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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following company:

Measurement Technology Limited
 Power Court, Luton
 Bedfordshire, England LU1 3JJ

For:

MTL4000 Series Associated Intrinsically Safe Isolating Barriers

MTL4041A. Current Repeater, 4/20mA, For Smart 2-Wire Transmitters, Passive Input

AIS/I,II,III/1/ABCDEFGH — SCI-805/1 Entity; NII/2/ABCD/T6 Ta = 60°C

Entity Parameters :

Terminals 3/5 and 4/6

Voc = 8.6 Vdc, Isc = 0 mA, Po = 0 W, Ca = 7.0 μ F, La = 1000 mH

Special Condition for use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 & S82.03

MTL4044. Repeater Power Supply, 2-Channel , 4/20mA, For 2-Wire Transmitters

AIS/I,II,III/1/ABCDEFGH — SCI-806/1 Entity; NII/2/ABCD/T6 Ta = 60°C

Entity Parameters :

Terminals 2 and 3 or 5 and 6

Voc = 28 Vdc, Isc = 93 mA, Po = 0.65 W, Ca = 0.13 μ F, La = 4.2 mH

Special Condition for use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 & S82.03

MTL4046. Isolating Driver 4/20mA, For HART® I/P Valve Positioners

AIS/I,II,III/1/ABCDEFGH — SCI-807/1 Entity; NII/2/ABCD/T6 Ta = 60°C

Entity Parameters :

Terminals 2/3 and 4/5

Voc = 28 Vdc, Isc = 93 mA, Po = 0.65 W, Ca = 0.13 μ F, La = 4.2 mH

Special Condition for use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 & S82.03

MTL4046C. Isolating Driver 4/20mA, For HART® I/P Valve Positioners

AIS/I,II,III/1/ABCDEFGH — SCI-808/1 Entity; NII/2/ABCD/T6 Ta = 60°C

Entity Parameters :

Terminals 2/3 and 4/5

Voc = 28 Vdc, Isc = 93 mA, Po = 0.65 W, Ca = 0.13 μ F, La = 4.2 mH

Special Condition for use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 & S82.03

Equipment Ratings: Associated Intrinsically Safe apparatus with connections to Class I, II, III Division 1, Group A, B, C, D, E, F and G per "Entity" requirements in accordance with the respective installation drawings, and non-incendive for Class I, Division 2, Groups A, B, C and D hazardous (classified) indoor locations

Manufactured By: Measurement Technology Limited
Power Court, Luton
Bedfordshire, England LU1 3JJ

This certifies that the equipment described has been found to comply with the following Factory Mutual Research Approval Standards:

- Approval Standard Class 3600 - 1998
- Approval Standard Class 3610 - 1999
- Approval Standard Class 3611 - 1999
- Approval Standard Class 3810 - 1989

Approval Job Identification: J.I. 3004945 Issue Date: August 18, 2000

Related Approval Job Identification: J.I. 0W2A6.AX
 J.I. 5Y7A1.AX
 J.I. 4Y5A6.AX
 J.I. 3Z9A8.AX

