



Instruments To
Industry Ltd

e-Gauge®

Technical Datasheet

Revision 2.0

Jan 2022

1. Input (Angle of Rotor relative to Sensor)

- a. Measuring Limits : max +/- 180.0°
- b. Mid Scale Position : 0° (12 o'clock)
- c. Full Scale (FS) Range : Defined by Part Number
Default: -135° to +135°

2. System Accuracy ^{1 2 3}

- a. Linearity : +/- 2.0% FS
- b. Repeatability : < +/- 0.2% FS
- c. Resolution : < 0.1% FS

3. Mechanical & Fitting Requirements ^{4 5}

- a. Non Concentricity : max 1mm
- b. Gap : max 4mm

4. Electrical Interface

- a. Connections : 2m Flexible Wires (x2)
AWG 24
PVC Jacket
Stranded Copper
Tinned Wire Ends
- b. Insulation : > 100 MΩ at 250V DC
- c. Colour (+ve) : Red
Power Supply (+ve) Input
- d. Colour (-ve) : Black
Return to Power Supply
via Current Meter
and Power Supply (ground)

5. Power Supply

- a. Supply Voltage : 24V DC nominal
- b. Voltage Range : 8 to 28V DC
- c. Reverse Polarity : min -28V DC
- d. Supply Current : 4 to 20 mA max
Depending on Input
3mA if Fault Detected

NOTES

1. Specified accuracy is guaranteed only when the e-Gauge is fitted correctly to the gauge (see mechanical & fitting requirements)
2. Excluding accuracy of the gauge (mechanical assembly)
3. Including accuracy of the current output
4. Maximum non concentricity between the Rotor PCB fitted on the pointer and the Sensor PCB fitted in the gauge window
5. Maximum face to face distance between the bottom side of the Sensor and the top side of Rotor PCB

6. Analogue Output (Power Supply Current)

- | | |
|-------------------------|--|
| a. Signal Span : | 4 to 20 mA |
| b. Angle (FS) Span : | Defined by Part Number |
| c. Mid Scale Position : | Defined by Alignment Marks
[Figure 1] |
| d. Mid Scale Output : | 12 mA |
| e. Full Scale Output : | 20 mA |
| f. Error Output : | 3 mA |
| g. Load impedance : | $RL [k\Omega] \leq (VPSU - 8) / 20$ |

7. Transitional Characteristics

- | | |
|---------------------|---------|
| a. Switch-On Time : | < 1 sec |
| b. Response Time : | 0.1 sec |

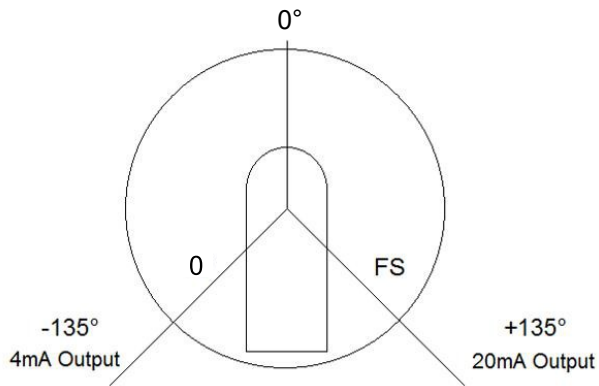
8. Environmental Conditions

- | | |
|--------------------------------|---|
| a. Storage Temperature : | -40°C to +85°C |
| b. Operating Temperature : | -40°C to +85°C |
| c. Temperature Stability : | +/- 0.01% (FS) / 1°C
Over 0°C to +50°C |
| d. Protection Class (Rotor) : | IP68
No functional degradation with long term submersion in water or glycerine |
| e. Protection Class (Sensor) : | IP55 |

9. EMC Data

- | | |
|--------------------|-------------------------|
| a. EMC Emissions : | Complies - EN61326:2006 |
| b. EMC Immunity : | Complies - EN61326:2006 |
| c. CE Marked | |

10. Default Settings

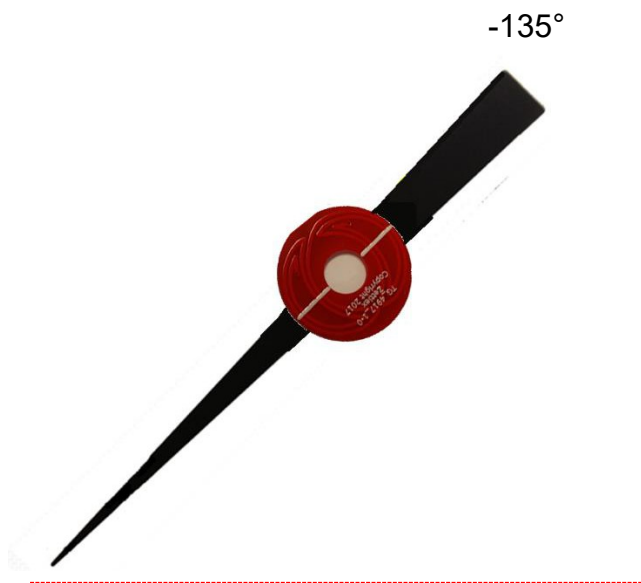


270° scale with 0° at 12 o'clock

4mA = -135°
20mA = +135°

Other ranges are available by factory order.

11. Alignment Marks



Set target on pointer along axis of -135°.