



Instructions

EP-SEMC-18-01-02

Second Edition

June 14, 2023

Admission

On apparatus reception it should be checked against the delivery notes and the following minimum controls should be made:

- **Visual inspection:** to ensure that apparatus has not suffered damages during delivery process.
- **Mechanical check:** to ensure all parts of the apparatus working properly.
- **Electrical check:** To ensure that all the electrical data like voltage, current, wiring diagrams, etc. are in accordance with the technical specification in the order.

Installation

The respective national regulations as well as the general rules of engineering which apply to the installation and operation of explosion protected apparatus should be observed.

Transport and storage of the enclosures is permitted in original packaging only.

Opening and closing the boxes (!)

The opening of boxes always shall be without voltage; the boxes are well closed when covers are completely threaded on the enclosure.

- 1- Furnished with or without drilled and tapped openings. Drilling and tapping of conduit openings and device openings in cover are subject to the limitations of maximum size and number of openings as well as spacing's. All machining must be done prior to installation by original manufacturer.
- 2- Select a mounting location that will provide suitable strength and rigidity for supporting all contained wiring and control devices.
- 3- Securely fasten enclosure to the mounting location, then attach into cable or conduit system. Install approved conduit sealing fittings when required by the National Electrical Code plus any other applicable standards.
- 4- Remove cover bolts securing cover. Firmly grasp the bottom and right side of cover and carefully swing aside to prevent damage to the flanged joint surface. Avoid striking cover, or devices in cover, or neighboring enclosures or structures.
- 5- Pull wires into enclosure, making sure they are long enough to make the required connections. Make all electrical connections. The internal grounding

terminal shall be used as equipment grounding means. The external terminal is only a supplemental bonding connection by using one of bottom fixing lug/brackets.

- 6- Test wiring for correctness with continuity checks and also for unwanted grounds with insulation resistance tester.
- 7- To install/close cover, make sure cover and body flanged joint surfaces are clean and not scratched. Lift cover to approximate position and line up bolt holes of cover with body. Avoid sliding flanged joint surface of cover over flanged joint surface of body. Cover/body bolt holes must match up. Hand start corner bolts. Fully tighten all cover bolts to torque value 30 N.M. the flameproof enclosures are well closed when all of cover screws closing the flanged Exd joints are perfectly tighten and their gaps are ≤ 0.15 mm.

Cable entries (!)

Mounting the selected cable entries e.g. cable glands or seals) according to type and dimensions of the main connection cable, following their manufacturer instructions. The cable entries devices have to be the same protection of the enclosure, where they are mounting “having minimum protection Exd IIB”.

The cable entry holes must be fitted with suitably certified cable glands or suitably certified stopping plugs, which are capable of maintaining the IP66, 67 rating of the equipment.

Thread engagement requirements for cable entries (!) 5 full threads and a minimum of 8 mm of thread engagement for cylindrical threads.

For taper threads, the threads shall conform to the NPT requirements of ANSI/ASME B1.20.1 and shall be made-up wrench tight.

Taking into operation

Prior to taking the apparatus into operation, the test specified in the relevant national regulations should be carried out.

Apart from that, the correct functioning and installation of the apparatus in accordance with these operating instructions and other applicable regulations will have to be checked.

Incorrect installation and use of the junction box can invalidate the guarantee.

- The IP rating of the enclosure must be maintained for the area of use, by the use of correct arrangement of Cable /gland /sealing arrangements and in accordance with the installation codes as detailed in *IEC 60079-14*, and this operating instruction.

- Where other certified components are part of assembly, the user must take in to account any limitations listed on relevant certificates.
- The enclosure shall be maintained at IP 66/67 suitable sealing washer under the shoulder of the cable gland.
- All unused entry holes must be sealed by a suitable certified stopping plug with the same protection level of the enclosures.
- Only carry out insulation measurements between PE and conductors L1, L2 and L3, as well as between PE and N.
 - a. - measurement voltage: ≤ 1 kV AC/DC
 - b. - insulation: ≥ 5 M ΩThen the enclosures have to be tightly closed.
- The apparatus must not be modified without reference to SEMC as this will invalidate certification.
- All further installation design should be in compliance with EN 60079-14
- Enclosure with installed component on it tested and certified together as a whole equipment

Maintenance (!)

Observe the national rules applicable to maintenance, servicing, inspection and repairing of apparatus for explosive atmospheres, as well as the general rules of engineering.

For dust explosive application, pay special attention don't have present dust layers above 5mm on side of the apparatus.

All further inspection and maintenance should be in compliance with EN 60079-17

Special Condition of use (X)

- The screws used for the lid fastening must have a tensile strength higher or equal to 700 N/mm² (grade A2-70).
- In case of re-painted on enclosures, the thickness of paint is to be less than 0.2 mm for Group IIB+H2
- Special ambient temperature -30°C up to 55°C;

Servicing

Before opening the enclosure make sure that the apparatus is disconnected from the supply voltage, or take appropriate protective measures.

The required maintenance intervals depend on the respective application and will therefore have to be determined by the user dependent on the conditions of use.

When servicing, in particular those components that affect the explosion protection, will have to be checked,
e.g.:

- The flameproof joints have to be clean, undamaged, without corrosion and perfectly greased.
- Cable entries without corrosion.
- Terminals and blanking plugs for their firm fix.

If during servicing it proves that repairs are necessary, the Repair / Overhaul / Modification of this manual will have to be observed.

The flame paths of these apparatus have to be greased permanently in order to ensure protection in front of the corrosion, water ingress and seize-up problems. Cleaning rest of grease and corrosion no using sharp metallic devices who can damage the surface of the joint, and greasing they using appropriate grease thermally and Chemically stable with a drop point > 200°C Inspection/ Repair / Overhaul / Modification (!)

The national's regulations have to be observed

Repairing

The national's regulations have to be observed. The tasks of repairing have to be made by "qualified" personnel.

Repairs may only be carried out with genuine **SEMC** spare parts.

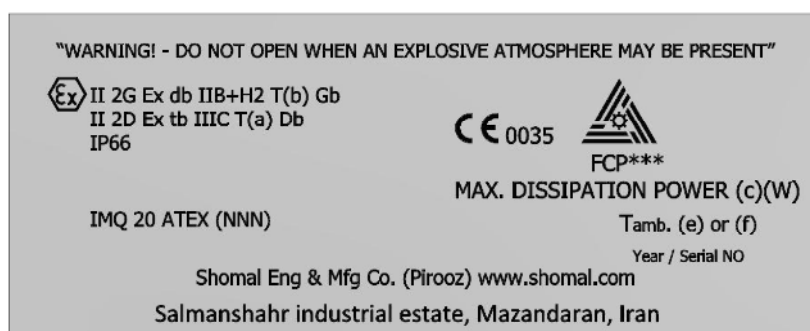
Repairs that affect the explosion protection may only be carried out by **SEMC** or a qualified electrician in compliance with the applicable rules.

Modifications to the apparatus or changes of its design are not permitted.

DISPOSAL / RECYCLING

SEMC cares for the environmental protection and recommends therefore disposing properly of the packing and wrapping of its goods, according to prescriptions and regulations in force in the destination country. The differential waste disposal strongly recommended. When the apparatus is disposed of, the respective national regulations on waste disposal will have to be observed.

Nameplate



Label guide	
a	Dust Temperature
b	Temperature class
c	Dissipated power
e	Tamb -20°C to +40°C



f	Tamb -30°C to +55°C
NNN	Certificate No.