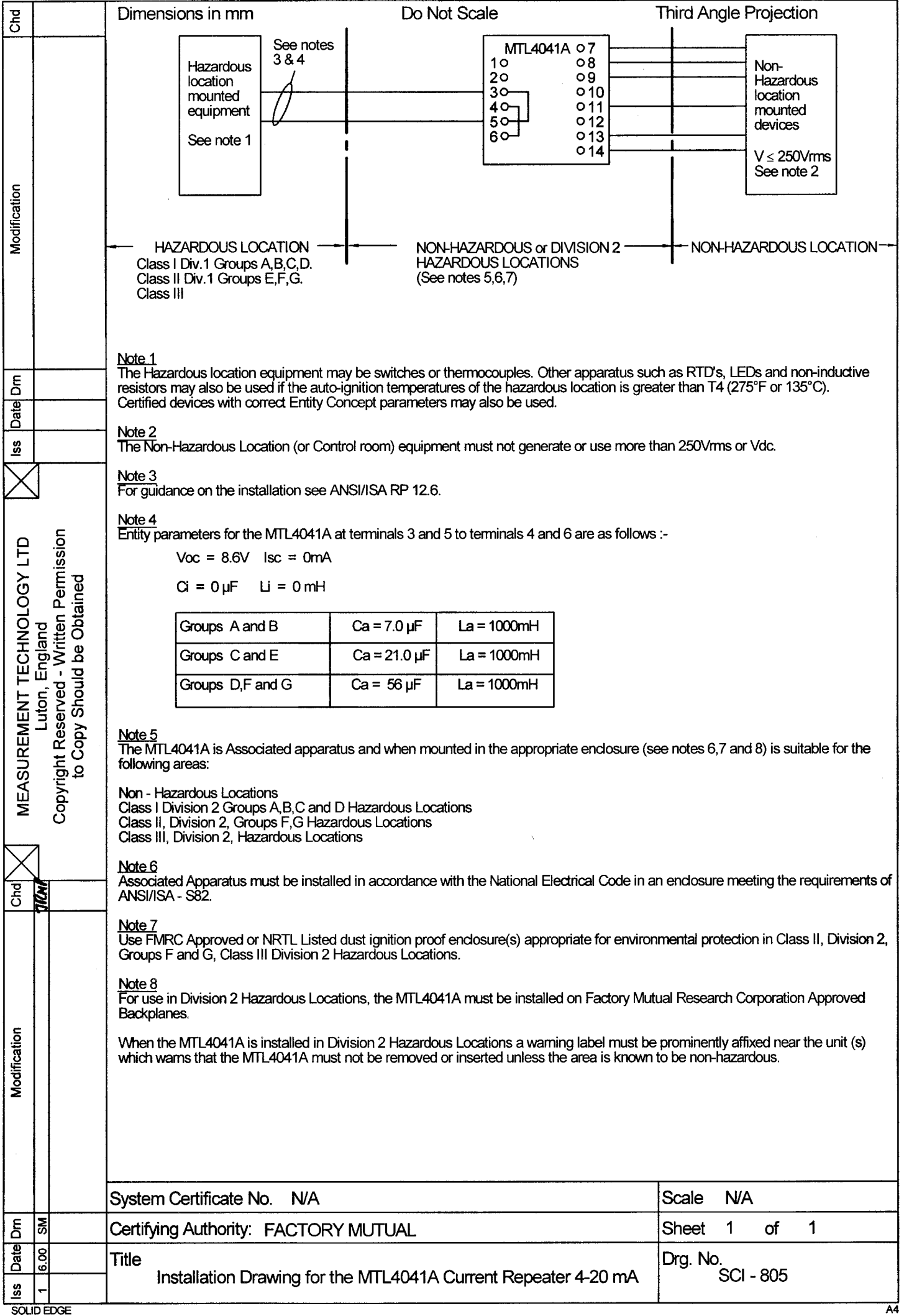
Subsequent Revision Reports/Date Approval Amended: Revision Report, October 3, 2000

Factory Mutual Research



W. Calder
Assistant Vice President
Approvals Division

3 October
Date



Note 1

The Hazardous location equipment may be switches or thermocouples. Other apparatus such as RTD's, LEDs and non-inductive resistors may also be used if the auto-ignition temperatures of the hazardous location is greater than T4 (275°F or 135°C). Certified devices with correct Entity Concept parameters may also be used.

Note 2

The Non-Hazardous Location (or Control room) equipment must not generate or use more than 250Vrms or Vdc.

Note 3

For guidance on the installation see ANSI/ISA RP 12.6.

Note 4

Entity parameters for the MTL4041A at terminals 3 and 5 to terminals 4 and 6 are as follows :-

$V_{oc} = 8.6V$ $I_{sc} = 0mA$

$C_i = 0 \mu F$ $L_i = 0 mH$

Groups A and B	$C_a = 7.0 \mu F$	$L_a = 1000mH$
Groups C and E	$C_a = 21.0 \mu F$	$L_a = 1000mH$
Groups D,F and G	$C_a = 56 \mu F$	$L_a = 1000mH$

Note 5

The MTL4041A is Associated apparatus and when mounted in the appropriate enclosure (see notes 6,7 and 8) is suitable for the following areas:

- Non - Hazardous Locations
- Class I Division 2 Groups A,B,C and D Hazardous Locations
- Class II, Division 2, Groups F,G Hazardous Locations
- Class III, Division 2, Hazardous Locations

Note 6

Associated Apparatus must be installed in accordance with the National Electrical Code in an enclosure meeting the requirements of ANSI/ISA - S82.

Note 7

Use FMRC Approved or NRTL Listed dust ignition proof enclosure(s) appropriate for environmental protection in Class II, Division 2, Groups F and G, Class III Division 2 Hazardous Locations.

