

GRP JUNCTION BOX INSTALLATION MANUAL

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1. **Product Overview**
2. Introduction



Glass Reinforced Polyester (GRP) Enclosures



1.2 Product description

The Glass Reinforced Polyester enclosure used for fitting electrical and mechanical components. The enclosure consists of high-quality Glass Reinforced Polyester.

Lid and base are screwed together with stainless screws. A groove and rib system with inserted sealing cord between the lid and base assures the high protection class IP 66 and Type 4X enclosures. The enclosure is mounted

through the screw channels lying outside the sealing space. The enclosures conform to the relevant Atex and UL standards.

3. Technical data

1. Lid screws

Stainless steel

Screw M4 – 2 TO 3 NM

Screw M6 – 3 TO 4 NM

2. Sealing

Silicon Operating Temperature (- 60°C to + 110°C)

3. Protection class (IP66)

3. Installation and Commissioning

4. Installation/ dismantling

The enclosures are suitable for accommodating such as terminals, switches, cable glands, measuring instruments, control equipment and display units. When processing the enclosures, attention must be paid to ensuring that there is suitable minimum spacing between individual boreholes and from the sealing edge of the enclosure so that the enclosure with the fittings. The minimum spacing depends on the geometrical dimensions of the built-in components; a longer lever will require an increase in the minimum spacing and accordingly must be determined specifically.

6. Installation

In the case of enclosures that have to be set up outside, it may be necessary to take measures to ensure that operation is in accordance with the intended use. This would include, for example, roofs as protection against rain or outer housings with an adequate protection class.

Note: Covers secured by screw tightening (hand tighten plus 1/4 turn) torque
Minimum (3 Nm) required maintaining the environmental integrity IP66.

7. Commissioning

Each electric apparatus for a potentially explosive area must be selected in accordance with the conditions set down for the individual type of installation. The apparatus may only be used if it is undamaged and clean. Electric plants must be examined by a qualified specialist before first commissioning and regularly at specific intervals.

1.8 Machining Instruction

Precautions to be taken before commencing Drilling and Tapping

- Is drilled hole the correct size?
- Is proper chamfer provided on hole after drilling?
- Is a clearance between the drilled hole and the tap sufficient at the starting position to allow the tap to clear the hole upon retraction?
- If a blind hole is being tapped, is there sufficient chip clearance?
- Is tap sharp and of the correct design for its current application?
- Is the tap in proper alignment with the drilled hole?
- Is machine speed correct?
- Is the machine feed correct?
- Is machine stop set properly so the tap release in neutral rather than bottoming in work piece or fixture?
- Is the work piece held rigidly against rotation and upward movement?
- Is the machine stop arm rigid enough to prevent the torque arm of the tapping attachment from bending or deflecting it? The machine stop arm must always be stronger than the tap itself.
- Is the correct tapping attachment for the specific job requirements being used?
- Is the machine retraction correct for the tapping attachment being used?
- Is the torque control set correctly so the tap will not break if bottom is accidentally engaged?
- Is the depth control set to correspond with the machine stop to provide the total thread depth required and prevent bottoming?
- Is the correct cutting fluid and recommended concentration being used?
- Post machining to get Type 6P environment condition Sealing should be adequate

Teflon seal Tape on threads In use, the tape is wrapped around the exposed threads of a Gland or Conduits stop plugs or cable gland etc. before it is screwed into place. The tape is commonly used in pressurized water systems, such as central heating systems, as well as in air compression equipment and thread joints with coarse threads.

. The use of tape in [tapered threads](#) performs a lubricating function, which more easily allows the threads to be screwed

A washer is a round, flat piece with a hole in the centre that is often placed between a screw or nut and a surface in order to increase tension In case of Aluminium Enclosures it helps to incorporate the draft angle. A rubber washer is

used in applications that require a tight seal and those that are exposed to water.

1.9 Operation, maintenance and failure rectifications

The operator of an electric plant must keep the operating equipment in an Orderly condition operates it correctly, monitor it and do the required maintenance and repairs.

Maintenance and failure rectification work may only be carried out by qualified electricians. If the type of protection is affected, only original parts should be used for replacement (e.g. lid sealing).

Torquing must be minimum done at 3 NM.

Conformity with all applicable laws and guidelines must be ensured prior to re-commissioning. All applicable safety instructions must be observed prior to the implementation of any maintenance and/or failure rectification work

1. Setup Tools

Depending on the placement and cabling of the enclosure, you may need the following tools:

Small flat-blade screwdriver

Small Phillips screwdriver

2. Earth Cabling

A mating earthing screw is provided connector is supplied with the enclosure.