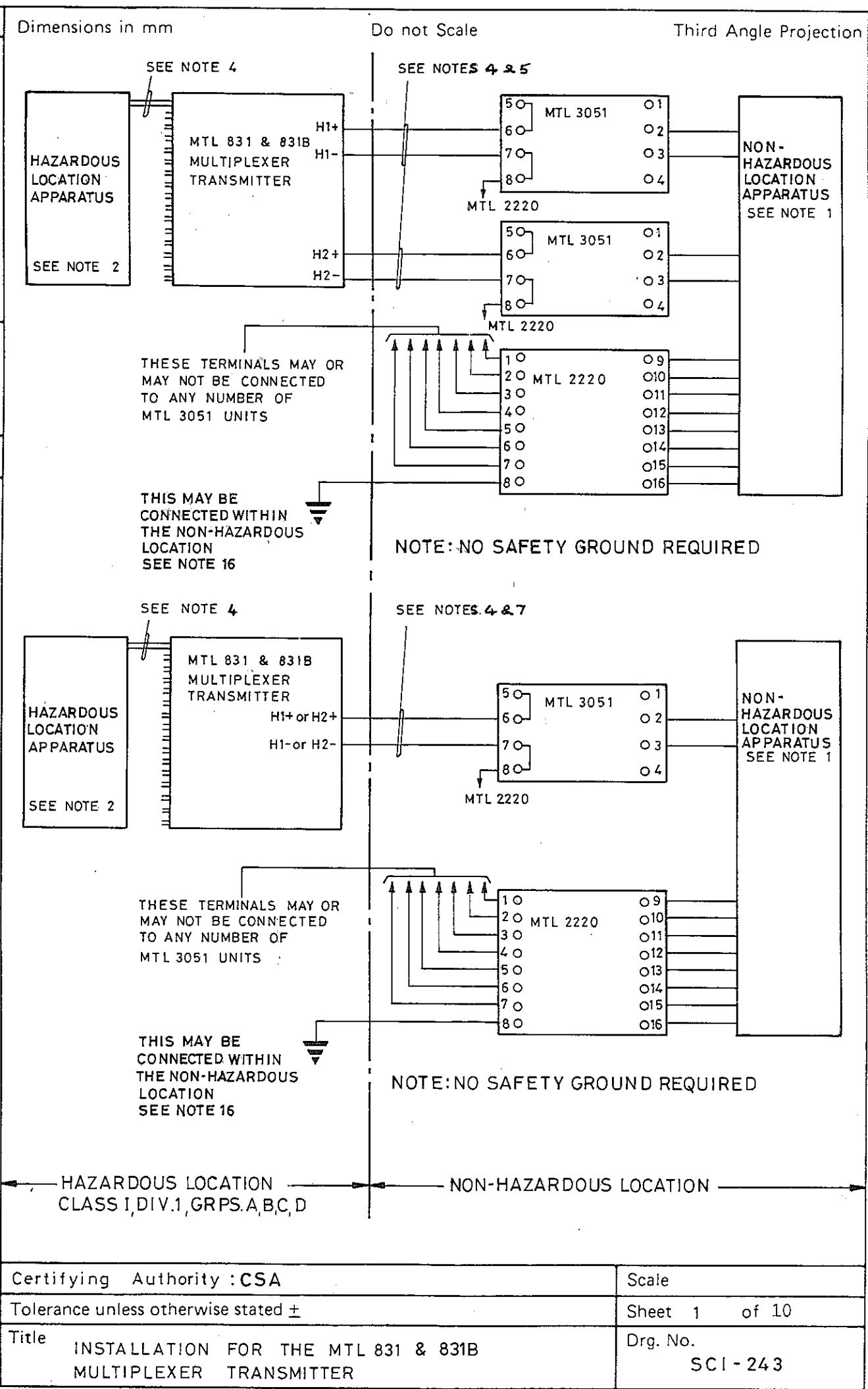
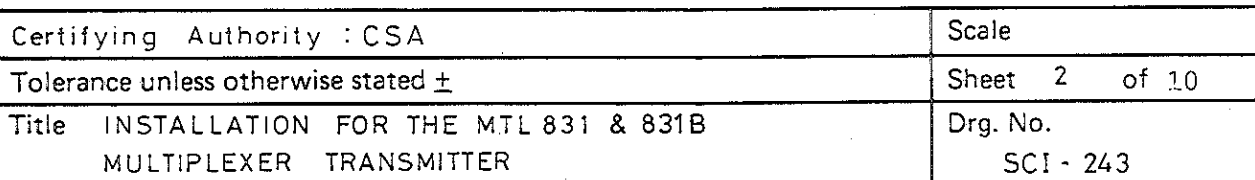


