1-CHANNEL BARRIERS

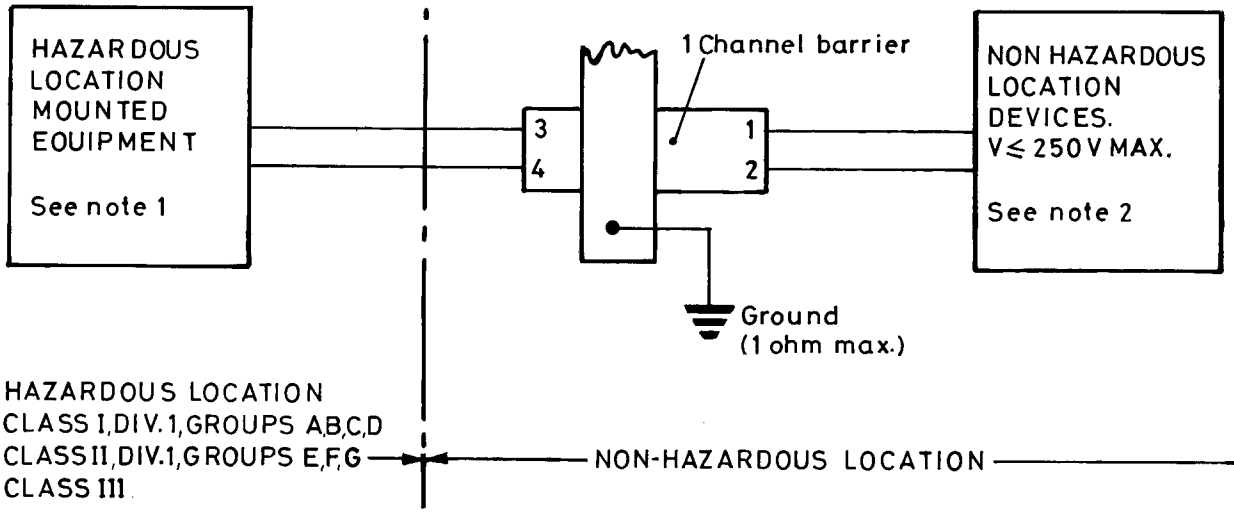

FIG. 1

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 (2/5°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 All intrinsically safe wiring shall bekept separate from non-intrinsically safe wiring. For guidance on the installation see ANSI/ISA 12.6-1987.

Note 4
Entity Concept parameters for 1-channel barriers connected as in Fig 1

MTL Barrier Type	Voc (V)	Isc (mA)	Ca (μF)	La (mH)
702+	25.11	125	0.16	2.2
705	28.1	93	0.12	4.0
708+	28.1	93	0.12	4.0
710+/-	10.03	189I	3	1.0
710 ac	10.03	189	3	1.0
715+/-	15.06	146	0.7	1.4
722+/-	22.08	146	0.2	1.4
728+/-	28.12	93	0.12	4.0
728 ac	28.12	93	0.12	4.0

Note 5
The cable capacitance plus the capacitance of the intrinsically-safe equipment must be less than the marked capacitance (Ca) shown on any barrier used. This alsoapplies to inductance.

Note 6
One channel of an MTL 779 may be used in place of an MTL 728. The barrier channels must be connected as shown in Fig. 3.

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2-CHANNEL BARRIERS - NO GROUND RETURN

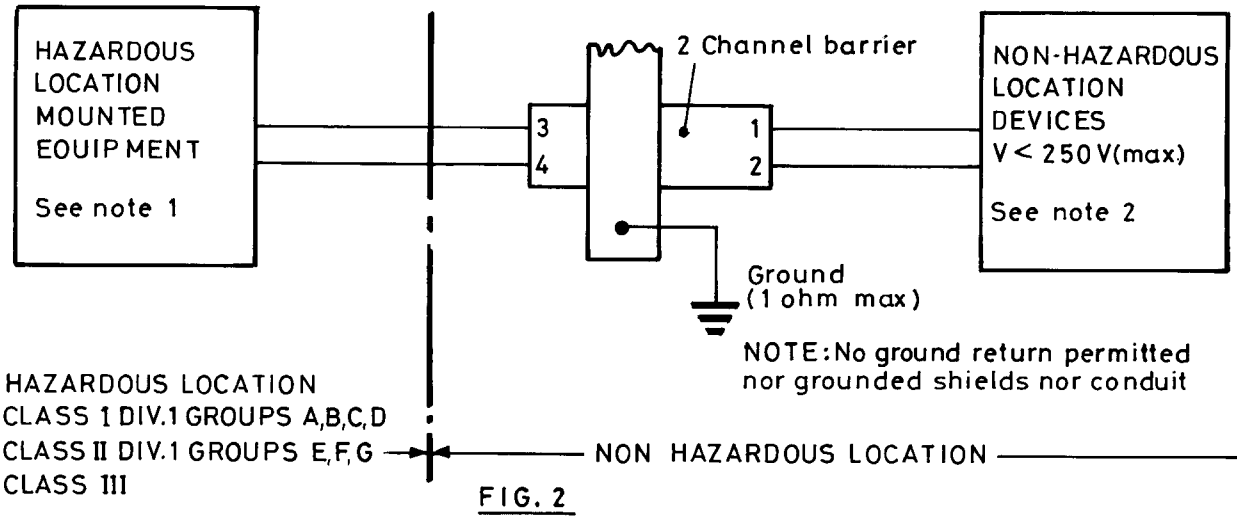

FIG. 2

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. The hazardous location mounted equipment must not be grounded.

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 All intrinsically safe wiring shall be kept separate from non-intrinsically safe wiring. For guidance on the installation see ANSI/ISA RP12.6-1987.

