FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

MTL7700 Series Shunt Diode Barriers
AIS/I,II,III/1/ABCDEFG – SCI- 942 Entity; NI/I/2/ABCD/T* Ta = *
[I/0] AEx [ia] IIC – SCI-942 Entity; NI/I/2/IIC/T* Ta = *
Special Condition of Use:
1.The MTL7700 Series barriers shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

Entity Parameters:

Single channel barrier to one device with ground return:

BARRIER MODEL Terminals	Voc or Uo (V)	Isc or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7706+ 3 & 4	28	93	0.65	0.083	4.2	56	T4	60°C
MTL7710+/- 3 & 4	10	200	0.5	3.0	0.91	74	T4	60°C
MTL7715+/- 3 & 4	15	150	0.56	0.58	1.45	66	T4	60°C
MTL7715P+/- 3 & 4	15	291	1.09	0.58	0.33	28	T4	60°C
MTL7722+/- 3 & 4	22	147	0.81	0.165	1.45	45	T4	60°C
MTL7728+/-/ac 3 & 4	28	93	0.65	0.083	4.2	56	T4	60°C
MTL7728P+/- 3 & 4	28	119	0.83	0.083	2.51	44	T4	60°C

Dual, three or four channel barrier, each channel to separate devices, with separate ground returns:

BARRIER MODEL Terminals	Voc or Uo (V)	Isc or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7707+ 3 & GND	28	93	0.65	0.083	4.2	56	T4	60°C
MTL7707+ 4 & GND	28	0	—	0.083	—	—	T4	60°C
MTL7707P+ 4 & GND	28	0	—	0.083	—	—	T4	60°C
MTL7755ac 3 & GND or 4 & GND	3	300	0.225	100	0.46	145	T4	65°C
MTL7756ac 3 & GND or 4 & GND or 7 & GND	3	300	0.225	100	0.46	145	T4	65°C
MTL7758+/- 3 & GND or 4 & GND	7.5	750	1.4	11.1	0.07	26	T4	60°C
MTL7760ac 3 & GND or 4 & GND	10	200	0.5	3.0	0.91	74	T4	60°C
MTL7761ac 3 & GND or 4 & GND	9	100	0.225	4.9	3.72	163	T4	60°C
MTL7761Pac 3 & GND or 4 & GND	9	26	0.058	4.9	56	613	T4	60°C
MTL7764+/- 3 & GND or 4 & GND	12	12	0.036	1.41	240	1000	T4	60°C
MTL7764ac 3 & GND or 4 & GND	12	12	0.036	1.41	240	1000	T4	60°C
MTL7765ac 3 & GND or 4 & GND	15	150	0.56	0.58	1.45	66	T4	60°C
MTL7766ac 3 & GND or 4 & GND	12	80	0.24	1.41	5.8	151	T4	60°C
MTL7766Pac 3 & GND or 4 & GND	12	157	0.471	1.41	1.47	78	T4	60°C

BARRIER MODEL Terminals	Voc or Uo (V)	Isc or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7767+/- 3 & GND or 4 & GND	15	150	0.56	0.58	1.45	66	T4	60°C
MTL7778ac 3 & GND or 4 & GND	28	47	0.33	0.083	16	107	T4	60°C
MTL7779+/- 3 & GND or 4 & GND	28	93	0.65	0.083	4.2	56	T4	60°C
MTL7787+/- 3 & GND	28	93	0.65	0.083	4.2	56	T4	60°C
MTL7787+/- 4 & GND	28	0	—	0.083	—	—	T4	60°C
MTL7787P+/- 3 & GND	28	119	0.83	0.083	2.51	44	T4	60°C
MTL7787P+/- 4 & GND	28	0	—	0.083	—	—	T4	60°C
MTL7788+/- 3 & GND	28	93	0.65	0.083	4.2	56	T4	60°C
MTL7788+/- 4 & GND	10	200	0.5	3.0	0.91	74	T4	60°C
MTL7788R+/-- 3 & GND	28	93	0.65	0.083	4.2	56	T4	60°C
MTL7788R+/- 4 & GND	10	200	0.5	3.0	0.91	74	T4	60°C
MTL7789+/- 3 & GND or 7 & GND	28	46.5	0.33	0.083	16	106	T4	60°C
MTL7789+/- 4 & GND or 8 & GND	28	0	—	0.083	—	—	T4	60°C
MTL7796+/- 3 & GND	26	87	0.56	0.1	4.91	64	T4	60°C
MTL7796+/- 4 & GND	20	51	0.26	0.22	13	136	T4	60°C

Dual, three or four channel barrier, two channels to same device, with or without ground returns:

BARRIER MODEL Terminals	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2 / Zone 2 Temp. code	
							T *	Ta *
MTL7707+ 3 & 4	29.4	93	0.65	0.071	4.2	56	T4	60°C
MTL7741 3 & 4	10	19	0.039	2.86	96	742	T4	60°C
MTL7742 3 & 4	10	19	0.039	2.86	96	742	T4	60°C
MTL7743 3 & 4 or 7 & 8	10	19	0.039	2.86	96	742	T4	60°C
MTL7744 3 & 4 or 7 & 8	10	19	0.039	2.86	96	742	T4	60°C
MTL7745 3 & 4	10	19	0.039	2.86	96	742	T4	60°C
MTL7755ac 3 & 4	6	600	0.45	40	0.13	69	T4	65°C
MTL7756ac 3 & 4 or 4 & 7 or 3 & 7	6	600	0.45	40	0.13	69	T4	65°C
MTL7758+/- 3 & 4	7.9	1500	2.8	8.8	0.02	10	T4	60°C
MTL7760ac 3 & 4	10	400	1.0	3.0	0.2	35.6	T4	60°C
MTL7761ac 3 & 4	18	200	0.45	0.31	0.91	62	T4	60°C
MTL7761Pac 3 & 4	18	52	0.115	0.31	14	236	T4	60°C
MTL7764+/- 3 & 4	13	24	0.072	1.0	61	360	T4	60°C
MTL7764ac 3 & 4	24	24	0.072	0.125	61	360	T4	60°C
MTL7765ac 3 & 4	15	300	1.12	0.58	0.32	31.6	T4	60°C
MTL7766ac 3 & 4	24	160	0.48	0.125	1.47	58	T4	60°C
MTL7766Pac 3 & 4	24	314	0.942	0.125	0.34	29	T4	60°C

BARRIER MODEL Terminals	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2 / Zone 2 Temp. code	
							T *	Ta *
MTL7767+/- 3 & 4	15	300	1.125	0.58	0.32	22	T4	60°C
MTL7778ac 3 & 4	28	93	0.654	0.083	4.2	56	T4	60°C
MTL7787+/- 3 & 4	29.4	93	0.65	0.071	4.2	56	T4	60°C
MTL7787P+/- 3 & 4	28.5	119	0.835	0.078	2.51	44	T4	60°C
MTL7788+/- 3 & 4	28	294	0.92	0.083	0.33	25	T4	60°C
MTL7788R+/- 3 & 4	28	294	0.92	0.083	0.33	25	T4	60°C
MTL7789+/- 3 & 4 or 7 & 8	28	46.5	0.33	0.083	16	106	T4	60°C
MTL7796+/- 3 & 4	26.4	138	0.81	0.096	1.94	34	T4	60°C

Three channel barrier, three channel to same device, with or without ground return:

BARRIER MODEL Terminals	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7756ac 3 & 4 & 7	6	900	0.675	40	0.06	44	T4	65°C

Four channel barrier, four channel to same device, with or without ground return:

BARRIER MODEL Terminals	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7743 3 & 4 & 7 & 8	10	38	0.078	2.73	25	184	T4	60°C
MTL7744 3 & 4 & 7 & 8	10	38	0.078	2.73	25	184	T4	60°C
MTL7789+/- 3 & 4 & 7 & 8	28	93	0.65	0.083	4.2	56	T4	60°C

Equipment Ratings:

Associated intrinsically safe apparatus with connections for Class I, II and III, Division 1, applicable Groups A, B, C, D, E, F and G; AEx [ia] IIC per "Entity" requirements in accordance with installation drawing SCI-942 Issue 5; nonincendive for installation in Class I, Division 2, Groups A, B, C and D,T4 at Ta = 60°C or 65°C; Class I, Zone 2, Group IIC, T4 at Ta = 60°C or 65°C hazardous (classified) indoor locations

And

MTL7700 Series Shunt Diode Barriers
AIS/I,II,III/1/CDEFG – SCI-942 Entity; NI/I/2/ABCD/T * Ta = *
[I/0] AEx [ia] IIB – SCI-942 Entity; NI/I/2/IIC/T * Ta = *
Special Condition of Use:
1.The MTL7700 Series barriers shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

Entity Parameters:

Single channel barrier to one device with ground return:

BARRIER MODEL Terminals	Voc or Uo (V)	Isc or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7729P+/- 3 & 4	28	170	1.19	0.65	5.65	127	T4	60°C

Dual, three or four channel barrier, each channel to separate devices, with separate ground returns:

BARRIER MODEL Terminals	Voc or Uo (V)	Isc or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7707P+ 3 & GND	28	171	1.2	0.65	5.34	125	T4	60°C

Dual, three or four channel barrier, two channels to same device, with or without ground return:

BARRIER MODEL Terminals	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF)	La or Lo (mH)	La/Ra or Lo/Ro (µH/Ω)	Division 2/ Zone 2 Temp. code	
							T *	Ta *
MTL7707P+ 3 & 4	29.4	171	1.2	0.587	5.34	125	T4	60°C
MTL7779+/- 3 & 4	28.3	186	1.3	0.636	4.1	108	T4	60°C

Equipment Ratings:

Associated intrinsically safe apparatus with connections for Class I, II and III, Division 1, applicable Groups C, D, E, F and G; AEx [ia] IIB per "Entity" requirements in accordance with installation drawing SCI-942 Issue 5; nonincendive for installation in Class I, Division 2, Groups A, B, C and D, T4 at Ta = 60°C or 65°C; Class I, Zone 2, Group IIC, T4 at Ta = 60°C or 65°C hazardous (classified) indoor locations

And

MTL7798 Power Feed Module
NI/I/2/ABCD/T4 Ta = 60°C; NI/I/2/IIC/T4 Ta = 60°C
Special Condition of Use:
1. The MTL7798 Power Feed Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. The MTL7798 Power Feed Module may be installed with MTL7700 Series Shunt Diode Barriers as auxiliary nonincendive apparatus.

