

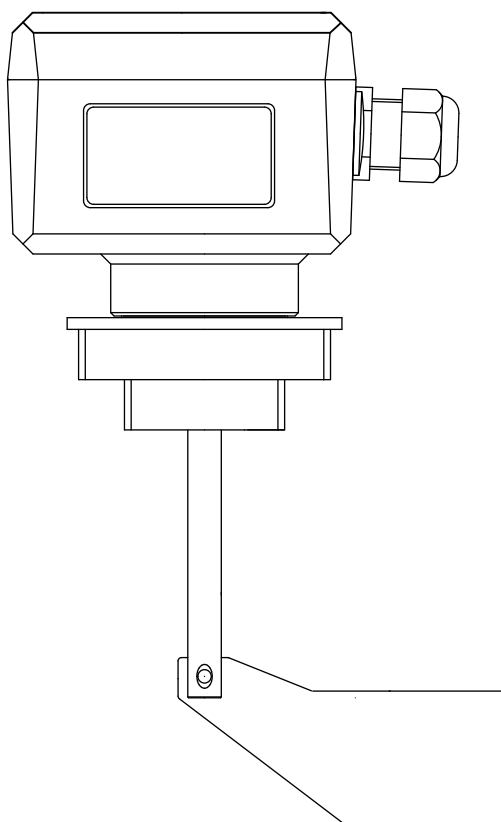


ILT

BIN LEVEL INDICATORS

2

ASSEMBLY AND MAIN INSTRUCTIONS FOR USE AND MAINTENANCE



Manual No. TOR.ILT.--.M.A1.1022.EN Issue: A1
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ORIGINAL INSTRUCTIONS IN ENGLISH

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1.1 Scope of the Manual

This Manual has been prepared by the Manufacturer to provide the operating technical information for installation, operation and maintenance of the device concerned.

The Manual, which is an integral part of the device concerned, must be preserved throughout the life of the device in a known easily accessible place, available for consultation whenever required.

If the Manual is lost, damaged or becomes illegible, contact the Manufacturer for a copy specifying the serial number of the device.

If the device concerned changes ownership, the Manual has to be handed over to the new owner as part of the device supply.

The Manual is meant for specialist technical personnel appointed and authorized by the Manufacturer, owner and installer to act on the device concerned for which specific technical skills in the sector concerned are necessary (electrical, mechanical, etc.).

The illustrations may differ from the actual structure of the device concerned but do not interfere with the explanation of the operations.

In case of doubt, contact the Manufacturer for explanations.

The Manufacturer reserves the right to make changes to the Manual without the obligation to provide prior communication. The Manufacturer reserves the right to make changes to the Manual without the obligation to provide prior communication.

The technical information included in this Instruction Manual is the property of the Manufacturer and therefore has to be considered as confidential.

It is forbidden to use the Manual for purposes other than those strictly linked to the operation and maintenance of the device.

This information is provided by the Manufacturer in the original language (English) and can be translated into other languages to satisfy legislative and/or commercial requirements.

1.2 Symbols

To highlight certain parts of the text, for purposes of safety, or to indicate important information, certain symbols are used, the meaning of which is described below.

It is important to comply with and scrupulously follow the information highlighted by the symbols.



Danger - Warning

Indicates situations of serious danger which, if ignored, can be risky for the health and safety of persons.



Caution





Indicates that appropriate behaviour must be adopted to avoid posing risk for the health and safety of persons and avoid causing economic damage.



Important

Indicates particularly important technical information which must not be ignored.

List of safety and information symbols

Symbol representation	Symbol description
	Danger sign: indicates danger of electric shock caused by the presence of powered components inside the junction box or control panel.
	Obligation: read this Manual before carrying out any action on the device concerned.
	Forbidden: indicates that it is forbidden to lubricate or adjust moving parts.
	Forbidden: indicates it is forbidden to introduce hands into the device.

1.3 Glossary and terminology

Operator: person appropriately trained and authorized by the Production Manager for setting up the device concerned and carrying out routine maintenance.

Installer: organization with specialized technicians and appropriate equipment for carrying out risk-free installation and extraordinary maintenance.

Specialist technician: person responsible for and authorized by the Manufacturer, owner or installer to act on the device; must have specific technical skills depending on the sector concerned (electrical, mechanical etc.). The specialist technician, in addition to being familiar with the working of the device concerned, must be familiar with the working of the plant or equipment on which the device concerned is installed.

Routine maintenance: includes all the actions necessary to keep the device in good working conditions, to ensure greater operating durability and to keep the safety requisites constant.

Extraordinary maintenance: all the actions meant to keep the device in perfect working order.

Setting in safety conditions: all the precautions the authorized personnel must adopt before acting on the device concerned.

The precautions are listed below.

- Ensure that the device concerned is disconnected from all the mains and use suitable devices to prevent the possibility of the power sources being activated accidentally.
- Ensure that all the moving parts of the device have come to a complete stop.
- Ensure the temperature of the device concerned is such that it does not burn.
- Provide appropriate lighting in the area around the operations.
- Wait for the material to be handled inside the device or machine concerned to settle down completely.

1.4 Manufacturer's data and identification of device



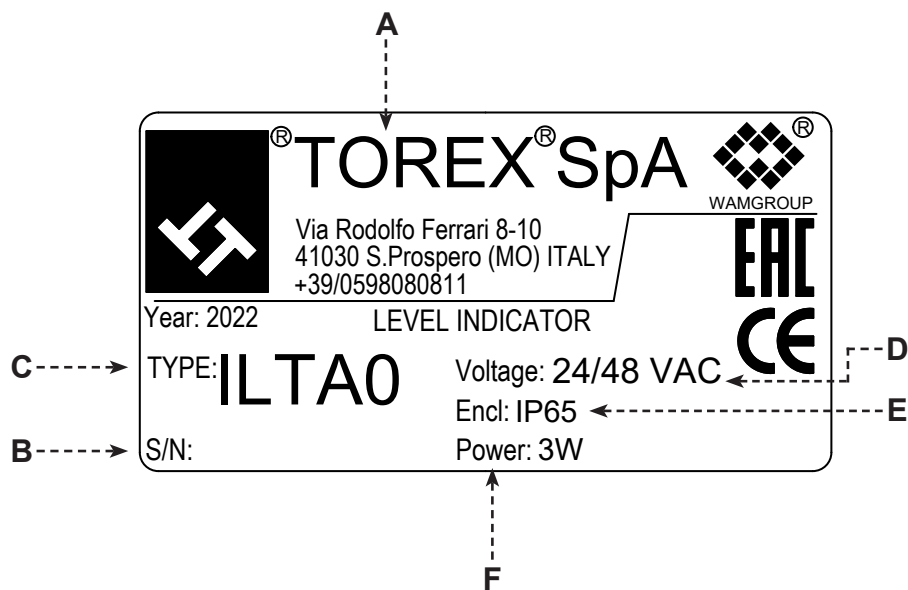
Important

Do not change the data on the identification plate.

Keep ID plates clean, intact and legible.

If an ID plate is damaged or no longer legible (even if only one piece of information on it) contact the Manufacturer and ask for a new ID plate and replace it.

The ID plates shown identify the equipment concerned and its main components.
The plates show the reference necessary for operating safety.



Identification plate ILT

- A) Manufacturer's name and address
- B) Serial No.
- C) Device type
- D) Supply voltage
- E) Case protection degree
- F) Power

1.5 Request for assistance

For all technical assistance, contact the Manufacturer's service network.

For all requests, provide the device identification data, the type of problem encountered and all other information which could be useful for identifying the problem.

1.6 Warranty

The conditions for validity and applicability of the warranty are specified in the sales contract.

1.7 Exclusion of responsibility

The device is delivered according to the specifications indicated by the Buyer in the order and the conditions valid at the time of purchase.

The Manufacturer shall not accept responsibility for safety of persons or objects and operation failure of the device if the loading/unloading operations from trucks, transport, positioning at the site, use, repairs, maintenance etc. have not been carried out in compliance with the warnings described in this Manual, and in accordance with the national legislation in force.

Likewise, the Manufacturer shall not accept any responsibility if the device concerned is used:

- improperly;
- by unauthorized persons and/or persons not sufficiently trained for installation, operation and maintenance;
- with modifications made to the original configuration without the Manufacturer's permission;
- with spare parts that are not original or are not specific for the model;
- without maintenance;
- non-pursuant to the regulatory standards and national or local legislation on the matter of occupational safety;
- non-pursuant to the regulatory standards and national or local legislation on the matter of occupational safety.

