

OPERATING MANUEL

Model : **B..x HOUSING**

enSim
SENSORS

Information in this manual is reviewed and completely reliable. Responsibility is not assumed due to any typing error. Products in this manual are available only for information purpose and they may be changed without notice.



Models :

B21x , B22x



1783

Important Notes:

Used Symbols :



: Caution



: Note



: Disposal










-  Please read this manual carefully before installation of the **housing**. User is responsible for accidents and losses arising from failure to comply with the warnings in this manual.
-  In the event that **housing** is broken, take measures in order to prevent accidents and losses which can occur in its system.
-  There is not any fuse and circuit breaker on the instrument; they should have been added to the system by the user.
-  This manual should be stored in an easily accessible place for subsequent use.
-  The manufacturer's liability cannot exceed the purchase price of the device according to the law.
-  Do not make any modification on the instrument and do not try to repair it. Reparation should be made by authorized service staff.
-  Do not operate the system before making assembly in compliance with the assembly chart related to the instrument.
-  Products which do not contain label and serial number are considered to be excluded from the warranty scope.
-  The instrument's useful life, determined and announced by the ministry, is 10 years.

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1. General Information :

1.1. Material Acceptance

Check that there is no damage on the packages during the transportation immediately after the material acceptance. If packages are damaged, open the packages immediately and check whether products are affected or not, if there is any damage, send your complaint report to the transporter company and its photocopy to the address of our company.

1.2. Information about Areas of Use

The enclosures are designed to house electronic and electrical devices, mechanical and electronic meters, status indicators and can operate in hazardous areas.

Flameproof Temperature Transmitter Housings are considered as an Ex Component enclosure and must be re-certified as an Ex Equipment with relevant standards.
IPX8 rating was tested at 2m depth (pressure of 0.2 bar) for a duration period of 1 hour.
Cable entry gland must be chosen according to relevant standards by the customer / user.

Application Areas ;

Such as oil refineries, chemical factories, food machinery, fuel-oil warehouses, ship industry...

Ambient Conditions: Relative Humidity: 0-98 %RH Ambient temperature: 60C (It is not used under -20 C)

1.3. Certifications and Approvals

CE	:	It shows that, product meets required conditions of EU with CE stamp and stipulate that product passed quality assessment stages
ATEX (2014 / 34 / AB)	:	TS EN 60079 - 0 : 2018 TS EN 60079 - 1 : 2014 TS EN 60079 - 31 : 2014 TS EN 60079 - 26 : 2015

Note: The Manufacturer (LONCA MAKİNA SANAYİ TİCARET A.Ş.) has applied all the features and tests performed in this document in all products manufactured as DX-Enclosure model.

1.4. Technical Specifications and Material Knowledge

Enclosure Material	Aluminium AISI12Fe Powder Coated Surface
Enclosure Colour	Black (RAL 9005) (Std.)
Seal Material	NBR Nitrile Rubber 120 °C, Opt. FPM (Viton) 200 °C
Glass Material	Soda Glass Toughened
Metal Label Material	Aluminium
Process Connection	1/2 "BSP , 3/4" BSP Female Thread (Std.) Opt.
Cable Entries	2 x M20x1,5 mm
Working Temperature	240 VAC 50 / 60 Hz ; 16 A
Max. Voltage ; Current	3 Nm
Working Temperature	(-) 20 ... (+) 60 °C (Std) , Ops./Opt. (-) 40 ... (+) 60 °C (Std)
Protection Class	IP 66 / 68 (EN60529)
Permitted Use	Gas , II 2G Ex d IIC Gb Dust , II 2D Ex tb IIIC -20 °C ≤ Tamb ≤ + 40°C, IP 66 / IP 68 (2meter)
Document number	TSE 22ATEX0175U
Relevant Standards	TS EN IEC 60079-0 , TS EN IEC 60079-1 , TS EN IEC 60079-31 TS3033 EN 605229/A2
Weight	B22x ~ 0.44 kg B21x ~ 1.05 kg

1.5. Marking



2104 / 34 AB

II 2G Ex d IIC T Gb For Gas

II 2D Ex tb IIIC For Dust

-20 °C ≤ Tamb ≤ + 40°C, IP 66 / IP 68 (2metre)

* Have a look at the temperature class chart.

1.6. Appropriate Zone Application

Zone	Protection Class Code
0 , 20	Ex d + Ex ia
1 , 21	Ex d
1 , 22	Ex d

1.7. Pressure Test

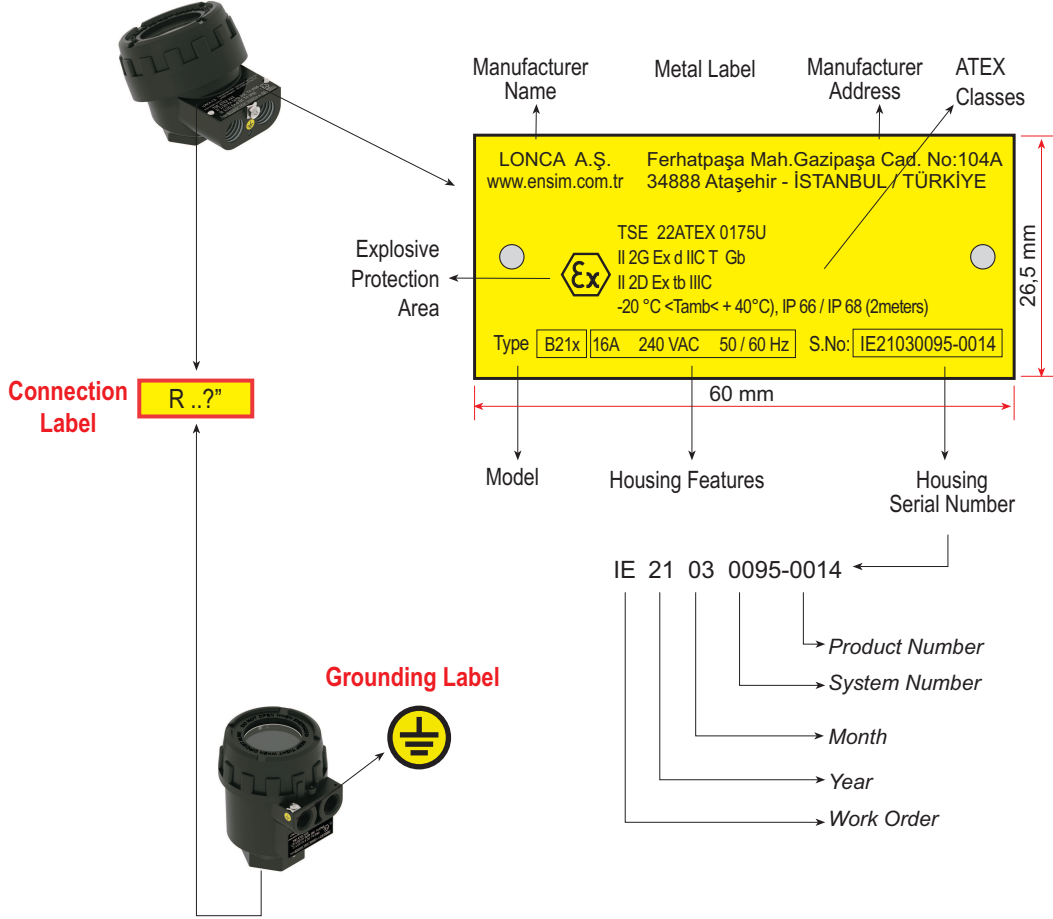
The enclosure maximum pressure test is 55 bar. It does not require routine testing when it does not exceed 12 bar with additional volumes formed by assembly.

