

## PRESSURE SENSOR/ TRANSMITTER

*Smart programmable analogue pressure sensor for GAUGE, ABSOLUTE and DIFFERENTIAL measurement in process systems and plant monitoring applications.*

- Long term stability and exceptional corrosion resistance to most aggressive media.
- High accuracy pressure capsule with characterised temperature compensation. Data intelligence gives a standardised output signal for simple servicing.
- Choice of analogue output signal:-  
4...20mA • 0.4...2V • 5...15Hz.
- Keypad programmable function calibration.
- LCD information display of signal values and all function mode parameters.
- Simple pushbutton scaling to match on-site parameters.  
Offset • elevated zero • volumetric conversions, etc.
- Programmable turndown and signal transfer characteristic expressed in true engineering units; square root, tank content, etc.
- Programmable signal damping and display suppression.
- Pressure ranges from 0-600bar Gauge, Absolute or Differential.
- Intrinsically Safe to Euronorm standards.




TX6141



TX6143



### Technical Details

|                             |   |
|-----------------------------|---|
| Overall Accuracy:           | ±0.25%.   |
| Long Term Drift:            | ±0.5% per annum.  |
| Linearity:                  | ±0.25%.   |
| Temperature Stability:      | ±0.06% / °C.  |
| Ambient Temperature Limits: | Housing: -10...50°C.<br>Sensor: -20...150°C.  |
| Humidity:                   | 0...95% non-condensing.   |
| Vibration Limits:           | 0.25min pk (10Hz...100Hz)<br>2g pk (100Hz...600Hz)<br>40g (Impact)  |
| Protection Classification:  | Dust and waterproof to IP66.  |
| Housing Material:           | Stainless steel filled Polyamide 6.   |
| Wetted Parts Material:      | TX6141 • Stainless steel/Ceramic diaphragm.<br>TX6143 • Stainless steel/Stainless steel diaphragm.  |
| Nett Weight:                | 0.7kg.  |
| Cable Entries:              | M20 x 1.5.  |
| Sensing Element:            | Positive strain gauge with integral data intelligence and standardised conditioned output signal.<br>Gauge, Absolute, Differential.   |
| Electrical Connections:     | 4mm Barrier/clamp terminals.  |
| Information Display:        | Dot Matrix alpha numeric LCD<br>17 characters.  |
| Operation:                  | Microprocessor controlled with non-volatile data retention.   |
| Menu System:                | Keycode.<br>Programming of Span, Zero, On-site scaling, Signal offset, Failure mode, Turndown, Hydrostatic level factor, Square law transfer function, Engineering units, Signal damping, Display contrast, Display suppression, Signal fix.<br>Master Reset.<br>Text Language:<br><br>English German French Spanish |

### Certification and Approval



Group I EEx ia I

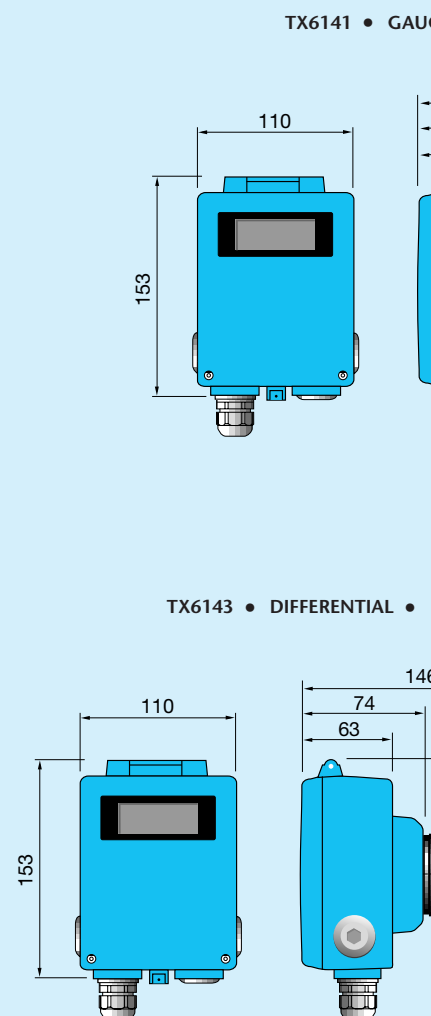
Group II EEx ia IIC T4



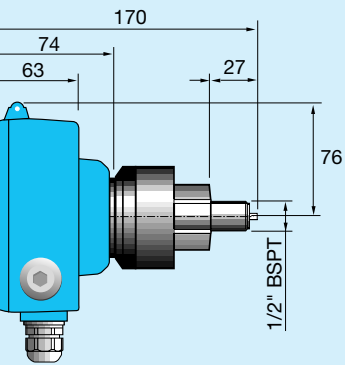
Designed to comply with the requirements of the EC directive on :

- ATEX directive 94/9/EEC
- EMC directive 89/336/EEC

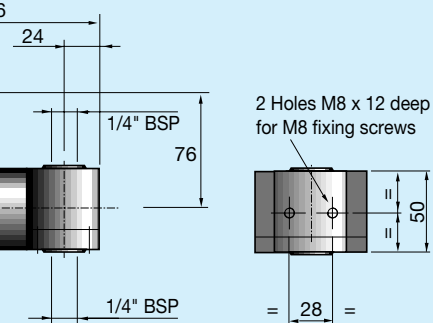
### Dimensions



GE • ABSOLUTE



STAINLESS STEEL DIAPHRAGM



All dimensions in mm

## Electrical Details

### GENERAL PURPOSE AND Ex GROUP II APPLICATIONS (24V dc)

TX6141 • TX6143

|                    |                          |  |
|--------------------|--------------------------|--|
| <b>Output</b>      | <b>4...20mA (2 wire)</b> |  |
| <b>Load</b>        | 600 ohms at 24V dc       |  |
| <b>Supply</b>      | 10...30V dc              |  |
| <b>Max Current</b> | 20mA                     |  |