Iss.	1	2	3
Date/Drawn	11.89/ACW	6.90/ACW	5.91/ACW
Modification		See Sheets 7 & 10	MTL3052 Removed, re-issue as 6 Sheets
Chk			
MEASUREMENT TECHNOLOGY LTD. Luton, England. Copyright Reserved - Written Permission to Copy Should be Obtained			
4	7.91/ACW	5	4.92/ACW
		6	9.96/P.S.
	MTL 3052 added, re-issue as 10 Sheets		See SMT. 8
			MTL 831B added.



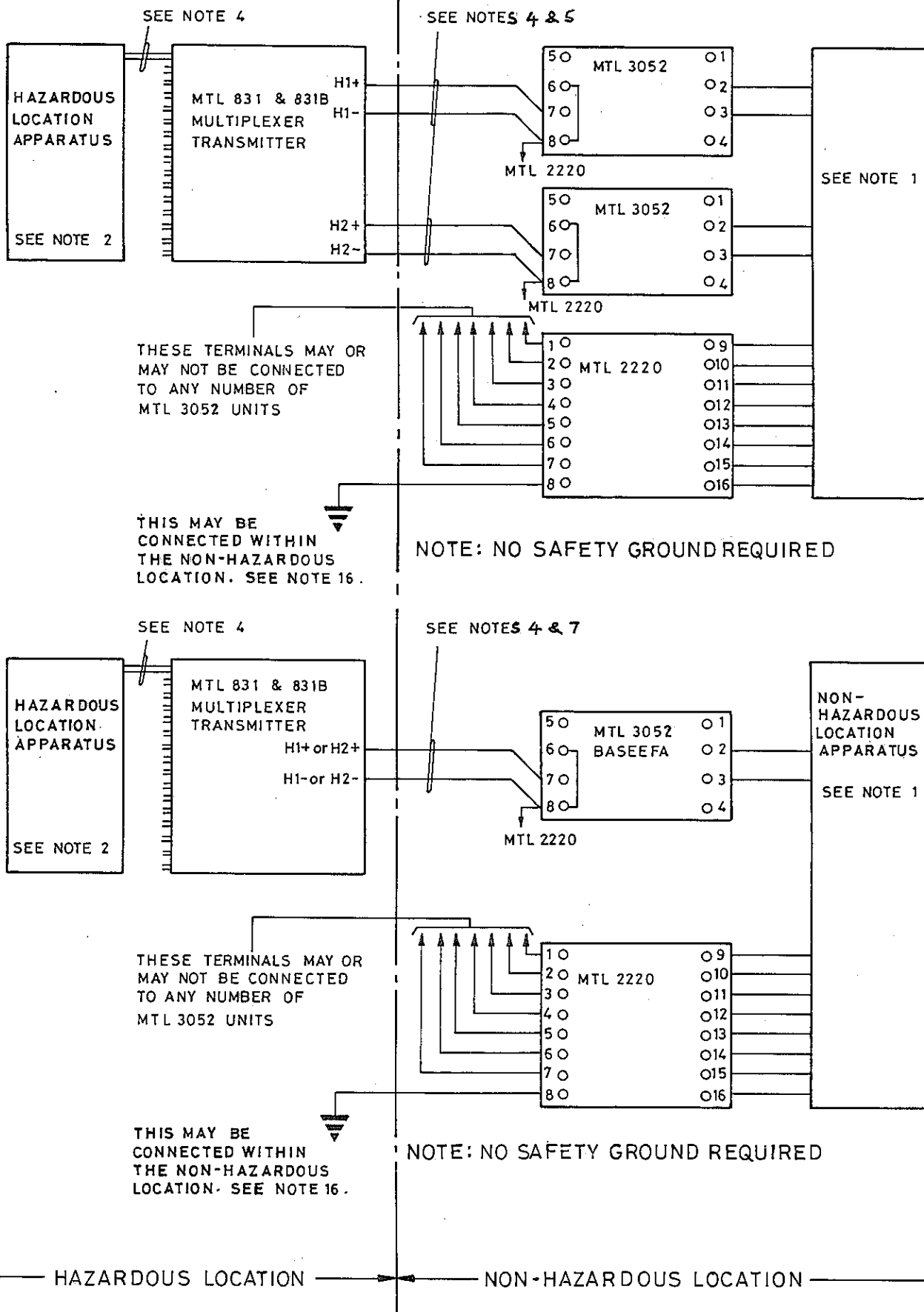


MEASUREMENT TECHNOLOGY LTD. Luton, England. Copyright Reserved - Written Permission to Copy Should be Obtained	4	7.91/ACW	See Sheet 1
	5	4.92/ACW	See Sht. 8
	6	9.96/P.S.	MTL 831B added.
Modification	Chk		
1	11.89/ACW	See Sheets 7 & 10	See Sheet 1
2	6.90/ACW		
3	5.91/ACW		
Date Drawn	11.89/ACW		
Iss.	1		

