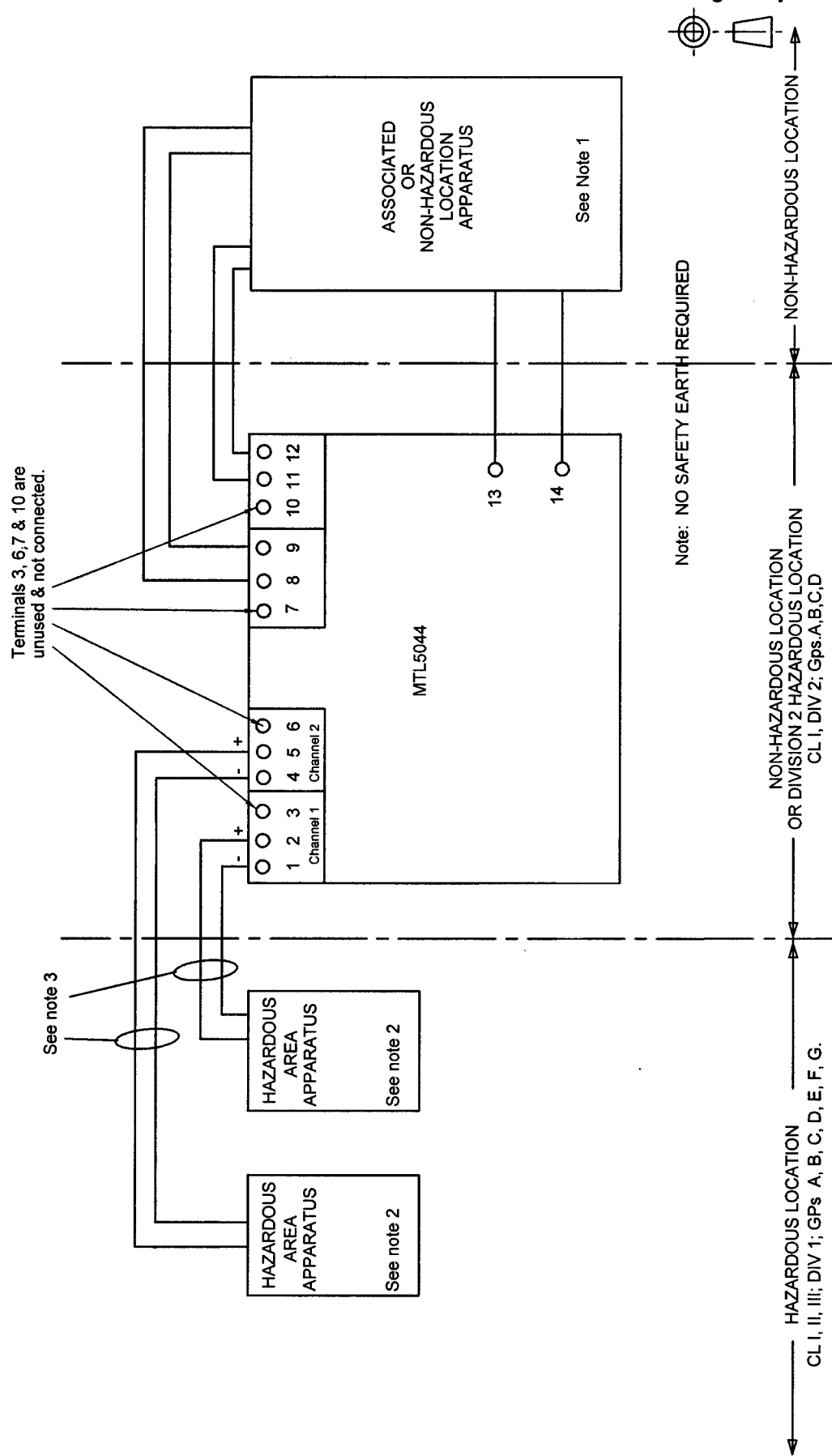


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System Certificate No:					Scale N/A				
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Title MTL5044 Repeater Power Supply Installation Diagram					Drg. No. SCI-914				

Dimensions in mm

Do Not Scale

Third Angle Projection

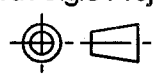


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Dimensions in mm

Do Not Scale

Third Angle Projection



Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

a) Entity Concept Parameters for each channel of the MTL5044 ie channel 1 (Terminals 1 & 2), channel 2 (Terminals 4 & 5) are as follows:-

Channel 1 - Terminal 1 Wrt 2  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

Channel 2 - Terminal 4 Wrt 5  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

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

b) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, I_{sc} \leq I_{max}$$

$$C_a \geq C_i + C_{cable}, L_a \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5044 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
 Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

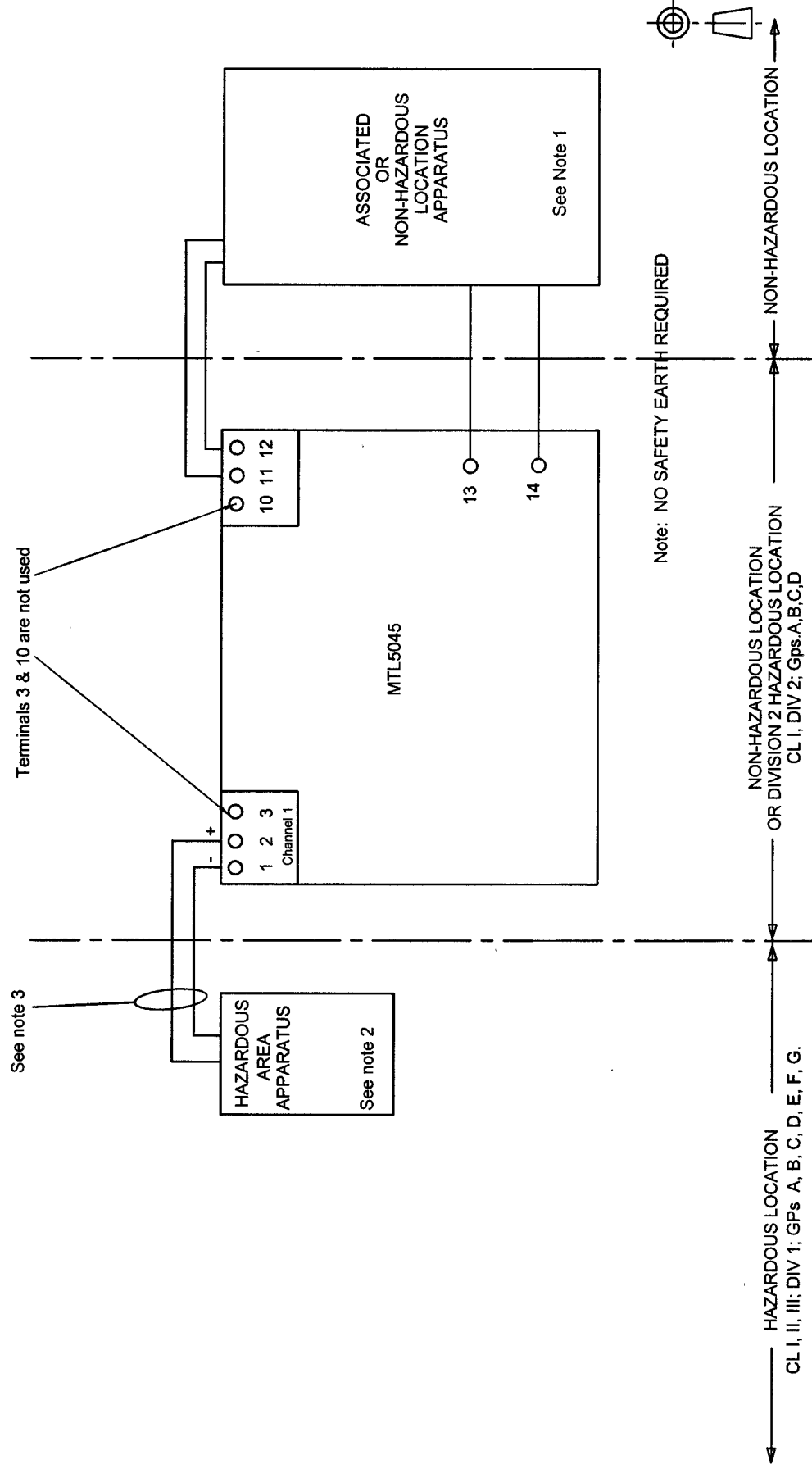
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Certifying Authority: UL		Sheet 2 of 2
Title MTL5044 Repeater Power Supply Installation Diagram		Drg. No. SCI-914

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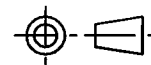
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Third Angle Projection



System Certificate No:		Scale N/A
Certifying Authority: UL		Sheet 1 of 2
Title MTL5045 Isolating Driver Installation Diagram		Drng. No. SCI-915



Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

a) Entity Concept Parameters for the MTL5045 ie channel 1 (Terminals 1 & 2) are as follows:-

Channel 1 - Terminal 1 Wrt 2/3  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

Groups A and B	$Ca \leq 0.13 \mu F$	$La \leq 4.2mH$
Groups C and E	$Ca \leq 0.39 \mu F$	$La \leq 12.6mH$
Groups D,F and G	$Ca \leq 1.04\mu F$	$La \leq 36.6mH$

b) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, I_{sc} \leq I_{max}$$

$$Ca \geq C_i + C_{cable}, La \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5045 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