Equipment Ratings:

Nonincendive apparatus for installation in Class I, Division 2, Groups A, B, C and D, T4 at Ta = 60°C or 65°C; Class I, Zone 2, Group IIC, T4 at Ta = 60°C or 65°C hazardous (classified) indoor locations

Approved for:

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

FM Approvals

This certifies that the equipment described has been found to comply with the following FM Approval Standards and other documents:

Class 3600	1998
Class 3610	1999
Class 3611	1999
Class 3810	1989
Including Supplement #1	1995

Original Project ID: 3010737

FM Approval Granted: October 8, 2001

Subsequent Revision Reports / Date FM Approval Amended

3012746	December 28, 2001
3013001	May 2, 2002
3014491	July 4, 2002

FM Global Technologies LLC

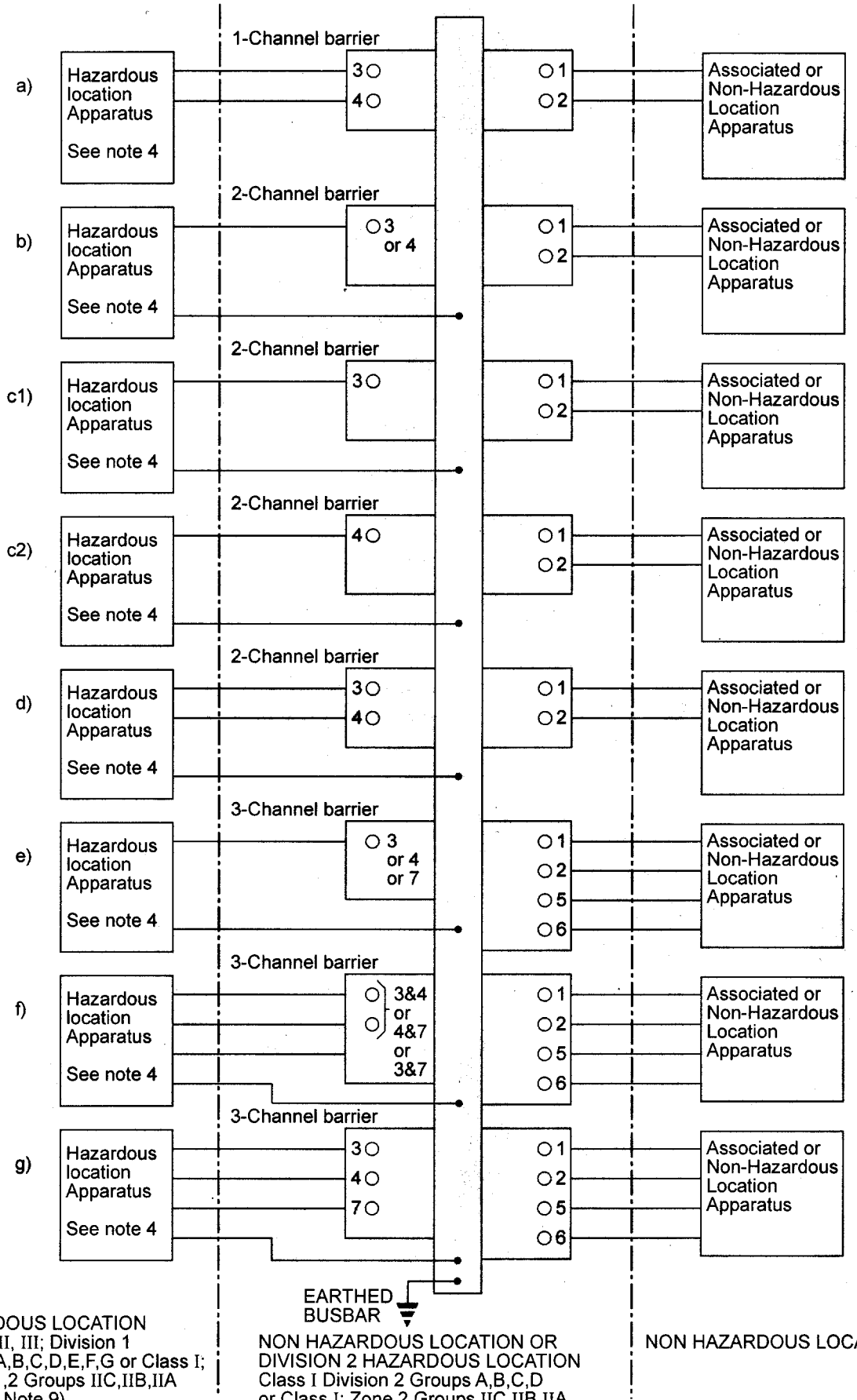
David W. Styrcula
Technical Team Manager