Note 8

For use in Division 2 Hazardous Locations, the MTL4041A must be installed on Factory Mutual Research Corporation Approved Backplanes.

When the MTL4041A is installed in Division 2 Hazardous Locations a warning label must be prominently affixed near the unit (s) which warns that the MTL4041A must not be removed or inserted unless the area is known to be non-hazardous.

System Certificate No. N/A		Scale N/A
Chd	SM	Certifying Authority: FACTORY MUTUAL
Date Dm	16.00	Sheet 1 of 1
Iss	1	Title Installation Drawing for the MTL4041A Current Repeater 4-20 mA
		Drg. No. SCI - 805

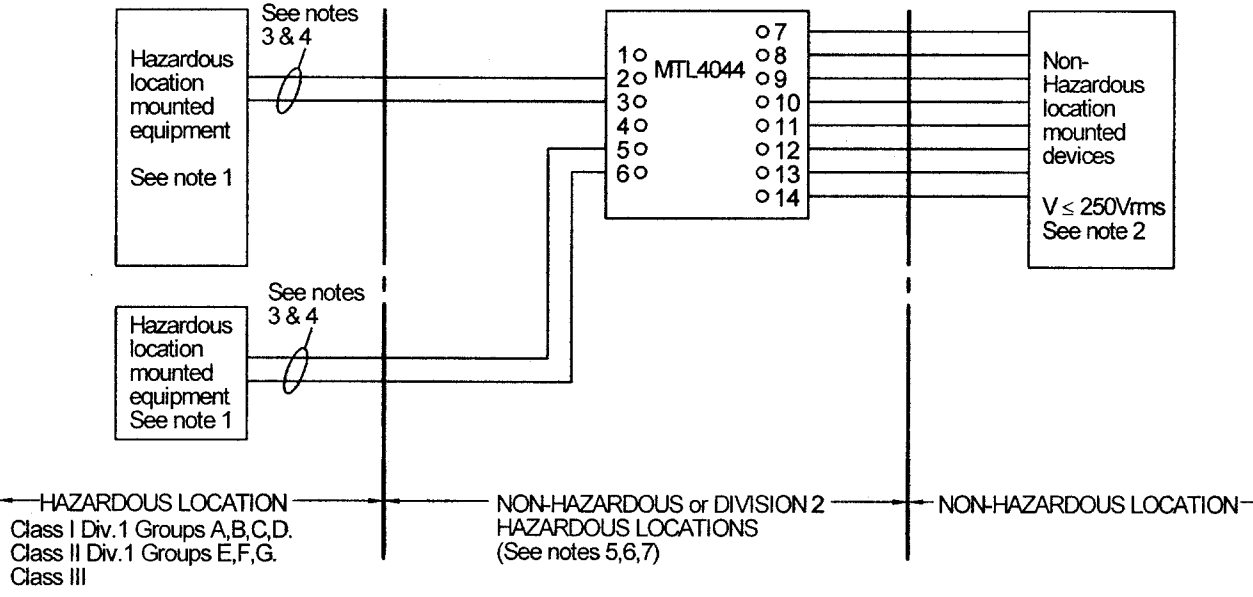
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Dimensions in mm

Do Not Scale

Third Angle Projection



Note 1

The Hazardous location equipment may be switches or thermocouples. Other apparatus such as RTD's, LEDs and non-inductive resistors may also be used if the auto-ignition temperatures of the hazardous location is greater than T4 (275°F or 135°C). Certified devices with correct Entity Concept parameters may also be used.

Note 2

The Non-Hazardous Location (or Control room) equipment must not generate or use more than 250Vrms or Vdc.

Note 3

For guidance on the installation see ANSI/ISA RP 12.6.

Note 4

Entity parameters for the MTL4044 at terminals 2 and 3 and at terminals 5 and 6 are as follows :-

$V_{oc} = 28V$ $I_{sc} = 93mA$ $P_o = 0.65W$

$C_i = 0 \mu F$ $L_i = 0 mH$

Groups A and B	$C_a = 0.13 \mu F$	$L_a = 4.2mH$
Groups C and E	$C_a = 0.39 \mu F$	$L_a = 12.6mH$
Groups D,F and G	$C_a = 1.04 \mu F$	$L_a = 33.6mH$

Note 5

The MTL4044 is Associated apparatus and when mounted in the appropriate enclosure (see notes 6,7 and 8) is suitable for the following areas:

- Non - Hazardous Locations
- Class I Division 2 Groups A,B,C and D Hazardous Locations
- Class II, Division 2, Groups F,G Hazardous Locations
- Class III, Division 2, Hazardous Locations

Note 6

Associated Apparatus must be installed in accordance with the National Electrical Code in an enclosure meeting the requirements of ANSI/ISA - S82.