Dimensions in mm

Do not Scale

Third Angle Projection



Certifying Authority : CSA

Scale 3

Tolerance unless otherwise stated $\pm$

Sheet 3 of 10

Title
INSTALLATION FOR THE MTL 831 & 831B
MULTIPLEXER TRANSMITTER

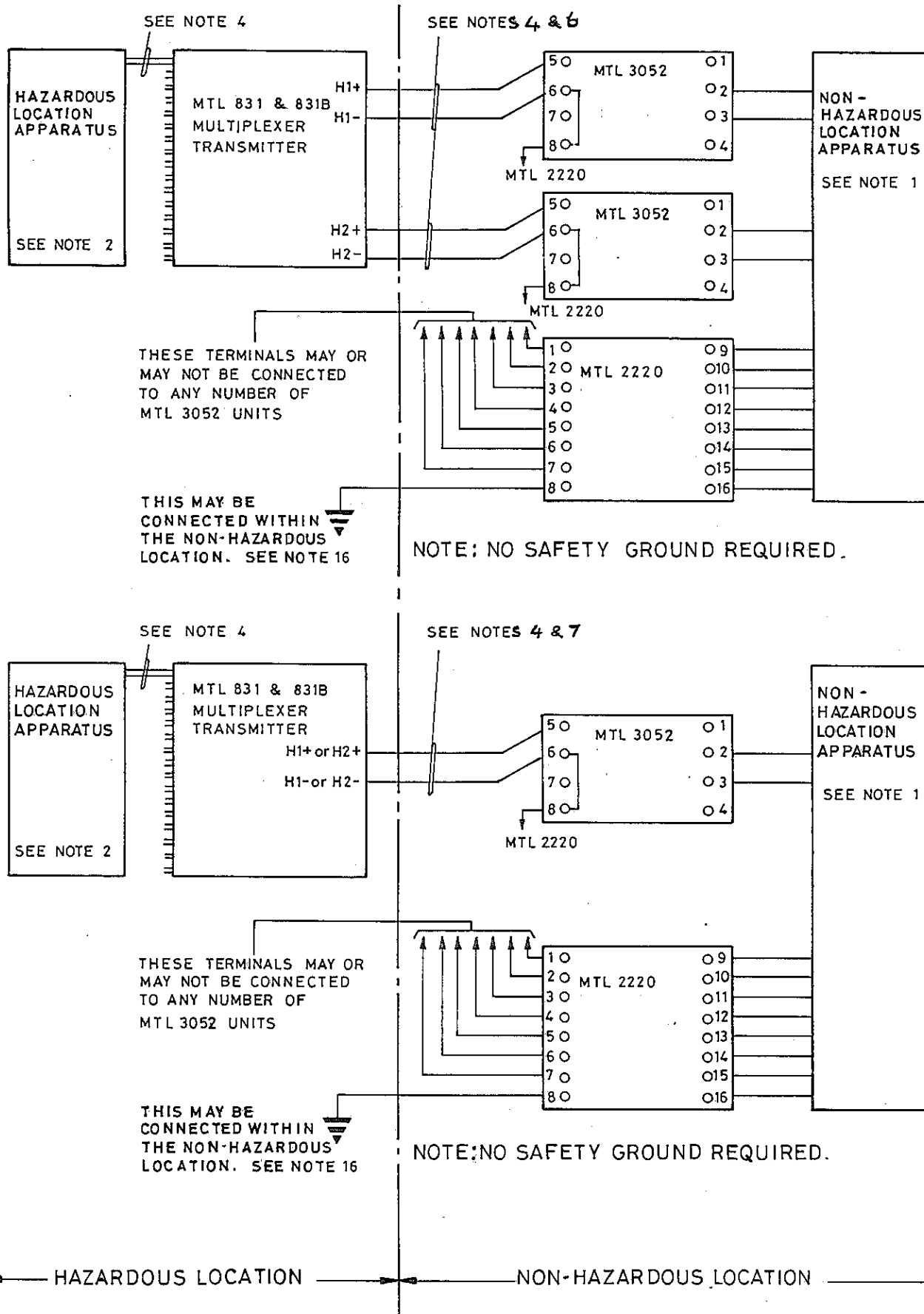
Drg. No.
SCI - 243

Iss.	1	2	3
Date Drawn	11.89/ACW	6.90/ACW	5.91/ACW
Modification		See Sheets 7 & 10	See Sheet 1
Chk			
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4	7.91/ACW	See Sheet 1	
5	4.92/ACW	See Sht. 8	
6	9.96/P.S.	MTL 831B added.	