IP68 indicates acceptance of immersion to a depth of 2 meters for 1 hour under water.

1.8. Label information

The device must be used with the metal label which indicates the manufacturer (LONCA MAKİNA SANAYİ TİCARET A.Ş.).

The label for customer must be applied at indicated area.



1.9. Package and package contents

Please check whether you have taken delivery of below listed content completely or not and check its conformity with criterions in your order:

***Housing**

***This operating manual**

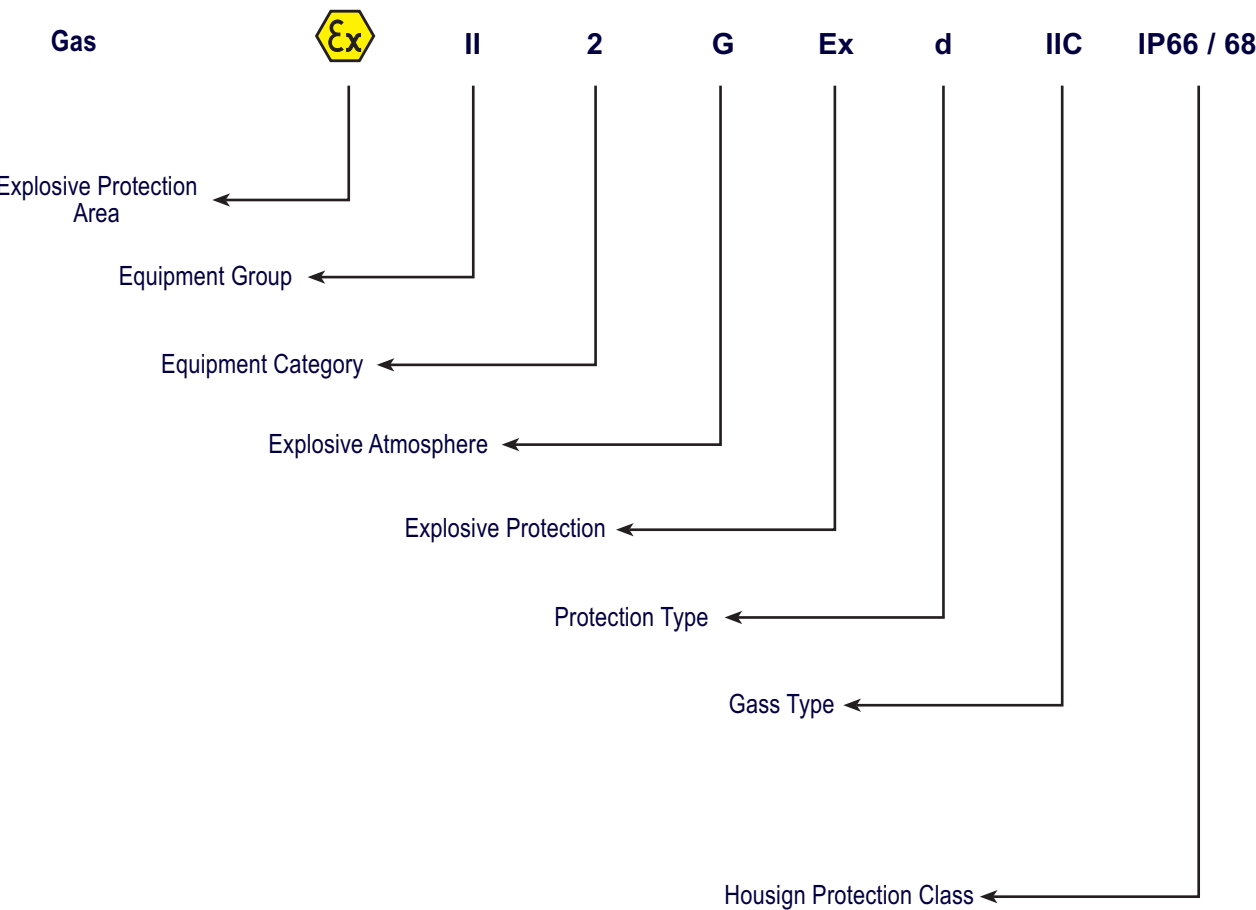
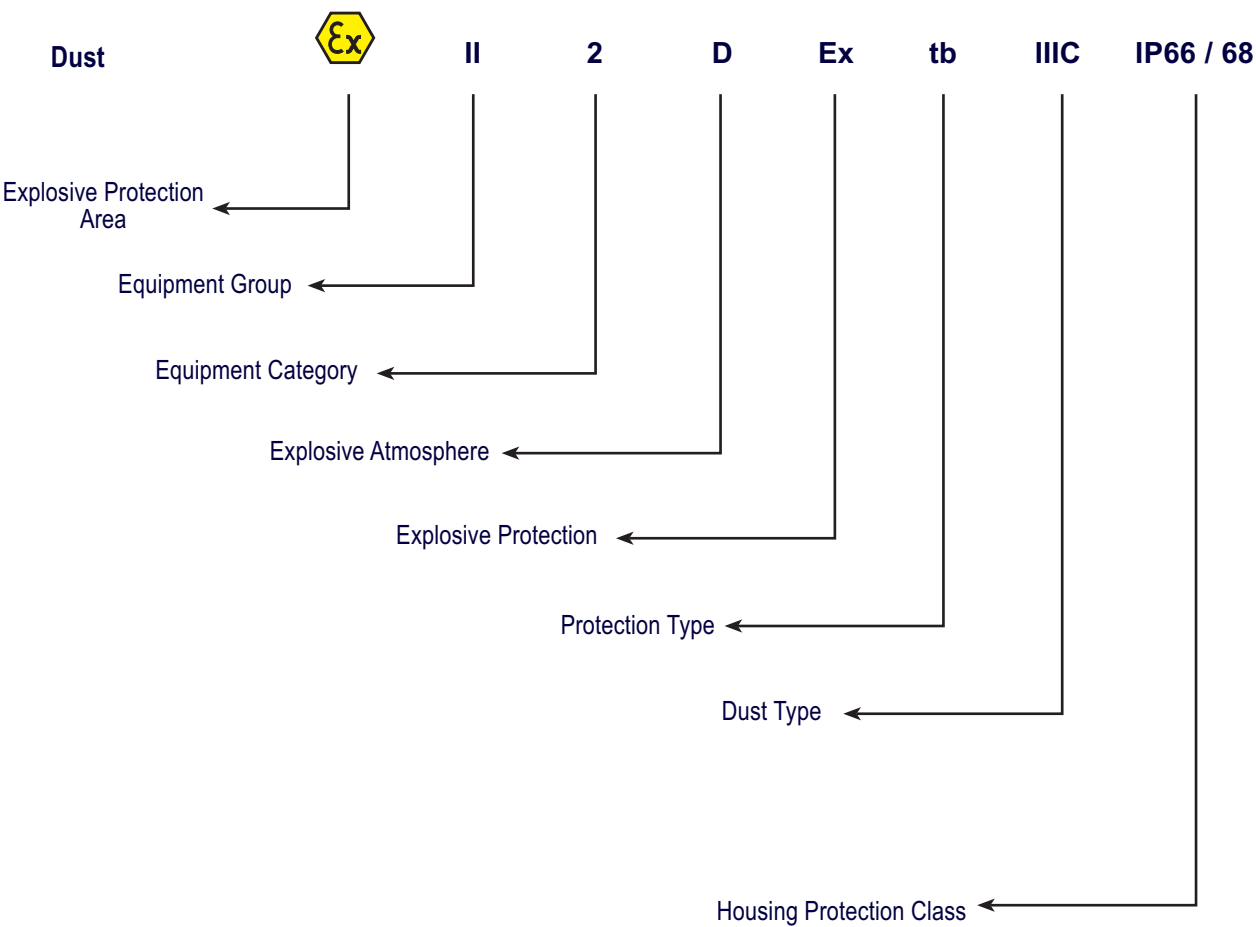