Note 7

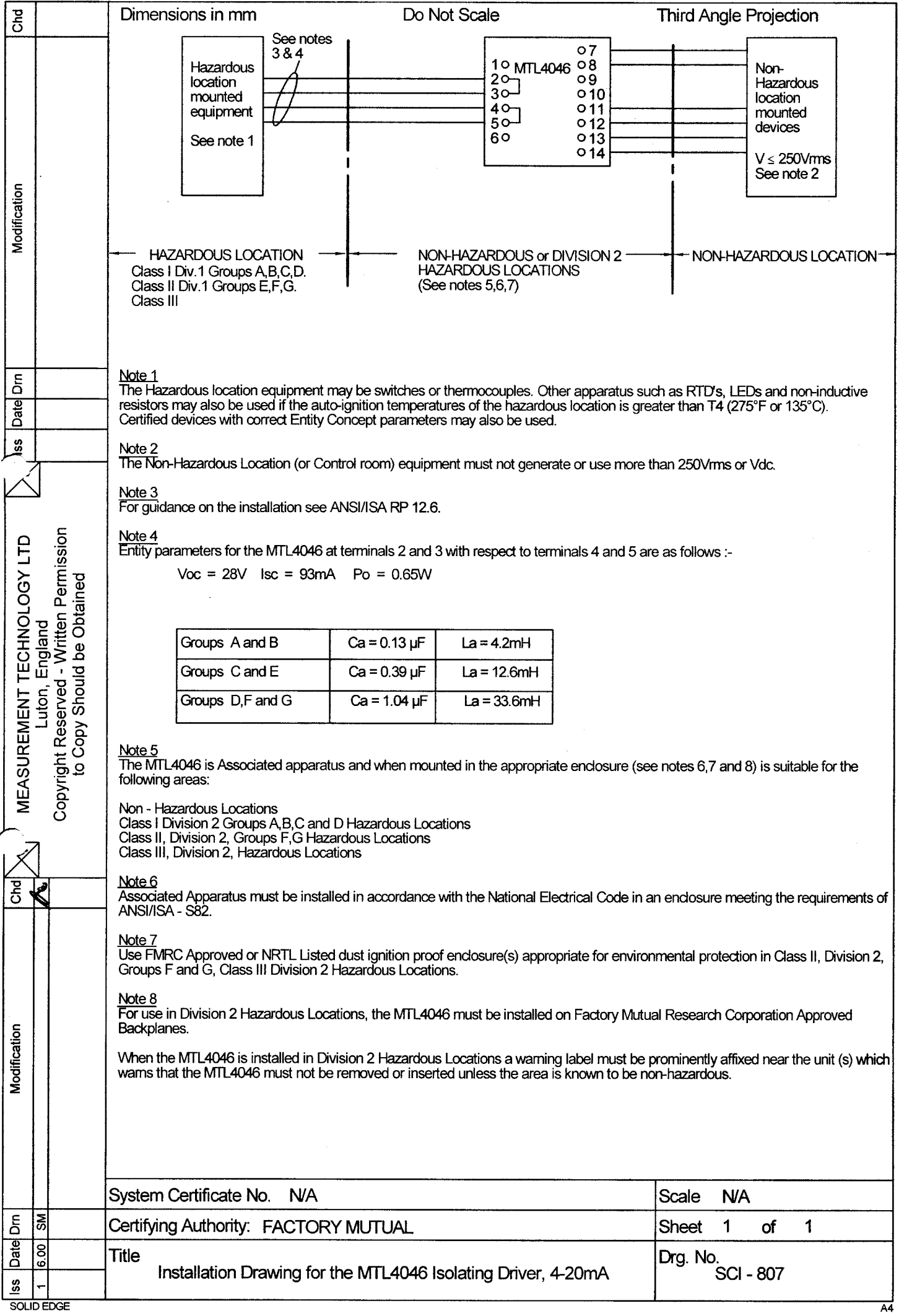
Use FMRC Approved or NRTL Listed dust ignition proof enclosure(s) appropriate for environmental protection in Class II, Division 2, Groups F and G, Class III Division 2 Hazardous Locations.