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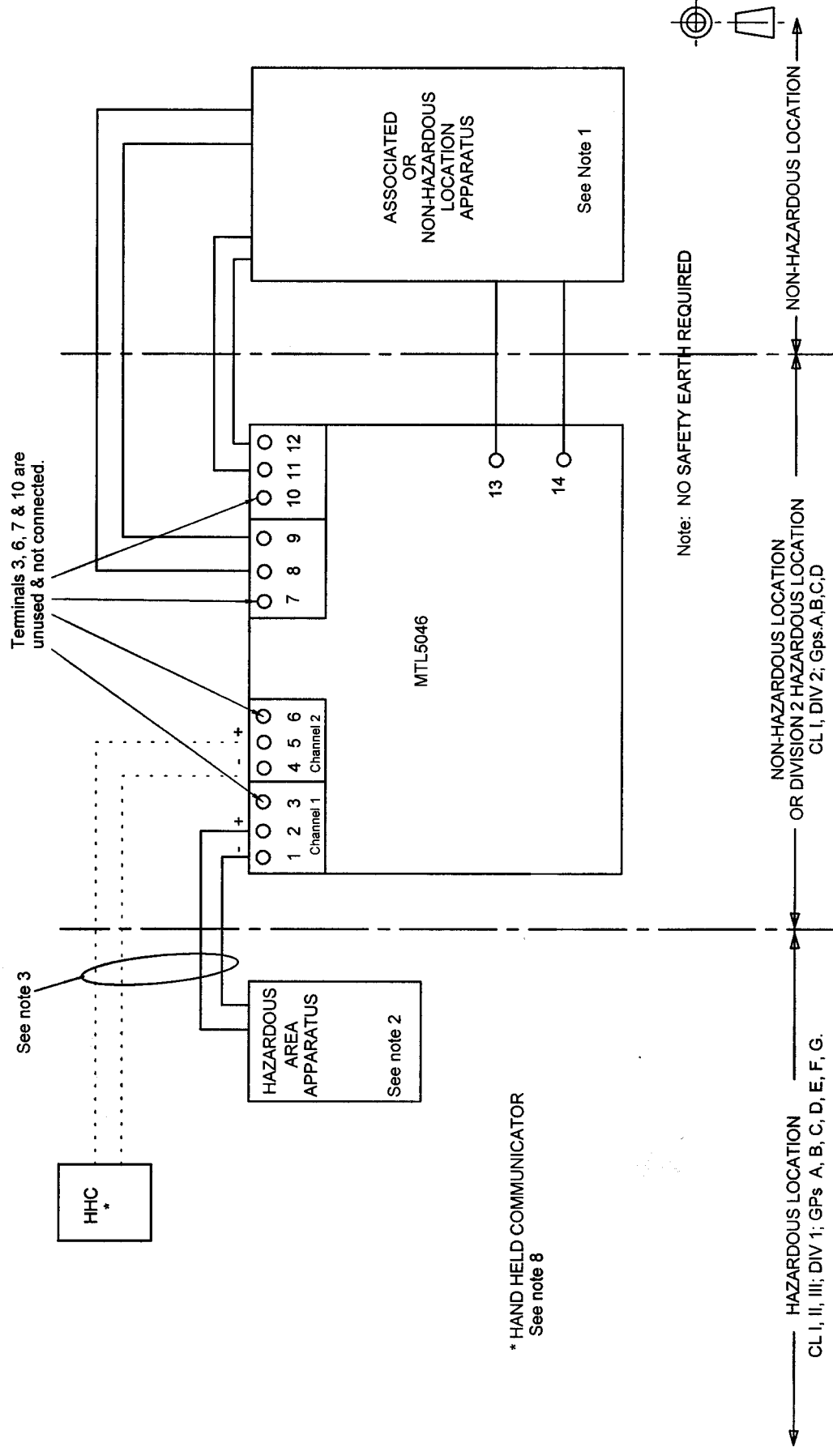
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Title MTL5045 Isolating Driver Installation Diagram		Drg. No. SCI-915

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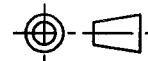
Dimensions in mm

Do Not Scale

Third Angle Projection



System Certificate No:		Scale N/A
Certifying Authority: UL		Sheet 1 of 2
Title MTL5046 Isolating Driver Installation Diagram		Drng. No. SCI-916



Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

a) Entity Concept Parameters for each channel of the MTL5046 ie channel 1 (Terminals 1 & 2) are as follows:-

Channel 1 - Terminal 1 Wrt 2  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

Groups A and B	$Ca \leq 0.13 \mu F$	$La \leq 4.2mH$
Groups C and E	$Ca \leq 0.39 \mu F$	$La \leq 12.6mH$
Groups D,F and G	$Ca \leq 1.04 \mu F$	$La \leq 34.2mH$

b) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, I_{sc} \leq I_{max}$$

$$Ca \geq C_i + C_{cable}, La \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5046 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

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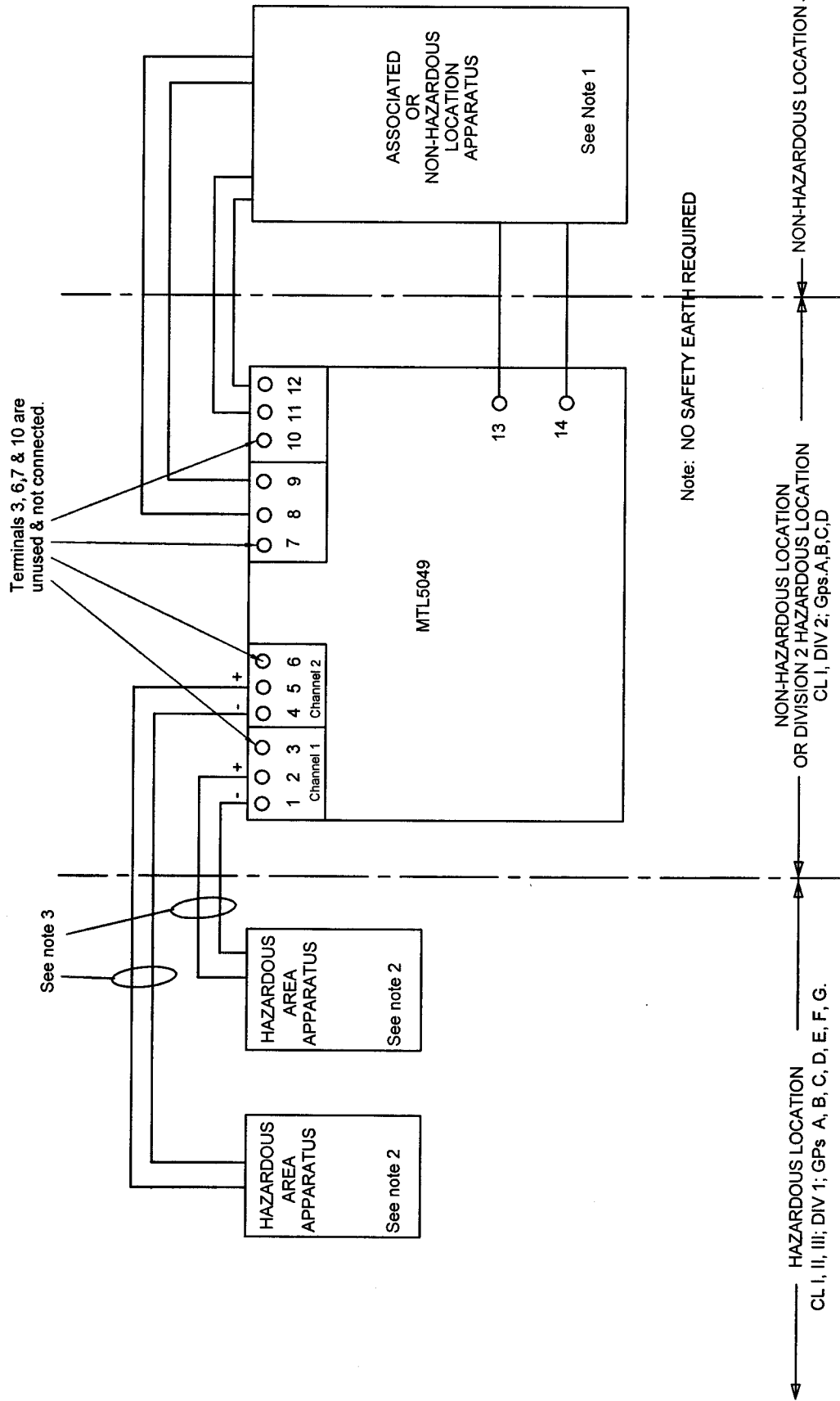
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Certifying Authority: UL	Sheet 2 of 2
Title MTL5046 Isolating Driver Installation Diagram	Drg. No. SCI-916

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Dimensions in mm

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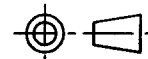
Third Angle Projection



System Certificate No:		Scale N/A
Certifying Authority: UL		Sheet 1 of 2
Title MTL5049 Isolating Driver Installation Diagram		Drg. No. SCI-917

Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

a) Entity Concept Parameters for each channel of the MTL5049 ie channel 1 (Terminals 1 & 2), channel 2 (Terminals 4 & 5) are as follows:-

Channel 1 - Terminal 1 Wrt 2  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

Channel 2 - Terminal 4 Wrt 5  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

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

b) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, I_{sc} \leq I_{max}$$

$$C_a \geq C_i + C_{cable}, L_a \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5049 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

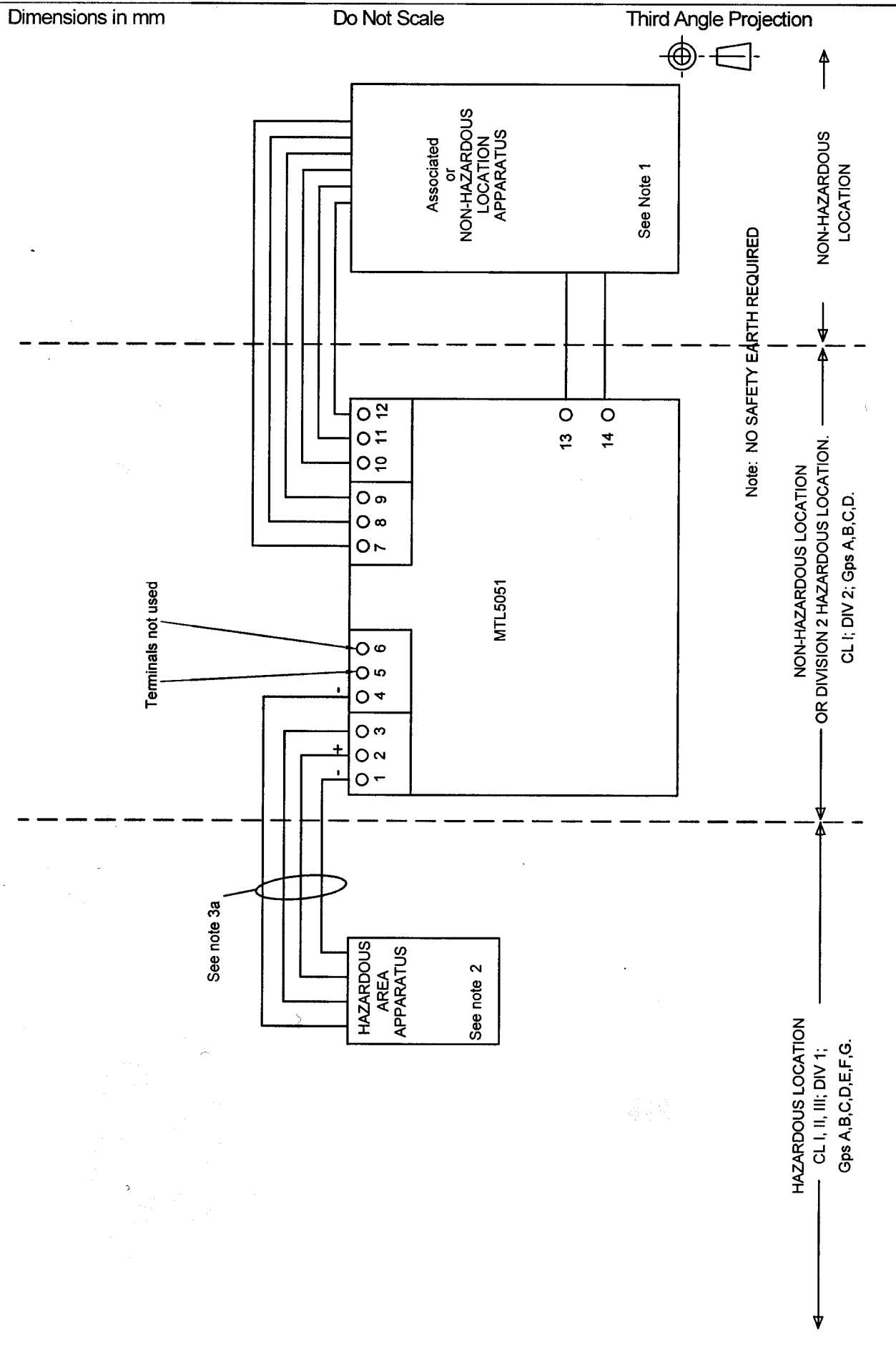
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Certifying Authority: UL		Sheet 2 of 2
Title MTL5049 Isolating Driver Installation Diagram		Drg. No. SCI-917

