

# User guide

## PRESSURE GAUGE WITH MICROSWITCH MGS7



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### 1. Important information

The instrument described in this manual has been designed and produced in conformity to the following standards:

EN 837-1-2 and ASME B40.1. All components are submitted to severe quality and traceability controls. The quality management system is certified according to the ISO 9001 standard. This manual contains important information about the use and the installation of the gauge in safe conditions. Therefore, reading the following instructions carefully before use is highly recommended.

*The instrument works in safe conditions when selected and installed correctly in the system and when rules concerning the product as well as the maintenance procedures established by the manufacturer are respected.*

*The staff charged with the selection, installation and maintenance of the instrument must be able to recognize the conditions that may negatively affect the instrument ability to work and which may lead to premature breakage. The staff must, therefore, be technically qualified and properly trained, and must carry out the procedures established by the plant regulations.*

Directive P.E.D. 2014/68/EU

Nuova Fima instruments are designed and manufactured according to the safety rules included in the safety international standards in force. According to the 2014/68/EU standard the NUOVA FIMA pressure gauges are classified in 2 categories

**PS ≤200 bar** these instruments may not satisfy completely the essential safety standards but they have to be designed and manufactured according to a SEP-Sound Engineering Practice. No CE marking is required on them.

**PS >200 bar** these instruments should satisfy the essential safety standards established by the PED, they are classified as category I and they are certified according to Form A. They should bring the CE marking as the one shown below



In accordance with directive  
BT 2014/35/UE – PED 2014/68/UE

Standards of reference: EN 837-1

### 2. Safety information



Warning

- The manufacturer disclaims all responsibility in case of damages caused by the improper use of the product as well as 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. Proper precautions are highly recommended.



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 2014/34/UE (ATEX).
- The product warranty is no longer valid in case of non-authorized modifications and product misuse.
- The user is fully responsible for the instrument installation and maintenance.
- Handle and stock the instrument carefully when toxic or inflammable liquids measurement is involved.

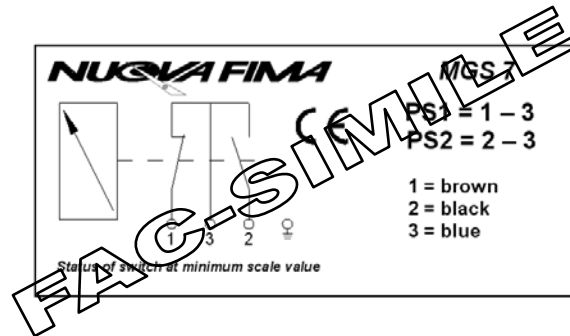
In order to verify the working and manufacturing features of the instruments read the catalogue sheets in the most updated edition available online on [www.nuovafima.com](http://www.nuovafima.com)

### 3. Intended use

These instruments are designed for applications in food, cannery, pharmaceutical, petrochemical industries, conventional and nuclear power stations and to monitor the automatic regulation of hydraulic and pneumatic equipment safely.

## 4. Electrical connections

**For electrical connection see the instrument label**



## 5. Installation

Before installing an electrical instrument into a plant or a system according to the safety installation rules, the user should verify the instrument suitability to the plant characteristics and if it has been installed properly. After installation the user should verify that the instrument is not exposed to any source of heat that exceeds the established ambient limits.

Secure the instrument thread through a special key/wrench on the process connection hexagon (20...30Nm) without grasping the case by the hands. The correct torque depends on the type of process connection and the seal type used (form and material).

As for 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 has to be tightened through a simple screwing on the plug. In order to tight the thread stronger, PTFE layer on the male thread is suggested.

If the instrument is equipped with a fluid diaphragm seal the connection should be clamped on the diaphragm no to compromise calibration.

### **5.1 Connection Output**

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

Reassemble the connector and fix it on the pressure gauge.

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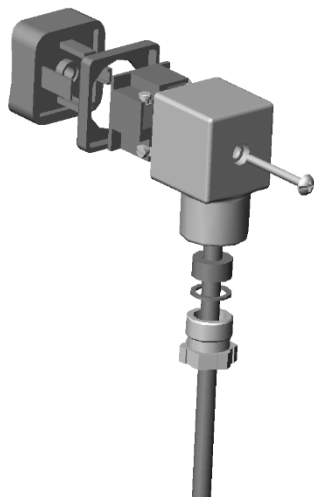


Figure 1 – Exploded view of the connector

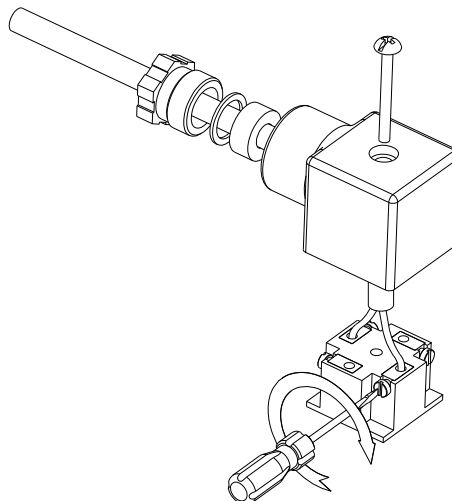


Figure 2 – Wires connection

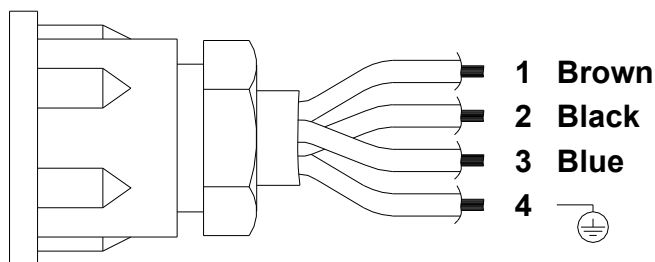


Attention

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.

## 5.2 Cable output

### Connection cable combination with colours and numbers



## 6. Working current

Volt	CC	CA	Inductive charge
220	0,3A	4A	4A
110	0,4A	4A	4A
48	4A	4A	4A
24	4A	4A	4A

## 7. Disposal and demolition

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