10-4-02
Date

An FM Global Enterprise

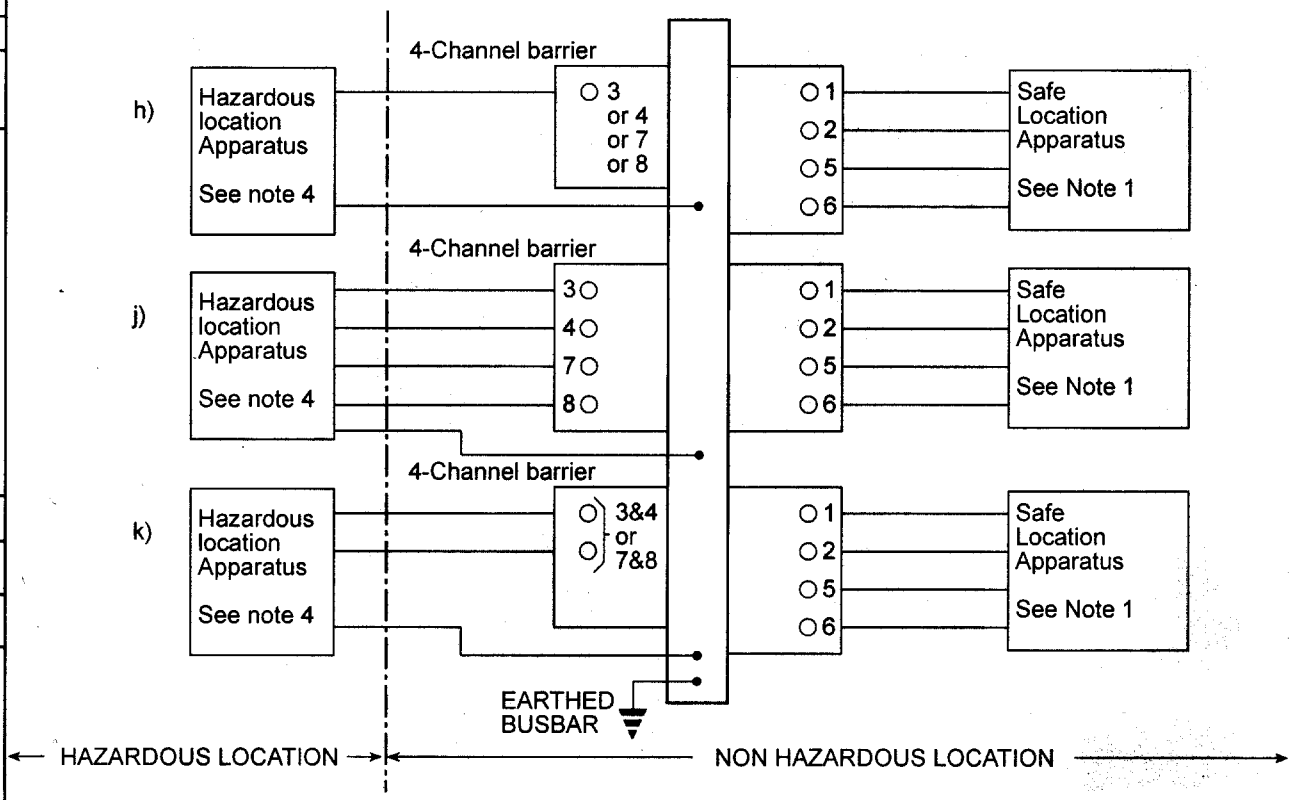
Is	Date	Drn	Modification
1	8.01	CMB	Reference to Note 9 added.
2	10.01	CMB	See sheets 4 & 5.
3	11.01	CMB	MTL7706+, 07+, 07P+, 58+/-, 88+/- added. Extra sheets added.
4	2.02	SM	
5	6.02	SM	MTL7741, 42, 43, 44, 45 & 78ac added. Extra sheet added.

Dimensions in mm | Do Not Scale | Third Angle Projection



System Certificate No.	Scale N/A
Certifying Authority: FM	Sheet 1 of 10
Title: MTL7700 SERIES BARRIER CONTROL DRAWING	Drg. No. SCI-942

Dimensions in mm | Do Not Scale | Third Angle Projection



CONFIGURATIONS:

a) Single channel barrier to one device with ground return
b) Dual channel barrier, each channel to separate devices with separate ground returns
c1) Dual channel barrier, first channel (power channel on diode return barriers) to separate device with separate ground return
c2) Dual channel barrier, second channel (diode return channel on diode return barriers) to separate device with separate ground return
d) Dual channel barrier, both channel to the same device with or without ground return
e) Three channel barrier, each channel to separate devices with separate ground returns
f) Three channel barrier, two channels to same device with or without ground return and one channel to separate device with separate ground return
g) Three channel barrier, three channels to same device with or without ground return
h) 1st, 2nd, 3rd, or 4th channel of a four channel barrier, each channel to separate devices with separate ground returns.
j) Four channel barrier, all channels to same device with or without ground return.
k) Four channel barrier, channels 1 and 2 or channels 3 and 4 to same device with or without ground return.

