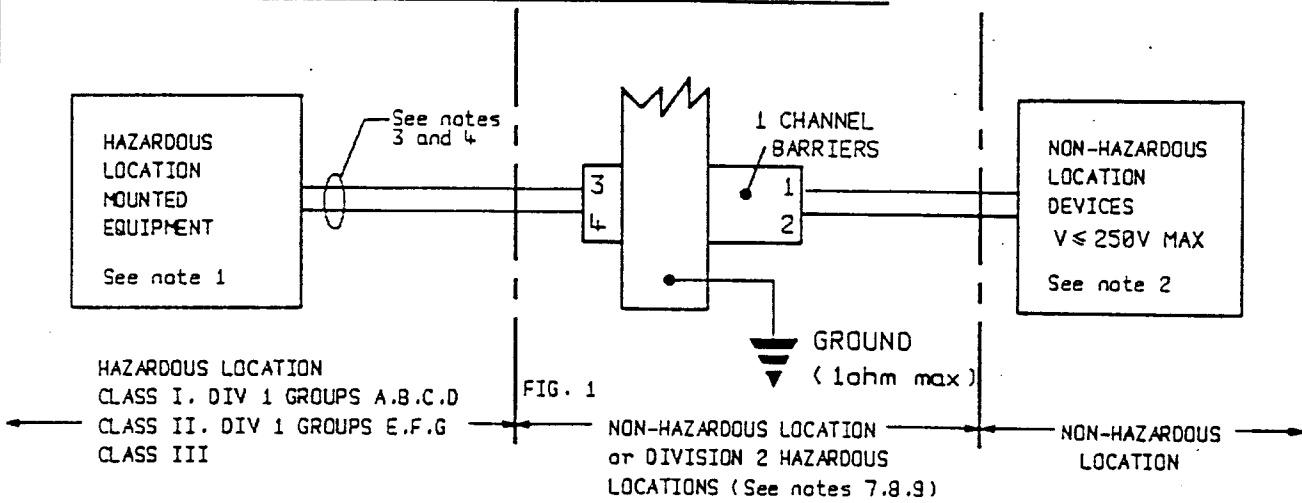


1 CHANNEL BARRIERS WITH GROUND RETURNS



**Note 1** The Hazardous Location equipment may be switches or thermocouples. Other apparatus such as RTDs, LEDs and non-inductive resistors may be used if the autoignition temperature of the hazardous location is greater than T4 (275°F, 135°C). Certified devices with the correct Entity Concept Parameters may also be used.

**Note 2** The non-hazardous location or control room mounted equipment should not use or generate more than 250 volts r.m.s.

**Note 3** For guidance on the installation see ANSI/ISA 12.6 and the National Electrical Code.

**Note 4** Entity Concept parameters for 1 Channel barriers with ground return.

MTL BARRIER TYPE	GROUPS	Voc (V)	Isc (mA)	Ca (μF)	La (mH)
MTL710P +/-	A, B	9.00	267	4.89	0.22
	C, E	9.00	267	14.6	2.23
	D, F, G	9.00	267	39.1	4.22
MTL715P +	A, B	13.7	264	1.04	0.23
	C, E	13.7	264	3.13	2.27
	D, F, G	13.7	264	8.37	4.30
MTL722P +	A, B	20.1	194	0.33	0.53
	C, E	20.1	194	0.99	4.33
	D, F, G	20.1	194	2.65	7.96
MTL728P +	A, B	26.3	112	0.16	2.86
	C, E	26.3	112	0.49	12.0
	D, F, G	26.3	112	1.32	23.8
MTL729P +	C, E	26.3	160	0.49	6.25
	D, F, G	26.3	160	1.32	11.6