Note 4 For multiple intrinsically-safe circuits run in the same multiconductor cable each cable must have at least 0.25mm (0.010") thick insulation, see paragraph 4.1.6. in ISA RP12.6.

MTL Barrier Type	Voc (V)	Isc (mA)	Ca (µF)	La (mH)
751ac	1.92	89	1000	4.5
755ac	5.92	296	346	0.4
760ac	10.03	97	3	3.5
761ac	18.08	99	0.4	3.5
764 +/-	13.25	6	1.0	800
764ac	24.10	12.0	0.18	200
765ac	15.08	75.4	0.7	6.0
766ac	24.10	80.4	0.17	5.6
767 +/-	16.35	75.8	0.5	6.0
768 +/-	23.33	73.5	0.2	6.0
772ac	22.13	36.9	0.2	22.0
778ac	28.23	23.6	0.12	58.0
779 +/-	29.37	46.5	0.11	14.0
786 +/-	29.20	0	0.11	500
787 +/-	29.74	94	0.10	4.0
788 +/-	28.75	82	0.11	5.6
788R +/-	28.75	82	0.11	5.6
796 +/-	27.30	40	0.13	22
707	28.7	87.5	0.11	4.0
787S	23.0	93	0.11	4.0

Note 5 The Entity Concept parameters shown in the table apply to 2-channel barriers connected as shown in Fig. 2.

Note 6 The values of Voc and Isc apply only when the barriers are installed as shown in Fig. 2.

Note 7 The cable capacitance plus the capacitance of the intrinsically-safe equipment must be less than the marked capacitance (Ca) shown on any barrier used. This also applies to inductance.

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Size A4

1-CHANNEL - TO GROUND RETURN

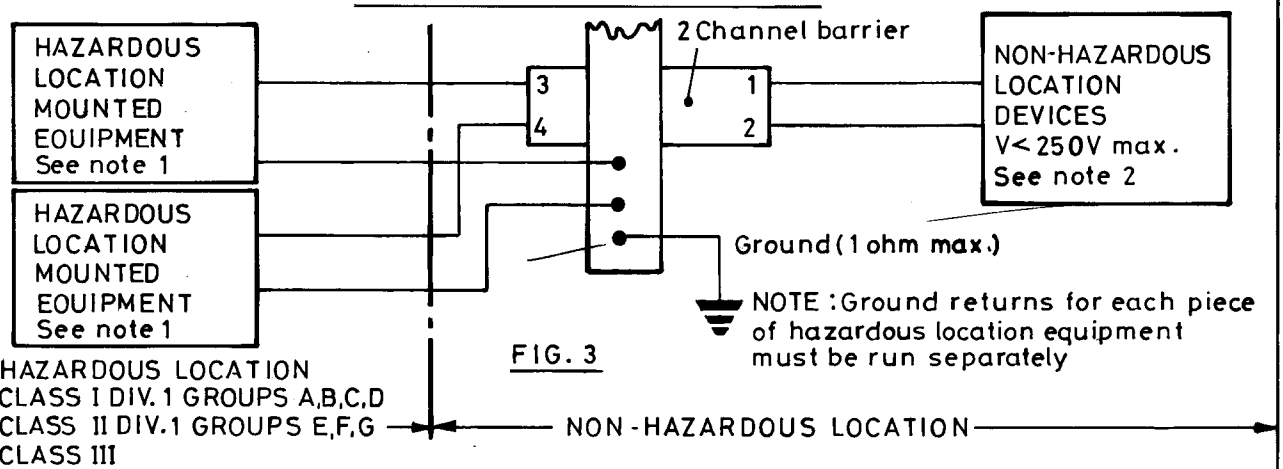

FIG. 3

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. The two pieces of hazardous location mounted equipment must be kept separate from each other.

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 All intrinsically safe wiring shall be kept separate from non-intrinsically safe wiring. For guidance on the installation see ANSI/ISA RP12.6-1987

Note 4 Circuits 1 and 2 must be separate cables, or if in one cable, each conductor shall have at least 0.25mm (0.10") thick insulation see paragraph 4.1.6 in ISA RP 12.6.

MTL Barrier Type	Voc (V)	Isc (mA)	Ca (μF)	La (mH)
751ac	0.96	89	1000	4.5
755ac	2.96	296	346	0.4
758 +/-	8.1	742	6.0	0.05
760ac	10.03	194	3.0	0.9
761ac	9.04	99	3.1	3.5
764+/- / ac	12.05	12	1.5	200.0
765ac	15.08	147	0.7	1.3
766ac	12.05	80	0.17	5.6
767+/-	15.15	147	0.7	1.7
768+/-	22.13	147	0.2	1.7
772ac	22.13	73	0.2	6.0
778ac	28.23	46	0.12	14.0
779+/-	28.17	93	0.12	4.0
786+/-	28.00	0	0.12	500.0
787+/- (28v ch)	28.54	94	0.11	4.0
787+/- (diodech)	28.00	0	0.12	500.0
787S	28.5	93	0.11	4.0
788+/- (28v ch)	28.15	93	0.12	4.0
788+/- (10v ch)	10.04	189	3.0	1.0
788R+/- (28v ch)	28.15	93	0.12	4.0
788R+/- (10v ch)	10.04	189	3.0	1.0
796+/- (26v ch)	26.10	86	0.14	4.7
796+/- (20v ch)	20.05	51.4	0.3	13.0

Note 5 The Entity Parameters shown in the table apply to 2-channel barriers connected as shown in Fig. 3.

Note 6 The values of Voc and Isc apply only when the barriers are installed as shown in Fig. 3.

Note 7 The cable capacitance plus the capacitance of the intrinsically safe equipment must be less than the marked capacitance (Ca) shown on any barrier used. This also applies to inductance.

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