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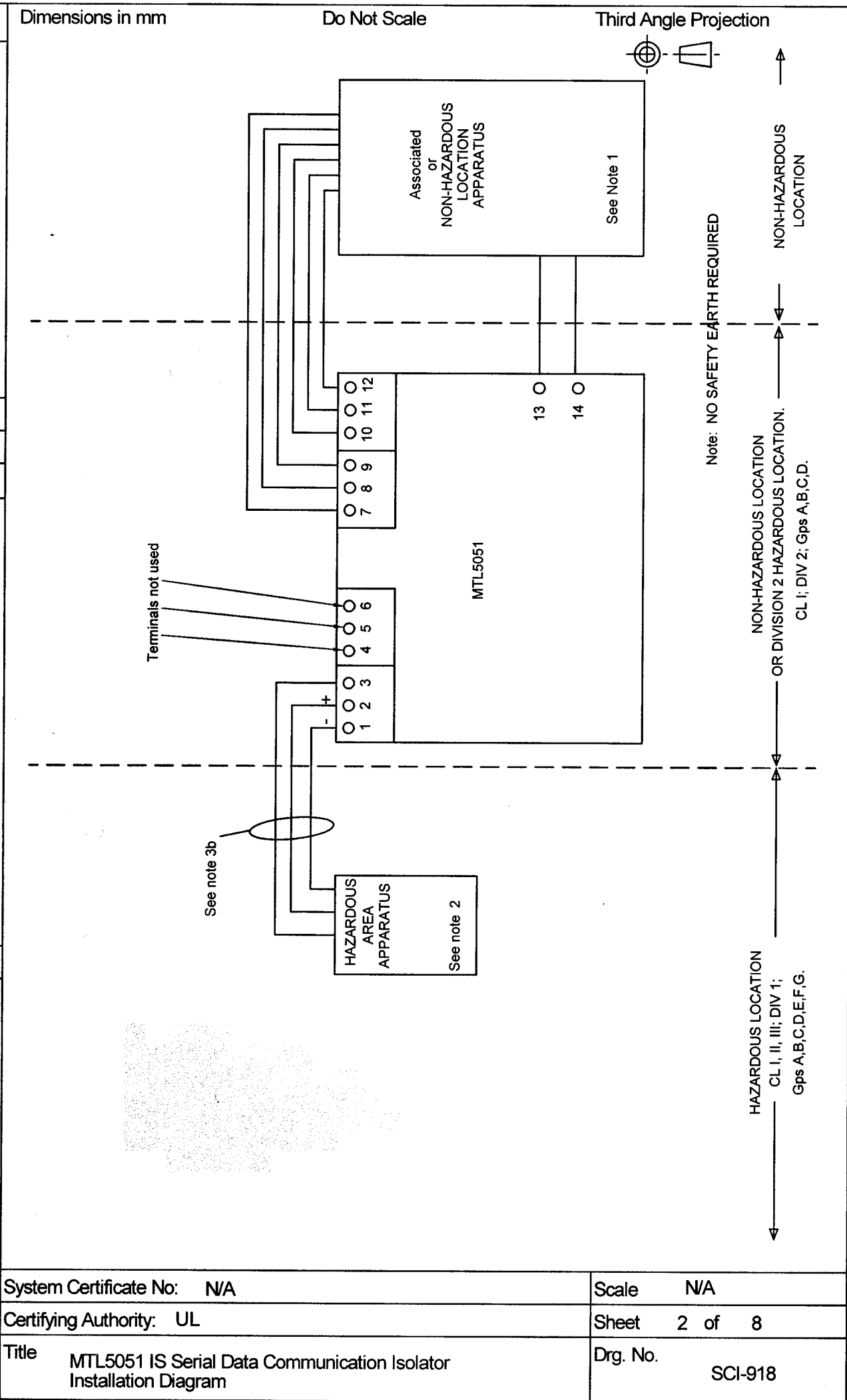
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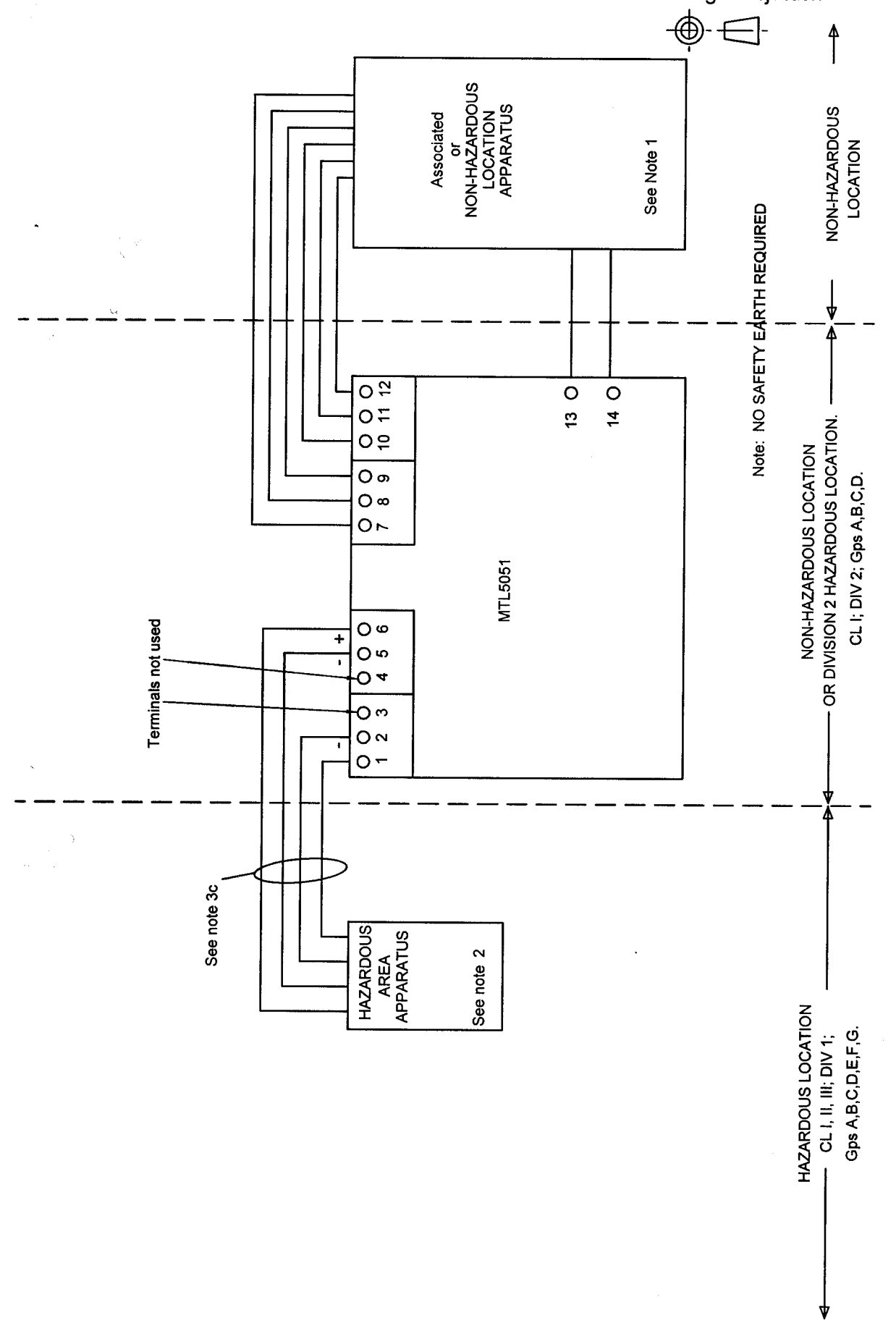