Std. Package

1.10. Target Group

This operating manual has been prepared for qualified technical personnel.

1.11. ATEX Marking Sample Description



1.12 . Safety instructions (ATEX)



Safety instructions should be read and applied to the end.

- The following notes should be observed in order to avoid hazards to the operator and his surroundings, adhering to the relevant standards, legal requirements and standards of the enclosure.
- Each enclosure contains the manufacturer metal label. The customer using the enclosure must apply their own product label.
- The enclosure manufacturer's marking labels must be protected by the user.
- The device setup and maintenance of this device must be done by knowledgeable persons who has read the instructions and is familiar with the safety at work.
- It should be checked by the users that the products are fitted suitable to the zone maps.
- Work safety,must be observe by accident prevention regulations and national installation standards.
- The product should be used within the specification presented guideline.
- These safety instructions are protected in terms of 2D and 2G category for **B..x** coded series and is compatible with TSE 22ATEX0175U and CE certificate.
- The Label should be used in appropriate environments.
- Because the enviroment is max. 60 °C you should choose a suitable cable for use.
- Do not over tighten the cable gland in order not to affect the IP protection class.(Max. 5 Nm)
- Make sure the cable entry and plug is tightened right.
- Ground connection must be done properly and checked without energizing.
- Before starting use make sure the lid is fully closed and the set screw is tightened.
- **B..x** models are metal protected.
- Max. working temperature,max. Surface temperature can change depending on the model, Please read the document carefully before using.
- During the mounting it should be checked that there is no mechanical stress or deformation in the tank wall.When this happens, the sensor should not be energized without the necessary correction measures.
- The housing is designed to withstand the chemical effects of the materials.Check the suitability of different materials.
- Check the suitability of different materials.
- The housing must be stored in suitable conditions and must be protected against the dust and humidity.
- Housing repairs should only be done at the manufacturer Lonca Inc.
- Protect the device from friction and cleaning should be done without water.
- It is not used as oiled circuit breakers and contactors.
- When the enclosures are used in explosive environments, they require maintenance every 3 (three) years as recommended by the standard.