2.1 General safety prescriptions

Read the Instruction Manual carefully and strictly follow the instructions it includes, especially those regarding safety.

Most accidents at the workplace are caused by negligence, failure to follow the most elementary safety regulations and incorrect or improper use of tools and equipment.

Accidents can be prevented and avoided by taking due care, using suitable equipment and adopting adequate preventive measures.

Apply and comply with the standards in force regarding workplace hygiene and safety.

The personnel trained for and authorized for the operations has to have the psychological/physical requisites, experience in the sector concerned and the necessary technical skills for carrying out the operations assigned to them.

All workers involved in any kind of operation must be prepared, trained and informed as regards the risks and the behaviour to be adopted.

Pay attention to the meaning of the notices applied on the device, keep these legible and respect the information indicated.

Use instruments, equipment and tools that have been approved and are intrinsically safe, and cannot alter the safety level of the operations or damage the device during installation, use and maintenance.

Modifications to the device components should not be made for any reason whatsoever, without the Manufacturer's permission.

2.2 Safety prescriptions for transport and handling

Carry out all handling and shipping operations as indicated on the procedures and the instructions given on the packaging and on the Manual supplied.

All operations have to be carried out by qualified and authorized personnel.

The personnel authorized to handle the machine have to possess the right skills and experience to put into effect all measures necessary to ensure his safety and the safety of the persons involved.

On choosing the features of the lifting and handling means (bridge crane, mobile crane or forklift) take into consideration the load to be handled, the overall dimensions and of the lifting points.

2.3 Safety prescriptions for installation

Before starting with installation, a “Safety Plan” must be implemented to safeguard the personnel directly involved and those who carry out operations in the surrounding area.

All the laws must be strictly applied, especially those concerning workplace safety.

Before proceeding with installation operations, mark off the work area to prevent access by unauthorized persons.

The electrical connections must be made in compliance with the standards and laws in force.

The person in charge of making the electrical connections has to ensure that the required standards and laws are respected before testing.

The ILT standard level indicators have NOT been designed to operate in hazardous conditions or with hazardous materials; in case the device must fulfil such requirements, it is mandatory to inform the Manufacturer.

The materials considered being hazardous are the following:

- explosives,
- toxic,
- flammable,
- harmful and / or similar.

2.4 Safety prescriptions for use and operation

Do not tamper with the device concerned by using any kind of device to obtain performances different from those designed.

Each unauthorized modification can endanger the health of persons and damage the machine itself.

The operators must wear only protective clothing and personal protection devices suitable to the operations to be carried out required by the safety and work accidents prevention standards.

Before operation make sure all safety devices are installed and working properly.

During operations, prevent access to the work area by unauthorized persons.

Remove all obstacles or sources of danger from the work area.

It is strictly forbidden to walk or placing any improper load on the device.

2.5 Safety prescriptions for maintenance and replacement of components



Danger - Warning

Before carrying out any operation on the device concerned, ensure it is switched off and disconnected from all mains and use suitable devices to prevent the possibility of the power sources being activated accidentally.

Maintain the device concerned in the conditions of utmost efficiency compliant with the maintenance plan provided by the Manufacturer.

Good maintenance apart from preserving the functional features and essential safety features over time, will also allow extending the working life of the device concerned and achieving the best possible performance.

Strictly follow the procedures indicated in the Manual, especially those concerning safety.

Ensure that all the safety devices are active and working properly.

Mark off the work area in such a manner as to prevent the access of unauthorized persons.

Replace the worn and damaged components exclusively with original spare parts, whose safety, reliability and interchangeability have been undoubtedly established.

Apart from invalidation of the warranty, the Manufacturer declines all responsibility for damage to objects and harm to persons deriving from the use of non-original spare parts or due to modifications made during repairs without express written authorization.

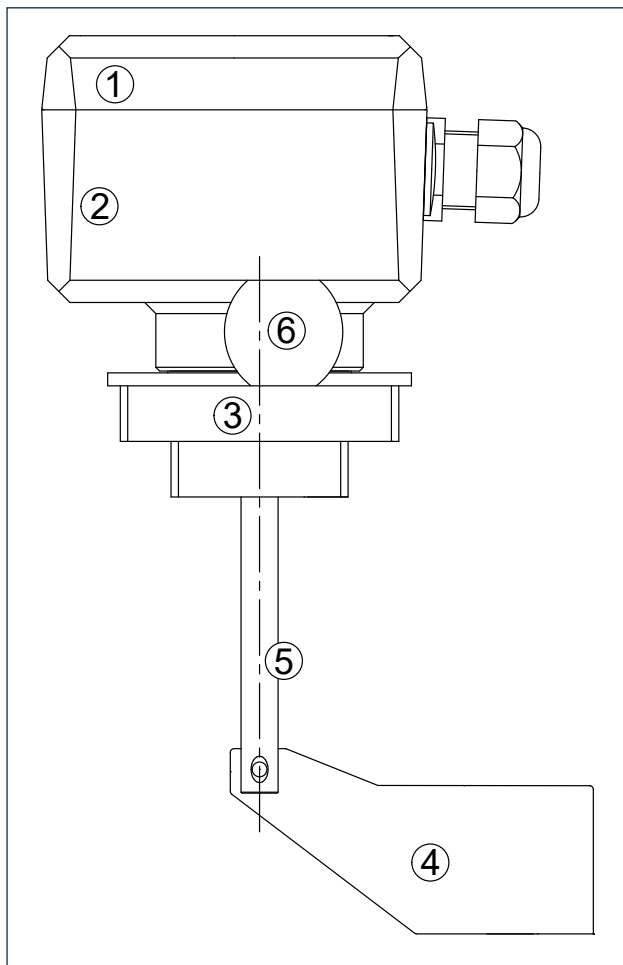
Do not dump polluting material (oil, grease, paint, plastic etc.) in the environment, but carry out waste separation disposal depending on the chemical composition of the various products in compliance with the legislation in force.

On completion of maintenance or replacement operations, before resuming production, check that no foreign bodies (rags, tools etc.) have been left inside the device concerned.

3.1 General description of device

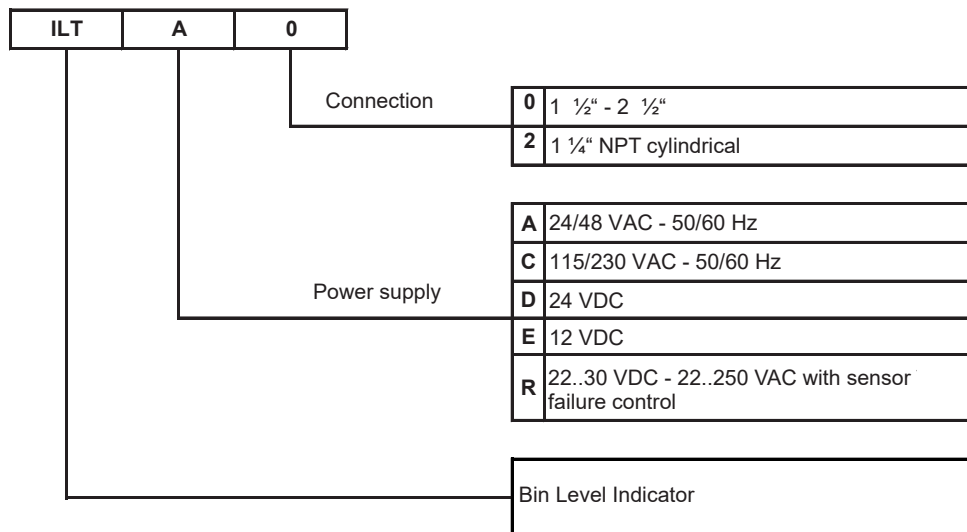
The ILT level indicator has been designed to signal the level of material inside silos, hoppers and bins, through its rotary movement.

3.2 Main components



Item	DESCRIPTION
1	COVER
2	BODY
3	CONNECTING BUSH
4	PADDLE
5	SHAFT
6	FRICTION CLUTCH

3.2 Versions - Order code



3.3 Operating principle

As soon as the material level reaches the measuring paddle, rotation is blocked, the inner torque reaction stops the motor and switches the signal relay status.

As soon as the material level sinks below the paddle radius, the relay returns to the previous status and the motor starts back.

