Please note that every care has been taken to ensure the accuracy of our technical manual. We do not, however, accept responsibility for damage, loss or expense resulting from any error or omission. We reserve the right to make alterations in line with technical advances and industry standards.
1.1 MARKING

The marking shown is for an Ex e apparatus certified junction box.

The maximum voltage (AC or DC) permitted in this junction box is marked on the label and identified by Voltage: ________ V.

The maximum power dissipation permitted in this junction box is marked on the label and identified by Max Power: ________ W.

The ambient temperature range for which this enclosure is suitable is marked on the label and identified by -__ °C ≤ Ta ≤ +__ °C.

1.2 ALTERNATE MARKINGS

When fitted with an ‘op pr’ fibre optical splice cases and other ‘op is’ cable jointing facilities the product may be marked as follows.

Ex e op is IIC T6 Gb  Ex e op is IIC T5 Gb  Ex e op pr IIC T6 Gb
Ex tb IIIC T80°C Db  Ex tb IIIC T95°C Db  Ex tb IIIC T80°C Db
Ta= -50°C to +55°C  Ta= -50°C to +55°C  Ta = -20°C to +40°C

Note

1) The ambient temperature range identified on the certification label refers to the enclosure and the terminals fitted within. It does not necessarily refer to the permitted temperature range of any cable entry devices that may be fitted. The user must check that the cable entry devices fitted are suitable for the lowest ambient temperature marked on the certification label and for the maximum permitted operating temperature (T6 or T5).
2) The IP rating identified on the certification label refers only to the enclosure. The user must ensure that the cable entry devices fitted provide an equivalent degree of protection when installed with their manufacturer’s instructions.
3) The maximum current that can be used with 2.5mm² terminals is 15A.
4) When fitted with ‘op pr’ splice case, the fibre cable outside the enclosure shall be installed such, that mechanical damage is prevented.
5) When marked ‘Ex e op pr’, the fibre connectors contained within the increased safety enclosure must not be separated whilst energised if an explosive atmosphere may be present. If not used fibre connectors within the increased safety enclosure must have dust covers fitted.
6) The fibre cables entering or exiting the increased safety enclosure must be suitably protected from breakages and satisfy the requirements of IEC / EN 60079-28 ‘op pr’.
2.0 INSTALLATION

These instructions assume that the required cable entries have been pre-drilled as clearance entries.
1) Using the mounting dimensions data provided, on the rear of the enclosure or on the G/A drawings supplied, mark out the positions for the mounting holes on the surface where installation is required.
2) Drill the mounting holes for M6 fixing bolts as applicable and tap thread into mounting holes if required.
3) Place a mounting screw through one mounting hole in the box so that the thread of the screw protrudes from the back of the box. Lift the box into place, using such assistance as may be necessary to avoid personal injury and:
   a) If clearance mounting holes are used, insert the protruding thread through the appropriate clearance hole and secure with a nut on the other side of the mounting surface.
   or
   b) If threaded mounting holes are used, locate the end of the mounting screw over the threaded hole and, using an appropriate screwdriver tighten the screw.
4) Rotate the box to line up the remaining mountings and repeat (3) above until all mounting screws have been fitted.
5) Install and secure any appropriately Ex e / Ex tb component certified cable entry devices, cable glands and blanking plugs in accordance with the manufacturer’s instructions. These cable entry devices must be suitable for a temperature range of -55°C to +75°C and have a minimum IP rating of IP65. Ensure that the torque applied during the installation of these devices does not exceed 20 Nm, in order to avoid damage to the enclosure.
6) Should any further cable entries be required (other than the entries which have been pre-drilled by Oxalis), these must be clearance entries only. All clearance entries shall have a diameter ≤ 0.7mm greater than the nominal diameter of the entry gland or fitting. Sufficient clearance must be allowed on the inside of the enclosure to attach a locknut to the gland or fitting. Advice from Oxalis is recommended before any changes are made.
7) Pull the cables into the box, leaving trailing leads of a length specified by site practice and secure any cable armour in accordance with site practice.
8) Terminate the cables in the terminals provided in accordance with the requirements of BS EN60079-14. Consideration must be given to any use limitations or special conditions detailed on the certificates for the terminals fitted.
9) Secure the lid by closing the lid and tightening the lid fixing screws.

NOTE: If the terminals provided with the enclosure are changed either in type or in quantity the terminal box, the certification may become invalid. Advice from Eaton is recommended before any changes are made.

Earthing

The enclosure may be provided with an external earth/ground connection. If such a connection is provided it must be connected to the appropriate earth bonding circuit before electrical power is connected to the contents of the enclosure.
When the box is provided with an internal earth continuity plate any metal cable glands must be secured using a vibration resistant washer and a locknut.
3.0 OPERATION

1) The lid must be secured using all of the lid screws provided in order to maintain the IP rating.
2) No attempt must be made to remove the enclosure lid whilst electrical power is connected to the contents of the enclosure.
3) If the enclosure is fitted with an external earthing facility it must be connected to the earth bonding circuit at all times when power is connected to the enclosure.

4.0 MAINTENANCE

Routine maintenance is likely to be a requirement of local Health and Safety legislation. The laws of the applicable country must be considered and maintenance checks carried out accordingly. Additional periodic checks that are advisable to ensure the efficiency of Oxalis GboX range enclosures are:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Check that the lid seal is in place and not damaged</td>
<td>Each time the enclosure is opened</td>
</tr>
<tr>
<td>2 Check that all lid fixing screws are in place and secured</td>
<td>Each time the enclosure is closed</td>
</tr>
<tr>
<td>3 Check that the mounting bolts are tight and free of corrosion</td>
<td>Every 3 years</td>
</tr>
<tr>
<td>4 Check the security of all entry devices</td>
<td>Every 3 years</td>
</tr>
<tr>
<td>5 Check that all screw clamp terminals are secure</td>
<td>As per manufacturer’s recommendation</td>
</tr>
<tr>
<td>6 Check enclosure for damage</td>
<td>Every 3 years</td>
</tr>
</tbody>
</table>

4.1 Chemical Attack
The GboX range of enclosures are manufactured using the following materials:
- Carbon loaded glass reinforced polyester resin
- Silicone rubber
- 316 stainless steel
- Brass
Consideration should be given to the environment in which these enclosures are to be used to determine the suitability of these materials to withstand any corrosive agents that may be present.

4.2 Static Hazard
The carbon loaded glass reinforced polyester resin has a surface resistance between \(10^{6}\) and \(10^{9}\) Ω. Therefore they do not present a hazard from static electricity.

4.3 Vibration
GboX range terminal boxes are designed for use in areas subject to normal industrial levels of vibration. They are not designed for use in areas subject to intentional or extreme conditions of vibration.

4.4 Protection from Foreseeable Faults
Circuits connected in the enclosure must be externally protected using suitable circuit interruption devices to prevent overloading. Provided the enclosure is correctly installed, there should be no foreseeable faults.