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= ISO 9001:2015 =



## INSTRUCTION AND MAINTENANCE MANUAL

### HELIX LEVELCONTROL FOR SOLIDS MOD. "SE"

**Manual Purpose**

This manual has been designed by the Manufacturer to provide the necessary information regarding the instrument to those who are authorized to carry out safely its installation, maintenance, dismantling and disposal. All the necessary information for the buyers and planners can be found in the Sales catalogue.

Other than adopting good technical construction methods, the information should be read carefully and strictly applied. Inobservance of this information could cause risks for the health and safety of people and economical damage.

This information, provided by the Manufacturer in the original language (Italian language) is also available in other languages to satisfy legislative and/or commercial needs.

This manual must be kept in a good condition by a responsible person in an ideal place so that it is always available for consultation. In case this manual is lost or deteriorates, a replacement should be requested directly from the manufacturer quoting the manual's code.

This manual reflects the state of skill of the instrument at the time of input on the market: however the manufacturer reserves the right to make changes, add or improve the manual without giving any reason to hold the present manual inadequate.

**Identification of the equipment**

The identification plate is applied on the cover of the instrument:

On it are carried out all the necessary indication for working in safety.

**Environmental conditions**

Environmental temperature from -10°C to 60°C

**Storage**

Avoid areas with excessive moisture and exposed to weather (excluding outdoor areas). Avoid direct contact of the tool with the ground. Stack the tool being careful not to gravity with excessive loads. It is leading you to the proper functioning of the instruments and for the maintenance of mechanical protection, care in handling. It is forbidden to strike the instrument with tools like hammers or similar.

**Conformity declaration and EC marking**

The indicator answers to the following Communitarian Directives:

2014/30/EU Electromagnetic compatibility, 2014/35/EU Low voltage, 2011/65/EU RoHS.

**Control, maintenance, technical servicing**

The instrument does not need a periodic setting but needs a control of good functioning at last every year.

Verify the intact of case, the mobility of helix, the general functioning.

Do not open the case in potentially dangerous atmosphere.

Avoid that layer of dust higher then 50mm settled on the instrument.

The instrument does not need a particular maintenance except cleaning, that has to be carried out by using a soft, damp, cloth with ethyl alcohol or water. Do not use hydrocarbon solvents (trichloroethylene, petrol, diluents, etc.). Reparations should be done only and exclusively at the FIAMA technical assistance centre. For any technical assistance turn the request direct to the sell-net of manufacturer indicating the references on the identification plate, the approx. working hours, and type damage.

**Manufacturer's responsibility**

The manufacturer declines any responsibility in case of:

- Using the instrument contrary to the national safety and accident-prevention laws;
- Wrong installation, inobservance or wrong procedures of the instructions provided in the present manual;
- Defective electrical power supply;
- Modifications or tampering;
- Operations carried out by untrained or unqualified personnel.

The safety of the instrument also depends on the strict observance of the procedures indicated in the manual: always operate the instrument in its functioning capacity and carry out a careful routine maintenance.

• All phases of inspection and maintenance should be done by qualified personnel.

• The configurations provided in the manual are the only ones permitted.

• Do not try to use them anyway contrary to the indications provided.

The instructions in this manual do not substitute but accomplish the obligations of the current law

### Description

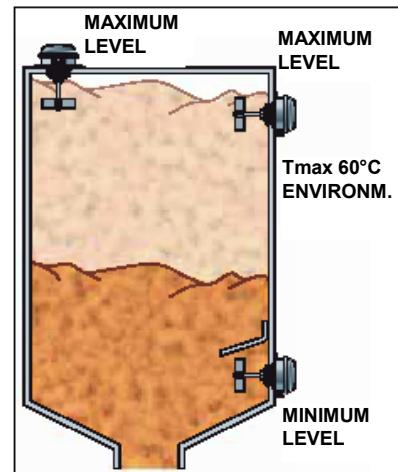
The warning level for solid **SE** are used to control the levels in tanks containing materials in powder or granular. The body of the apparatus is applied to the outer wall of the container side or head.

The material must be able to move freely around the helix, which should not be invested by the direct jet of material.

The functioning of the device is very simple: a synchronous motor that rotates at blow speed drives a helix inside the tank to be checked. In the absence of material the motor is energized and rotates the helix. The presence of material around the helix it slows the rotation causing an exchange of contacts of command; a second micro-switch causes the detachment of the supply voltage of the motor.

The opening or closing the circuit determines the command of an audible or visual signal, or the loading of the silo itself, the conveyors stop, starting or stopping of screws, etc.

1. The body of the instrument is of cast aluminium, with two output press-cables.
2. The tree, stainless steel, is mounted on ball bearings sealed, and is equipped with a dust seal ring.
3. The mounting plate has six holes, or at the hub with threaded 2 "1 / 2 inch GAS.
4. The auction (with port propeller shaft) is cm long. 15, 30, 50, 70, 100 in the standard executions (is the part that goes inside the tank).



### Installation

The instrument is NOT suitable for use in environments where a potentially explosive Atmosphere is present.

**Provide for protection against short circuit on nutrition in accordance to directive EN 60079-14.**

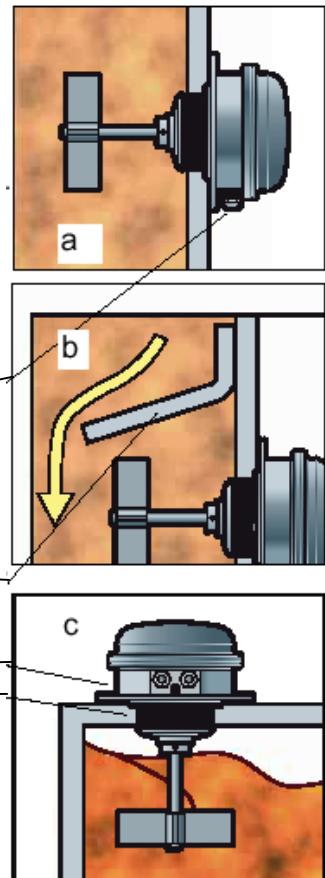
### Care in mounting

By sideways mounting the press-cables have to be directed downward. (a).