3.4 Permitted use

The device is used to monitor the level inside any kind of container or silo. It can be used with solid bulk materials be it powder or granular. For use with potentially explosive powders, it is available the ATEX certified model of the same device.

3.5 Improper use not permitted

The standard ILT level indicators have NOT been designed to operate in conditions or with hazardous materials. If these conditions are met, it is compulsory to inform the manufacturer.

The materials considered being hazardous are the following:

- explosives,
- toxic,
- flammable,
- harmful and / or similar.

3.6 Technical data and specifications

MECHANICAL FEATURES		
	ILTA_, ILTC_, ILTD_, ILTE_	ILTR_
Protection	IP 65	
Standard connections	1 1/2" + 2 1/2" ISO 228 , 1 1/4" NPT	
Connection bushing material	Plastic or aluminium	
Shaft and paddle material	Stainless steel	
Signal delay	1.5 s	1.5 s + (0.5 - 5s)
Sensitivity	Adjustable, by means of a spring, on 3 different positions	
Paddle speed	1 rpm	
Weight (standard)	1 kg	

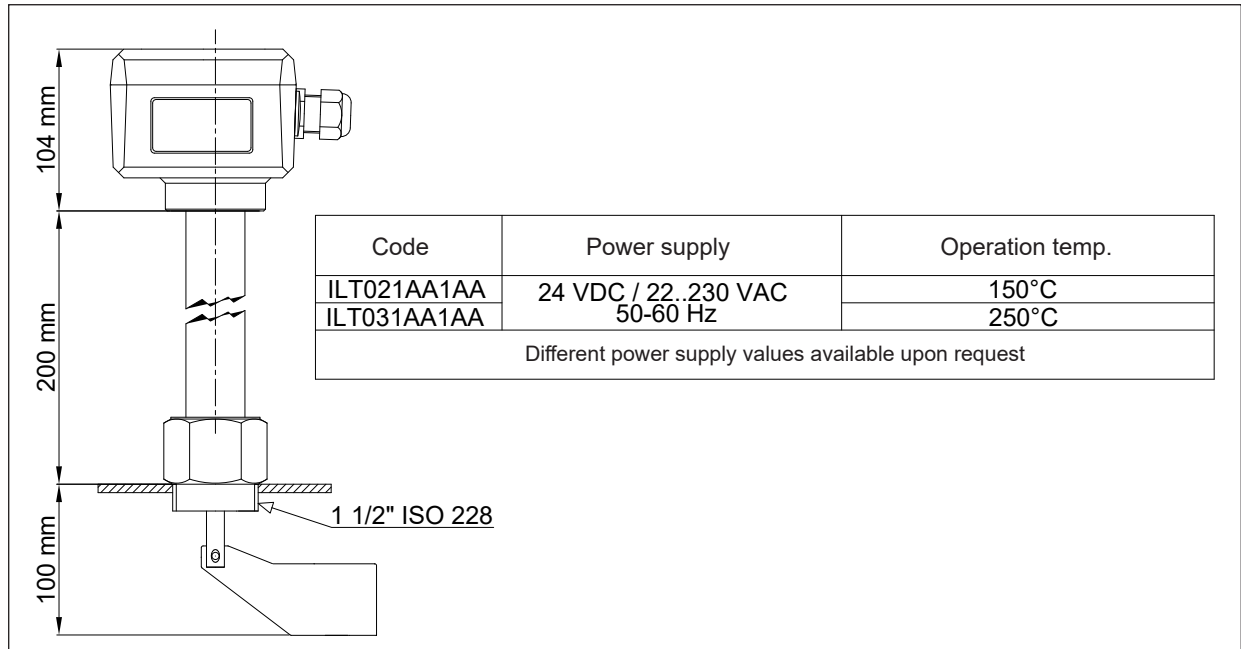
ELECTRICAL DATA					
	ILTA_	ILTC_	ILTD_	ILTE_	ILTR_
Supply voltage (!)*	24 / 48 VAC 50/60Hz (+/- 10%)	115 / 230 VAC 50/60Hz (+/- 10%)	24 VDC (+/- 10%)	12 VDC (+/- 10%)	22-250 VAC 50/60 Hz 22..30 VDC (+/- 10%)
Absorption	3W				5W
Connection cables cross-section	1 ÷ 1.5 mm ²				
Output signals	Relay Output (N.O+N.C) max.250V - 2A				Relay Output (N.O+N.C) max.250V - 2A
failure sensor signal					Relay Output (N.C) max.250V - 2A
Operation modality					FSL / FSH
Protection class	I				
Overvoltage category	II				



Important

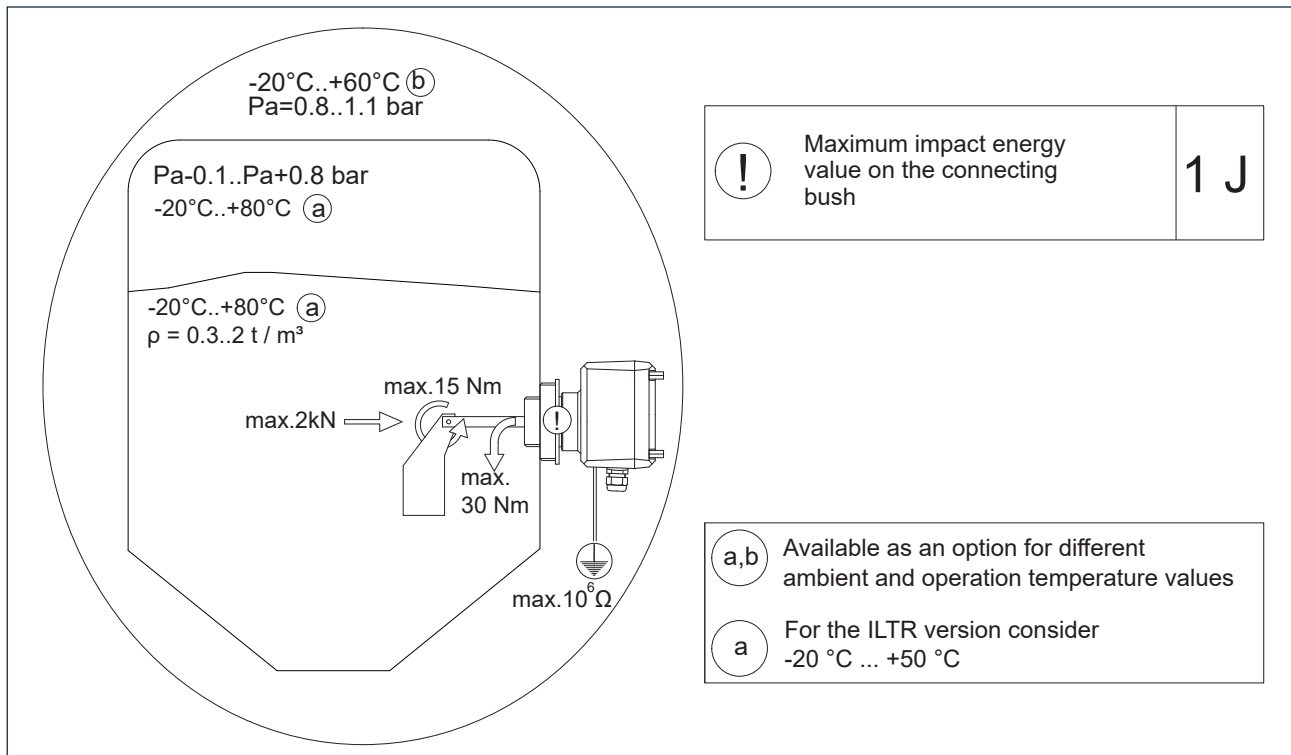
The supply voltage must not come directly from the network; it must always be obtained from a secondary winding.

