



Operating instructions
Electronic pressure sensor
for industrial applications

PT24xx

UK

10 / 2021

11421200 / 00



Contents

1 Preliminary note.....	2
2 Safety instructions	2
3 Functions and features	3
3.1 Applications	3
4 Functions	4
5 Installation.....	5
6 Electrical connection.....	5

1 Preliminary note

Symbols used

► Instructions

→ Cross-reference



Important note

Non-compliance can result in malfunction or interference.



Information

Supplementary note.

2 Safety instructions

- The device described is a subcomponent for integration into a system.
 - The manufacturer of the system is responsible for the safety of the system.
 - The system manufacturer undertakes to perform a risk assessment and to create a documentation in accordance with legal and normative requirements to be provided to the operator and user of the system. This documentation must contain all necessary information and safety instructions for the operator, the user and, if applicable, for any service personnel authorised by the manufacturer of the system.
- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.

- Only use the product for its intended purpose (→ Functions and features).
- Only use the product for permissible media (→ Technical data).
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the unit must be carried out by qualified personnel authorised by the machine operator.
- Protect units and cables against damage.

3 Functions and features

The pressure sensor detects the system pressure and converts it into an analogue output signal.

3.1 Applications

- Type of pressure: relative pressure



Information on pressure rating and bursting pressure → data sheet.



Pressure Equipment Directive (PED):

The units comply with the Pressure Equipment Directive and are designed and manufactured for group 2 fluids in accordance with the sound engineering practice. Use of group 1 fluids on request!



Avoid overload pressure exceeding the specified maximum permissible pressure by taking appropriate measures.

The indicated bursting pressure must not be exceeded.

Even if the bursting pressure is exceeded only for a short time, the unit may be destroyed. ATTENTION: Risk of injury!



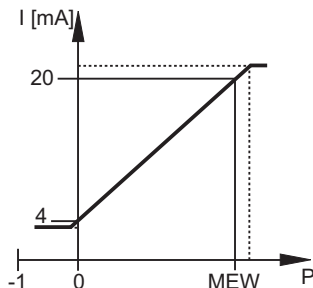
If the cable length exceeds 30 m or if used outside buildings, there is a risk of overvoltage pulses from external sources. We recommend to use the unit in protected operating environments and to limit overvoltage pulses to max. 500 V.



The units are vacuum resistant.

4 Functions

Current output 4...20 mA (PT24xx)



P = system pressure, MEW = final value of the measuring range

In the measuring range the output signal is between 4 and 20 mA.

If the system pressure is above or below the measuring range, the analogue output behaves, without achieving the accuracy, as follows:

- System pressure above the measuring range: 20...25 mA.
- System pressure below the measuring range: 4...3 mA.

5 Installation



Before installing and removing the unit: make sure that no pressure is applied to the system.

- ▶ Insert the unit in a 1/4-18 NPT process connection.
- ▶ Tighten firmly. Recommended tightening torque: max. 50 Nm.
Depends on lubrication, seal and pressure load!

6 Electrical connection



The unit must be connected by a qualified electrician.

The national and international regulations for the installation of electrical equipment must be adhered to.

Voltage supply to EN 50178, SELV, PELV.



For marine applications (if approval available for the device), additional surge protection is required.

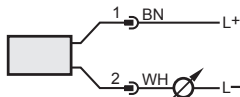
- ▶ Disconnect power.
- ▶ Connect the unit as follows:

PT24xx (4...20 mA analogue)

Core colours			
BN	brown		
WH	white		

OUT: analogue output 4...20 mA
Colours to DIN EN 60947-5-2

Example circuit



More information at www.ifm.com