2. Installation :

2.1. General Notes :

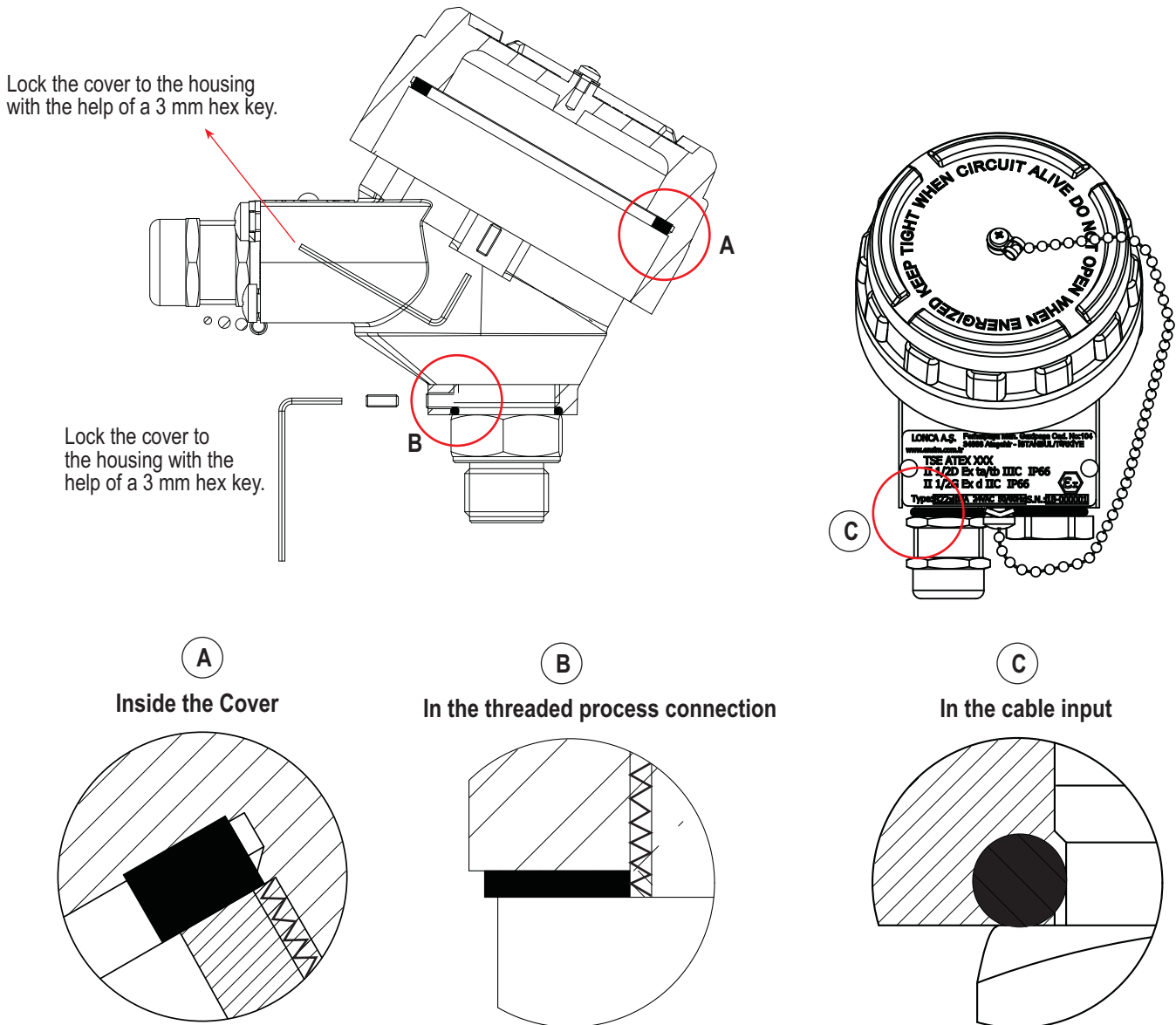
The installation of the device should be carried out only by authorized personnel who know that they are responsible for ensuring explosion safety and taking measures that will not harm the environment and third parties according to 2014 / 34 / EU criteria. Do not apply force to the instrument during the installation!

2.2. General Installation Steps

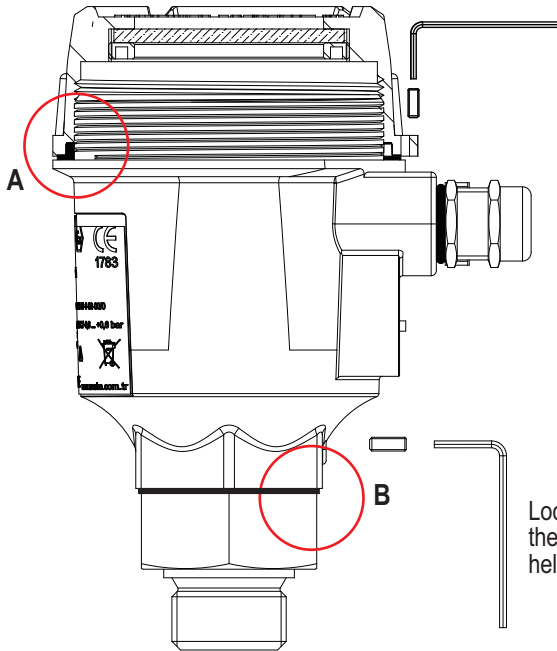
- Carefully remove the housing from the box.
 - Contanın muhafazaya uygun olup olmadığını kontrol ediniz. If is not appropriate, contact with the producer.
 - Then, apply below mentioned explanations according to structure of the design.
 - If the device is installed outdoors and there is a lightning hazard, we recommend placing the protection unit effectively between the supply or switch container and the device.
 - Under operating conditions, the enclosure may be hot depending on the condition of the material, in this case, do not touch the enclosure, your skin may be damaged.
 - The grounding of the product must be done properly. (Can be done outside or inside the enclosure.)
 - Use appropriate O-Ring or gasket for tightness.
 - Ensure that its surface is clean and smooth.
 - Assemble the instrument manually.
 - Connect the contacts as shown in the figure.
- (For G1" max. 20 Nm, G 1 1/4", For G" 1 1/2"max. 30Nm)

2.3. Exposure Notes

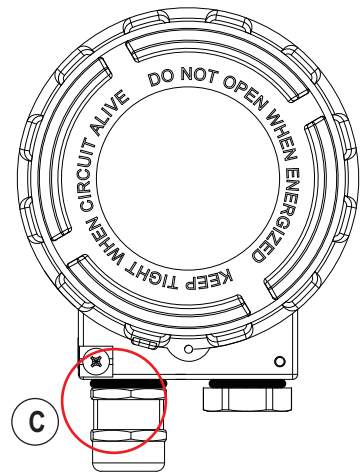
Process openings must be closed in use.



Lock the cover to the housing
with the help of a 3 mm hex key.

