

Queensland

Brisbane. 4000.

ELECTRICAL APPARATUS

Approval certificate for Model and Series

Intrinsic Safe Interface Units

MTL 2210B/2211

Manufactured by

Measurement Technology Ltd

Manufactured for

Control Devices Pty Ltd

Limitations to operation The apparatus may be operated at any location in an underground coal mine in Queensland in accordance with the requirements of the Coal Mining Act and conditions of approval Approval number MDA Ex. i 0547A/0547 Qld Associated Approval and Drawing numbers on reverse of sheet

Date 23rd May, 1984

In accordance with the provisions of the Queensland Coal Mining Act 1925 as amended it is hereby notified that on this date I have approved for use at Coal Mines in Queensland the above described apparatus subject to the following conditions.

- (1) The approval numbers listed above shall be stamped on a nameplate permanently attached to the appropriate enclosure or embossed upon its surface and a copy of this approval and conditions shall be supplied to each purchaser of this apparatus or machine.
- (2) The requirements of the Queensland Coal Mining Act 1925 as amended shall be complied with in regard to the installation, operation, electrical protection, maintenance, and repair of apparatus and machines.
- (3) In normal operation the temperature of the external surface of apparatus shall not exceed 100 degrees Celsius or the temperature rating of associated electrical insulation if of a lower classification.
- (4) There shall be no variation in materials, design or construction associated with this approval as is indicated by the drawings, certificates and information submitted to obtain this approval, without the prior consent of the Chief Inspector of Coal Mines.
 - (5) Unauthorised alteration or substitution of approved apparatus shall render this approval void.
- (6) When maintenance, alteration or repair is allowed to approved apparatus, compliance with the Queensland Coal Mining Act 1925 as amended and Australian Standards Association Specifications shall be shown to be maintained and established.

(G.E. Hardie, Chief Inspector of Coal Mines.

Associated Drawings

Sheets 1 to 9 Issue 1 dated May, 1979 CI2210-01 Sheets 1 to 10 Issue 1 dated May, 1979 C12210-02 Sheets 1 to 9 Issue 1 dated May, 1979 C12211-Ø1 C12211-02 Sheets 1 to 10 Issue 1 dated May, 1979

Additional Conditions contineud

- Any repair to the switch operated relays that may affect their 7. explosion proof properties shall be carried out only at a workshop acceptable to the manufacturer.
- The currents and voltages switched by the relay contacts shall not 8. exceed 5 Amps r.m.s. and 250 Volts r.m.s. respectively with the total rating not exceeding 100 VA.
- 9. The switch operated relays shall not be supplied from nor contain under normal or abnormal conditions a source of potential with respect to earth in excess of 250 Volts r.m.s. or 250 Volts d.c.
- 10 The capacitance and inductance or the inductance to resistance ratio of the cables connecting remove switch contacts to the hazardous area terminals of the switch operated relay shall not exceed the following values:-

Capacitance: Inductance:

7.2 microfarads

124 millihenries

Inductance/Resistance Ratio: 1.2 millihenries/ohm

- Any system utilising the switch operated relays shall be installed strictly in accordance with drawings C12210-01 Sheet 9, C12210-02 Sheet 10, CI2211-01 Sheet 9 and CI2211-02 Sheet 10, as appropriate.
- At all times while below ground the switch operated relays shall be completely enclosed in order to satisfy the requirements of the Coal Mining Act.

G.E. Hardie,

Chief Inspector of Coal Mines.