Modification	Date	Drn	Is
See sheet 1.	6.02	SM	5

Modification	Date	Drn	Is
See all other sheets.	8.01	CMB	1
See sheets 4 & 5.	10.01	CMB	2
See sheet 1.	11.01	CMB	3
	2.02	SM	4

System Certificate No.	Scale N/A
Certifying Authority: FM	Sheet 2 of 10
Title MTL7700 SERIES BARRIER CONTROL DRAWING	Drg. No. SCI-942

Note 1
MTL7700 Series Shunt Diode Barriers must be secured to a DIN 'T' section (35x27x7.5mm) mounting rail. Rails constructed of aluminium or aluminium-based alloys must not be used. The mounting rail must be provided with at least one grounding terminal (two are recommended) which should be situated at each end of the rail. These terminals are to be used for the intrinsic safety grounding and must be capable of accommodating conductors up to 4mm in cross-section (12 AWG).

Note 2
The intrinsic safety grounding system must be such that when installed the ground loop impedance (including the mounting rail) does not exceed 1.0Ω.

Note 3
The Non-Hazardous (Safe) Location or Division 2/Zone 2 equipment must not generate or use voltages (Um) in excess of 250V rms or dc.

Note 4
The Hazardous Location equipment may be Factory Mutual Research Approved devices suitable for the locations which it is to be installed and with correct Entity parameters or Simple Apparatus.
If the Simple Apparatus consists only of switches, then the entity parameter table on susequent pages of this drawing applies without any temperature limitation.
If the Simple Apparatus consists of thermocouples (TC's), Light Emitting Diodes (LED's) or Resistance Temperature Devices (RTD's), with or without switches, then the maximum output power (Po) from the barrier connected to simple apparatus must not exceed the following:

Maximum barrier output power (Po)	Maximum ambient Temperature (Ta) where simple apparatus is located
1.3 Watts	40°C
1.2 Watts	60°C
1.0 Watts	80°C

Note 5
Barriers must be installed in suitable equipment enclosure meeting requirements of ANSI/ISA S82.02.01 or in compliance with the enclosure, mounting, spacing,and segregation requirements of the ultimate application.

Note 6
The MTL7700 Series Shunt Diode safety barriers are Associated Apparatus, and when mounted in an appropriate enclosure may be installed in the following locations:

i Non-Hazardous (Safe) Locations
II Class I, Division 2, Groups A,B,C, and D or Class I, Zone 2, IIC, IIB, IIA Hazardous Locations and T4 Temperature code.

When installed in a Factory Mutual Research Approved or NRTL Listed, dust-ignition proof enclosure, the barriers may also be installed in the following locations:
iii Class II Division 2, Groups F and G Hazardous Locations and T4 Temperature code.
iv Class III, Division 2 Hazardous Locations and T4 Temperature code.

Is	Date	Drn	Modification
5	6.02	SM	See sheet 1.

Is	Date	Drn	Modification
1	8.01	CMB	See all other sheets.
2	10.01	CMB	See sheets 4 & 5.
3	11.01	CMB	Note 4 modified.
4	2.02	SM	

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Note 7
For guidance on the installation refer to ANSI/ISA RP2.6 "Wiring Practices for Hazardous (Classified) Locations Instruments, Part I: Intrinsic Safety" and the National Electrical Code (ANSI/NFPA 70).

Note 8
Entity parameters for barriers listed in the parameters table must be used to determine the suitability of the barrier for connection to hazardous location apparatus. The following must be observed:

Voc or Vt (Uo) ≤ Vmax (Ui)
Isc or It (Io) ≤ Imax (Ii)
Po ≤ Pi
Ca (Co) ≥ Ccable + Ci
La (Lo) ≥ Lcable + Li or La/Ra (Lo/Ro) ≥ Lcable/Rcable and La/Ra (Lo/Ro) ≥ Li/Ri

Note 9
Certain barriers are not permitted as associated apparatus for Div 1 Groups A,B or Zones 0,1 Group IIC. Refer to entries with asterisks in the following table.

Note 10
When fitted in a Safe Area, the barriers may be used at the same maximum ambient temperature as when used in Division 2 or Zone 2.

WARNING:
The following precautions must be taken when MTL7700 Series Shunt Diode Barriers are installed in Division 2 or Zone 2 Hazardous locations:

i Barriers must not be fitted to or removed from the DIN rail unless power is off or the location is known to be free of flammable vapors.
ii Plug in terminals on non-hazardous (Safe) side of the barriers as well as the bus power terminal jumper of barriers fitted with the bus power feature, must not be inserted or removed unless power is off or the location is known to be free of flammable vapors.

Is	Date	Drn	Modification	No	Cl	Ckd
5	6.02	SM	See sheet 1.			

Is	Date	Drn	Modification	No	Cl	Ckd
1	8.01	CMB				
2	10.01	CMB	Note 9 added.			
3	11.01	CMB	Note 10 added.			
4	2.02	SM	See sheet 1.			

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Is	Date	Drn	Modification	No	Cl	Ckd
1	8.01	CMB				
2	10.01	CMB	Right-hand column was mH/Ω.			
3	11.01	CMB	MTL7715P+/- added.			
4	2.02	SM	See sheet 1.			