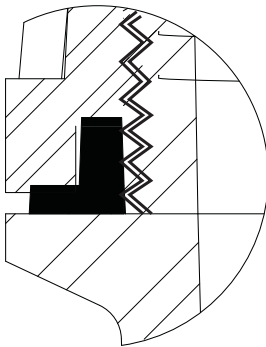


Lock the cover to
the housing with the
help of a 3 mm hex key.



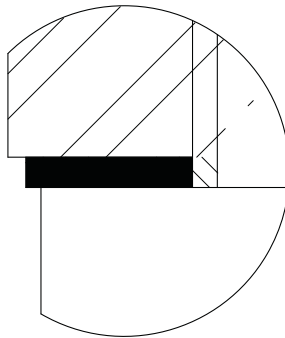
A

Inside the Cover



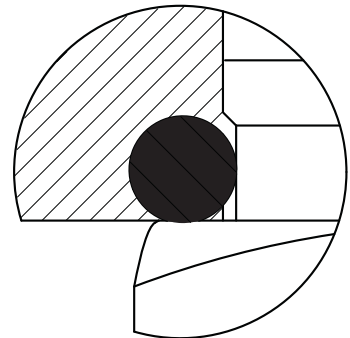
B

In the threaded process connection



C

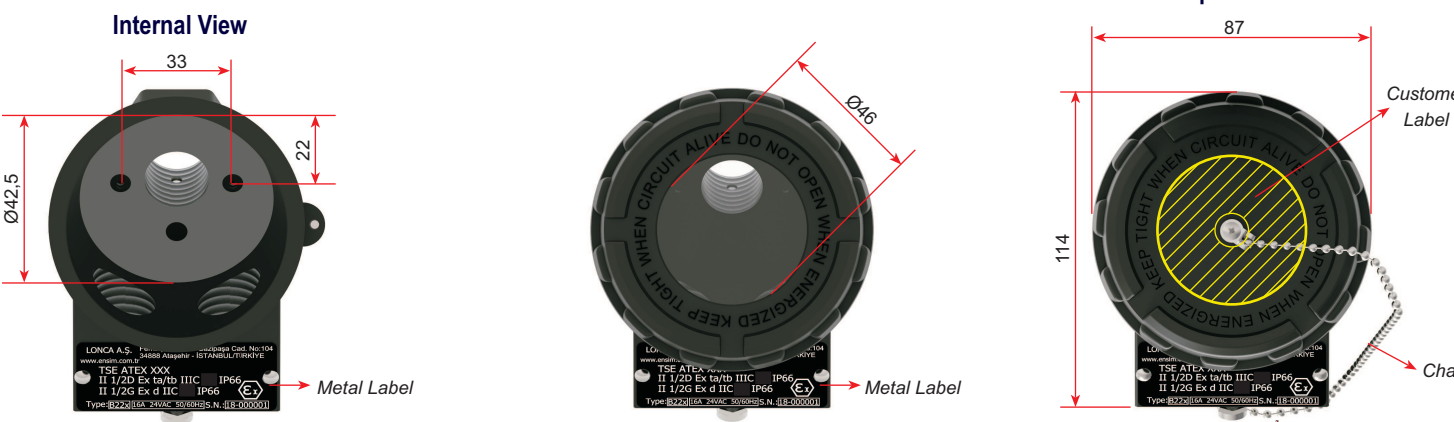
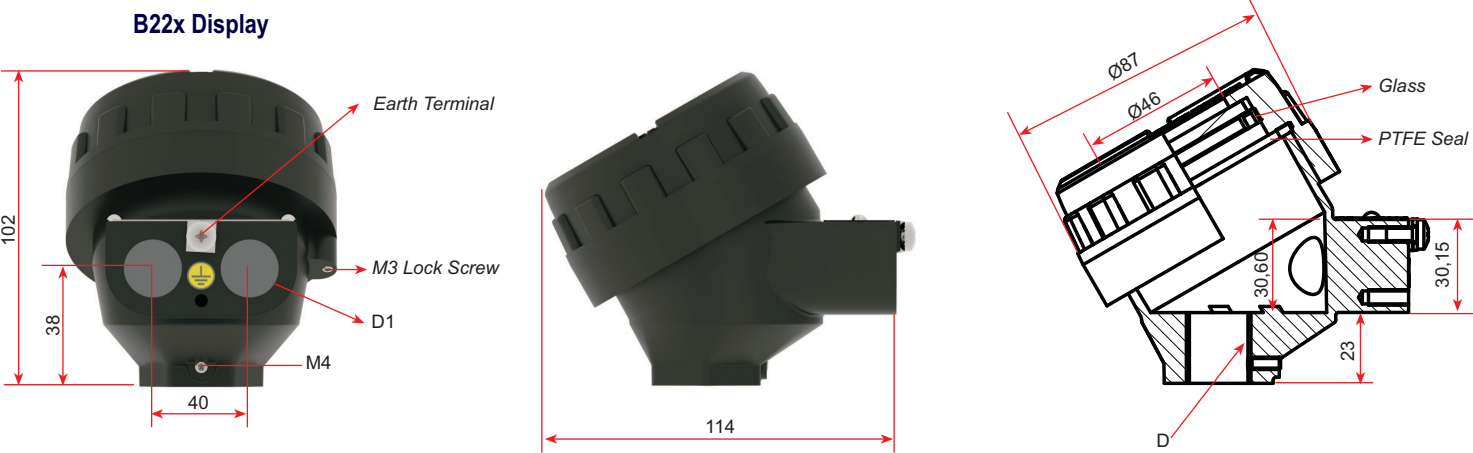
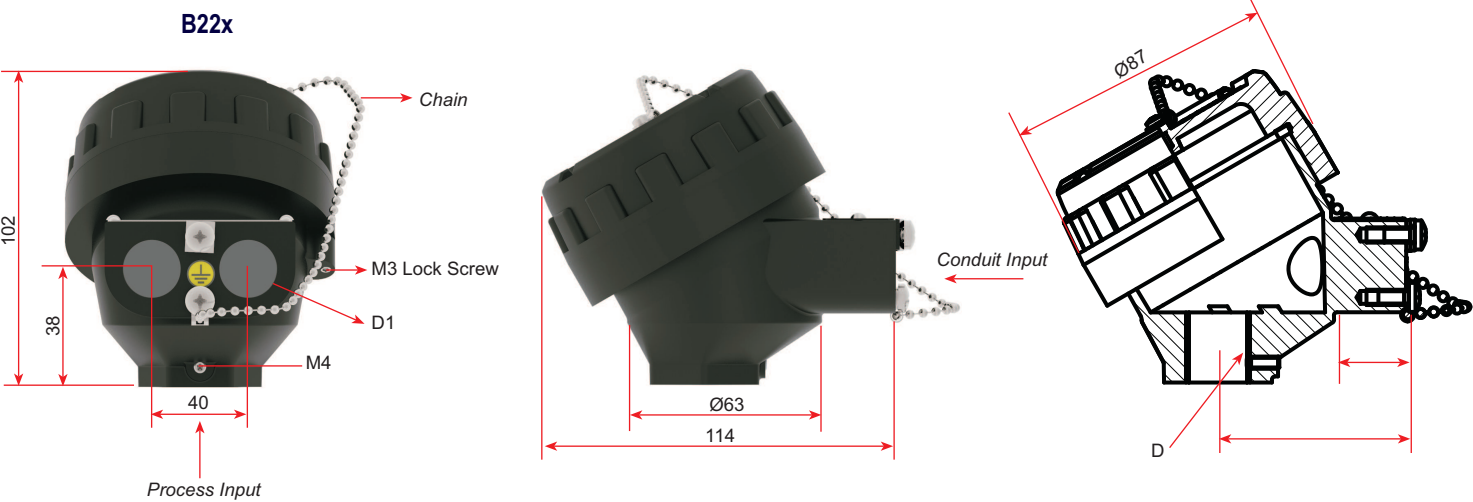
In the cable input