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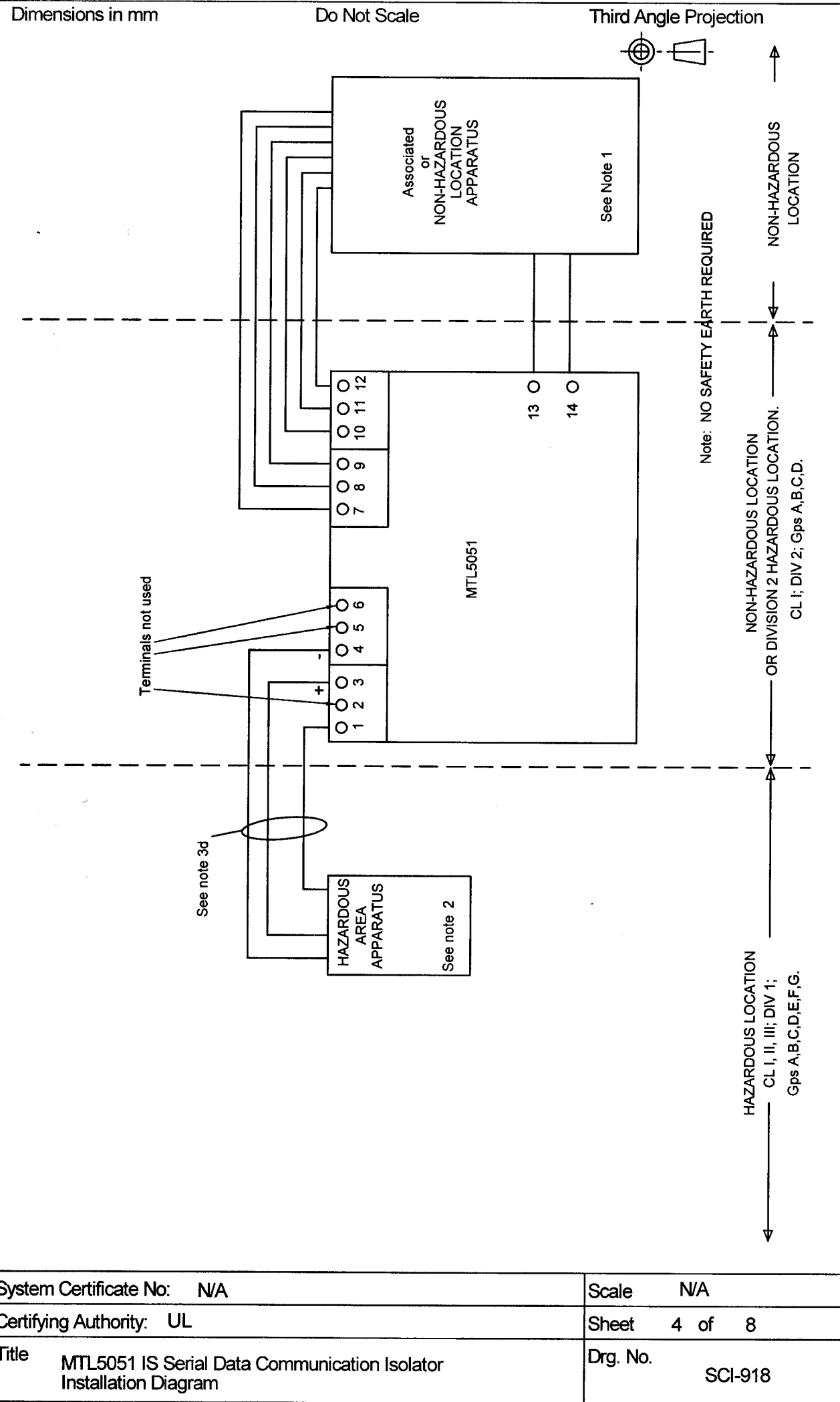
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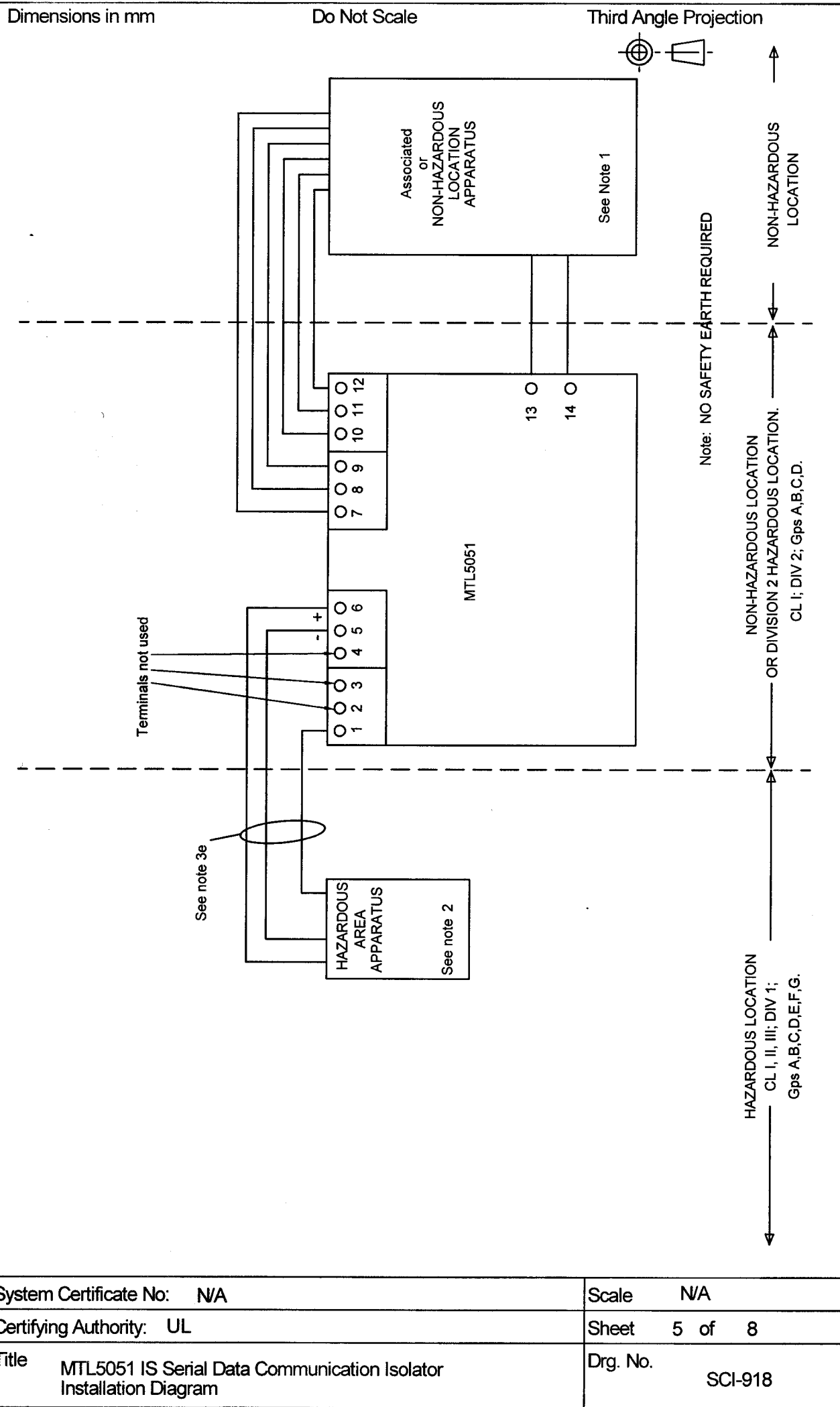


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Certifying Authority: UL		Sheet	3 of 8
Title MTL5051 IS Serial Data Communication Isolator Installation Diagram		Drg. No.	SCI-918

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Sheet	1	4	of	8			
Title				Mtl5051 IS Serial Data Communication Isolator Installation Diagram			
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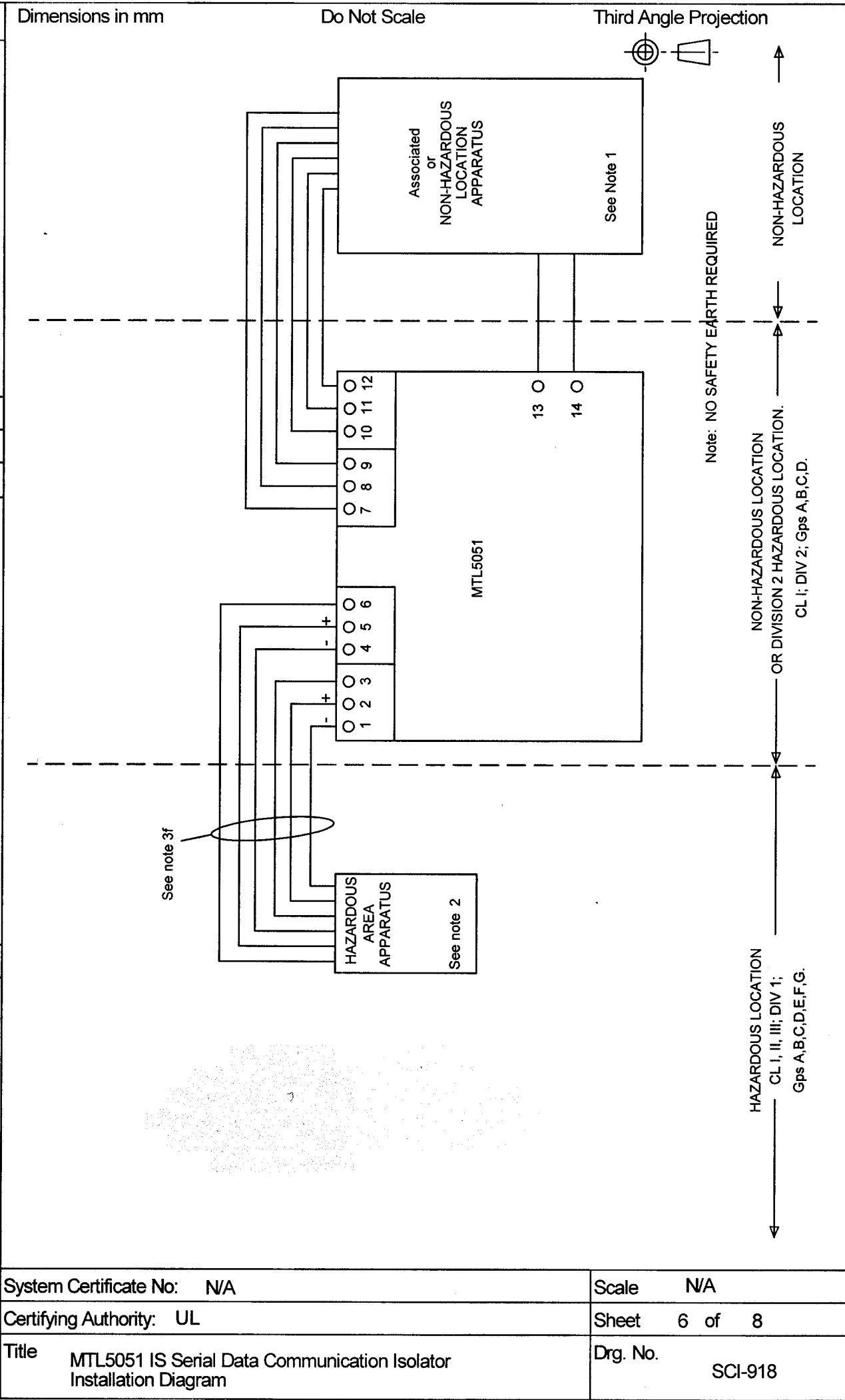


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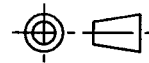


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Certifying Authority:	UL	Sheet	5 of 8
Title	MTL5051 IS Serial Data Communication Isolator Installation Diagram	Drg. No.	SCI-918

Iss	Date	Drn	Title	Chd	Modification	Chd	Modification
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System Certificate No:	N/A	Scale	N/A
Certifying Authority:	UL	Sheet	6 of 8
Title	MTL5051 IS Serial Data Communication Isolator Installation Diagram	Drg. No.	SCI-918

Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

Entity Concept Parameters for the MTL5051 are as follows :-

- a) Terminals 2,3,4 Wrt 1  $V_t \leq 14V$   $I_t \leq 192mA$   $P_o = 0.8W$

Groups A and B	$C_a \leq 0.73 \mu F$	$L_a \leq 0.80mH$
Groups C and E	$C_a \leq 2.93 \mu F$	$L_a \leq 2.41mH$
Groups D,F and G	$C_a \leq 7.80 \mu F$	$L_a \leq 6.44mH$