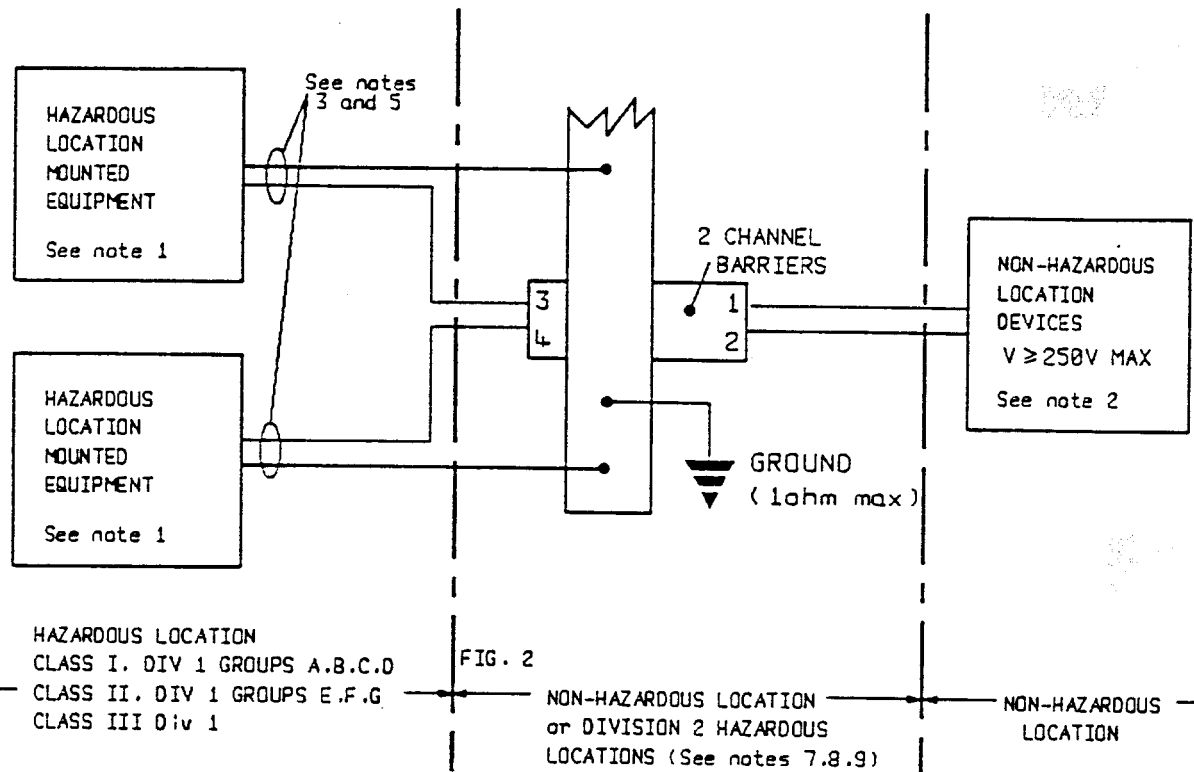
System Certificate No:		Scale
Certifying Authority: Factory Mutual		Sheet 1 of 3
Title Installation drawing for the MTL700P series barriers with the Entity Concept parameters		Drg. No. SCI-326

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DUAL CHANNEL BARRIERS WITH SEPARATE GROUND RETURNS



Note 5 Entity Concept parameters for 2 Channel barriers, each with separate ground returns.

MTL BARRIER TYPE	GROUPS	Voc (V)	Isc (mA)	Each Channel Ca (μF)	Each Channel La (mH)
MTL707P + RETURN (TERMINAL 4)	C, E	14.1	0	2.85	1000
	D, F, G	14.1	0	7.62	1000
MTL707P + SIGNAL (TERMINAL 3)	C, E	26.4	160	0.49	6.21
	D, F, G	26.4	160	1.31	11.5
MTL761P	A, B	9.0	25	4.89	54.8
	C, E	9.0	25	14.6	194.0
	D, F, G	9.0	25	39.1	475.0
MTL766P	A, B	11.5	149	1.87	1.25
	C, E	11.5	149	5.63	7.16
	D, F, G	11.5	149	15.00	13.4
MTL787SP RETURN (TERMINAL 4)	A, B	25.9	0	0.17	1000
	C, E	25.9	0	0.51	1000
	D, F, G	25.9	0	1.38	1000
MTL787SP SIGNAL (TERMINAL 3)	A, B	25.9	110	0.17	2.93
	C, E	25.9	110	0.51	12.3
	D, F, G	25.9	110	1.38	24.3

