



Health & Safety Executive

Research & Laboratory
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Mr D R Gaunt
Measurement Technology Limited
Power Court
LUTON
Beds
LU1 3JJ

Your reference

Our reference SFA/12/372/050

Date 4th May, 1984

Dear Sirs

REPLACEMENT OF MTL 100 SERIES BARRIERS BY MTL 700 SERIES BARRIERS

Your current production range MTL 700 series shunt zener diode safety barriers has been assessed by BASEEFA as having equivalent or less onerous electrical characteristics to the now superseded MTL 100 series shunt zener diode safety barriers. The mechanical mounting arrangements are, however, directly incompatible but an adaptor bracket is available to enable replacement.

Accordingly it is accepted by BASEEFA that MTL 100 Series shunt diode safety barriers specified in any BASEEFA certified intrinsically safe system may be replaced by MTL 700 Series shunt diode safety barriers having equivalent voltage/resistance ratings without invalidating that certificate. See Annex 1.

The status of the existing system certificate remains unaltered; in particular, the substitution of the MTL 700 Series safety barriers does not imply that the installation necessarily meets the requirements of more recent standards. The installation conditions of MTL 700 Series safety barriers will be those defined in BASEEFA Certificate No. Ex 832452.

Yours faithfully

B HILL
Director/BASEEFA

Permitted barrier replacement

MTL 100 Series type	Safety Description	BASEEFA Cert No.	MTL 700 Series Type	Safety Description
MTL 110	10volt 47ohm	72132/B/S	MTL 710	10volt 50ohm
MTL 115	15volt 100ohm	72104/B/S	MTL 715	15volt 100ohm
MTL 122	22volt 150ohm	72106/B/S	MTL 722	22volt 150ohm
MTL 128	28volt 300ohm	72108/B/S	MTL 728	28volt 300ohm
MTL 151	2x1volt 2ohm	72096/B/S	MTL 751	2x1volt 10ohm
MTL 155	2x5volt 10ohm	73200/B/S	MTL 755	2x3volt 10ohm
MTL 160	2x10volt 50ohm	72102/B/S	MTL 760	2x10volt 50ohm
MTL 161	2x10volt 70ohm	Ex75333/B/S	MTL 761	2x9volt 90ohm
MTL 164	2x15volt 1000ohm	Ex75334/B/S	MTL 764	2x12volt 1000ohm
MTL 165	2x15volt 100ohm	73201/B/S	MTL 765	2x15volt 100ohm
MTL 172	2x22volt 300ohm	73202/B/S	MTL 772	2x22volt 300ohm
MTL 178	2x28volt 600ohm	73203/B/S	MTL 778	2x28volt 600ohm
MTL 179	2x28volt 300ohm	72108/B/S	MTL 779	2x28volt 300ohm
MTL 186	2x30volt diode	Ex75337/B/S	MTL 786	2x28volt diode
MTL 187	30volt diode + 28volt 300ohm	Ex75338/B/S	MTL 787	28 volt diode + 28volt 300ohm
MTL 188	28volt 300ohm + 10volt 50ohm	72112/B/S	MTL 788	28volt 300ohm + 10volt 50ohm
MTL 196	26volt, 300ohm, 87mA + 20.4volt, 390ohm 55mA Uz=26volts, Ik=142mA	Ex832233	MTL 796	26volt, 300ohm, 87mA + 20volt, 390 ohm 52mA Uz=26volts Ik=138mA

The MTL 700 series safety barriers are covered by one BASEEFA certificate i.e. Ex 832452

The terminal numbering system has been simplified in the new Series, and the equivalent terminal numbers are as follows:

No. of Channels	100 SERIES		700 SERIES	
	Haz	Safe	Haz	Safe
1	4 (Earth)	2	3 (Channel 1)	1
	3 (Channel 1)	1	4 (Earth)	2
2	13 (Channel 1)	11	3 (Channel 1)	1
	23 (Channel 2)	21	4 (Channel 2)	2

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Your reference

Our reference
SFA 12/372/050

Date 2 August 1984

Dear Sir

REPLACEMENT OF MTL 100 SERIES BARRIERS BY MTL 700 SERIES BARRIERS

On the same basis as outlined in our letter dated 4 May 1984, the "permitted barrier replacements" listed in the attached ANNEX 2 are accepted by BASEEFA.