**It's recommended to tighten cable gland at bottom after fitting in the cable.**

It is necessary to get ready a protective flap to about 8-10 cm above the instrument, when the weight of the material on the helix is significant, for example, material with high specific gravity, or subject to movements in block (b).

The indicator must be set with six screws M6 (mounting plate) or by using the hub threaded 2"1/2 inch GAS (supplied on request) (c).

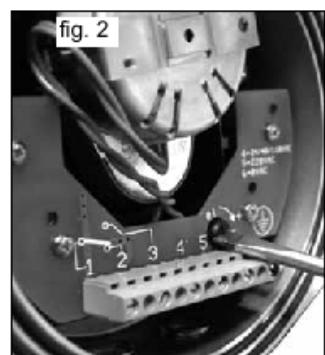
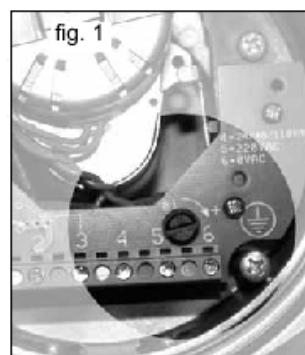


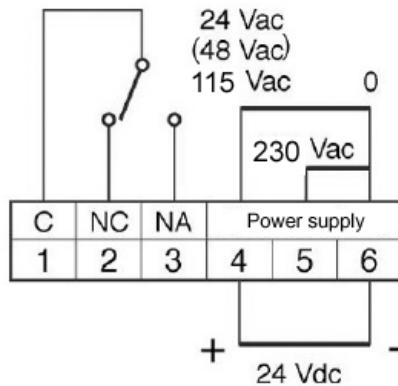
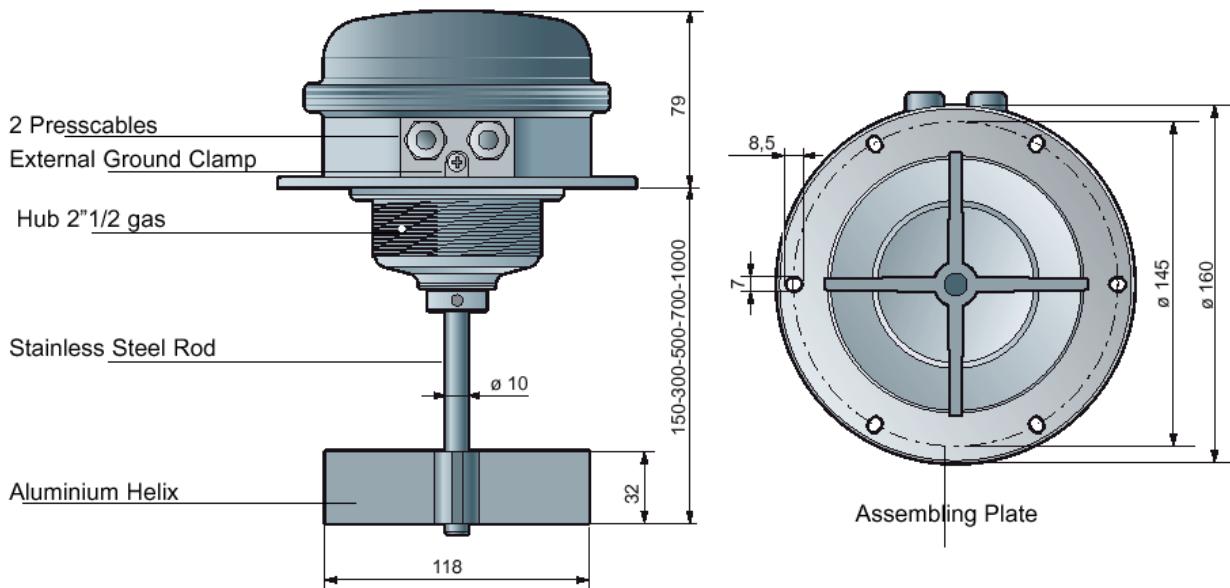
### Instruction for adjustment of spring power

The indicators SE are usually supplied with the pressure-spring of the starter adjusted on minimum power.

For products with a high specific weight it is advisable to increase the spring power as follows:

- take off the cover of the instrument,
- identify the adjustment screw (fig.1) in front of the terminal board,
- turn the screw, equipped with 3 adjustment releases, clock-wise (fig.2).



**Connection scheme****Dimensions****Technical characteristics**

Case	Aluminium
Protection degree	IP65
Electrical contacts	6A 250Vac – 3A 250vdc
Working temperature	-10° +60°C environmental
Absorption	3 VA
Power supply (available)	24 - 48 - 115 - 230 Vca ±10% 50/60 Hz - 24 Vdc ±10%
Cable input	Press-cables M16x1,5
Rod length	15 – 30 – 50 – 70 – 100 cm
Relative humidity	10-90%
Working pressure	atmospheric pressure
Electromagnetic compatibility	2014/30/EU
Low voltage	2014/35/EU

All communications to the manufacturer should be addressed to:

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**La FIAMA srl is not responsible for any damage to persons or things caused by tamperings and wrong use and in any case that are not consistent with the features of the instrument.**