3.6.1 Version for high temperatures processing



3.7 Environmental operating limits

OPERATION CONDITIONS



RESTRICTIONS

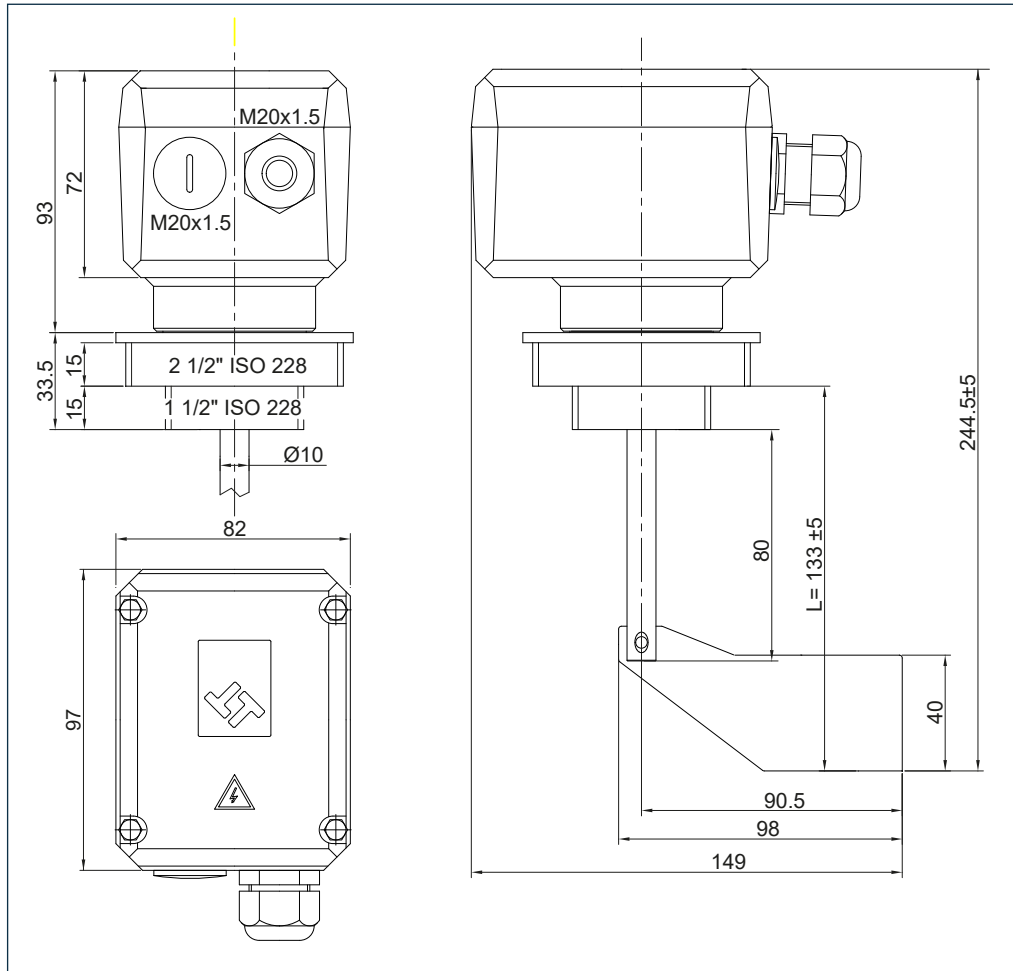
The bushing resists the sunlight and atmospheric agents. The mechanical features of the material are not guaranteed in case of acid or base containing environments.

Such environmental conditions have to be checked depending on the application.

The tensile strength of the plastic material lowers in time as follows:

- about 50% in two years
- about 60% in five years

3.8 Overall dimensions



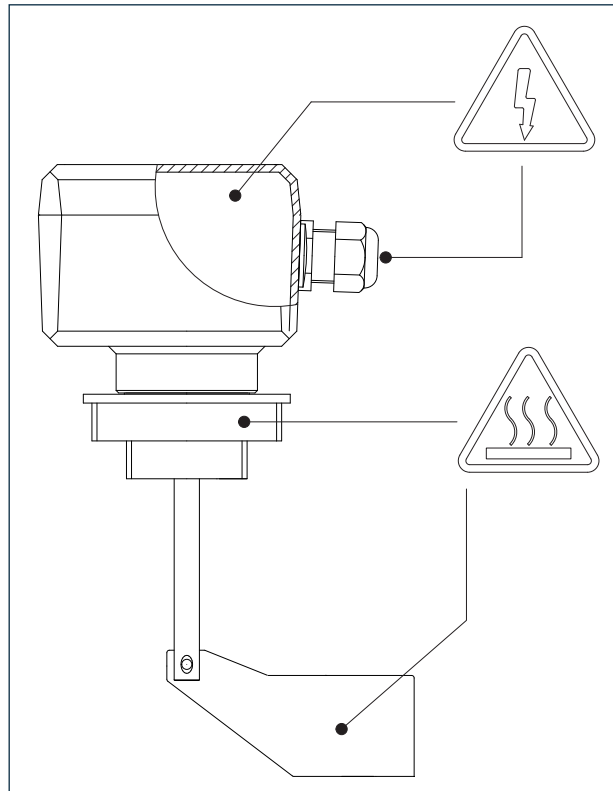
3.9 Safety and information signs



Danger - Warning

Follow the signs on the plates.

Ensure the plates are legible; otherwise clean them and replace the damaged ones, applying them in their original position.



4.0 INFORMATION REGARDING HANDLING AND TRANSPORT

2

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4.1 Type of packaging



Danger - Warning

The person authorized for unloading must implement all necessary measures to ensure their own safety and the safety of others.

Use personal protection devices and means / accessories (ropes, hooks, shackles etc.) suitable for the load to be handled.

PACKAGING: The ILT level indicator are packed separately in cardboard boxes.. Depending on the quantity ordered, the boxes can be secured on pallets covered with film or shrink-wrap. The packages may vary depending on the configurations with extensions and/or for high temperature.

Indicators in the boxes are not fixed in any manner.



REMOVING THE PACKAGING: make sure the packaging is intact and shows no signs of damage. The unpacking simply operations require the removal of the film (if present).

DISPOSING OF THE PACKAGING: The installer is liable for the proper disposal of the packaging according to the legislation in force.

4.2 Reception of goods

On receiving the goods, check if type and quantity match the data on the acknowledgement of order.

Possible damage has to be immediately communicated in writing in the space provided to this purpose in the waybill.

The carrier is obliged to accept the complaint and leave the Customer a copy of the waybill.

If the supply is "free destination" a copy of the waybill and of the complaint shall be sent to the Manufacturer or to the forwarder.

If the damages are not claimed immediately on receipt of the goods, your request for compensation may not be accepted.

4.3 Lifting and unloading methods



Danger - Warning

Handle according to the information on the device.

The person authorized for unloading operations has to make sure the necessary measures are adopted to ensure his or her safety and the safety of other persons directly involved.

Use means and accessories suitable for the load to be lifted.

Handle the load with care to avoid possible injury to persons.

Do not stack the packages as they are not sized for that purpose.

Before lifting and handling the packed device, read the relevant information indicated in the "Information regarding safety" Chapter.

5.1 Safety prescriptions for installation



Danger - Warning

The replacement operations must be carried out by a specialist authorized technician with specific skills.

Provide appropriate safety measures and use suitable equipment to prevent risk of work accident to persons involved in the operations and to those nearby.

Before starting installation, define a safety plan compliant to the legislation in force regarding workplace safety.

The specialist technician, authorized by the installer or owner, must assess whether the area has been prepared correctly and whether the necessary installation equipment is available.

5.2 Mechanical connections



Danger - Warning

Before carrying out the operation, read the general safety requirements and the shipping and handling safety recommendations. Follow strictly the fixing procedures indicated below.