MEASUREMENT TECHNOLOGY LTD
Luton, England

Is	Date	Drn	Modification	No	Cl	Ckd
5	6.02	SM	Amend 7707P+.			

Title
MTL7700 SERIES BARRIER CONTROL DRAWING

Certifying Authority: FM

System Certificate No.

Drg. No.
SCI-942

Sheet 5 of 10

Scale N/A

BARRIER Model Terminals	CONFIG	Voc or Uo (V)	Isc or Io (mA)	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (μF) AB(IIC)/CE(IIB)/DFG(IIA)	La or Lo (mH) AB(IIC)/CE(IIB)/DFG(IIA)	La/Ra or Lo/Ro (μH/Ω) AB(IIC)/CE(IIB)/DFG(IIA)
MTL7706+ 3 & 4	a	28	93	—	—	0.65	0.083/0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7707+ 3 & GND	c1	28	93	—	—	0.65	0.083/0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7707+ 4 & GND	c2	28	0	—	—	—	0.083/0.65/2.15	—	—
MTL7707+ 3 & 4	d	—	—	29.4	93	0.65	0.071/0.587/1.91	4.2/12.6/33.6	56/210/444
MTL7707P+ 3 &GND	c1	28	171	—	—	1.2	*/0.65/2.15	*/5.34/10.73	*/125/256
MTL7707P+ 4 & GND	c2	28	0	—	—	—	0.083/0.65/2.15	—	—
MTL7707P+ 3 & 4	d	—	—	29.4	171	1.2	*/0.587/1.91	*/5.34/10.73	*/125/256
MTL7710+/- 3 & 4	a	10	200	—	—	0.5	3.0/20/100	0.91/2.72/7.25	74/310/627
MTL7715+/- 3 & 4	a	15	150	—	—	0.56	0.58/3.55/14	1.45/7.22/14	66/263/544
MTL7715P+/- 3 & 4	a	15	291	—	—	1.09	0.58/3.55/14.0	0.33/0.99/2.64	28/140/280
MTL7722+/- 3 & 4	a	22	147	—	—	0.81	0.165/1.14/4.2	1.45/7.22/14	45/180/373
MTL7728+/-/ac 3 & 4	a	28	93	—	—	0.65	0.083/0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7728P+/- 3 & 4	a	28	119	—	—	0.83	0.083/0.65/2.15	2.51/7.53/20	44/168/354

* Not permitted for Groups A/B(IIC)

Dimensions in mm

Do Not Scale

Third Angle Projection

Is	Date	Drn	Modification	No	Cl	Ckd
4	2.02	SM	See sheet 1.			
5	6.02	SM	See sheet 1.			

MEASUREMENT TECHNOLOGY LTD
Luton, England

Is	Date	Drn	Modification	No	Cl	Ckd

BARRIER Model Terminals	CONFIG	Voc or Uo (V)	Isc or Io (mA)	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF) AB(IIC)/CE(IIB)/DFG(IIA)	La or Lo (mH) AB(IIC)/CE(IIB)/DFG(IIA)	La/Ra or Lo/Ro (µH/Ω) AB(IIC)/CE(IIB)/DFG(IIA)
MTL7729P+/- 3 & 4	a	28	170	—	—	1.19	* /0.65/2.15	* /5.65/11.34	* /127/260
MTL7741 3 & 4	d	—	—	10	19	0.039	2.86 /20.0/100	96 /365/696	742/1900/1900
MTL7742 3 & 4	d	—	—	10	19	0.039	2.86 /20.0/100	96 /365/696	742/1900/1900
MTL7743 3 & 4 or 7 & 8	k	—	—	10	19	0.039	2.86 /20.0/100	96 /365/696	742/1900/1900
MTL7743 3,4,7 & 8	j	—	—	10	38	0.078	2.73 /19.9/100	25 /91/193	184/694/1323
MTL7744 3 & 4 or 7 & 8	k	—	—	10	19	0.039	2.86 /20.0/100	96 /365/696	742/1900/1900
MTL7744 3,4,7 & 8	j	—	—	10	38	0.078	2.73 /19.9/100	25 /91/193	184/694/1323
MTL7745 3 & 4	d	—	—	10	19	0.039	2.86 /20.0/100	96 /365/696	742/1900/1900
MTL7755ac 3 & GND or 4 & GND	b	3	300	—	—	0.225	100/1000/1000	0.46/1.37/3.66	145/722/1442
MTL7755ac 3 & 4	d	—	—	6	600	0.45	40/1000/1000	0.13/0.39/1000	69/206/548

* Not permitted for Groups A/B(IIC)

Title
MTL7700 SERIES BARRIER CONTROL DRAWING

Certifying Authority: FM

System Certificate No.

Drg. No.
SCI-942

Sheet 6 of 10

Scale N/A

Dimensions in mm

Do Not Scale

Third Angle Projection

FOR 186

F/Hand Dir.CERTDRGS.

