

# GB-110 TERMINAL BOX FITTED WITH BARTEC MINI-THERMOSTAT, WEIDMULLER BK TERMINAL BLOCK AND EARTH CONTINUITY PLATE -INSTALLATION INSTRUCTIONS AND CONDITIONS FOR SAFE USE-

## 1. General Installation Requirements

This terminal box carries the following Hazardous Area approvals :-



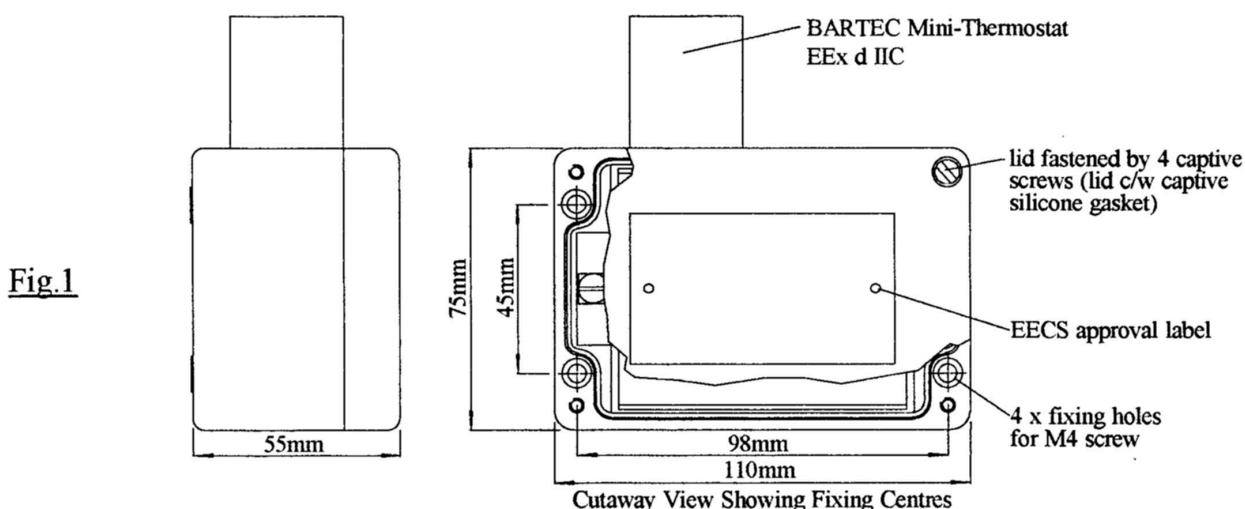
**II 2G EExe II T6  
BAS98ATEX3090X**

1.1 It is designated Category 2 Equipment and is suitable for installation in Zone 1 Hazardous Areas with Apparatus Group II. The terminal box and its contents carry a Temperature Classification (T Rating) of T6, which means that no surface temperature of the enclosure or its contents will exceed 85°C when in service.

1.2 The terminal box lid **MUST NOT** be removed whilst the connected circuits are energised.

1.3 The installer/user must ensure that the enclosure and lid gasket materials are suitable for the environment into which the terminal box is to be installed, and that the Explosion Protection Concept of the terminal box is not invalidated.

1.4 Enclosures in colours other than black must have a static electricity hazard label attached in a visible position. These enclosures may only be cleaned with a damp cloth.



## 2. Cable Entry Provision

2.1 This terminal box has been proof tested to IP66 - the installer shall use an appropriate method to ensure a minimum ingress protection of IP66 at each cable entry. A lower level of ingress protection may be maintained at each cable entry if required, with a minimum rating of IP54. Cable entry devices must be chosen in accordance with the relevant harmonized standard e.g. EN60079-14.

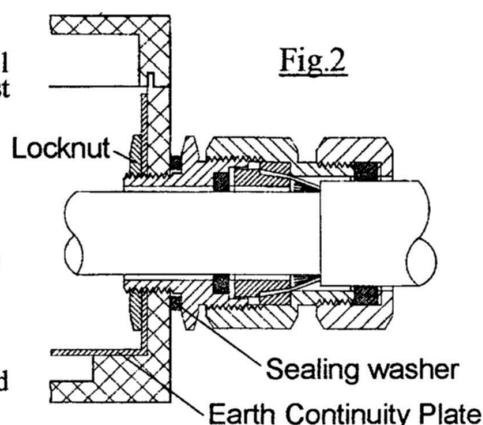
2.2 (See Fig.2 also) Where earth continuity is required, via cable entry devices, either :-

- i) The entry device shall be screwed into a tapped hole in the wall of the enclosure and the locknut shall be securely tightened against the 'dimples' provided around the clearance hole in the earth continuity plate, or
- ii) In the event that the hole in the enclosure wall is a clearance hole and/or the clearance hole in the earth continuity plate is not provided with 'dimples' (e.g. if the holes are drilled by the installer) then the installer shall provide a resilient washer for installation between the earth continuity plate and the locknut. The installer is responsible for ensuring that the resilient washer is suitable for the conditions of use, noting particularly that any earth fault current must pass via the washer.