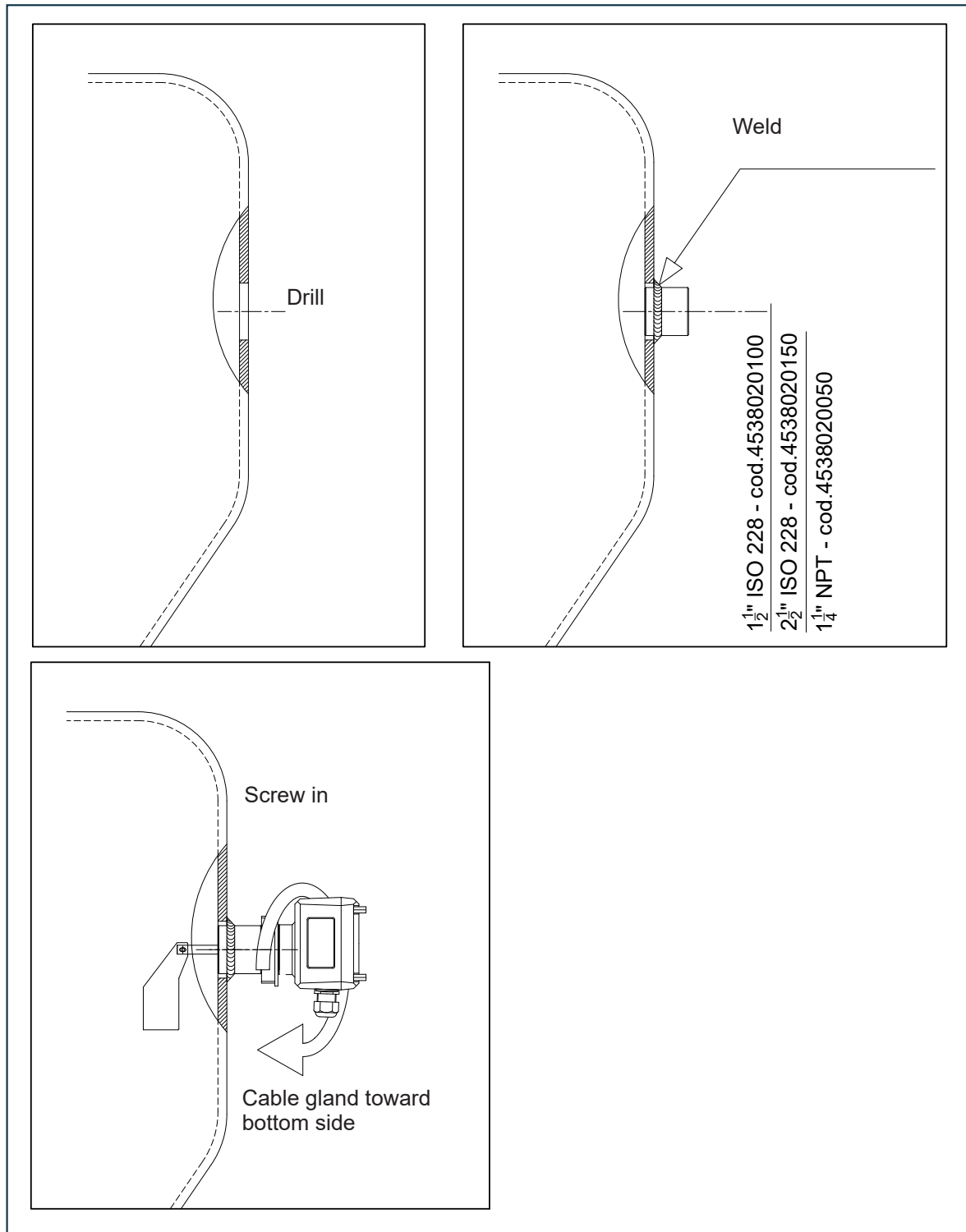
The unit must be mounted with the threaded fitting on the container. It can also be used a suitable sealant (Teflon tape) for the fixing and sealing of the unit: tighten manually the plastic bushing, do not use tools.

The cable gland must be positioned at the bottom to prevent water/dust from entering.

The housing cannot be rotated after fixing; make sure the cable is securely fastened inside the cable gland.

5.0 INSTALLATION AND FIXING

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5.3 Electrical connections



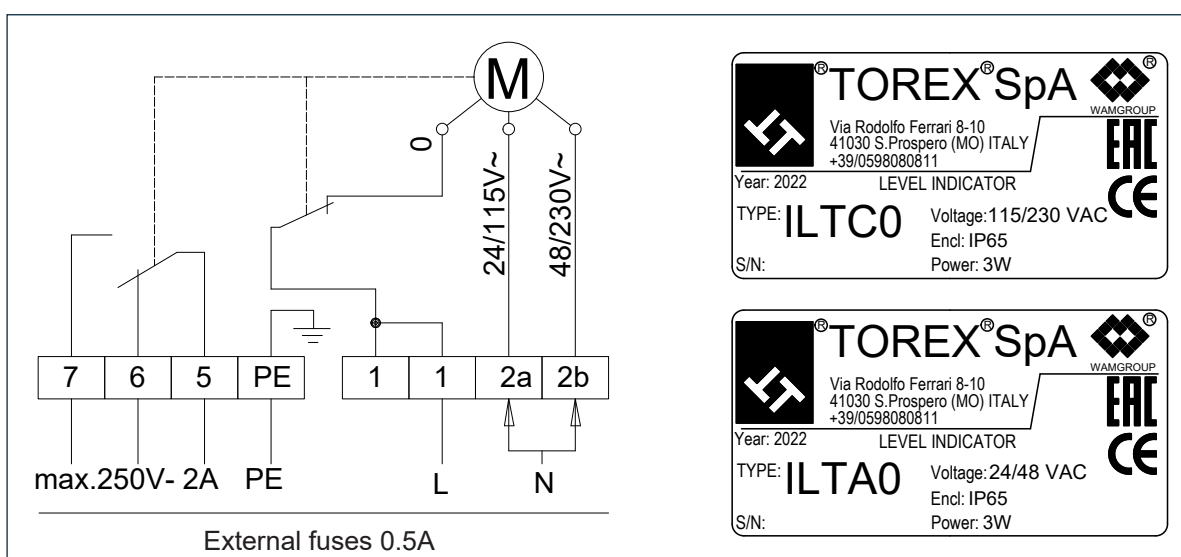
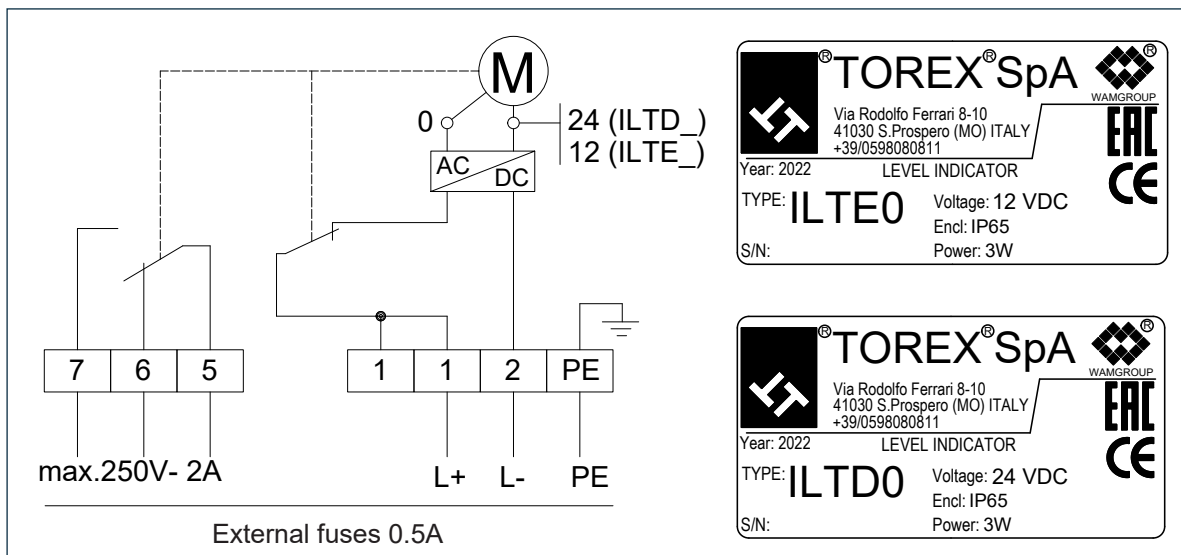
Danger - Warning

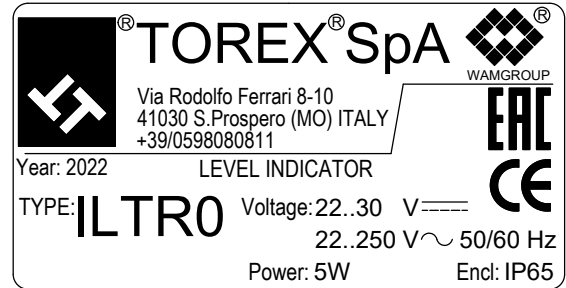
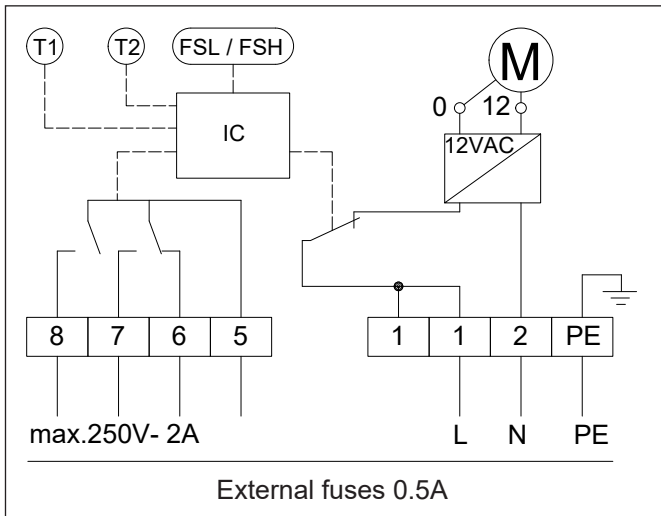
Before carrying out the operation, read the general safety requirements and the shipping and handling safety recommendations. Follow strictly the fixing procedures indicated below. Before carrying out any intervention on the device make sure it has been set in safety conditions.



