
| Supply Voltage | 9-12Vdc |
| Operating Current | <30mA (@12V) |
| Cable Length | 2m (screened) |
| Dimensions | 43 x 40.5 x 21.5mm |
| Weight | 40g |
| Operating Temp | -25 to 85°C |
| Sealing | IP65 |



Dimensions



RS232 Interface

- Baud Rate : 9600 bps
- Parity : None
- Data Bits : 8
- Stop Bits : 1

Output Format : (19 Bytes)

| | | | | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Bytes | 1 | 1 | 6 | | | | | | 1 | 1 | 1 | 6 | | | | | | 1 | 1 |
| O/P | x | = | | + | 3 | . | 0 | 2 | , | y | = | - | 1 | 7 | . | 4 | 5 | CR | LF |

The full duplex RS232 interface allows commands can be sent to and data received from the device simultaneously. The output by default transmits the angle data in ASCII format (as shown above) continuously, however using the Set Mode command, this can be switched to command mode so the device only replies in response to a call command. Full details of the RS232 interface, and command set can be found in the operating instructions.

The Effect of Temperature on Accuracy

Changes in temperature can cause a zero bias drift, and a change in sensitivity of the output. The graphs below show these errors for typical amd worst case devices.