Yours faithfully



M POWNEY
Senior Certifying Officer

Enc

Permitted barrier replacement.

MTL 100 Series Type.	Safety Description.	BASEEFA Cert. No.	MTL 700 Series Type.	Safety Description.
MTL 115	15 Volt 100 ohm	72104/B/S	MTL 767	2 x 15 Volt 100 ohm.
MTL 122	22 Volt 150 ohm	72106/B/S	MTL 768	2 x 22 Volt 150 ohm.

Note 1. - The MTL 700 series barriers listed above are 2 - channel version of the equivalent MTL 100 series. When the equivalent MTL 700 is used each channel must be used separately and each have its own earth return.

Note 2. - The MTL 700 series safety barriers are covered by one BASEEFA certificate i.e Ex 832452.

The terminal numbering system has been simplified in the new Series, and the equivalent terminal numbers are tabulated below.

For spares purposes a small adaptor bracket is available to allow 700 Series barriers to replace 100 Series barriers individually on 100 Series busbar — see PS701.

No. of Channels	100 SERIES			700 SERIES		
	Haz		Safe	Haz		Safe
1	4	(Earth)	2	3	(Channel 1)	1
	3	(Channel 1)	1	4	(Earth)	2
2	13	(Channel 1)	11	3	(Channel 1)	1
	23	(Channel 2)	21	4	(Channel 2)	2



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08 NOV 1984

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Mr D R Gaunt
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Beds
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Your reference

Our reference SFA12/372/050

Date 7 November 1984

Dear Sir

REPLACEMENT OF MTL 100 SERIES BARRIERS BY MTL 700

SERIES BARRIER

On the same basis as outlined in our letter dated 4 May 1984, the "permitted barrier replacements" listed in the attached ANNEX 3 are accepted by BASEEFA.

Yours faithfully

M. POWNEY
Senior Certifying Officer

Enc:

ANNEX 3

MTL 702 - Permitted Barrier Substitution.

	Safety Description	BASEEFA Cert. No.		Safety Description	BASEEFA Cert. No.
MTL 322	25.2 volt 171 ohms	Ex 77292/B/S	MTL 702	25 volt 200 ohms	Ex 84B2307

The terminal numbering has been changed on the MTL 702.

MTL 322			MTL702		
Haz		Safe	Haz		Safe
4	(Earth)	2	3	(Channel 1)	1
3	(Channel 1)	1	4	(Earth)	2

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Your reference

Our reference
EECS 0703/02/008

Date
10 November 1988

Dear Sir

SUBSTITUTION OF MTL 700 SERIES BARRIERS

On the same basis as outlined in our letter dated 4 May 1984, the "permitted barrier replacements" listed in the attached ANNEX 4 are accepted by BASEEFA.

Yours faithfully



M POWNEY
Principal Certifying Officer

Enc

ANNEX 4

PERMITTED BARRIER SUBSTITUTION

Barrier Type	Safety Description	Replacement Barrier Type	Safety Description
MITL 728 -	28V 300 ohm	MITL 705	28V 300 ohm
MITL 728	28V 300 ohm	MITL 708	28V 300 ohm
MITL 787	28V 300 ohm + 28V (diode)	MITL 707	28V 300 ohm + 28V (diode)
MITL 787	28V 300 ohm + 28V (diode)	MITL 787S	28V 300 ohm + 28V (diode)

All the above barriers, except the MITL 705, are covered by BASEEFA Certificate No Ex 832452. The MITL 705 is covered by Certificate No Ex 87B2428.

Note: The MITL 705 may replace an MITL 728 of either polarity where the MITL 728 is the only barrier in the system.