Important

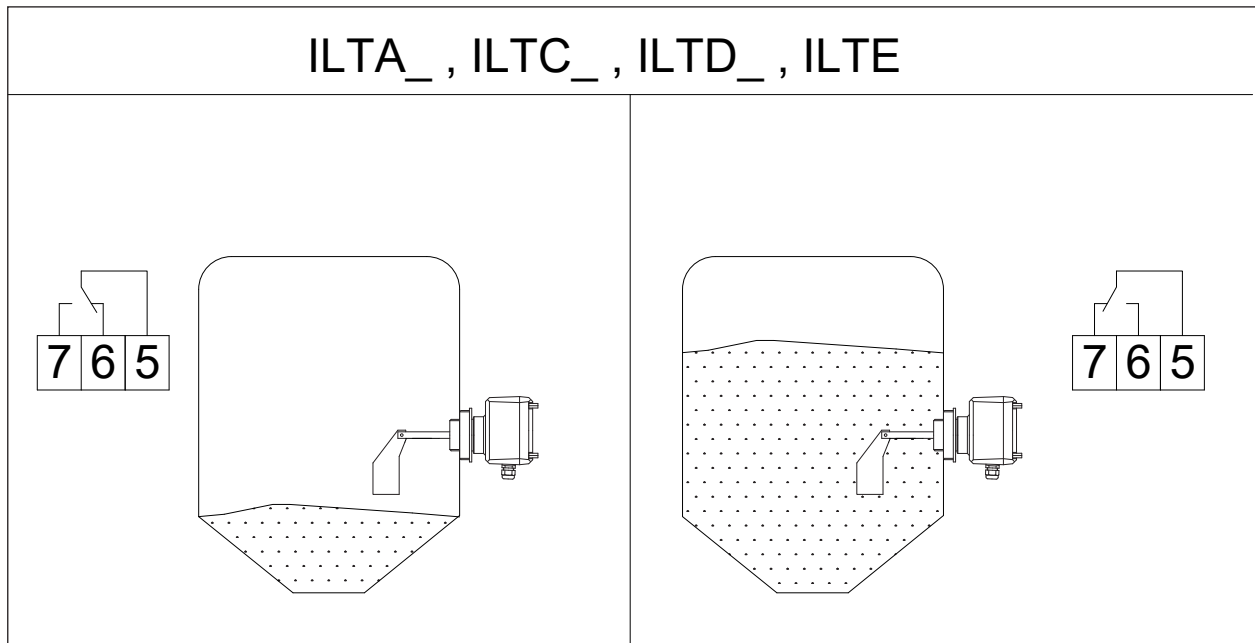
The connection must be made in accordance with the voltage value shown on the rating plate and in accordance with applicable standards.





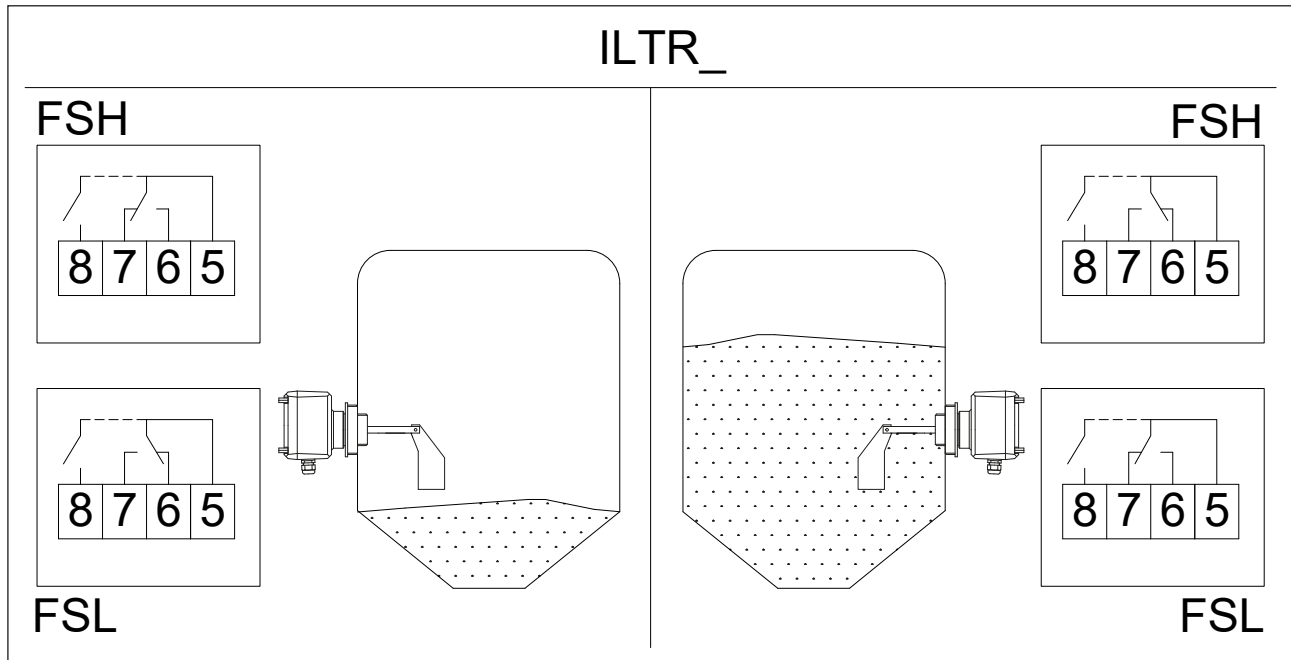
5.3.1 Signal logics

For the ILTA, ILTC, ILTD, ILTE versions the graph shows the switching logic of the electromechanical contacts indicating the presence / absence of material on the paddle.



5.3.2 ILTR versions signals logics

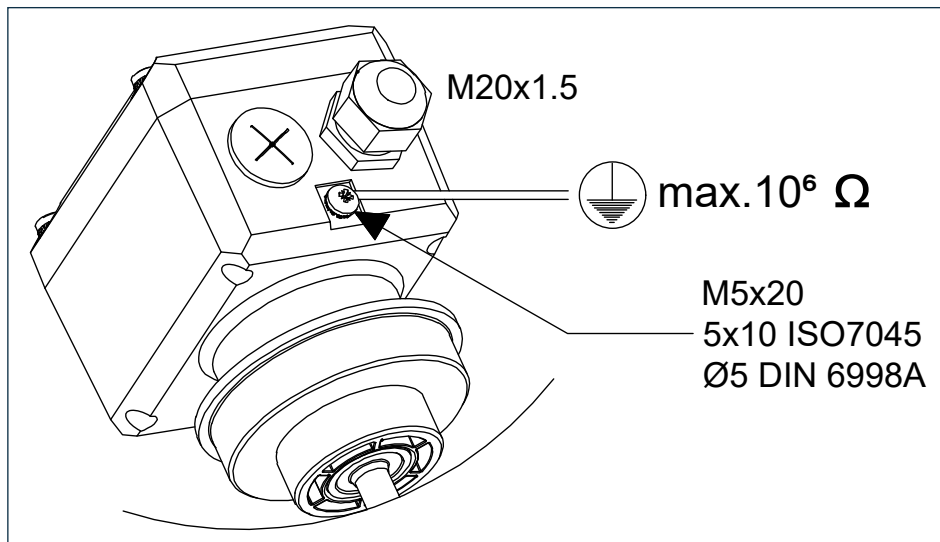
The ILTR version features an additional signal for sensor failure indication. In normal operating conditions the contact 5-8 is closed. In the event of a power failure or malfunction of the level indicator, the contact 5-8 opens. The following figure shows the switching logic of signal contact, which can apply two different operation modes (FSH / FSL), to be set through the jumper fitted on the electronic module.