### Ex GROUP I APPLICATIONS (12V dc)

TX6141 • TX6143

|                    |                             |  |
|--------------------|-----------------------------|--|
| <b>Output</b>      | <b>0.4...2V dc (4 wire)</b> |  |
| <b>Load</b>        | 10k ohms at 12V dc          |  |
| <b>Supply</b>      | 6.5...16.5V dc              |  |
| <b>Max Current</b> | 15mA                        |  |

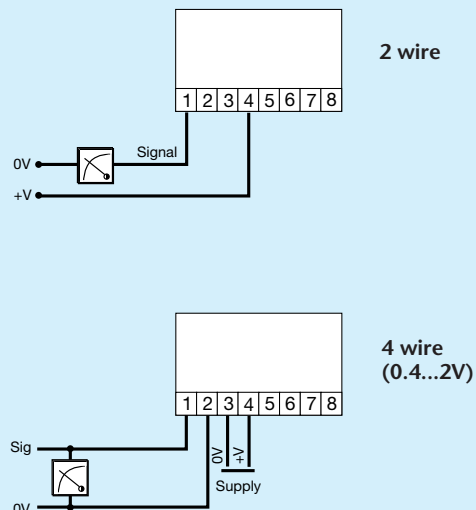
TX6141 • TX6143

|                    |                          |  |
|--------------------|--------------------------|--|
| <b>Output</b>      | <b>4...20mA (2 wire)</b> |  |
| <b>Load</b>        | 300 ohms at 12V dc       |  |
| <b>Supply</b>      | 6.5...16.5V dc           |  |
| <b>Max Current</b> | 20mA                     |  |

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|                    |                          |  |
|--------------------|--------------------------|--|
| <b>Output</b>      | <b>5...15Hz (4 wire)</b> |  |
| <b>Load</b>        | Opto isolated. 2mA max   |  |
| <b>Supply</b>      | 6.5...16.5V dc           |  |
| <b>Max Current</b> | 25mA                     |  |

### Connections:



## Pressure Measuring Range

### TX6141

**GAUGE** Ceramic diaphragm (21)  
FOR GAS AND LIQUID APPLICATIONS



|                 |        |        |         |         |         |          |          |          |
|-----------------|--------|--------|---------|---------|---------|----------|----------|----------|
| <b>Range:</b>   | 0-2bar | 0-5bar | 0-10bar | 0-20bar | 0-50bar | 0-100bar | 0-200bar | 0-400bar |
| <b>Maximum:</b> | 3bar   | 7.5bar | 15bar   | 30bar   | 75bar   | 150bar   | 300bar   | 600bar   |
| <b>Burst:</b>   | 6bar   | 15bar  | 30bar   | 60bar   | 150bar  | 300bar   | 600bar   | 1200bar  |

### TX6141

**ABSOLUTE** Ceramic diaphragm (22)  
FOR GAS AND LIQUID APPLICATIONS



|                 |        |        |         |         |         |          |          |          |
|-----------------|--------|--------|---------|---------|---------|----------|----------|----------|
| <b>Range:</b>   | 0-2bar | 0-5bar | 0-10bar | 0-20bar | 0-50bar | 0-100bar | 0-200bar | 0-400bar |
| <b>Maximum:</b> | 3bar   | 7.5bar | 15bar   | 30bar   | 75bar   | 150bar   | 300bar   | 600bar   |
| <b>Burst:</b>   | 6bar   | 15bar  | 30bar   | 60bar   | 150bar  | 300bar   | 600bar   | 1200bar  |

### TX6143

**DIFFERENTIAL** Stainless steel diaphragm  
FOR GAS AND LIQUID APPLICATIONS



|                 |            |            |            |          |          |           |           |            |
|-----------------|------------|------------|------------|----------|----------|-----------|-----------|------------|
| <b>Range:</b>   | 0-0.1bar   | 0-0.2bar   | 0-0.5bar   | 0-1bar   | 0-2bar   | 0-5bar    | 0-10bar   | 0-20bar    |
| <b>Maximum:</b> | +2.5,-1bar | +2.5,-1bar | +2.5,-1bar | +3,-2bar | +4,-3bar | +10,-5bar | +20,-7bar | +40,-10bar |
| <b>Burst:</b>   | 200bar     | 200bar     | 200bar     | 200bar   | 200bar   | 200bar    | 200bar    | 200bar     |

## Order Reference

### TX6141 PRESSURE SENSOR/TRANSMITTER.

**PRESSURE FORMAT:**  
Gauge or Absolute

### TX6143 DIFFERENTIAL PRESSURE SENSOR/TRANSMITTER.

**PRESSURE FORMAT:**  
Differential

*Please specify additional information:*

#### Options:

##### CERTIFICATION:

|                             |      |
|-----------------------------|------|
| Intrinsically Safe Group I  | (01) |
| Intrinsically Safe Group II | (02) |
| General Purpose             | (03) |

##### OUTPUT SIGNAL:

|          |      |
|----------|------|
| 0.4...2V | (11) |
| 4...20mA | (12) |
| 5...15Hz | (13) |

##### PRESSURE FORMAT (TX6141):

|          |      |
|----------|------|
| Gauge    | (21) |
| Absolute | (22) |

##### ADDITIONAL INFORMATION:

Pressure Measuring Range (bar)  
Non Standard process connections to specification

## Accessories

### TX9200.11 PIPE MOUNTING BRACKET.