- b) Terminals 2,3, Wrt 1  $V_t \leq 14V$   $I_t \leq 108mA$   $P_o = 0.46W$

Groups A and B	$C_a \leq 0.73 \mu F$	$L_a \leq 3.07mH$
Groups C and E	$C_a \leq 2.93 \mu F$	$L_a \leq 12.65mH$
Groups D,F and G	$C_a \leq 7.80 \mu F$	$L_a \leq 24.51mH$

- c) Terminals 2,5,6 Wrt 1  $V_t \leq 20V$   $I_t \leq 139mA$   $P_o = 0.46W$

Groups A and B	$C_a \leq 0.22 \mu F$	$L_a \leq 1.77mH$
Groups C and E	$C_a \leq 1.01 \mu F$	$L_a \leq 7.79mH$
Groups D,F and G	$C_a \leq 2.70 \mu F$	$L_a \leq 14.79mH$

- d) Terminals 3,4 Wrt 1  $V_t \leq 14V$   $I_t \leq 88mA$   $P_o = 0.35W$

Groups A and B	$C_a \leq 0.73 \mu F$	$L_a \leq 4.71mH$
Groups C and E	$C_a \leq 2.93 \mu F$	$L_a \leq 18.64mH$
Groups D,F and G	$C_a \leq 7.80 \mu F$	$L_a \leq 36.93mH$

- e) Terminals 5,6 Wrt 1  $V_t \leq 15V$   $I_t \leq 35mA$   $P_o = 0.07W$

Groups A and B	$C_a \leq 0.58 \mu F$	$L_a \leq 28.29mH$
Groups C and E	$C_a \leq 2.35 \mu F$	$L_a \leq 106.72mH$
Groups D,F and G	$C_a \leq 6.26 \mu F$	$L_a \leq 217.55mH$

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Certifying Authority: UL

Sheet 7 of 8

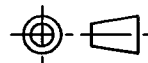
Title MTL5051 IS Serial Data Communication Isolator  
Installation Diagram

Drg. No. SCI-918

Dimensions in mm

Do Not Scale

Third Angle Projection



f) Terminals 2,3,4,5,6 Wrt 1  $V_t \leq 20V$   $I_t \leq 227mA$   $P_o = 0.81W$

Groups A and B	$C_a \leq 0.22 \mu F$	$L_a \leq 0.61mH$
Groups C and E	$C_a \leq 1.01 \mu F$	$L_a \leq 1.83mH$
Groups D,F and G	$C_a \leq 2.70 \mu F$	$L_a \leq 4.89mH$

g) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, I_{sc} \leq I_{max}$$

$$C_a \geq C_i + C_{cable}, L_a \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5051 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

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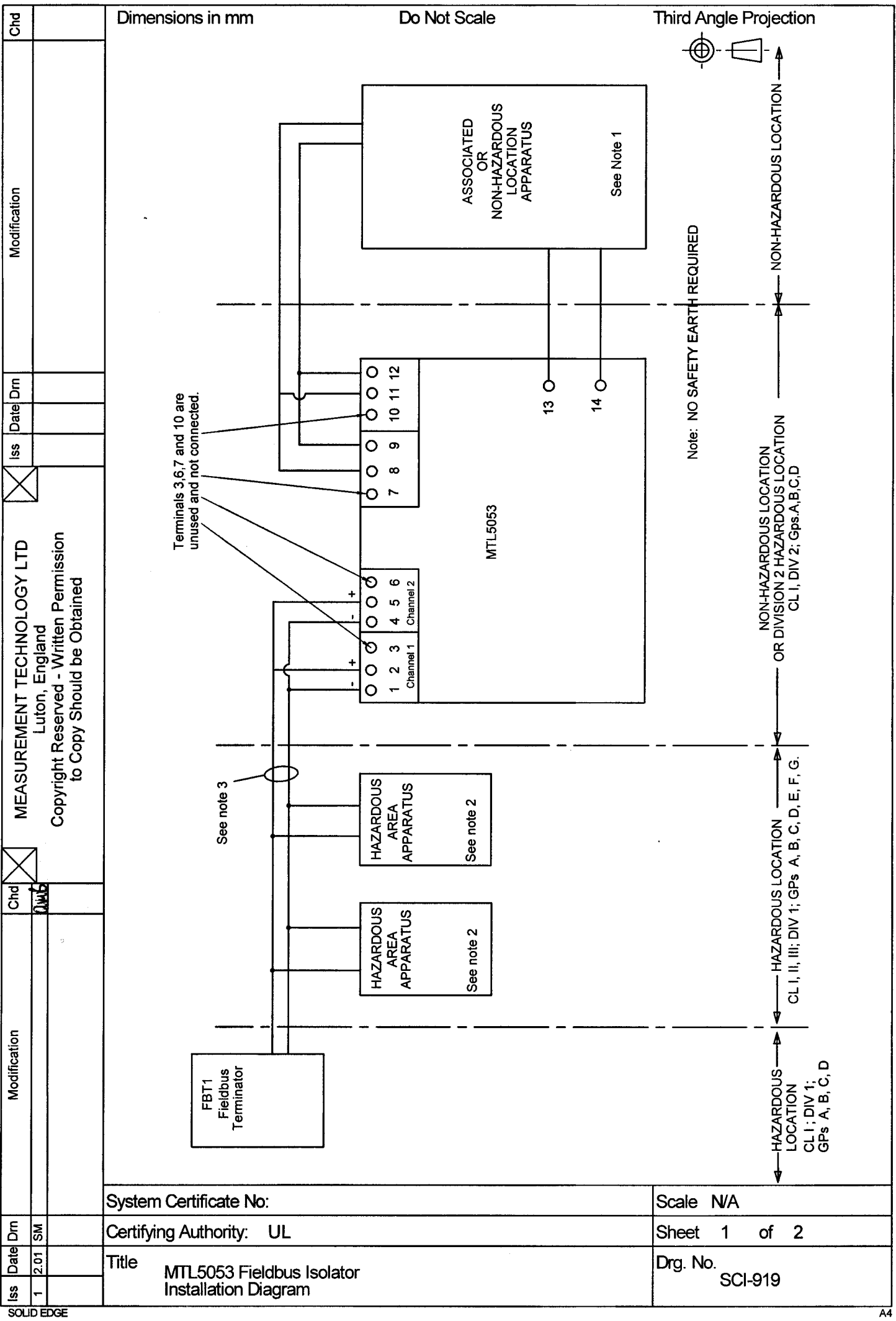
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Title	MTL5051 IS Serial Data Communication Isolator Installation Diagram	Drg. No.	SCI-918



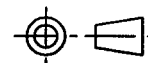


SOLID EDGE

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Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

The Hazardous Location : Any number of UL Approved devices which meet the power and Entity Parameter requirements below may be connected to the fieldbus:

- a) All device's electronic circuitry which interface directly to the Fieldbus must be powered from the fieldbus power. Other power sources in the devices (if any), must be galvanically isolated from the fieldbus power.
- b)  $V_{max}$  of all device's must be equal to or greater than 22V.
- c)  $I_{max}$  of all device's must be equal to or greater than 216mA.
- d)  $P_{max}$  of all device's must be equal to or greater than 1.2W.
- e) The sum of all device's unprotected input capacitance  $C_i$ , plus the cable capacitance must be equal to or less than  $C_a$  for applicable Gas Group in note 3.
- f) The sum of all device's unprotected input inductance  $L_i$ , plus the cable inductance must be equal to or less than  $L_a$  for the applicable Gas Group in note 3.

Note 3

- a) Entity Concept Parameters for the MTL5053 ie channel 1 (Terminals 1 & 2), channel 2 (Terminals 4 & 5) are as follows:-

Channel 1 - Terminal 2/5 Wrt 1/4  $V_{oc} \leq 22V$   $I_{sc} \leq 216mA$

Groups A and B	$C_a \leq 0.26 \mu F$	$L_a \leq 0.84mH$
Groups C and E	$C_a \leq 0.78 \mu F$	$L_a \leq 3.48 mH$
Groups D,F and G	$C_a \leq 2.09 \mu F$	$L_a \leq 6.4 mH$

- b) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, I_{sc} \leq I_{max}$$

$$C_a \geq C_i + C_{cable}, L_a \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5053 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

System Certificate No:		Scale N/A
Certifying Authority: UL		Sheet 2 of 2
Title MTL5053 Fieldbus Isolator Installation Diagram		Drg. No. SCI-919

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Date Dm	SM
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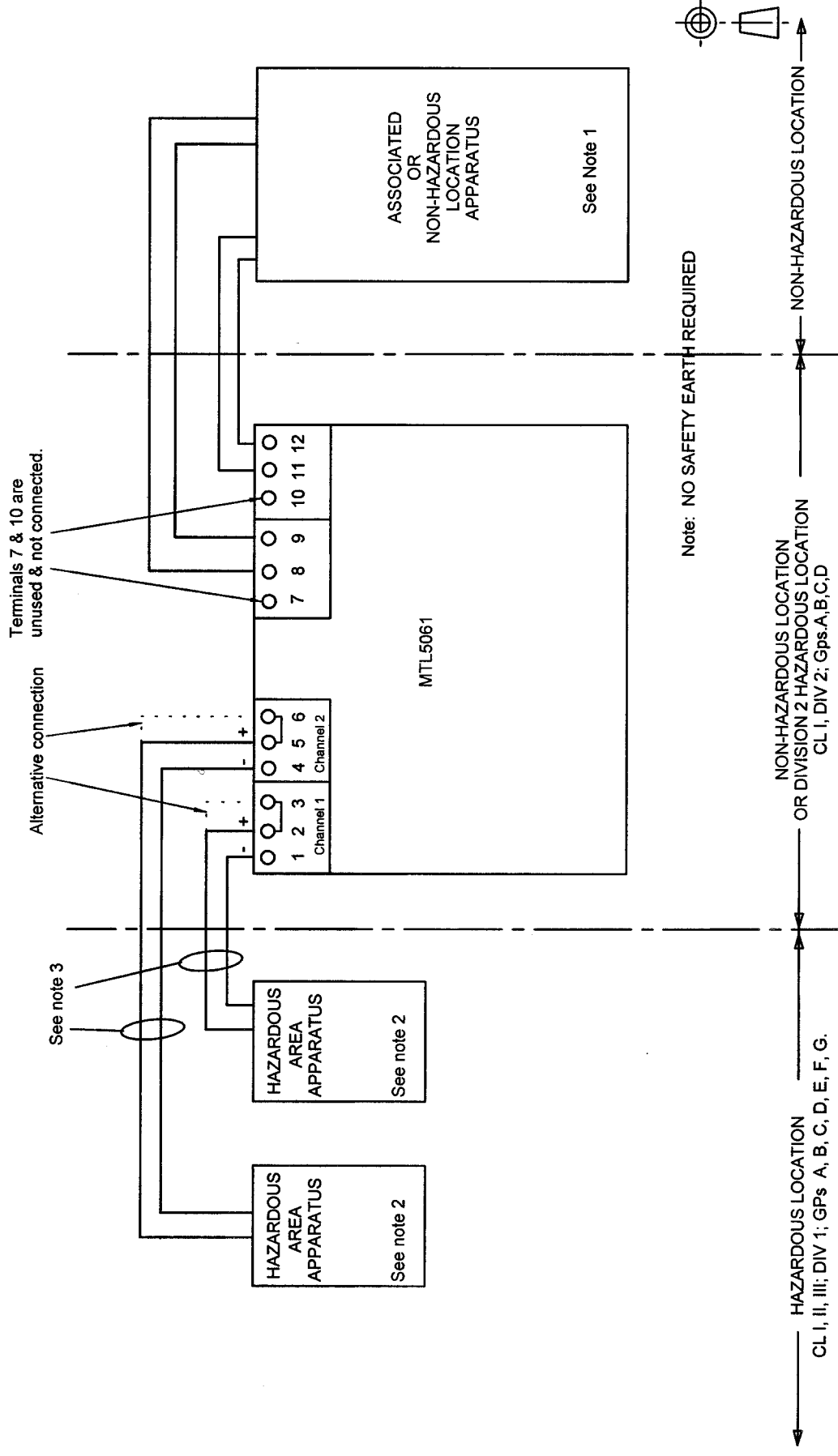
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Dimensions in mm