	Function	Field	Factory settings
A	Output signal jumper mode (free/busy sensor)	FSL - FSH	FSL
T1	Free sensor delay -> signal switching	min.0; max.5 s	0.5 s
T2	Busy sensor delay -> signal switching	min.0; max.5 s	0.5 s
8-5	Failure signal	max.250V - 2A	
5-6-7	Level status signal		
1-2	Supply	22...30V DC , max.5W	
		22..250V AC 50-60 Hz, max. 5W	

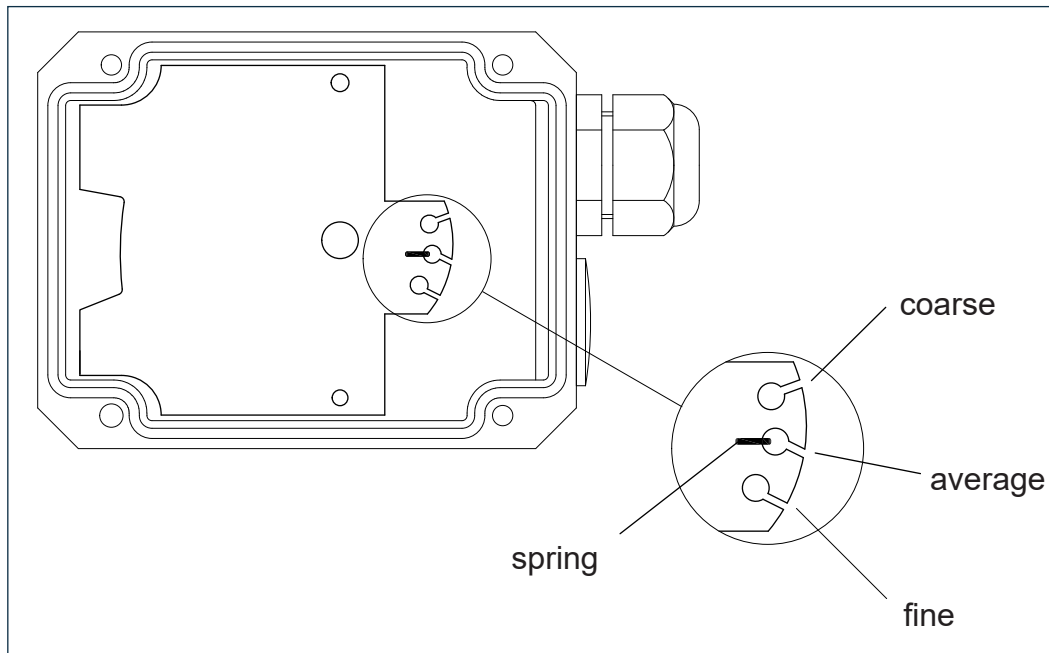
5.3.3 Safety instructions on the electrical connections

- provide protection for the output relay contacts against voltage peaks due to inductive voltages.
- make sure the wires surface exposed does not exceed 8 mm length (hazard of contact with powered parts).
- position a power switch near the device. .
- in case of fault, the power supply must be cut off automatically by means of a safety switch F1 in order to protect the user from indirect contact with hazardous electric voltages.
- protect the power supply of the device by means of a fuse.
- the connection cables must have minimum insulation voltage 250V and cover a range of working temperatures between -30°C and +90°C.
- the cable glands must have minimum protection degree IP65 and cover a range of working temperatures between -30°C and +70°C.
- make sure the cable gland tightens the cable safely, by fixing it properly (water infiltration hazard).
- the body of the device must be connected to the grounding to avoid formation of electrostatic charges. This aspect is very important in pneumatic conveying applications or with containers made from other than metal.



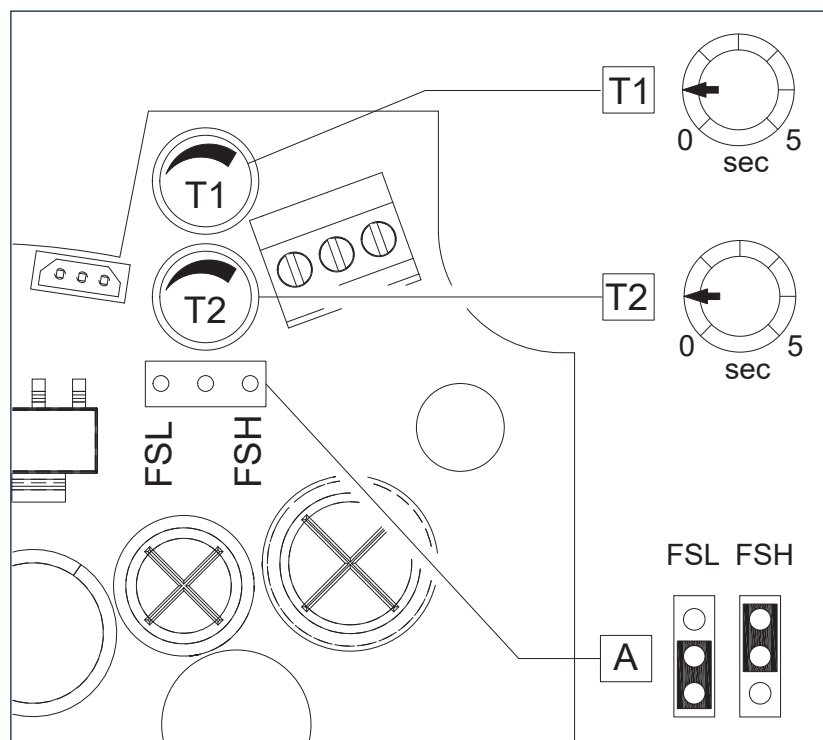
5.4 Adjustments

The sensor features a spring adjustable in 3 positions meant to change sensitivity of the indicator. Move the spring hook using a small pliers.



5.4.1 Specific settings for ILTR

The figure shows the area of the board where the jumpers and the 2 trimmers are fitted to adjust to the contact switching mode and the signal delays.(ref.5.3.2)



6.1 Start-up



Pericolo - Attenzione

Before starting up the device, the operator in charge has to ensure all safety devices are enabled and that the operation conditions are met.

Before carrying out any intervention on device, check to make sure it has been set in safety conditions.

Before the definitive starting of the device valve, ensure the installation has been completely and properly carried out and that connections to external mains were made according to the following indications:

- 1) Read fully the INSTALLATION, USE AND MAINTENANCE manual.
- 2) Check that all electrical connections have been performed according to the indications given in the sections 5.3.
- 3) Ensure all warning plates are intact.
- 4) Check THE electrical connections and secure the device.
- 5) Make sure that the cover is closed and the cable gland is properly tightened to prevent infiltration of water and dust.



Prudenza - Cautela

Pay particular attention to any detail that may indicate a fault (noise, vibration, uneven motion of the paddle, overheating)..

These procedures should be repeated whenever the plant is restarted after being stopped for over a week.

6.2 Machine shut-down at the end of the work cycle

Disconnect the power supply; for the ILTR version, when the device is switched-off, the failure signal contact opens.

6.3 Long shut-downs of the device

6.3.1 STORAGE PRIOR TO INSTALLATION

- Storage conditions below -15°C are forbidden
- Avoid as much as possible salty and moist environments.
- Place the device indoors on wooden platforms, protected from atmospheric agents.
- The device must not be stored in the open or in areas where vapours or substances incompatible with its construction materials (even slightly corrosive substances) are present.
- Clean the device thoroughly before storing it for a period of inactivity.

6.3.2 POSSIBLE REUSE AFTER LONG SHUT-DOWNS

- Before using the device, check the condition of the electrical systems and the parts whose proper working may be affected by prolonged shut-downs.
- Power the device to check the paddle rotation before installing the indicator on the plant.
- If the device works in conditions and with materials different from those of the previous application, check the compatibility with this use according to the INDICATION FOR USE section.
- If the device remains inactive for over 6 months, it is advisable to check the integrity of the sealing ring on the shaft and the seal on the cover; replace them if necessary.
- Check to make sure no water, dust or condensation has infiltrated the casing.


Danger - Warning

Before carrying out any maintenance activity, activate all the safety devices to ensure the safety of the persons involved in the operations and those nearby.

Set the device concerned in safety condition.

Wear suitable personal protection equipment; in this regard, consult the person in charge of production activities safety.

Prior to any operation, disconnect device from the power supply.