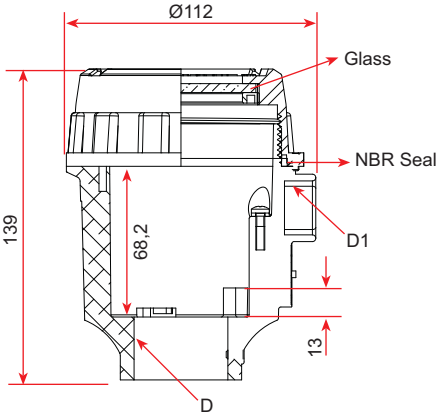
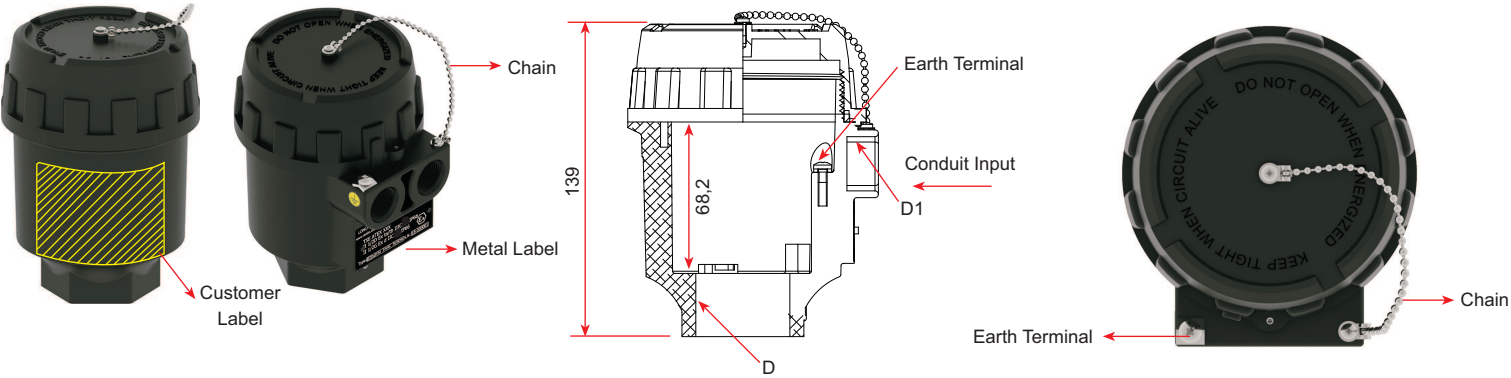
Note 1: While screwing or removing the cover to the body, there should be no foreign materials that cause jamming, the thread may be damaged.

Note 2: When the cover needs to be opened after operating at maximum temperature, comply with the allowed times for the temperature to drop.
Your skin may be damaged.

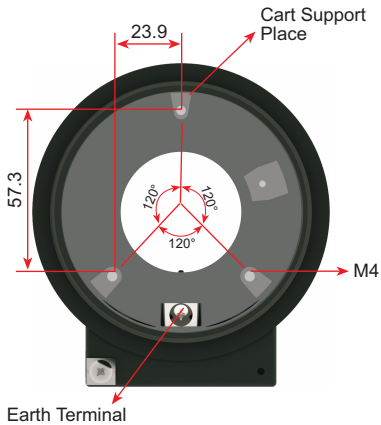
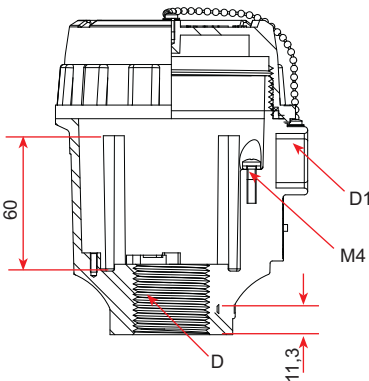
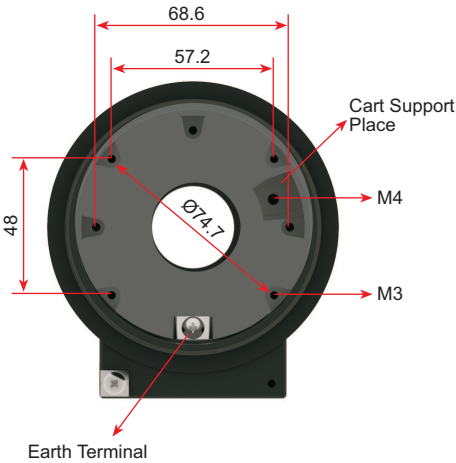
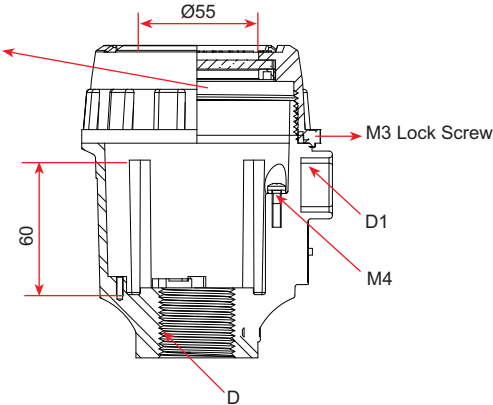
2.4. Dimensions



