

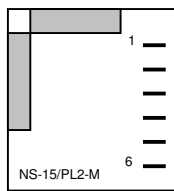
The NS-15/PL2-M is a dual axis, OEM Inclinometer utilizing two single axis, tilt sensors which work on the conductivity principle. The electronics measure the electrical stray field that is formed by applying AC voltage to planar electrode structures that are immersed in electrolytic fluid. When the sensor is tilted, the fluid level changes over the measuring electrodes; and, as a result, the conductivity with respect to the stray field changes. Using a differential measurement principle, the tilt angle and the tilt direction can be measured.

All PL type inclinometers are microprocessor controlled transducers capable of producing a linearized and temperature compensated V24-interface TTL-level.

Applications

- Zero point detection
- Alignment and level control
- Angle measurement
- Wheel Alignment
- Load cell compensation

Pin out



- Connector:
- 1 Vcc +5 VDC, stabilized
 - 2 RxD TTL
 - 3 GND
 - 4 N.C.
 - 5 N.C.
 - 6 TxD TTL

Advantages

- Single and dual axis models
- Microprocessor controlled inclinometer
- Integrated linearisation and temperature compensation
- V24 interface, TTL-level
- Small construction kit

Specification

| | Conditions | Min | Typ | Max | Units |
|--------------------------------------|------------------------------|-------|--------------|-------|--------------------------------------|
| Measurement range | | -15 | | +15 | ° |
| Resolution | | | 0,001 | | ° |
| Precision (absolute) | T ₁ =0...+55 °C | -0,15 | | +0,15 | ° of ³ FS, T ₁ |
| Precision (absolute) | T ₂ =-25...+85 °C | -0,3 | | +0,3 | ° of ³ FS, T ₂ |
| Noise (RMS) | RT ¹ | | 0,03 | | ° |
| Rise time | 0 ° → 15 °, t=90% | | 2,5 | | s |
| V24-interface TTL-level ⁵ | | | 4,3 | | V |
| V24-interface load ⁵ | | | 3 | | mA |
| Baud rate ² | | | 9600 | | Bits/s |
| Transmission rate | | 3,5 | 4 | 4,5 | Hz |
| Supply voltage ⁴ | | | +5 | | VDC |
| Current consumption | | | 20 | | mA |
| Operating temperature | | -25 | | +85 | °C |
| Storage temperature | | -40 | | +85 | °C |
| Weight | | | 20 | | g |
| Dimensions | | | 45 x 45 x 17 | | mm |

¹RT = by room temperature 20 °C
²Baud rate = fixed
³FS= Full scale
⁴Stabilisation essential
⁵Note the port-load of microcontroller
 Microchip Pic 14000
 RxD, TxD are not protected

Conector:
 Compney Molex
 Picoflex PF-50 1,27mm