File name:AS DRAWING.FH9

CAD A4

Is	Date	Drn	Modification	No	Cl	Ckd
1	8.01	CMB				
2	10.01	CMB	Right-hand column was mH/Ω.			
3	11.01	CMB	MTL7760ac & MTL7765ac added.			
4	2.02	SM	See sheet 1.			

MEASUREMENT TECHNOLOGY LTD
Luton, England

Is	Date	Drn	Modification	No	Cl	Ckd
5	6.02	SM	See sheet 1.			

Title
MTL7700 SERIES BARRIER CONTROL DRAWING

Certifying Authority: FM

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Drg. No.
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Sheet 7 of 10

Scale N/A

BARRIER Model Terminals	CONFIG	Voc or Uo (V)	Isc or Io (mA)	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (μF) AB(IIC)/CE(IIB)/DFG(IIA)	La or Lo (mH) AB(IIC)/CE(IIB)/DFG(IIA)	La/Ra or Lo/Ro (μH/Ω) AB(IIC)/CE(IIB)/DFG(IIA)
MTL7756ac 3 & GND or 4 & GND or 7 & GND	e	3	300	—	—	0.225	100/1000/1000	0.46/1.37/3.66	145/722/1442
MTL7756ac 3 & 4 or 4 & 7 or 3 & 7	f	—	—	6	600	0.45	40/1000/1000	0.13/0.39/1.03	69/206/548
MTL7756ac 3 & 4 & 7	g	—	—	6	900	0.675	40/1000/1000	0.06/0.19/0.49	44/131/349
MTL7758+/- 3 & GND	c1	7.5	750	—	—	1.4	11.1/174/1000	0.07/0.20/0.54	26/77/206
MTL7758+/- 4 & GND	c2	7.5	750	—	—	1.4	11.1/174/1000	0.07/0.20/0.54	26/77/206
MTL7758+/- 3 & 4	d	—	—	7.9	1500	2.8	8.8/115/1000	0.02/0.05/0.14	10/30/81
MTL7760ac 3 & GND or 4 & GND	b	10	200	—	—	0.5	3.0/20.2/100	0.91/2.72/7.25	74/310/627
MTL7760ac 3 & 4	d	—	—	10	400	1.0	3.0/20.2/100	0.2/1.0/1.8	35.6/142.2/284.4
MTL7761ac 3 & GND or 4 & GND	b	9	100	—	—	0.225	4.9/40/500	3.72/15/500	163/616/1299
MTL7761ac 3 & 4	d	—	—	18	200	0.45	0.31/1.78/7.6	0.91/2.72/7.2	62/258/522
MTL7761Pac 3 & GND or 4 & GND	b	9	26	—	—	0.058	4.9/40/500	56/208/419	613/2382/2778
MTL7761Pac 3 & 4	d	—	—	18	52	0.115	0.31/1.78/7.6	14/55/116	236/870/1747

Dimensions in mm

Do Not Scale

Third Angle Projection

Is	Date	Drn	Modification	No	Cl	Ckd
1	8.01	CMB				
2	10.01	CMB	Right-hand column was mH/Ω.			
3	11.01	CMB	See sheets 4 & 5.			
4	2.02	SM	See sheet 1.			

MEASUREMENT TECHNOLOGY LTD
Luton, England

Is	Date	Drn	Modification	No	Cl	Ckd
5	6.02	SM	See sheet 1.			

Title
MTL7700 SERIES BARRIER CONTROL DRAWING

Certifying Authority: FM

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Drg. No.
SCI-942

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Scale N/A

BARRIER Model Terminals	CONFIG	Voc or Uo (V)	Isc or Io (mA)	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (μF) AB(IIC)/CE(IIB)/DFG(IIA)	La or Lo (mH) AB(IIC)/CE(IIB)/DFG(IIA)	La/Ra or Lo/Ro (μH/Ω) AB(IIC)/CE(IIB)/DFG(IIA)
MTL7764+/- 3 & GND or 4 & GND	b	12	12	—	—	0.036	1.41/9/36	240/932/1000	1000/1000/1000
MTL7764+/- 3 & 4	d	—	—	13	24	0.072	1.0/6.2/22.5	61/226/452	360/1398/1500
MTL7764ac 3 & GND or 4 & GND	b	12	12	—	—	0.036	1.41/9/36	240/932/1000	1000/1000/1000
MTL7764ac 3 & 4	d	—	—	24	24	0.072	0.125/0.93/3.35	61/226/452	360/1398/1500
MTL7765ac 3 & GND or 4 & GND	b	15	150	—	—	0.56	0.58/3.55/14.0	1.45/7.22/14.0	66/263/544
MTL7765ac 3 & 4	d	—	—	15	300	1.12	0.58/3.55/14.0	0.32/0.95/2.54	31.6/126.4/252.8
MTL7766ac 3 & GND or 4 & GND	b	12	80	—	—	0.24	1.41/9/36	5.8/23/48	151/556/1174
MTL7766ac 3 & 4	d	—	—	24	160	0.48	0.125/0.93/3.35	1.47/4.4/11	58/234/481
MTL7766Pac 3 & GND or 4 & GND	b	12	157	—	—	0.471	1.41/9/36	1.47/44/11	78/313/644
MTL7766Pac 3 & 4	d	—	—	24	314	0.942	0.125/0.93/3.35	0.34/1.02/2.71	29/87/231
MTL7767+/- 3 & GND or 4 & GND	b	15	150	—	—	0.56	0.58/3.55/14	1.45/7.22/14	66/263/544
MTL7767+/- 3 & 4	d	—	—	15	300	1.125	0.58/3.55/14	0.32/0.95/2.54	22/108/216