Do Not Scale

Third Angle Projection

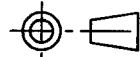


System Certificate No:		Scale	N/A
Certifying Authority: UL		Sheet	1 of 2
Title MTL5061 Fire Smoke Detector Installation Diagram		Drg. No.	SCI-920

Dimensions in mm

Do Not Scale

Third Angle Projection



Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

a) Entity Concept Parameters for each channel of the MTL5061 ie channel 1 (Terminals 1,2 & 3), channel 2 (Terminals 4 & 5) are as follows:-

Channel 1 - Terminal 1 Wrt 2  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

Channel 2 - Terminal 4 Wrt 5  $V_{oc} \leq 28V$   $I_{sc} \leq 93mA$

Groups A and B	$C_a \leq 0.13 \mu F$	$L_a \leq 4.2mH$
Groups C and E	$C_a \leq 0.39 \mu F$	$L_a \leq 12.6mH$
Groups D,F and G	$C_a \leq 1.04 \mu F$	$L_a \leq 34.2mH$

b) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, I_{sc} \leq I_{max}$$

$$C_a \geq C_i + C_{cable}, L_a \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5061 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

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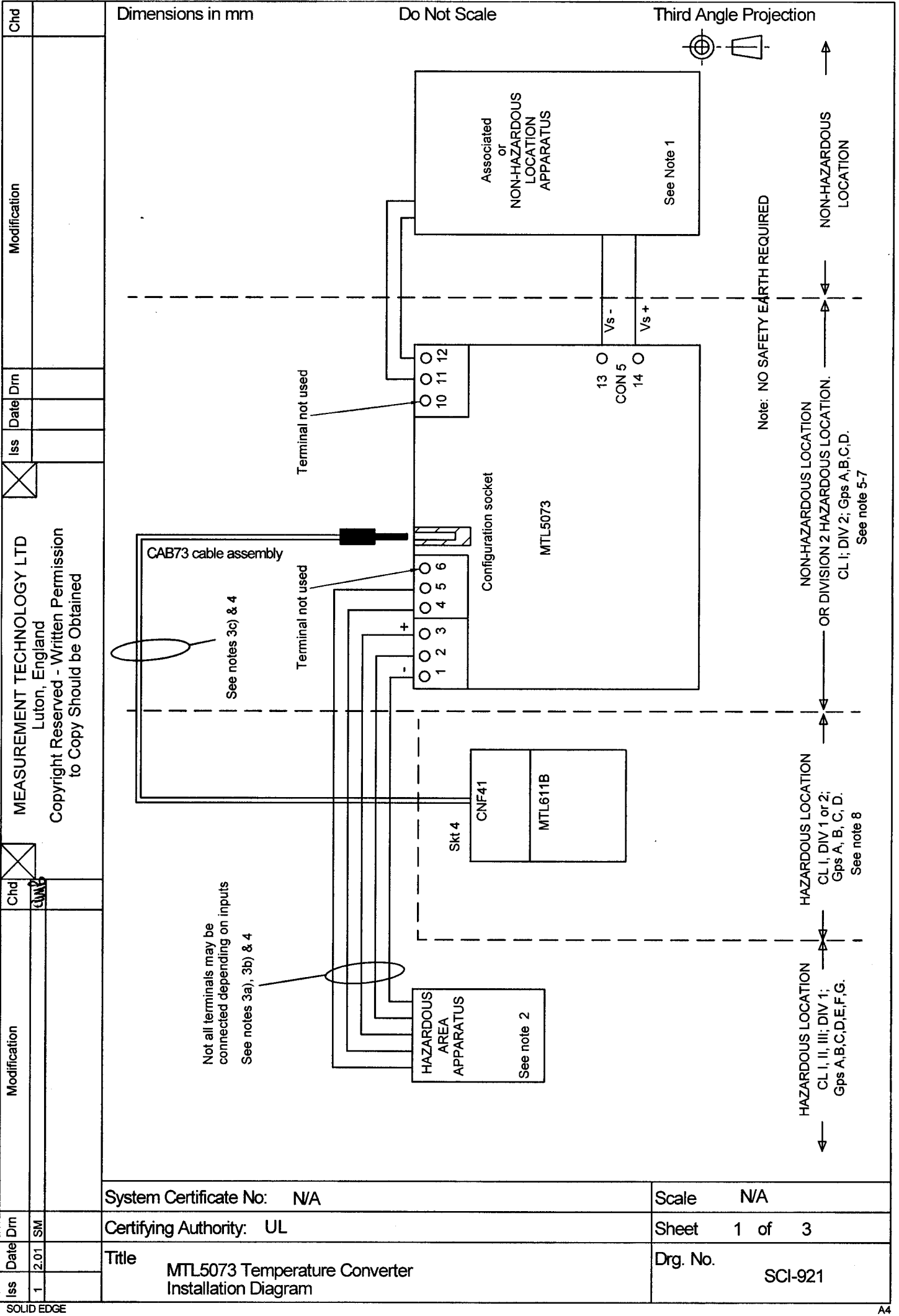
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System Certificate No:		Scale N/A
Certifying Authority: UL		Sheet 2 of 2
Title MTL5061 Fire Smoke Detector Installation Diagram		Drg. No. SCI-920



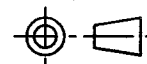
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System Certificate No:	N/A
Certifying Authority:	UL
Title	MTL5073 Temperature Converter Installation Diagram

Scale	N/A
Sheet	1 of 3
Drg. No.	SCI-921



Note 1

The Non-Hazardous Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s

Note 2

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

Note 3

Entity Concept Parameters for the MTL5073 are as follows :-

a) Terminals 5,4 & 3  $V_t \leq 7.2V$   $I_t \leq 11.5mA$

Groups A and B	$Ca \leq 0.11 \mu F$	$La \leq 245mH$
Groups C and E	$Ca \leq 33.0 \mu F$	$La \leq 853mH$
Groups D,F and G	$Ca \leq 88.0 \mu F$	$La \leq 1000mH$

b) Terminals 3 & 1  $V_{oc} \leq 1.2V$   $I_{sc} \leq 3.8mA$

Groups A and B	$Ca \leq 1000 \mu F$	$La \leq 3.6mH$
Groups C and E	$Ca \leq 1000 \mu F$	$La \leq 1000mH$
Groups D,F and G	$Ca \leq 1000 \mu F$	$La \leq 1000mH$

c) The following cable parameters must not be exceeded :-

Groups A and B	$Ca \leq 0.6 \mu F$	$La \leq 47mH$
Groups C and E	$Ca \leq 1.8 \mu F$	$La \leq 141mH$
Groups D,F and G	$Ca \leq 4.8 \mu F$	$La \leq 376mH$

These figures apply when the MTL611B/CNF41 and MTL5073 are interconnected as shown on sheet 1 of this drawing.

d) The parameters of the complete installation must meet the following criteria :-

$$V_t \leq V_{max}, I_t \leq I_{max}$$

$$Ca \geq C_i + C_{cable}, La \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5073 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

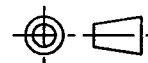
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System Certificate No:	N/A	Scale	N/A
Certifying Authority:	UL	Sheet	2 of 3
Title	MTL5073 Temperature Converter Installation Diagram	Drg. No.	SCI-921