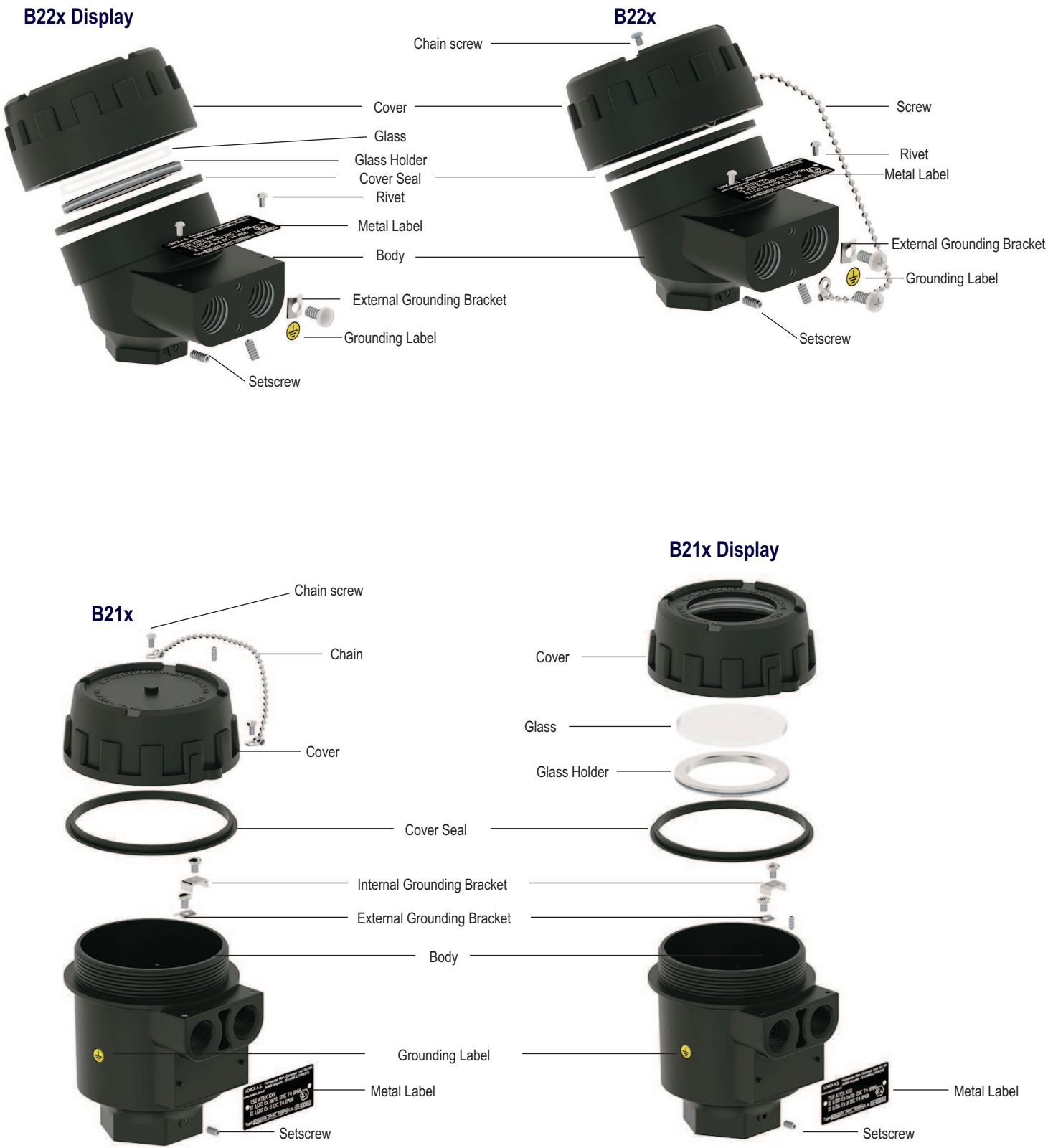
B21x



B21x Display



2.5. Part Names



Note : Appropriate cable for grounding terminal must be chosen via user

2.6. Order Form :

Order Form : **Please consider sample models when coding!..**

1 MODEL

Small Type Enclosure.....B22x	Big Type Enclosure.....B21x
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2 MODEL

B21x 3 Short Cover.....700	B22x Short Cover.....750
B21x 3 Long Cover.....701	B22x Long Cover.....751
B21x 3 with Indicator Cover.....702	B22x with Indicator Cover.....752
B21x 4 Short Cover.....703	
B21x 4 Long Cover.....704	
B21x 4 With Indicator Cover.....705	

3 COLOR

Black (Std.).....02	Cream.....04
Blue.....03	Red.....05
	Special.....x

4 MATERIAL OF BODY

Aluminum (Std.).....029	Special.....x
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5 MATERIAL OF SEAL

Nitrile Rubber.....081	Special.....x
Fluoro Rubber.....084	

6 PROCESS CONNECTION (R)

1/2" BSP.....0004	1 1/4" BSP.....0008
3/4" BSP.....0005	M36-11 Thread.....0407
1" BSP.....0006	M32x1,5.....0408
	Special.....x

7 CABLE INPUT SIZE

M20x1,5 mm (Std.).....0308

8 OPTIONAL

None...../ 0

EXAMPLE

B22x - 750 - 02 - 029 - 081 - 0004 - 0308

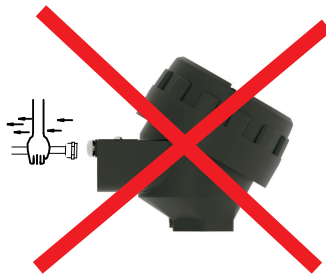
Small Enclosure, Black Clour, Short Cover, NBR Seal



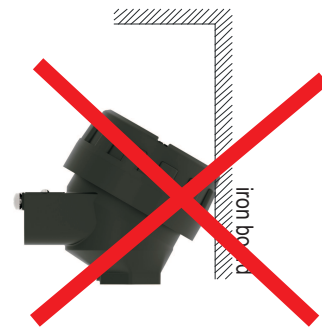
Please pay attention to following matters in order to operate your flow switch properly.



