



British Approvals Service
for
Electrical Equipment
in
Flammable Atmospheres

SYSTEM CERTIFICATE No Ex 79248

Issued to

MEASUREMENT TECHNOLOGY LIMITED
of Luton, Beds

THIS IS TO CERTIFY THAT AN MTL2210 SINGLE CHANNEL SWITCH
OPERATED RELAY SYSTEM

comprising the items of apparatus specified in and arranged in accordance
with the Schedule and the documents therein referred to, complies with the
requirements of an Intrinsically Safe System as defined in BASEEFA Standard
SFA 3012 : 1972 for Category ia and Group IIC

This Certificate is granted subject to the general conditions of the British
Approvals Service for Electrical Equipment in Flammable Atmospheres and
any additional conditions as may be prescribed.

This Certificate does not imply that the apparatus meets all statutory
requirements in any particular industry or circumstance.

Code :Ex ia IIC

File : SFA 12/372/037
Test Report 79 (i)103

Dated 7 March 1980
18/10/11

B HILL
Director

Certificate of Assurance

Schedule

NUMBER Ex 79248

DATED 7 March 1980

Sheet 1 of 2

SYSTEM AN MTL2210 SINGLE CHANNEL SWITCH OPERATED RELAY SYSTEM comprises:

1. Apparatus located in a Safe Area.

1.1 An MTL2210 single channel switch operated relay (BASEEFA Certificate No Ex 79220X).

1.2 Apparatus which is unspecified except that it must 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.

2. Apparatus which may be located in a Hazardous Area.

2.1 Switch contacts which meet the requirements for simple apparatus as defined in paragraph 6.3.3 in BS 5345 : Part 4 : 1977.

3. Permissible interconnecting cables.

DRAWING NUMBER	ISSUE	DATE	DESCRIPTION
CI2210-01 Sheet 9	1	5-79	Installation Drawing for MTL2210 switch module single channel 120/240V a.c.
CI2210-02 Sheet 10	1	5-79	Installation Drawing for MTL2210 switch module single channel 24V d.c.

ADDITIONAL CERTIFICATION CONDITIONS

1. The Installation must conform to the approved drawings CI2210-01 sheet 9 and CI2210-02 sheet 10.

2. The Capacitance and Inductance or the Inductance to Resistance ratio (L/R) of the cables connecting remote switch contacts to the Hazardous Area terminals of the switch operated relay must not exceed the following values:

Protected switches in Zone 0 (i.e. hermetically sealed or flameproof) and switches in Zone 1 and 2.

GROUP	CAPACITANCE in μF	INDUCTANCE in mH	OR	L/R Ratio in $\mu\text{H}/\text{ohm}$
IIC	13	69		600

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Sheet 2 of 2

Unprotected switches in Zone 0 (supplementary protection measures apply).

GROUP	CAPACITANCE in μF	INDUCTANCE in mH	OR	L/R Ratio in $\mu\text{H}/\text{ohm}$
IIC	0.9	18		150

The values for Groups IIB and IIA are 3 and 8 times the values for Group IIC respectively.

3. The currents and voltages switched by the relay contacts must not exceed 5 amperes r.m.s and 250 volts r.m.s. respectively and the rating must not exceed 500VA.



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THIS IS TO CERTIFY THAT CERTIFICATE NO Ex 79248

Issued to MEASUREMENT TECHNOLOGY LTD
of Luton, Bedfordshire

is hereby extended to apply to apparatus conforming to the specification set out in the Schedule of the said Certificate but having the variation specified in the following Schedule.

Schedule

VARIATION ONE To permit a minor drawing change to incorporate the certificate of conformity number for the MTL 2210 switch module (Ex 802334).

DRAWINGS

<u>Number</u>	<u>Issue</u>	<u>Date</u>	<u>Description</u>
CI2210-01 Sheet 9	2	10.80	Installation Drawing
CI2210-02 Sheet 10	2	10.80	Installation Drawing

File: SFA 12/372/037

B Hill

CERTIFICATE NO: Ex 79248/1 dated 6 July 1981
6/04

B HILL
DIRECTOR



BASEEFA

British Approvals Service
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THIS IS TO CERTIFY THAT CERTIFICATE NO Ex 79248

Issued to

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of Luton, Bedfordshire

is hereby extended to apply to apparatus conforming to the specification set out in the Schedules of the said Certificate but having the variation specified in the following Schedule.

Schedule

VARIATION TWO To permit the use of the switch operated Relay Type MTL2210B in place of the Type MTL2210.

The output and cable parameters are unchanged.