Dimensions in mm

Do Not Scale

Third Angle Projection



Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

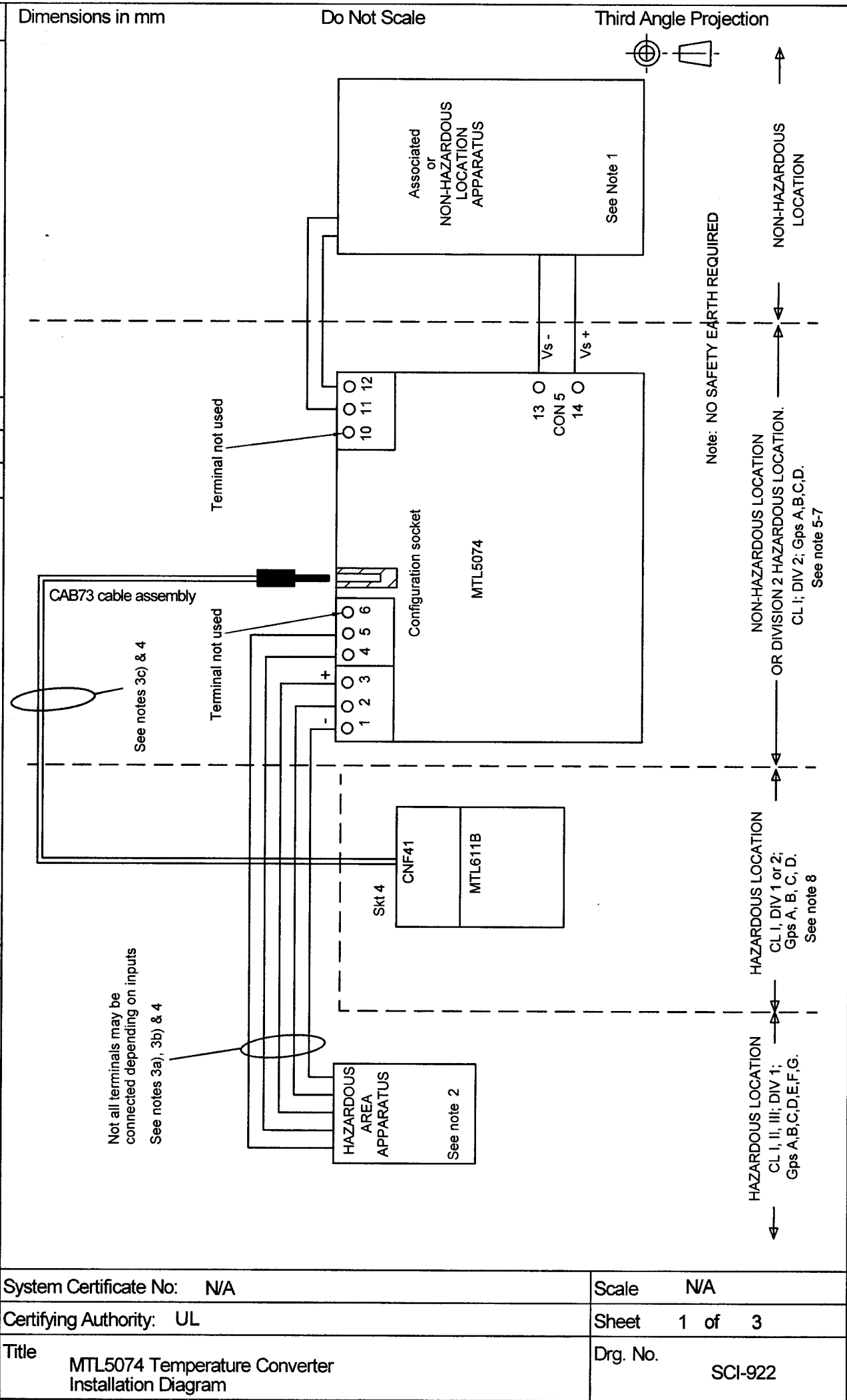
Note 8

The MTL 611B and CNF41 Interface may be used in the Non-Hazardous Division 1 or Division 2 Hazardous locations. Cable parameters in note 3c must be applied in all cases.

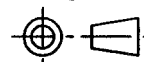
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System Certificate No:	N/A	Scale	N/A
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Title	MTL5073 Temperature Converter Installation Diagram	Drg. No.	SCI-921

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Note 1

The Non-Hazardous Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s

Note 2

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

Note 3

Entity Concept Parameters for the MTL5074 are as follows :-

a) Terminals 1,2 & 3 and terminals 4,5 & 6  $V_t \leq 7.2V$   $I_t \leq 32mA$

Groups A and B	$Ca \leq 11 \mu F$	$La \leq 35mH$
Groups C and E	$Ca \leq 33 \mu F$	$La \leq 131mH$
Groups D,F and G	$Ca \leq 88 \mu F$	$La \leq 285mH$

b) Terminals 3 & 1  $V_{oc} \leq 1.2V$   $I_{sc} \leq 3.8mA$

Groups A and B	$Ca \leq 1000 \mu F$	$La \leq 1000mH$
Groups C and E	$Ca \leq 1000 \mu F$	$La \leq 1000mH$
Groups D,F and G	$Ca \leq 1000 \mu F$	$La \leq 1000mH$

c) The following cable parameters must not be exceeded :-

Groups A and B	$Ca \leq 0.6 \mu F$	$La \leq 47mH$
Groups C and E	$Ca \leq 1.8 \mu F$	$La \leq 141mH$
Groups D,F and G	$Ca \leq 4.8 \mu F$	$La \leq 376mH$

These figures apply when the MTL611B/CNF41 and MTL5074 are interconnected as shown on sheet 1 of this drawing.

d) The parameters of the complete installation must meet the following criteria :-

$$V_t \leq V_{max}, I_t \leq I_{max}$$

$$Ca \geq C_i + C_{cable}, La \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5074 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

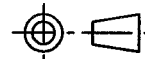
System Certificate No:	N/A	Scale	N/A
Certifying Authority:	UL	Sheet	2 of 3
Title	MTL5074 Temperature Converter Installation Diagram	Drg. No.	SCI-922

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Dimensions in mm

Do Not Scale

Third Angle Projection



Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

Note 8

The MTL 611B and CNF41 Interface may be used in the Non-Hazardous Division 1 or Division 2 Hazardous locations. Cable parameters in note 3c must be applied in all cases.

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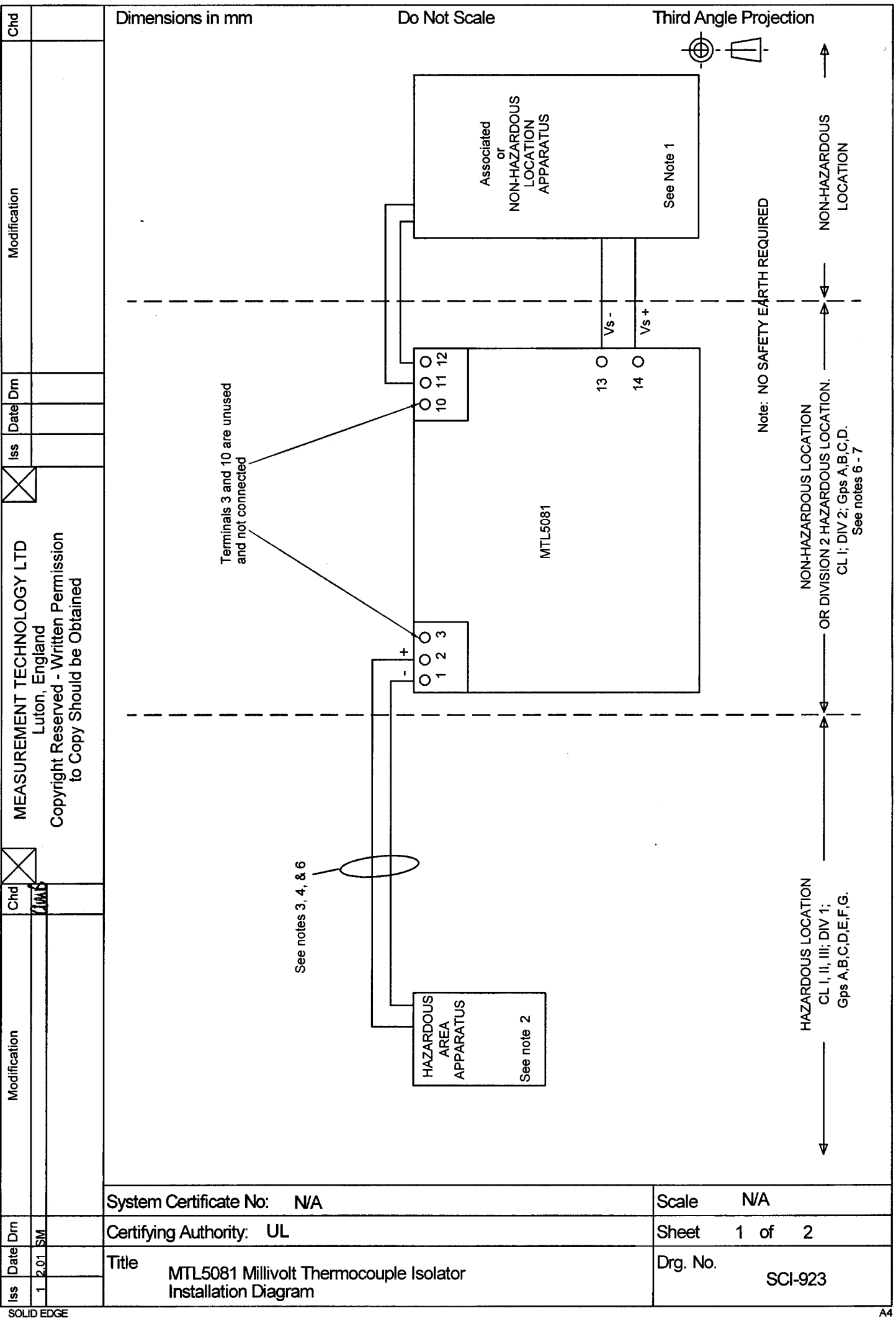
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System Certificate No:	N/A	Scale	N/A
Certifying Authority:	UL	Sheet	3 of 3
Title	MTL5074 Temperature Converter Installation Diagram	Drg. No.	SCI-922



System Certificate No: N/A

Certifying Authority: UL

Title: MTL5081 Millivolt Thermocouple Isolator Installation Diagram

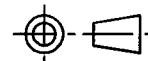
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Sheet: 1 of 2

Drg. No.: SCI-923

Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

a) Entity Concept Parameters for Terminals 1 and 2 of the MTL5081 are as follows :-

$$V_{oc} \leq 1.0V \quad I_{sc} \leq 48mA$$

Groups A and B	$Ca \leq 100 \mu F$	$La \leq 15mH$
Groups C and E	$Ca \leq 1000 \mu F$	$La \leq 60mH$
Groups D,F and G	$Ca \leq 1000 \mu F$	$La \leq 120mH$

b) The parameters of the complete installation must meet the following criteria :-

$$V_{oc} \leq V_{max}, \quad I_{sc} \leq I_{max}$$

$$Ca \geq Ci + C_{cable}, \quad La \geq Li + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5081 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