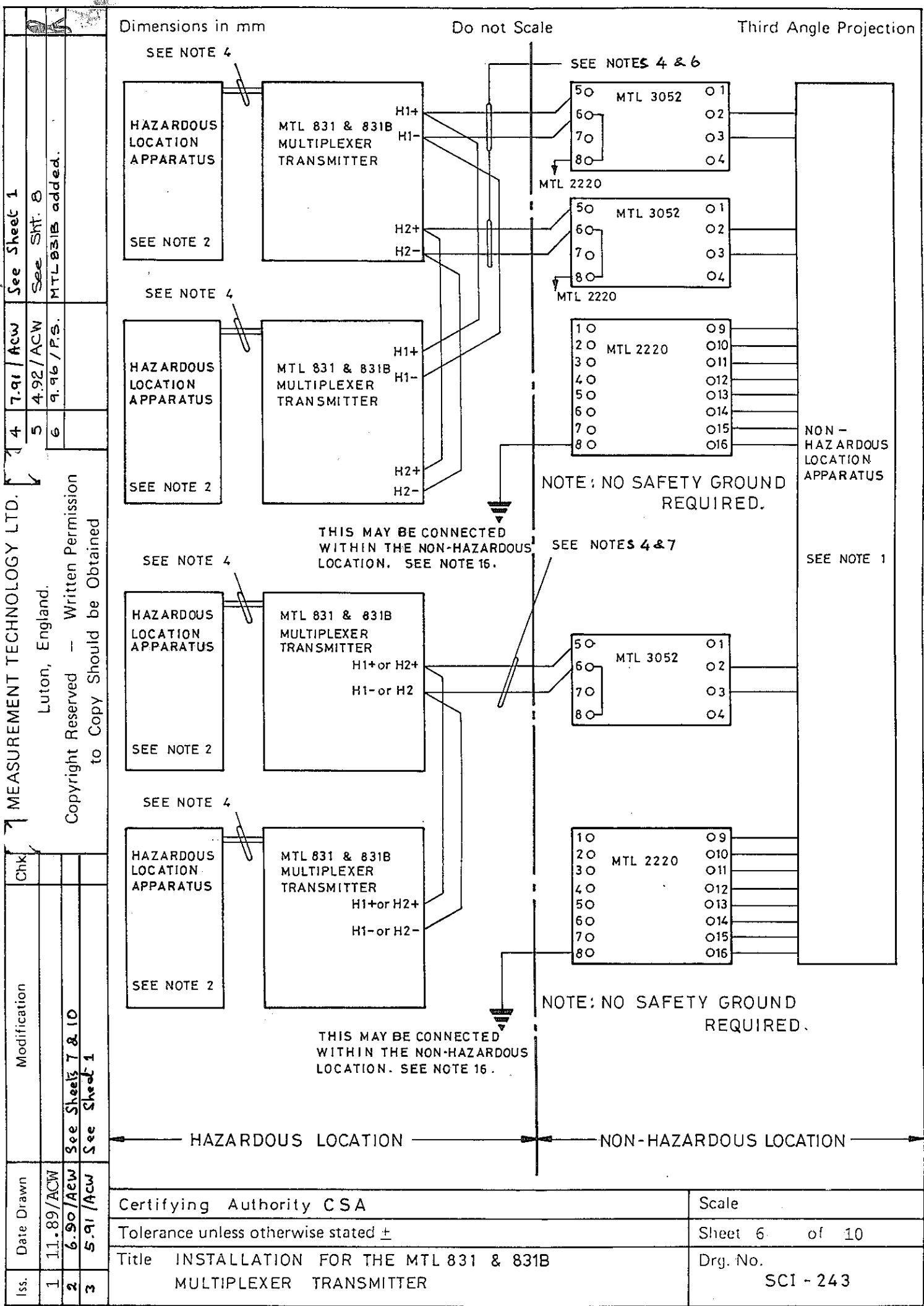
Dimensions in mm

Do not Scale

Third Angle Projection



Certifying Authority : CSA		Scale	-
Tolerance unless otherwise stated $\pm$		Sheet	5 of 10