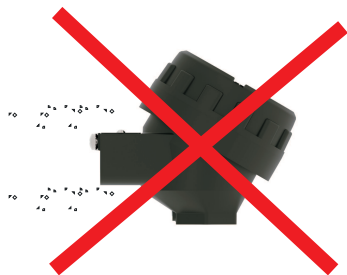
In case vapour splash cable potting points, insulation problem may cause.



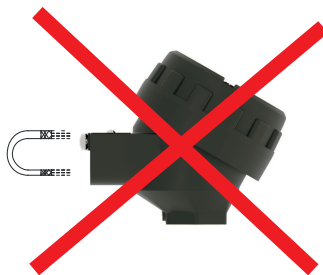
Do not pull the cable strongly, otherwise the characteristics might be changed.



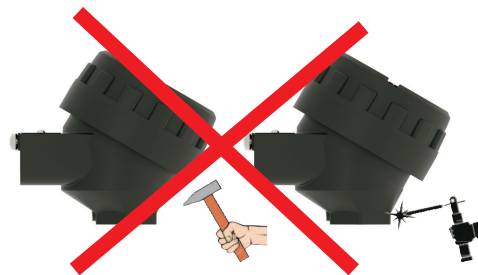
Please keep away from magnetic materials like iron board ; otherwise the characteristics might be affected



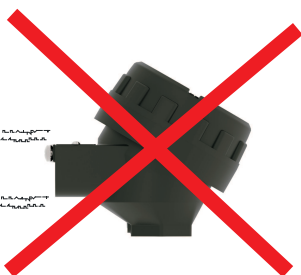
Please do not dip cables potting into liquids, otherwise insulation problem may cause.



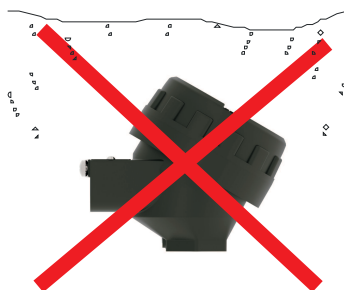
Do not fasten switch reversely , otherwise its characteristics might be changed.



Please do not drop , otherwise the characteristics might be changed.



Vibration might be caused instability.



Do not fasten switch reversely , otherwise its characteristics might be changed.



Do not remove the plastic parts of the bottom of the switch body , do not loosen.

3. Failure Delection



Your device must be repair only at an outhorized serviced.

Breakdown	Probable cause	Failure detection\correction
Fluid is leaking	-There is a hole on the body. -Sensör mekanîğinde delik vardır.	-Check that is worked under appropriate conditionand then contact with producer company.
Ground not done	-The grounding bracket is lost. -Connection forgotten.	-Bracket should be provided instead or requested from the manufacturer. -Authorized personnel should be warned
Body was broken	-Tightening the screws more than adequate during the assembly. -Product falling or taking a blow from outside.	-Inform authorized service.
Housing paint has peeled off	-Scratched with a screwdriver -It came unpainted	-It should be used with maintenance or contact the manufacturer.

If you find an error, try to eliminate it by using this table or send the instrument to our service address for repair.



The instrument should be repaired only by authorized service! Serial number shall be indicated to the authorized service center.

4. Disassembly of Instrument

Instrument should be disassembled while feeding and pressure is not available!

5. Service

The instrument does not require maintenance. If it is desired, residue accumulated inside should be blown according to kind of fluid and instrument can be cleaned with soft cleaning solutions. Measures should be taken during the disassembly.

During prolonged use of a housing, loosening can occur. In these cases, it is necessary to tighten the screws again.Service could be made by your technical staff or you could send to manufacturer company. According to IEC 60017, ex proof devices must be go through detailed inspection every 3 year from purchase date.Responsibility of inspections are belong to the user (IEC: International Electrotechnical Commission)

6. Repair – Manufacturer Address

If irreparable breakdowns occur, the instrument should be sent to us for repair purpose. Before this, the instrument should be cleaned carefully and packaged so as not to be broken. Furthermore, you should also add a detailed explanation which describes the breakdown while instrument is sent. If your instrument contacts with harmful substances, decontamination report should be also sent additionally. In the event that instrument does not have any decontamination report or our service department has doubts about instrument, repair process will not start until an acceptable report is sent.

If the instrument contacts with hazardous substances, necessary measures should be taken for decontamination!

Service -Manufacturer Company Name and Address:



LONCA MAK. SAN. TİC. A.Ş. Ferhatpaşa Mah. Gazipaşa Cad. No: 104A Ataşehir - İSTANBUL - TÜRKİYE
Tel:+90 216 50 50 555 Faks:+90 216 515 45 84 E-Mail: lonca@ensim.com.tr Web: www.ensim.com.tr

7. Disposal

The instrument should be disposed according to 2002/96/EC and 2003/108/EC European Directives (waste electrical and electronic instruments). Waste electrical and electronic equipment should not be mixed with domestic wastes!



If the instrument has contacted with harmful substances, special attention should be paid for its disposal!



8. Terms of Warranty

The instrument has warranty legally for 24 months after delivery date. Warranty demands are not accepted in case of inappropriate operation, damage on the instrument or any modification on the instrument.

9. Terms of Return

In the return of materials, user should send an open list related to damage or problem, malfunction of the material to be returned or its operation in the different modification, with the instrument. If it is required to return the material, used in the dangerous, corrosive or toxic fluid, in this case, used part should be cleaned very carefully. Security of personnel should be ensured. All products to be returned should be sent to our company address, which we have stated.