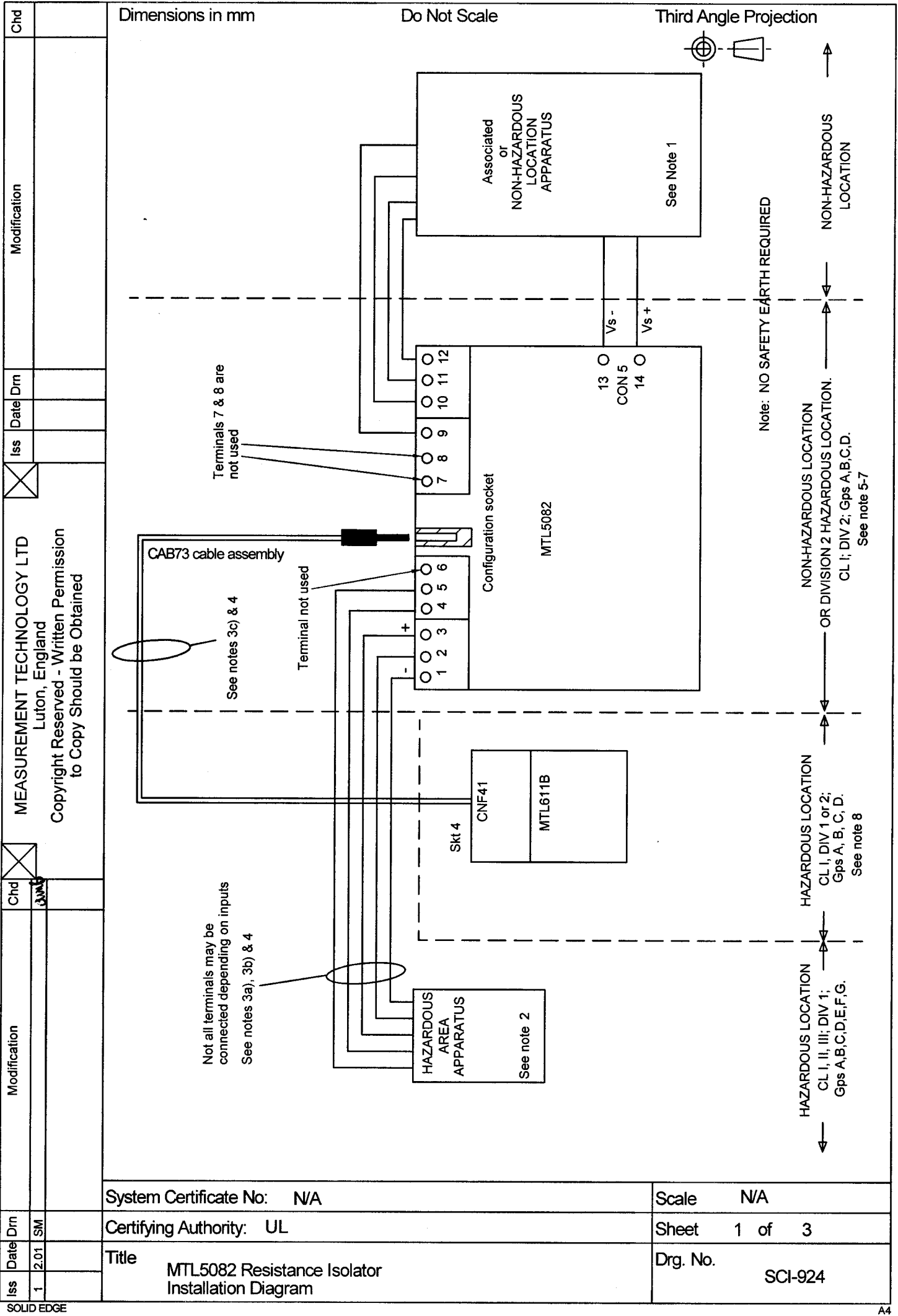
Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

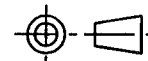
Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

System Certificate No:	N/A	Scale	N/A
Certifying Authority:	UL	Sheet	2 of 2
Title	MTL5081 Millivolt/Thermocouple Isolator Installation Diagram	Drg. No.	SCI-923

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Note 1

The Non-Hazardous Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

Entity Concept Parameters for the MTL5082 are as follows :-

- a) Terminals 5,4 & 3  $V_t \leq 6.6V$   $I_t \leq 27mA$

Groups A and B	$C_a \leq 22 \mu F$	$L_a \leq 48.7mH$
Groups C and E	$C_a \leq 500 \mu F$	$L_a \leq 178.4mH$
Groups D,F and G	$C_a \leq 1000 \mu F$	$L_a \leq 363.7mH$

- b) Terminals 3 & 1  $V_{oc} \leq 1.1V$   $I_{sc} \leq 4mA$

Groups A and B	$C_a \leq 13.5 \mu F$	$L_a \leq 153.5mH$
Groups C and E	$C_a \leq 240 \mu F$	$L_a \leq 591.4mH$
Groups D,F and G	$C_a \leq 1000 \mu F$	$L_a \leq 1000mH$

- c) The following cable parameters must not be exceeded :-

Groups A and B	$C_a \leq 0.67 \mu F$	$L_a \leq 66.6mH$
Groups C and E	$C_a \leq 4.18 \mu F$	$L_a \leq 247.4mH$
Groups D,F and G	$C_a \leq 15.8 \mu F$	$L_a \leq 489.1mH$

These figures apply when the MTL611B/CNF41 and MTL5082 are interconnected as shown on sheet 1 of this drawing.

- d) The parameters of the complete installation must meet the following criteria :-

$$V_t \leq V_{max}, I_t \leq I_{max}$$

$$C_a \geq C_i + C_{cable}, L_a \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5082 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

System Certificate No: N/A

Scale N/A

Certifying Authority: UL

Sheet 2 of 3

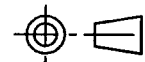
Title  
MTL5082 Resistance Isolator  
Installation Diagram

Drg. No.  
SCI-924

Dimensions in mm

Do Not Scale

Third Angle Projection



Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

Note 8

The MTL 611B and CNF41 Interface may be used in the Non-Hazardous Division 1 or Division 2 Hazardous locations. Cable parameters in note 3c must be applied in all cases.

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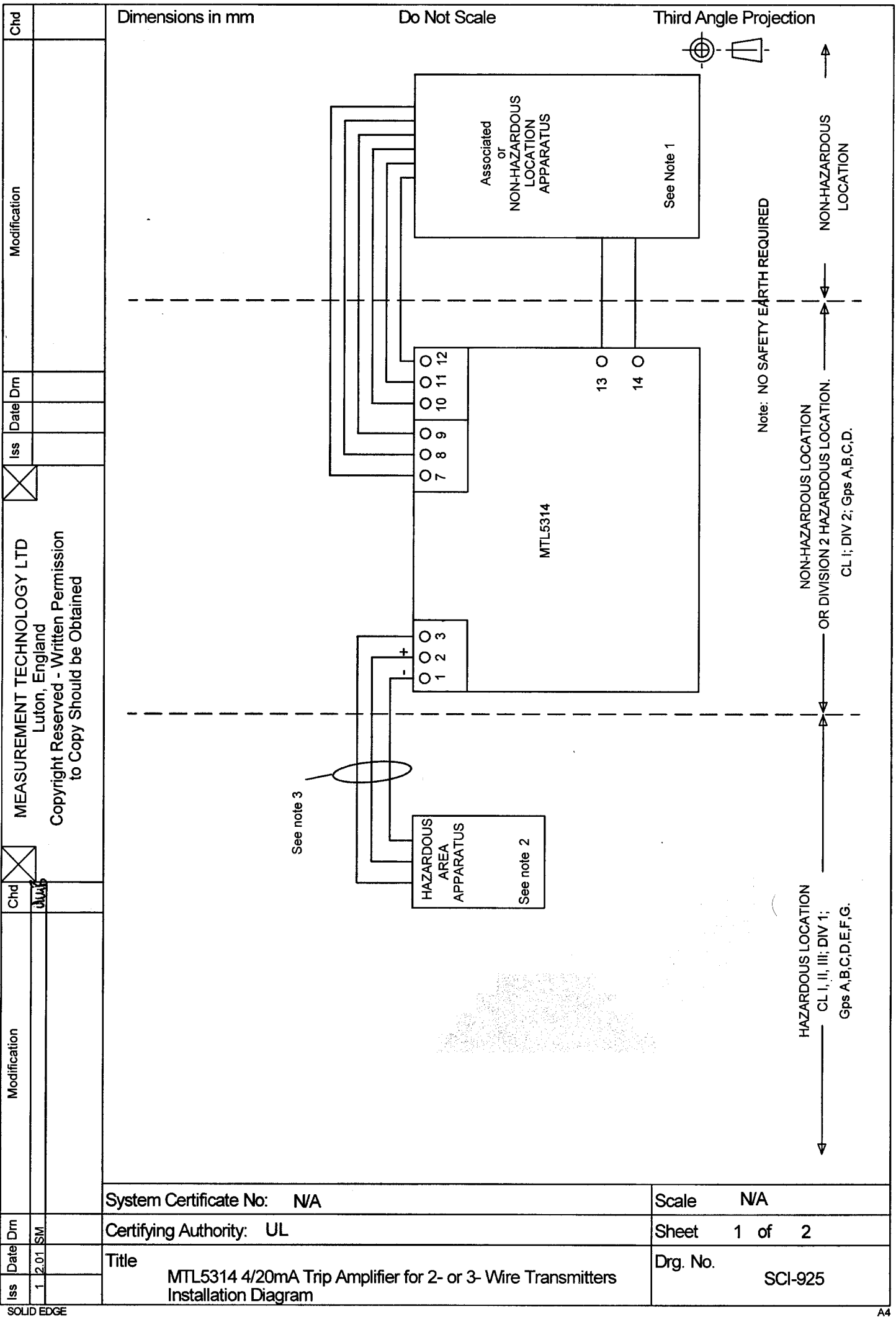
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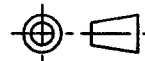
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System Certificate No: N/A		Scale	N/A
Certifying Authority: UL		Sheet	3 of 3
Title MTL5082 Resistance Isolator Installation Diagram		Drg. No.	SCI-924







Note 1

The Non-Hazardous (Safe) Location (or Control Room) equipment must not generate or use more than 250 volts r.m.s or d.c.

Note 2

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

Note 3

a) Entity Concept Parameters for Terminals 1,2 & 3 of the MTL5314 are as follows :-

$$V_t \leq 28V \quad I_t \leq 93mA$$

Groups A and B	$Ca \leq 0.083 \mu F$	$La \leq 4.3mH$
Groups C and E	$Ca \leq 0.650 \mu F$	$La \leq 17.7mH$
Groups D,F and G	$Ca \leq 2.15 \mu F$	$La \leq 36.0mH$

b) The parameters of the complete installation must meet the following criteria :-

$$V_t \leq V_{max}, \quad I_t \leq I_{max}$$

$$Ca \geq C_i + C_{cable}, \quad La \geq L_i + L_{cable}$$

Note 4

For installation in the USA, the installation practices must comply with the National Electrical code NFPA70 Article 504 ANSI/ISA RP12.6.

Note 5

The MTL5314 is Associated Apparatus and when mounted in the appropriate enclosure (See notes 6 and 7) is suitable for installation in the following area:-

Non-Hazardous Locations  
Class I, Division 2, Groups A,B,C and D, Hazardous Locations

Note 6

Intrinsically Safe wiring must be installed in accordance with the ANSI National Electrical Code / NFPA70, Article 504 in an enclosure meeting the requirements of ANSI/ISA-S82.

Note 7

Use UL listed or NRTL Listed dust-ignition proof enclosure(s) appropriate for the environmental protection in class II, Division 2, Groups F and G; Class III, Division 2 Hazardous Locations.

System Certificate No: N/A		Scale N/A
Certifying Authority: UL		Sheet 2 of 2
Title MTL5314 4/20mA Trip Amplifier for 2- or 3- Wire Transmitters Installation Diagram		Drg. No. SCI-925

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