Depending on the application, check these items:

- mechanical damage to the blade.
- damage to the connecting cables.
- cleaning degree of the paddle.
- wear of the seals.

7.1 Removing the material residues

Danger - Warning

When removing the dust that may be present on the device , take care not to disperse it in the environment.

For a safe operation the user must use cleaning products suitable to the purpose, on the basis of the plant type; avoid toxic or flammable products.

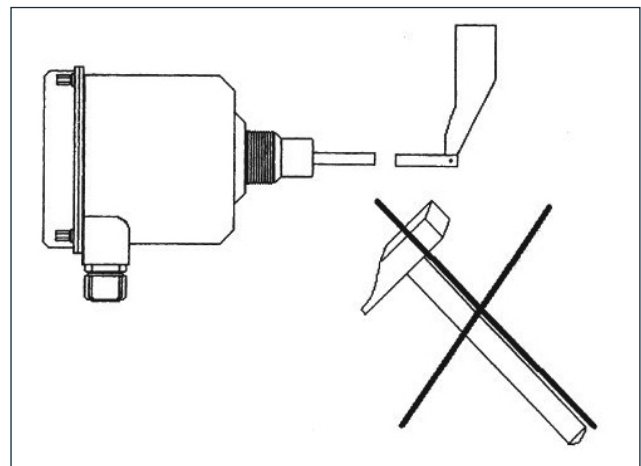
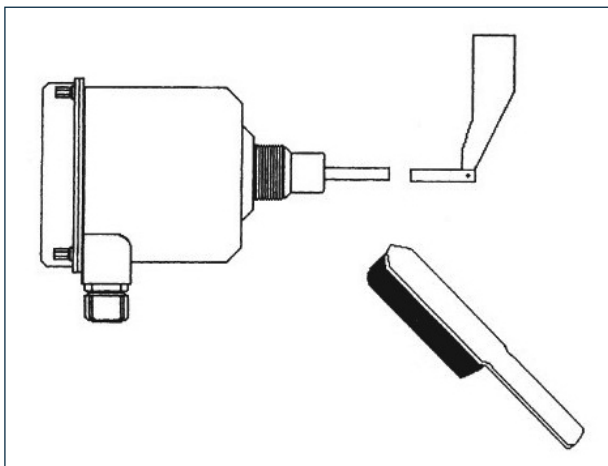
In case the device is used with food products, it is mandatory to use not toxic detergents, suitable to the type of application.

The cleaning frequency depends on the type of product being handled and on the plant type.

In case of toxic or dangerous products, the cleaning residues must be collected in closed tanks and disposed of in accordance with the instructions of the product safety chart.

Do not use water jets.

Clean thoroughly the indicator each time it is used for foodstuffs.



8.1 Safety recommendations for replacement



Danger - Warning

The replacement operations must be carried out by an authorized specialized technician with specific skills in the sector concerned (mechanical, electrical etc.).

Provide appropriate safety measures and use suitable equipment to prevent risk of work accident to persons involved in the operations and to those nearby.

Activate all the safety devices envisaged and prevent access to controls which, if activated, could cause work injuries to the persons involved in the operations.



Caution

Operating the device other than according to the indications may cause operational problems and void the warranty that covers on the device supplied.

8.2 Returning the device

When returning the device, use the original packaging if it has been preserved, otherwise place it in a container that protects as much as possible from impact during transport. However, make sure there is no material residue inside the device.

8.3 Dismantling and disposal

The dismantling of the device must be entrusted to personnel specialized in such activities, having the suitable skills.

Dismantle the components of the device; if necessary contact the Manufacturer for further information.

The components dismantled have to be separated on the basis of the materials they are made of, in compliance with the laws on “differential collection and disposal of wastes”.

With reference to the WEEE Directives, electrical and electronic components, marked with a special symbol, have to be disposed off in authorized collection centres meant for the purpose.

Unauthorized disposal of “Waste Electrical and Electronic Equipment” (WEEE) is punishable with fines governed by the laws concerning the matter.

9.0 INFORMATION REGARDING FAULTS

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9.1 Trouble-shooting

Minor problems can be solved without consulting a specialist.

The following Table contains a list of the most common problems, the possible causes and possible remedies.

For particularly difficult actions which are not mentioned in the Table, contact the Manufacturer's Customer Service Department.


Danger - Warning

Before carrying out any operation "set the device concerned in safety" (see "Glossary and terminology"), operate according to the indications on the "Operation and Maintenance Manual" and in accordance with and in compliance with the standards in force as regards health and safety.

	PROBLEM		SOLUTION
1.0	The level indicator does not rotate.	1.1	Make sure it is connected to the mains and powered.
		1.2	Check the operation of the motor.
		1.3	Check the operation of the related microswitch.
		1.4	Check that no dust has entered the threaded bushing. If so, check the pressure inside the silo/container and the temperature of the material.
2.0	Failure to signal the status of the level indicator.	2.1	Check the correct connection to the output contacts.
		2.2	Check the operation of the related microswitch.
		2.3	Check the mechanical integrity of the control board holder.
3.0	Level indicator faulty. (ILTR)	3.1	Check the operation of the motor.
		3.2	Check that the rotation LED gives a signal every 20 seconds (approx.) on the board.
		3.3	Make sure the jumper switch is set correctly.
4.0	The sensor does not sense the presence of the material.	4.1	Adjust the spring to middle or end position.
5.0	The full signal arrives later than the paddle stop (ILTR).	5.1	Adjust the T2 delay trimmer.
6.0	The empty signal arrives after the paddle has restarted. (ILTR)	6.1	Adjust delay trimmer T1.
7.0	The presence / absence of the material is signalled wrongly.	7.1	Check the correct setting of the FSL/FSH jumper.

9.0 INFORMATION REGARDING FAULTS

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	PROBLEM		SOLUTION
8.0	Adjustments on trimmers / jumpers have no effect on the operation of the level sensor (ILTR)	8.1	The power supply must be disconnected and reconnected.
9.0	Output signal status is unstable (ILTR).	9.1	Check that the supply voltage is not below the prescribed limit. (ILTR)
		9.2	Check that there are no strong magnetic fields near the indicator head. (ILTR)
		9.3	Check that there are no strong sources of vibration.

9.2 Check-list in case of fault

If you have been unable to solve the problem on the device even after having carried out the operations suggested in paragraph "Trouble-shooting" please contact the plant technician/installer/or the Manufacturer.

If technical assistance is required, in addition to the device data, the plant technician/installer or Manufacturer will also need information concerning the plant in which the device is installed, its installation and its working, for better identification of the problem that has occurred.

Obviously many of the checking operations which are requested have already been performed in the various steps during installation, testing and start-up of the device concerned.


Danger - Warning

Before carrying out any operation "set the device concerned in safety" (see "Glossary and terminology"), operate according to the indications on the "Operation and Maintenance Manual" and in accordance with and in compliance with the standards in force as regards health and safety.

1) Information necessary

- a) Code and serial number
- b) A photo that shows the application type as well as the plant.
- c) Description of the problem.
- d) Operation sequence (timing, delays, signals management).

2) Checking the electrical part

- a) Supply voltage
- b) Voltage on the output contacts.

3) Checking the material

- a) Type of the material.
- b) Density and particle size, abrasiveness, hygroscopicity.

A1 Spare parts and accessories

ACCESSORIES	
Sleeve 1+1/2"	4538020100
Sleeve 2+1/2"	4538020150
Double paddle kit	13N07052A (Item 3)
Green lamp cover M20x1.5	3848004510 (Item 5)
Red lamp cover M20x1.5	3848004530 (Item 5)
24 volt lamp	3848004050 (Item 6)
48 volt lamp	3848004055 (Item 6)
115 volt lamp	3848004100 (Item 6)
230 volt lamp	3848004150 (Item 6)
500 mm shaft extension kit (Carbon Steel)	452039676 (Item 2)
1000 mm shaft extension kit (Carbon Steel)	452039678 (Item 2)
500 mm shaft extension kit (SS304)	452039677 (Item 2)
1000 mm shaft extension kit (SS304)	452039679 (Item 2)
Shaft extensions pin	3850001039 (Item 4)
Ø4x25 AISI 304 DIN 94 (included in item 2)	(Item 1)


Important

Extensions can be used up to maximum 500 mm horizontally and 3000 mm vertically.
In addition to the extension, make sure to purchase also the other components indicated in the figure.
For lengths over 1000 mm use 2 extension kits, connected to pin (item 4).