Title INSTALLATION FOR THE MTL 831 & 831B MULTIPLEXER TRANSMITTER		Drg. No. SCI-243	

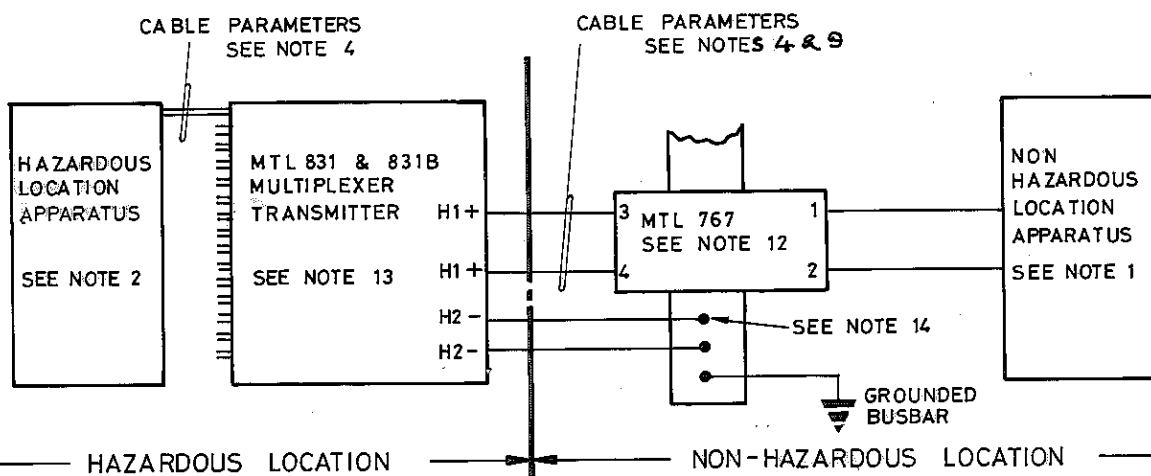
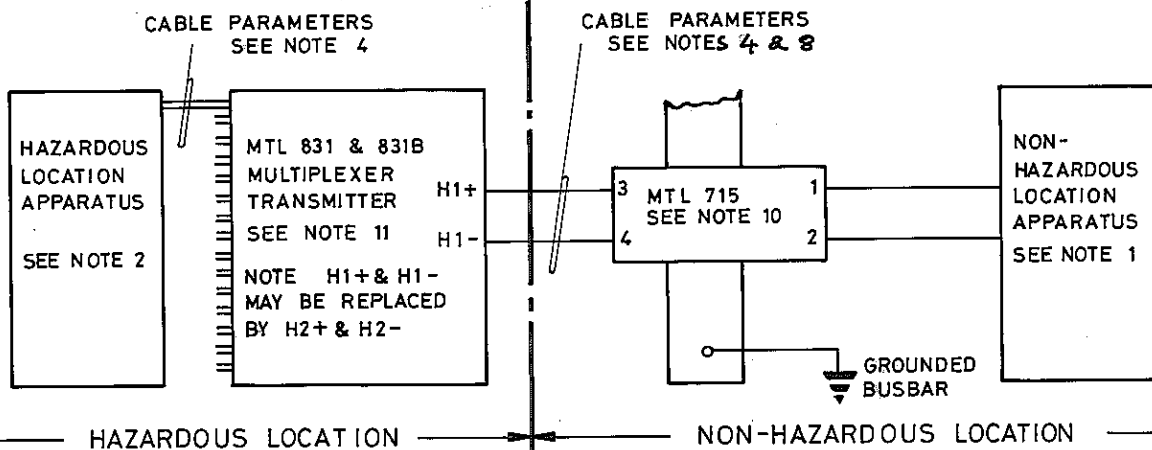