* Not permitted for Groups A/B(IIC)

Dimensions in mm
Do Not Scale
Third Angle Projection

Is	Date	Drn	Modification	No	Cl	Ckd
1	8.01	CMB				
2	10.01	CMB	Right-hand column was mH/Ω.			
3	11.01	CMB	See sheets 4 & 5.			
4	2.02	SM	See sheet 1.			

MEASUREMENT TECHNOLOGY LTD
Luton, England

Is	Date	Drn	Modification	No	Cl	Ckd
5	6.02	SM	See sheet 1.			

BARRIER Model Terminals	CONFIG	Voc or Uo (V)	Isc or Io (mA)	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF) AB(IIC)/CE(IIB)/DFG(IIA)	La or Lo (mH) AB(IIC)/CE(IIB)/DFG(IIA)	La/Ra or Lo/Ro (µH/Ω) AB(IIC)/CE(IIB)/DFG(IIA)
MTL7778ac 3 & GND or 4 & GND	b	28	47	—	—	0.33	0.083/0.65/2.15	16/62/130	107/398/789
MTL7778ac 3 & 4	d	—	—	28	93	0.654	0.083 /0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7779+/- 3 & GND or 4 & GND	b	28	93	—	—	0.65	0.083/0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7779+/- 3 & 4	d	—	—	28.3	186	1.3	* /0.63/2.09	* /4.1/7.9	* /108/217
MTL7787+/- 3 & GND	c1	28	93	—	—	0.65	0.083/0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7787+/- 4 & GND	c2	28	0	—	—	—	0.083/0.65/2.15	—	—
MTL7787+/- 3 & 4	d	—	—	29.4	93	0.65	0.071/0.587/1.91	4.2/12.6/33.6	56/210/444
MTL7787P+/- 3 & GND	c1	28	119	—	—	0.835	0.083/0.65/2.15	2.51/7.53/20	44/168/354
MTL7787P+/- 4 & GND	c2	28	0	—	—	—	0.083/0.65/2.15	2.51/7.53/20	44/168/354
MTL7787P+/- 3 & 4	d	—	—	28.5	119	0.835	0.078/0.627/2.05	2.51/7.53/20	44/168/354

Title
MTL7700 SERIES BARRIER CONTROL DRAWING

Certifying Authority: FM

System Certificate No.

Drg. No.
SCI-942

Sheet 9 of 10

Scale N/A

Dimensions in mm

Do Not Scale

Third Angle Projection

FOR 186

F/Hand Dir.CERTDRGS.

File name.AS DRAWING.FH9

CAD A4

MEASUREMENT TECHNOLOGY LTD
Luton, England

BARRIER Model Terminals	CONFIG	Voc or Uo (V)	Isc or Io (mA)	Vt or Uo (V)	It or Io (mA)	Po (W)	Ca or Co (µF) AB(IIC)/CE(IIB)/DFG(IIA)	La or Lo (mH) AB(IIC)/CE(IIB)/DFG(IIA)	La/Ra or Lo/Ro (µH/Ω) AB(IIC)/CE(IIB)/DFG(IIA)
MTL7788+/- MTL7788R+/- 3 & GND	c1	28	93	—	—	0.65	0.083/0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7788+/- MTL7788R+/- 4 & GND	c2	10	200	—	—	0.5	3.0/20/100	0.91/2.72/7.25	74/310/627
MTL7788+/- MTL7788R+/- 3 & 4	d	—	—	28	294	0.92	0.083/0.65/2.15	0.33/0.99/2.64	25/124/253
MTL7789+/- 3 & GND or 7 & GND	h	28	46.5	—	—	0.33	0.083/0.65/2.15	16/63/133	106/393/781
MTL7789+/- 4 & GND or 8 & GND	h	28	0	—	—	0	0.083/0.65/2.15	—	—
MTL7789+/- 3 & 4 & 7 & 8	j	—	—	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	56/210/444
MTL7789+/- 3 & 4 or 7 & 8	k	—	—	28	46.5	0.33	0.083/0.65/2.15	16/63/133	106/393/781
MTL7796+/- 3 & GND	c1	26	87	—	—	0.56	0.1/0.77/2.6	4.91/20/40	64/239/505
MTL7796+/- 4 & GND	c2	20	51	—	—	0.26	0.22/1.41/5.5	13/51/108	136/501/1014
MTL7796+/- 3 & 4	d	—	—	26.4	138	0.81	0.096/0.74/2.48	1.94/8.5/16	34/136/282

Title
MTL7700 SERIES BARRIER CONTROL DRAWING

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Sheet 10 of 10

Scale N/A

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Do Not Scale

Third Angle Projection