

User guide

PRESSURE TRANSMITTER ST



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1. Important information

Please read carefully this information before installation and use of the instrument. Keep it in a safe and accessible place for every user.

The instrument safety level depends on the right choose and installation of the instrument model and on the respect of the maintenance procedures established by the producer.

Technicians in charge of the instrument selection, installation and maintenance should be able to understand if the instrument conditions of use could affect its right functioning and lead to any premature damage or breaking.

It is essential that these procedures included in the plants regulations should be carried out by qualified staff . An improper use could be dangerous for the instrument itself and cause breakings and damages to the staff and to the plant.

In order to choose correctly the right instrument it is highly recommended to read the most recent catalogue sheets available on-line at www.nuovafima.com



In accordance with directive
EMC 2004/108/CE – PED 97/23/CE

Standards of reference: IEC 61326-1
IEC 60770 – IEC 61298-2

2. Safety Instructions



Warning

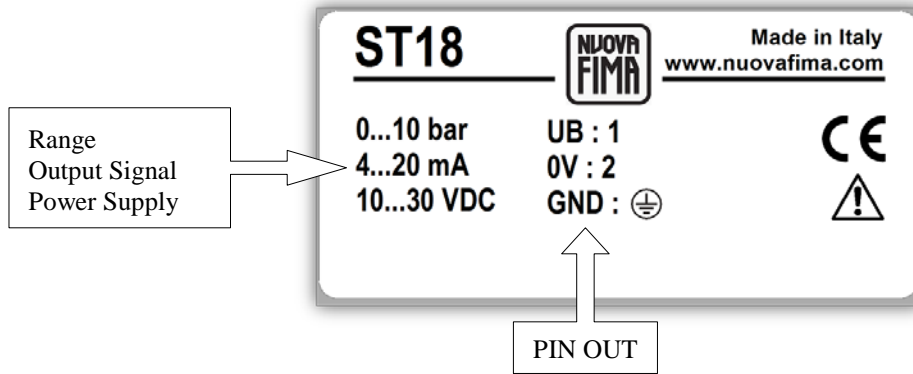
- The manufacturer disclaims all responsibility in case of damages caused by the improper use of the product and by the non-respect of the instructions reported in this manual.
- Follow carefully the specific safety rules in case of measuring oxygen pressure, acetylene, inflammable or toxic gas or liquids.
- Disconnect the instruments only after depressurization of the system.
- The process fluids residuals in the disassembled instruments could affect people, the environment and the system. It is highly recommended to take proper precautions.



Attention

- Before installation be sure that the right instrument has been selected following the working conditions and in particular the range, the working temperature and the compatibility between the material used and the process fluid.
- This manual does not concern the instruments conforming to standard 94/9/CE (ATEX).
- The product warranty is no longer valid in case of non-authorized modifications and of wrong use of the product.
- The user is totally responsible for the instrument installation and maintenance.
- Handle and carefully stock the instrument used for toxic or inflammable liquids measurement

3. Product Label



4. Intended use

The pressure transmitter turns the input pressure into an output electrical signal. The electrical signal changes in proportion to the input pressure level.

5. Electrical connections

| Output Signal | | | |
|--------------------------|---------------------------|-----------------|------------------|
| | 4...20mA | 0...5Vcc | 0...10Vcc |
| N° of wires | 2 | 3 | 3 |
| Charge (Ohm) | $RL \leq (V_{in}-8)/0,02$ | $RL > 5K\Omega$ | $RL > 10K\Omega$ |
| Power Supply Ub (Vcc) | 8...30 | 8...30 | 14...30 |
| Current Consumption (mA) | < 25 | < 10 | < 10 |

| Connections | | | | | | |
|---------------------------|-------------------------------|-----|--------------------|---|--------------|-------|
| | Connector DIN 175301-803 A | | Connector M12x1 | | Cable Outlet | |
| N° of wires | 2 | 3 | 2 | 3 | 2 | 3 |
| Power Supply Terminal: Ub | 1 | 1 | 1 | 1 | Brown | Brown |
| Negative Terminal: 0V | 2 | 2 | 3 | 3 | White | White |
| Signal: S+ | - | 3 | - | 4 | - | Green |
| Screen | GND | GND | 2 | 2 | Grey | Grey |

The transmitter metal case should always be connected to ground through the process connection thread in order to protect it from disturbances due to electromagnetic fields or electrostatic charges. If it wouldn't be possible to do so connect the transmitter to ground through the connector and the cable screen.

5. Installation

Before installing electrical instrument safely and securely into a plant or a system the user should verify the instrument suitability to the plant characteristics and the correct installation. After installation the user should verify that the instrument is not exposed to any source of heat exceeding the established ambient limits.

Secure the instrument thread through a special key/wrench on the process connection hexagon without grasping the case by the hands.

Secure the instrument thread through a special key/wrench on the process connection hexagon (20...30Nm). The correct torque depends on the type of process connection and the type of seal used (form and material).

If the connection thread is conical the instrument is tightened through a simple screwing on the



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plug. In order to improve the thread tightness it is recommended to place a PTFE layer on the male thread. If the instrument is equipped with a fluid diaphragm seal the connection should be clamped on the diaphragm otherwise the calibration could be compromised.

Instruments showing symbol.

Instruments with process connection DIN 11851 must be installed with special adapter SKS.

Instruments with process connection ISO 2853 (IDF/ISS) must be installed using gaskets with supporting ring according to the above mentioned standard.

Connector Assembling EN 175301-803 Form A

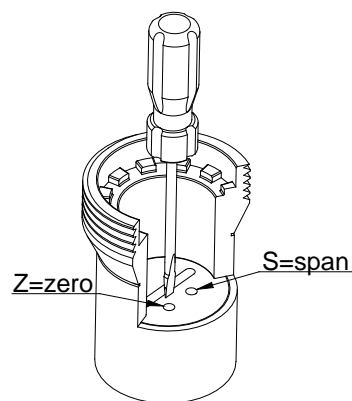
Disassemble the connector as in fig.1 and connect the cable as in fig.2.

Reassemble the connector and fix it on the transmitter.

Exploded view of the connector



Recalibration



1. Connector disassembling
2. Zero adjustment (Z)
3. Span adjustment (S)



The IP grade according to standard CEI EN 60529 is guaranteed only if the female connector equipped with a connection cable is mounted on the instrument and all the other components are assembled correctly

6. Maintenance

The transmitters is “*maintenance free*”.

If a fault occurs, contact NUOVA FIMA S.p.A. use the service

Product Return - www.nuovafima.com/en/product-return/

Using transmitters that have been subjected to work not explicitly authorised by NUOVA FIMA S.p.A. relieves the Company of any and all responsibility and causes the contractual guarantee to become null and void.



7. Disposal and demolition

Dispose of instrument components and packaging materials in an environmentally compatible way and in accordance with the rules of the specific waste in the country of origin.