DRAWING
Number

Issue

Date

Description

SCI-33

1

7.81

Installation diagram for
MTL2210B

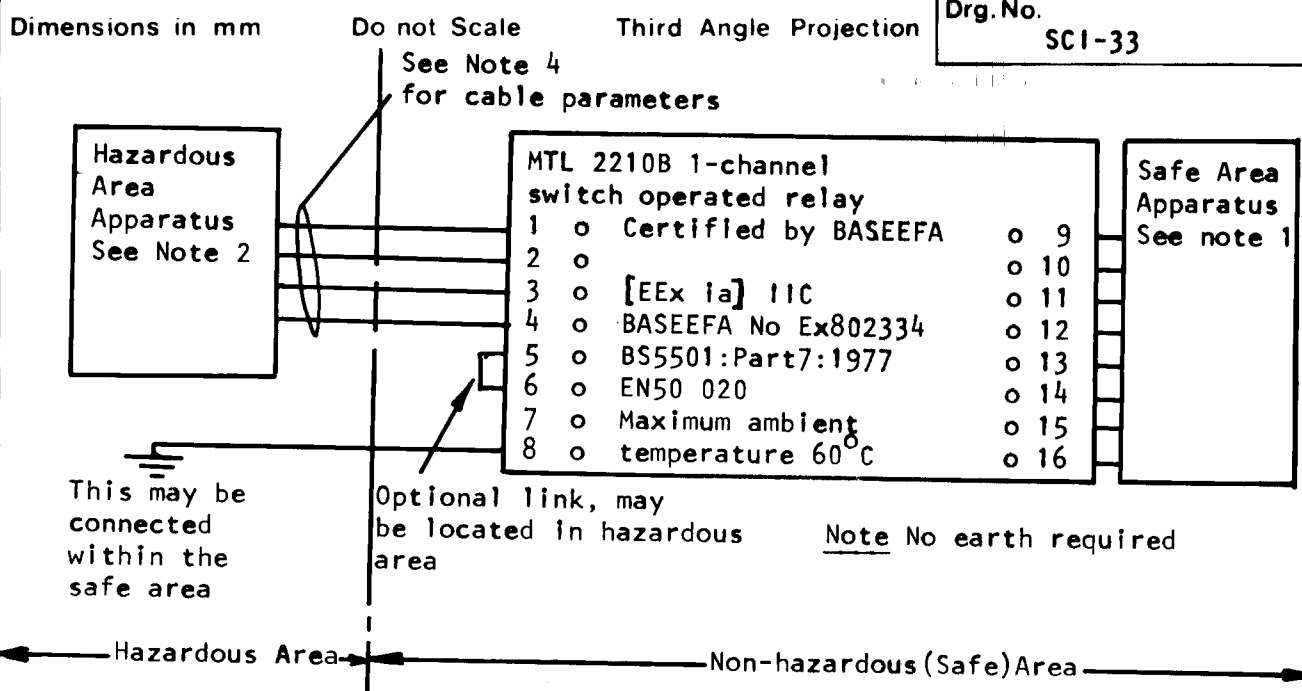
File: SFA 12/372/037

B HILL
DIRECTOR

CERTIFICATE NO: Ex 79248/2 dated 20 July 1981
32/33

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Luton, England
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Modification
Iss. Date / Drawn
1 7/81/DRG
2
3



Note 1 Non-hazardous (Safe) Area Apparatus - unspecified except that it must 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.

Note 2 Hazardous Area Apparatus - must be as specified in paragraph 6.3.3. in BS 5345:Part 4: 1977. Normally the apparatus must be capable of withstanding an a.c. test voltage of 500V r.m.s. to earth or frame. However, when the input circuit is fully floating i.e. there is no connection to earth or to a MTL 2220, there is no need to meet this insulation requirement.

Note 3 The maximum relay contact ratings are:- AC 250V, 5A, 500VA; DC-250V, 5A, 250 watts.

Note 4 The following cable parameters must not be exceeded:-

Gas Group	Capacitance	Inductance	or	L/R Ratio
IIC(HYDROGEN)	13 (0.9) μ F	69(18) mH		600 (150) μ H/ Ω

Applies to switches in zones 1 and 2 (Category Ex ib) and switches (having one of the supplementary protection methods specified in 4.1 of BS5501:Part 7:1977 EN50 020) in zone 0 (category Ex ia). The figures in () apply to switches without any supplementary protection in zone 0 (category Ex ia)

The values for Group IIB and IIA are 3 and 8 times the values for Group IIC respectively.

Certifying Authority: BASEEFA

BASEEFA System Certificate
No Ex 79248, Code Ex ia IIC

Used on	Scale
Tolerance unless otherwise stated \pm	Sheet 1 of 1
Title Installation diagram for the MTL 2210B 1-channel switch relay 24V d.c., 120V, or 240V a.c.	Drg. No. SCI-33