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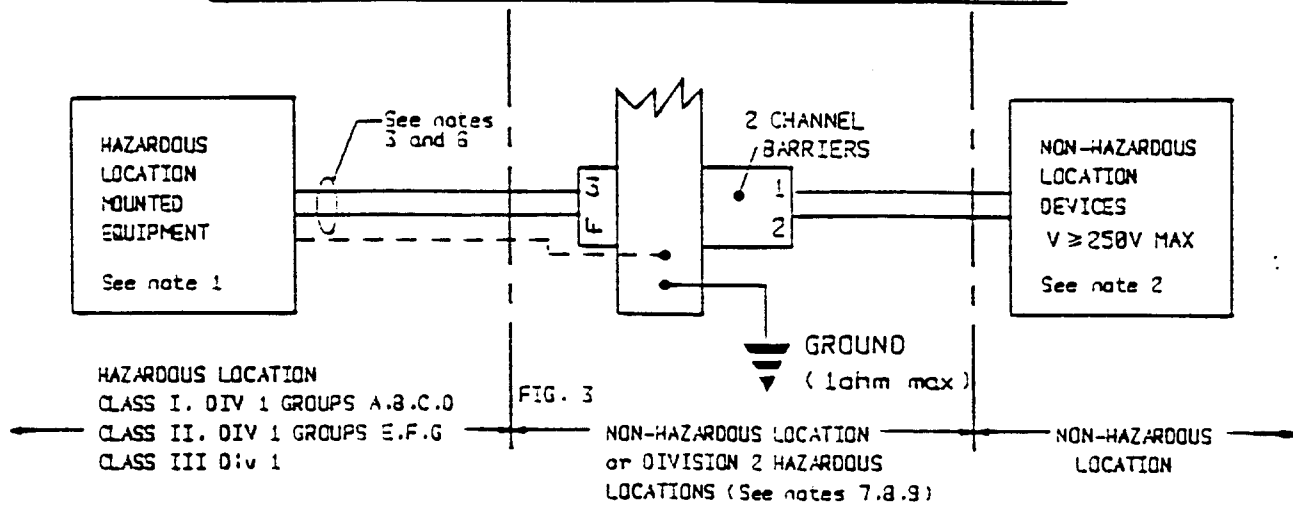
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**DUAL CHANNEL BARRIERS WITH OR WITHOUT GROUND RETURN**



**Note 6** Entity Concept parameters for 2 channel barriers connected with or without common ground return (Channels connected to the same or separate devices).

MTL BARRIER TYPE	GROUPS	Vt (V)	It (mA)	Ca (μF)	La (mH)
MTL707P +	C, E	27.4	160	0.45	6.21
	D, F, G	27.4	160	1.20	11.5
MTL761P	A, B	18.0	50	0.43	14.4
	C, E	18.0	50	1.29	53.0
MTL766P	D, F, G	18.0	50	3.46	119.0
	A, B	23.0	297	0.22	0.20
MTL787SP	C, E	23.0	297	0.66	1.72
	D, F, G	23.0	297	1.77	3.39
MTL787SP	A, B	28.9	115	0.13	2.70
	C, E	28.9	115	0.39	11.52
	D, F, G	28.9	115	1.06	22.57

**Note 7** These safety barriers are associated apparatus and when mounted in the appropriate enclosure (see Notes 8 and 9) are suitable for installation in the following areas:-

Non-hazardous locations.

Class I, Division 2, Groups A, B, C and D hazardous locations.

Class II, Division 2, Groups F and G hazardous locations.

Class III, Division 2 hazardous locations.

**Note 8** Barriers must be installed in enclosure meeting requirements of ANSI/ISA-S82.

**Note 9** Use Factory Mutual Research Corp. Approved dust-tight enclosure appropriate for environmental protection in Class II, Division 2, Groups F and G; and Class III, Division 2 hazardous locations.

**Note 10** See SCI-351 for strain gauge bridge installation.

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