Note 8

For use in Division 2 Hazardous Locations, the MTL4044 must be installed on Factory Mutual Research Corporation Approved Backplanes.

When the MTL4044 is installed in Division 2 Hazardous Locations a warning label must be prominently affixed near the unit (s) which warns that the MTL4044 must not be removed or inserted unless the area is known to be non-hazardous.

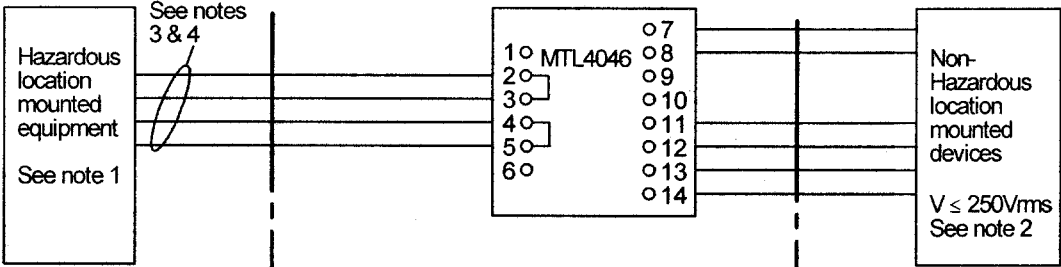
System Certificate No.	N/A	Scale	N/A
Certifying Authority:	FACTORY MUTUAL	Sheet	1 of 1
Title	Installation Drawing for the MTL4044 Repeater Power Supply : 4-20mA, Two Channel	Drg. No.	SCI - 806



Dimensions in mm

Do Not Scale

Third Angle Projection



HAZARDOUS LOCATION
 Class I Div.1 Groups A,B,C,D.
 Class II Div.1 Groups E,F,G.
 Class III

**NON-HAZARDOUS or DIVISION 2
 HAZARDOUS LOCATIONS**
 (See notes 5,6,7)

NON-HAZARDOUS LOCATION

Non-Hazardous location mounted devices
 V ≤ 250Vrms
 See note 2

Note 1

The Hazardous location equipment may be switches or thermocouples. Other apparatus such as RTD's, LEDs and non-inductive resistors may also be used if the auto-ignition temperatures of the hazardous location is greater than T4 (275°F or 135°C). Certified devices with correct Entity Concept parameters may also be used.

Note 2

The Non-Hazardous Location (or Control room) equipment must not generate or use more than 250Vrms or Vdc.

Note 3

For guidance on the installation see ANSI/ISA RP 12.6.

Note 4

Entity parameters for the MTL4046 at terminals 2 and 3 with respect to terminals 4 and 5 are as follows :-

$V_{oc} = 28V$ $I_{sc} = 93mA$ $P_o = 0.65W$

Groups A and B	Ca = 0.13 μF	La = 4.2mH
Groups C and E	Ca = 0.39 μF	La = 12.6mH
Groups D,F and G	Ca = 1.04 μF	La = 33.6mH

Note 5

The MTL4046 is Associated apparatus and when mounted in the appropriate enclosure (see notes 6,7 and 8) is suitable for the following areas:

- Non - Hazardous Locations
- Class I Division 2 Groups A,B,C and D Hazardous Locations
- Class II, Division 2, Groups F,G Hazardous Locations
- Class III, Division 2, Hazardous Locations

Note 6

Associated Apparatus must be installed in accordance with the National Electrical Code in an enclosure meeting the requirements of ANSI/ISA - S82.

Note 7

Use FMRC Approved or NRTL Listed dust ignition proof enclosure(s) appropriate for environmental protection in Class II, Division 2, Groups F and G, Class III Division 2 Hazardous Locations.

Note 8

For use in Division 2 Hazardous Locations, the MTL4046 must be installed on Factory Mutual Research Corporation Approved Backplanes.

When the MTL4046 is installed in Division 2 Hazardous Locations a warning label must be prominently affixed near the unit (s) which warns that the MTL4046 must not be removed or inserted unless the area is known to be non-hazardous.