2.3 Unused entry holes must have the self adhesive label removed and the appropriate stopping plug fitted prior to commissioning.

2.4 The installer shall only drill cable entry holes in the recognised positions according to the General Arrangement drawings listed in the Certificate BAS98ATEX3090X.

2.5 **COSHH - DRILLING THIS PRODUCT MAY CONSTITUTE TOXIC DUST** - Under normal conditions this would not be seen as a risk to health. However when working in a confined or poorly ventilated area, or when large volumes of dust are liberated, it may present a risk to health (further information available on request).



# BARTEC

BARTEC (UK) LTD.  
WHITWORTH  
ROCHDALE OL12 8LN  
UNITED KINGDOM  
Tel. +44 (0)1706 852 224  
Fax. +44 (0)1706 852 521

## 3. Mini-Thermostat

The BARTEC Mini-Thermostat is a pre-set flameproof thermal switch which has been ready mounted into an EExe terminal box. It can be used for temperature control within Ex installations.

Explosion Protection **EEx d IIC T6**  
Certification **PTB No. 85 / 1131**

3.1 The maximum voltage and current ratings shown below must not be exceeded.

MINI-THERMOSTAT TYPE REF.	RATED VOLTAGE	SWITCHING CURRENT	SWITCH-OFF TEMPERATURE (°C)	SWITCH-ON TEMPERATURE (°C)
07-6111-9425	230V AC	6A	14°C ± 5K	4°C ± 3K

The standard switch contact arrangement is N/C i.e. switch opens on temperature rise.

## 4. Terminals

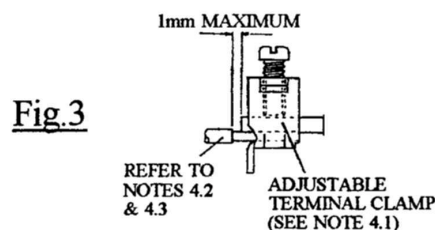
4.1 All terminal screws, used and unused, shall be fully tightened down by the installer.

4.2 Only one conductor shall be connected to each terminal way, unless multiple conductors have previously been joined in a suitable manner (for example with an insulated crimped boot-lace ferrule) such that they form a single cohesive item for insertion into the terminal way, however the WECO DFG1/EN earth facility can accept 2 conductors per terminal.

### Terminal Schedule

TERMINAL TYPE	MAX VOLTAGE	RATED CURRENT	RATED CONDUCTOR SIZE	MAXIMUM QUANTITY	INSULATION STRIPPING LENGTH
WEIDMULLER BK3	275V	21A*	4mm <sup>2</sup>	1 +EARTH	8mm
EARTH TERMINALS	CONDUCTOR SIZE (mm <sup>2</sup> )				
	MIN	MAX			
WECO DFG1/EN	-	2.5(4 solid)	-	-	7mm

\* maximum switching current of 6A applies when used in conjunction with mini-thermostat.



4.3 Conductor insulation shall extend to within 1mm of the metal in the terminal throat (see Fig. 3) except for the DFG terminal, where the connected leads shall be insulated for the appropriate voltage, and this insulation shall extend to within 3mm of the metal of the terminal throat. The bared end of each lead shall not extend beyond the other side of the slot by more than 2mm. The conductors and their terminations shall not be subjected to unnecessary mechanical stress or bending.

4.4 The installer shall ensure that creepage and clearance distances are not reduced.

4.5 When used as a general purpose junction box or marshalling box, the circuits carrying currents  $\geq 1A$  shall be individually protected against overcurrent such that the protective device operates effectively at no more than 1.45 times the current carrying capacity of the smallest conductor used in that circuit.

4.6 The terminal box fitted with the BARTEC Mini-Thermostat is suitable for use in ambient temperatures ranging from -20°C to +40°C and the maximum power dissipation figure of 2.2 W must not be exceeded.