3	5.91/ACW	See Sheet 1
4	7.91/ACW	See Sheet 1
5	4.92/ACW	See Sht. 8
6	9.96/P.S.	MTL 831B added.
Iss.	Date/Drawn	Modification
1	11.89/ACW	Refs. to Haz. Loc. App.
2	6.90/ACW	& cable parameters altered

Dimensions in mm

Do not Scale

Third Angle Projection



Note 1: Non Hazardous Location Apparatus - unspecified except that it must not be supplied from nor contain under normal or abnormal conditions a source of potential with respect to ground in excess of 250V rms or 250V dc.

Note 2: Hazardous Location Apparatus - switches, thermocouples and non-inductive resistance devices or CSA certified apparatus when connected in accordance with the manufacturers installation instructions.

The Hazardous Location Apparatus is repeated for each pair of I+ and I- terminals.

Note 3: When the MTL 2220 is used or there is a ground connection then the circuit in the Hazardous Location must be capable of withstanding a test voltage of 500 volts rms with respect to ground or frame of the apparatus for a period of one minute without breakdown (dc resistance and impedance at 60Hz shall not be less than 100K Ω). Otherwise there is no need for this requirement.

Note 4: IN ALL INSTALLATIONS, THE PARAMETERS OF ANY INTERCONNECTING CABLES SHOULD NOT EXCEED THE VALUES RECOMMENDED IN SECTION F6, APPENDIX F, CANADIAN ELECTRICAL CODE, PART 1, BUT IN ANY EVENT MUST NOT EXCEED THE VALUES GIVEN IN THIS NOTE AND IN NOTES 5, 6, 7, 8, 9 and 18.

The figures in () are applicable when the MTL 2220 is used:-

Used on CERTIFYING AUTHORITY: CSA

Scale N/A

Tolerance unless otherwise stated $\pm$

Sheet 7 of 10

Title
Installation for the MTL 831 & 831B Multiplexer Transmitter

Drg. No.

SCI-243

MEASUREMENT TECHNOLOGY LTD. Luton, England.				Copyright Reserved - Written Permission to Copy Should be Obtained			
Iss.	Date/Drawn	Modification	Chk	7.91/ACW	4.92/ACW	Note 6 amended	See Sheet 1
1	11.89/ACW						
2	6.90/ACW	See Sheets 7 & 10					
3	5.91/ACW	See Sheet 1					

Dimensions in mm		Do not Scale		Third Angle Projection	
Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$	
A + B	0.8	120		505	
C	2.4	360		1515	
D	6.4	960		4040	

Note 5

Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$	
A + B	0.11 (0.07)	1.3 (1.3)		43.3 (43.3)	
C	0.33 (0.21)	3.9 (3.9)		129.9 (129.9)	
D	0.88 (0.56)	10.4 (10.4)		346.4 (346.4)	

Note 6 When two MTL3052 are used with connections to terminals 5 and 6 on each, this system combination is only suitable for Class I, Div. 1, Groups C and D locations and must not be used in Groups A and B locations.

Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$	
C	0.33 (0.21)	1.75 (1.75)		96 (96)	
D	0.88 (0.56)	4.6 (4.6)		256 (256)	

Note 7

Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$	
A + B	0.75 (0.26)	5.2 (5.2)		109 (109)	
C	2.25 (0.78)	15.6 (15.6)		327 (327)	
D	6.00 (2.08)	41.6 (41.6)		872 (872)	

Note 8 The following cable parameters must not be exceeded (MTL 715):-

Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$	
A + B	0.75	1.65		65	
C	2.25	4.95		195	
D	6.0	13.2		520	

Note 9 The following cable parameters must not be exceeded (MTL 767):-

Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$	
A + B	0.5	0.32		24.75	
C	1.5	0.96		74.25	
D	4.0	2.56		198.00	

Note 10 The MTL 715 may be replaced by $\frac{1}{2}$ MTL 767. In this case the connection shown to terminal 4 must be taken separately to the busbar.

Note 11 An additional MTL 831 Multiplexer may be connected in parallel with H1+ and H1- without affecting the cable parameters.

CERTIFYING AUTHORITY : CSA		Scale N/A
Tolerance unless otherwise stated $\pm$		Sheet 8 of 10
Title INSTALLATION FOR THE MTL 831 MULTIPLEXER TRANSMITTER		Drg. No. SCI-243

MEASUREMENT TECHNOLOGY LTD. Luton, England.				Dimensions in mm		Do not Scale		Third Angle Projection																					
Iss.	Date/Drawn	Modification	Chk	4	7.91 / ACW	5	4.92 / ACW	See Sheet 1	See Sht. 8																				
Copyright Reserved - Written Permission to Copy Should be Obtained				<u>Note 12</u> The MTL 767 may be replaced by two MTL 715 barriers of the same polarity. <u>Note 13</u> An additional MTL 831 Multiplexer may be connected in parallel with H1+, H2+, H1- and H2- without affecting the cable parameters. <u>Note 14</u> For single highway operation, the busbar connections to the transmitter may be omitted and H1- connected to terminal 4 on the MTL 767 in place of H2+. <u>Note 15</u> Where the hazardous location cable is part of a multicore, it must comply with the requirements of Section F6, Appendix F of the Canadian Electrical Code, Part 1. <u>Note 16</u> The installation must comply with national requirements (eg. in Canada, the Canadian Electrical code, Part 1). <u>Note 17</u> When the connection is made in the hazardous location, the cable from terminal 8 of the MTL 2220 must be installed so as to minimise the risk of invasion by any currents or voltages. The ground connection must meet the requirements of Section F2.5 of the Canadian electrical Code, Part 1 and generally comply with the grounding conductor requirements of Section F3.2.2 <u>Note 18</u> When all the inputs I1 to I16 are interconnected the following cable parameters must not be exceeded:- <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="width: 15%;">Group</th> <th style="width: 20%;">Capacitance μF</th> <th style="width: 20%;">Inductance mH</th> <th style="width: 10%; text-align: center;">or</th> <th style="width: 35%;">L/R Ratio $\mu\text{H}/\Omega$</th> </tr> </thead> <tbody> <tr> <td>A & B</td> <td style="text-align: center;">0.8</td> <td style="text-align: center;">35</td> <td></td> <td style="text-align: center;">141</td> </tr> <tr> <td>C</td> <td style="text-align: center;">2.4</td> <td style="text-align: center;">105</td> <td></td> <td style="text-align: center;">423</td> </tr> <tr> <td>D</td> <td style="text-align: center;">6.4</td> <td style="text-align: center;">280</td> <td></td> <td style="text-align: center;">1128</td> </tr> </tbody> </table> <u>Note 19</u> The terminals on the MTL 2220 may or may not be connected to any number of MTL 3051 or 3052 units. <u>Note 20</u> The input circuit of the MTL 831 may be connected as shown on sheet 10 when the cable parameters in Note 18 above apply. This input circuit can be used for all circuit configurations shown elsewhere on this drawing.						Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$	A & B	0.8	35		141	C	2.4	105		423	D	6.4	280		1128
Group	Capacitance μF	Inductance mH	or	L/R Ratio $\mu\text{H}/\Omega$																									
A & B	0.8	35		141																									
C	2.4	105		423																									
D	6.4	280		1128																									
				CERTIFYING AUTHORITY : CSA Tolerance unless otherwise stated $\pm$ Title INSTALLATION FOR THE MTL 831 MULTIPLEXER TRANSMITTER				Scale N/A Sheet .9 of 10 Drg. No. SCI-243																					

