Industrial instrumentation for Pressure and Temperature

ENG

User guide

PRESSURE TRANSMITTER ST1-ST2

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1. Important information

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

The safety level of the instrument depends on the chosing the correct application, the proper installation of the instrument and by following the maintenance procedures established by the manufacturer.
Technicians in charge of the instrument selection, installation and maintenance should be able to understand if the instruments condition could affect its function and thereby, lead to any premature damage or breaking.
It is essential that these procedures are included in the plants regulations and should be carried out by a qualified staff. Any improper use could damage the instrument, causing breakage and possible hazards to the staff and to the plant.
In order correctly choose the right instrument it is highly recommended to reference the most recent catalogue sheets available on-line at **www.nuovafima.com**

CE

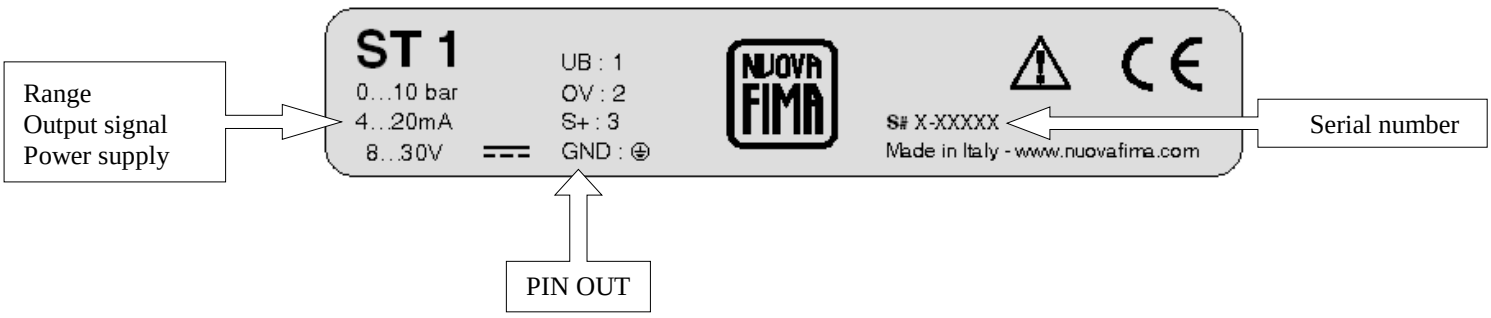
In accordance with directive	Standards of reference: IEC 61326-1
EMC 2004/108/CE – PED 97/23/CE	IEC 60770 – IEC 61298-2

2. Safety information

- 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.

- 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- The product warranty is no longer valid in case of non-authorized modifications and of wrong use of the product.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 connection

Output Signal					
	4…20mA	**0…5Vcc**	**0…10Vcc**	**1…5Vcc**	**0,5…4,5Vcc** Ratiometric
N° of wires	**2**	**3**	**3**	**3**	**3**
Charge (Ohm)	$R_L \leq (Vin-8)/0,02$	$R_L > 5K\Omega$	$R_L > 10K\Omega$	$R_L > 5K\Omega$	$R_L > 4,5K\Omega$
Power Supply Ub (Vcc)	8…30	8…30	14…30	8…30	5±10%
Current Consumption (mA)	< 25	< 10	< 10	< 10	< 10

Connection						
	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	Green
Signal: S+	-	3	-	4	-	White
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 is not possible to do so, connect the transmitter to ground through the connector and the cable screen.

6. 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 - **20…30Nm**. The correct torque depends on the type of process connection and the type of seal used (form and material).

As for those process connections with a cylindrical thread (Gas-Metric), a head gasket compatible with the measurement gas or fluid should be used.
If the connection thread is conical the instrument is tightened through a simple screwing on the 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.

7. Maintenance

The ST1-ST2 transmitters is "*maintenance free*".
If a fault occurs, contact NUOVA FIMA S.r.l. use the service
Product Return - www.nuovafima.com/en/product-return/

8. 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.