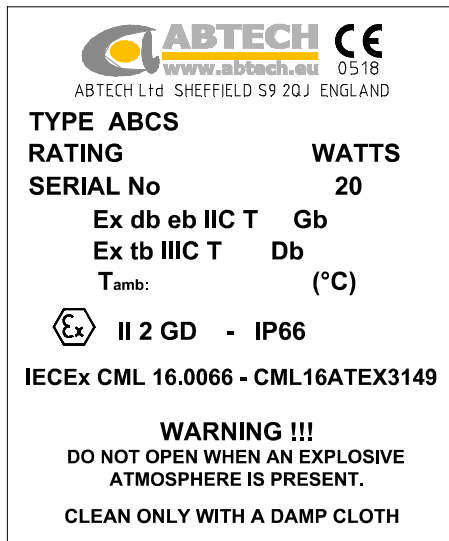


# INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS FOR ABTECH 'ABCS' Range Control Stations CML 16ATEX3149 / IECEx CML16.0066



## Marking

The marking shown is for an apparatus certified control station fitted with control units, indicators and/or ammeters.

The Ex db eb marking may be replaced by Ex db eb mb if fitted with a device combination which includes voltmeters, Ex eb if fitted with ammeters only or Ex eb mb if fitted with voltmeters only.

The maximum power dissipation permitted in this control station is marked on the label and identified by RATING \_\_\_\_\_ WATTS.

The ambient temperature range for which this product is suitable is marked on the label and identified by Tamb ..... (°C).

The 'T' rating can be T6, T5 or T4. This rating must be equal or better than the 'T' rating assigned to the hazardous area in which it is installed.

## Installation

These instructions assume that the required cable entries have been pre-drilled. Cable entries may be threaded.

- 1) Using the mounting dimensions data provided, either in the product catalogue data sheets or on the drawings supplied, (as part of the project documentation), mark out the positions for the mounting holes on the surface where installation is required.
- 2) Drill the mounting holes for M6 fixing studs.
- 3) Tap thread into those mounting holes at user's discretion.
- 4) 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 holes are used, locate the end of the mounting screw over the threaded hole and, using an appropriate screwdriver, tighten the screw.
- 5) Rotate the box to line up the remaining mountings and repeat (4) above until all mounting screws have been fitted.
- 6) Install and secure the cable glands in accordance with the manufacturer's instructions.

NOTE: - All cable glands must be Ex e or Ex d certified and rated IP66 as a minimum to provide adequate resistance against cable pulling and adequate protection against the ingress of dust.
- 7) Pull the cables into the box, leaving trailing leads of a length specified by site practice or the site engineer and secure any cable armour in accordance with site practice. Ensure that all cable glands are tightened in accordance with the manufacturer's instructions.
- 8) Where slotted trunking has been supplied (solid trunking is not permitted) ensure that it is suitable for the proposed T classification of the final certified product. Trunking may be mounted in any orientation in the box, vertically, horizontally or diagonally.

- 9) When laying cables into trunking; No more than 50% of the trunking internal area shall be occupied by conductors, when instrumentation currents of 1A or less are carried. All cabling used must be capable of carrying a minimum of 3A.
- 10) For cables carrying more than 1A - No more than 25% of the trunking internal area shall be occupied by conductors, these shall be de-rated to a maximum of 4A /sq mm. All cabling used must be capable of carrying a minimum of 10% higher current than the rating required.
- 11) Terminate the cables in the terminals which form part of the control units or into the additional terminals if installed. Consideration must be given to any use limitations or special conditions detailed on the certificates for the terminals fitted.
- 12) Secure the lid by closing the lid and tightening the lid fixing screws.

### **Earthing/Grounding**

- 13) 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.
- 14) 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.

### **Operation**

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

### **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 ABCS range control stations are:-

<b>Activity</b>		<b>Frequency</b>
1	Check that the lid seal is in place and not damaged	Each time the enclosure is opened
2	Check that all lid fixing screws are in place and secured	Each time the enclosure is closed
3	Check that the mounting bolts are tight and free of corrosion	Every 3 years
4	Check the security of all cable glands and entry devices	Every 3 years
5	Check the security of all control unit and lens bezels	Every 3 years
6	Check that all screw clamp terminals are secure	As manufacturers recommendations
7	Check enclosure for damage	Every 3 years

### **Chemical attack**

The ABTECH ABCS range of control stations are manufactured using the following materials:-

Glass reinforced polyester resin (with or without carbon loading), Thermoplast, EPDM rubber, Neoprene or silicone rubber, 316 stainless steel, Copper, 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.

### **Static hazard**

ABCS range control stations may contain plastics which have a surface resistance greater than 10E9 Ohms. They can present a hazard from static electricity and may not be cleaned except with a damp cloth.

### **Vibration**

ABCS range control stations 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.