System Certificate No. N/A		Scale N/A
Certifying Authority: FACTORY MUTUAL		Sheet 1 of 1
Title Installation Drawing for the MTL4046 Isolating Driver, 4-20mA		Drg. No. SCI - 807

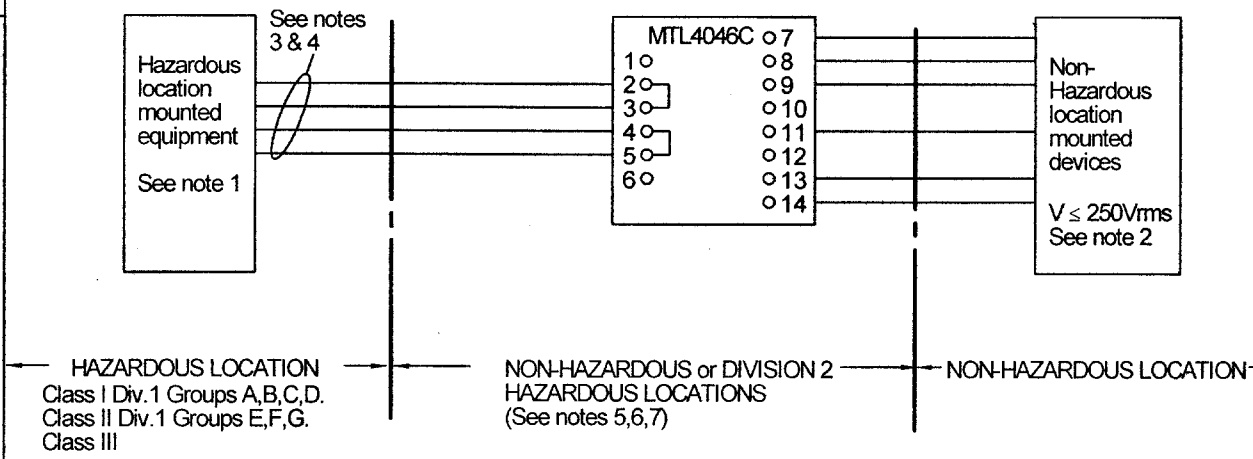
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Dimensions in mm

Do Not Scale

Third Angle Projection



Note 1

The Hazardous location equipment may be switches or thermocouples. Other apparatus such as RTD's, LEDs and non-inductive resistors may also be used if the auto-ignition temperatures of the hazardous location is greater than T4 (275°F or 135°C). Certified devices with correct Entity Concept parameters may also be used.

Note 2

The Non-Hazardous Location (or Control room) equipment must not generate or use more than 250Vrms or Vdc.

Note 3

For guidance on the installation see ANSI/ISA RP 12.6.

Note 4

Entity parameters for the MTL4046C at terminals 2 and 3 with respect to terminals 4 and 5 are as follows :-

$V_{oc} = 28V$ $I_{sc} = 93mA$ $P_o = 0.65W$

$C_i = 0 \mu F$ $L_i = 0 \mu F$

Groups A and B	$C_a = 0.13 \mu F$	$L_a = 4.2mH$
Groups C and E	$C_a = 0.39 \mu F$	$L_a = 12.6mH$
Groups D,F and G	$C_a = 1.04 \mu F$	$L_a = 33.6mH$

Note 5

The MTL4046C is Associated apparatus and when mounted in the appropriate enclosure (see notes 6,7 and 8) is suitable for the following areas:

- Non - Hazardous Locations
- Class I Division 2 Groups A,B,C and D Hazardous Locations
- Class II, Division 2, Groups F,G Hazardous Locations
- Class III, Division 2, Hazardous Locations

Note 6

Associated Apparatus must be installed in accordance with the National Electrical Code in an enclosure meeting the requirements of ANSI/ISA - S82.

Note 7

Use FMRC Approved or NRTL Listed dust ignition proof enclosure(s) appropriate for environmental protection in Class II, Division 2, Groups F and G, Class III Division 2 Hazardous Locations.

Note 8

For use in Division 2 Hazardous Locations, the MTL4046C must be installed on Factory Mutual Research Corporation Approved Backplanes.

When the MTL4046C is installed in Division 2 Hazardous Locations a warning label must be prominently affixed near the unit (s) which warns that the MTL4046C must not be removed or inserted unless the area is known to be non-hazardous.

System Certificate No.	N/A	Scale	N/A
Certifying Authority:	FACTORY MUTUAL	Sheet	1 of 1
Title	Installation Drawing for the MTL4046C Isolating Driver, 4-20mA	Drg. No.	SCI - 808