1 # EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3	EC - Type Examination Certificate Number:	**Baseefa04ATEX0260X**
4	Equipment or Protective System:	**FP32 Fieldbus Surge Protection Device**
5	Manufacturer:	**Atlantic Scientific Corporation (MTL Surge Technologies)**
6	Address:	**4300 Fortune Place, Suite A.W. Melbourne, Florida 32904, USA**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa (2001) Ltd. Notified body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **04(C)0054**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014: 1997 + A1 & A2 EN 50020: 2002 EN 50284: 1999

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

⟨Ex⟩ **II 1G EEx ia IIB T3 or EEx ia IIC T4 (See Schedule) (-40°C ≤ Ta ≤ 60°C)**

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa (2001) Ltd. Customer Reference No. **5229**

Project File No. **04/0054**

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

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13 **Schedule**

14 **Certificate Number Baseefa04ATEX0260X**

15 Description of Equipment or Protective System

The FP32 Fieldbus Surge Protection Device is designed as a FISCO Field Device, to provide protection for sensitive electronic Fieldbus compatible equipment, and it is intended to be mounted in a Safe Area immediately following a FISCO Power Supply or within a Hazardous Area.

This unit does not in itself provide any voltage or current limiting functions and must be supplied from a suitably certified intrinsically safe FISCO source. It is a dual channel unit, with screen and earth, but all connections and both channels must form part of the same intrinsically safe circuit.

The unit comprises two series resistors, a diode bridge circuit, two gas discharge tubes, a silicon avalanche diode and two metal oxide varistors mounted on a printed circuit board. This assembly is housed within an MTL7700 Series plastic enclosure, which is provided with four input and four output terminals in addition to a base spring, which provides mounting on a DIN earthing rail. The lower part of the enclosure is encapsulated to consolidate the mounting arrangement.

The FP32 Fieldbus Surge Protection Device is considered to be coded ⟨Ex⟩ II 1G EEx ia IIB T3 ($-40°C \leq Ta \leq 60°C$) when supplied from a Certified [EEx ia] Group IIB source.

Field Connectors - S1, S2, Screen and Earth.
$U_i = 17.5V$
$I_i = 380mA$
$P_i = 5.32W$
$C_i = 0$
$L_i = 0$

Surge Protected Connectors – S3, S4, Screen and Earth
$U_o = U_i$
$I_o = I_i$
$P_o = P_i$

The cable parameters associated with the Field and Surge Protected Connectors will be determined by the source supplying the intrinsically safe circuit.

Variation 0.1

To permit the input power and current to be reduced from 5.32W and 380mA to 2.56W and 183mA respectively. The FP32 Fieldbus Surge Protection Device is considered to be coded ⟨Ex⟩ II 1G EEx ia IIC T4 ($-40°C \leq Ta \leq 60°C$) when supplied from a Certified [EEx ia] Group IIC source.

Field Connectors - S1, S2, Screen and Earth.
$U_i = 17.5V$
$I_i = 183mA$
$P_i = 2.56W$
$C_i = 0$
$L_i = 0$

Surge Protected Connectors – S3, S4, Screen and Earth
$U_o = U_i$
$I_o = I_i$
$P_o = P_i$

16 Report Number

04(C)0054

17 Special Conditions for Safe Use

1. The FP32 Fieldbus Surge Protection Device is not capable of withstanding the 500V voltage withstand test for one minute without breakdown to earth. This must be taken into consideration in any installation.

2. When the FP32 Fieldbus Surge Protection Device is mounted within a Hazardous Area the plastic enclosure is considered to present a potential electrostatic risk. Do not rub or clean with solvents.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings

Number	Sheet	Issue	Date	Description
1100439	1	-	14 July 2004	Index sheet
1100439	2	-	14 July 2004	Circuit Diagram
1100439	3	-	14 July 2004	Internal Components
1100439	4	-	14 July 2004	Enclosure
1100439	5	-	14 July 2004	Certification Label
1100439	6	-	14 July 2004	Terminal Labels

1 # SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3	Supplementary EC - Type Examination Certificate Number:	**Baseefa04ATEX0260X/1**
4	Equipment or Protective System:	**FP32 Fieldbus Surge Protection Device**
5	Manufacturer:	**Atlantic Scientific Corporation (MTL Global Surge Technologies)**
6	Address:	**4300 Fortune Place, Suite A.W. Melbourne, Florida 32904, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa04ATEX0260X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

Baseefa (2001) Ltd. Customer Reference No. **5229**

Project File No. **04/0679**

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13 # Schedule

14 ## Certificate Number Baseefa04ATEX0260X/1

15 Description of the variation to the Equipment or Protective System

Variation 1.1

To permit the introduction of an alternative encapsulant for the FP32 Fieldbus Surge Protection Devices. This change does not affect the original assessment.

16 Report Number

None

17 Special Conditions for Safe Use

None additional to those listed previously

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings

Number	Sheet	Issue	Date	Description
1100439	1	A	12 Aug 2004	Index sheet
1100439	2	A	12 Aug 2004	Circuit Diagram
1100439	3	A	12 Aug 2004	Internal Components
1100439	4	A	12 Aug 2004	Enclosure
1100439	5	A	12 Aug 2004	Certification Label
1100439	6	A	12 Aug 2004	Terminal Labels

1 # SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3	Supplementary EC - Type Examination Certificate Number:	**Baseefa04ATEX0260X/2**
4	Equipment or Protective System:	**FP32 Fieldbus Surge Protection Device**
5	Manufacturer:	**Atlantic Scientific Corporation (MTL Global Surge Technologies)**
6	Address:	**4300 Fortune Place, Suite A.W. Melbourne, Florida 32904, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa04ATEX0260X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa (2001) Ltd. Customer Reference No. **5229**

Project File No. **04/0739**

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13 # Schedule

14 ## Certificate Number Baseefa04ATEX0260X/2

15 Description of the variation to the Equipment or Protective System

Variation 2.1

To permit the correction of dimensional information on the general assembly drawing for the FP32 Fieldbus Surge Protection Devices. This change does not affect the original assessment.

16 Report Number

None

17 Special Conditions for Safe Use

None additional to those listed previously

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings

Number	Sheet	Issue	Date	Description
1100439	1	B	07 Oct 2004	Index sheet
1100439	2	B	07 Oct 2004	Circuit Diagram
1100439	3	B	07 Oct 2004	Internal Components
1100439	4	B	07 Oct 2004	Enclosure
1100439	5	B	07 Oct 2004	Certification Label
1100439	6	B	07 Oct 2004	Terminal Labels

1 # SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3	Supplementary EC - Type Examination Certificate Number:	**Baseefa04ATEX0260X/3**
4	Equipment or Protective System:	**FP32 Fieldbus Surge Protection Device**
5	Manufacturer:	**Atlantic Scientific Corporation (MTL Global Surge Technologies)**
6	Address:	**4300 Fortune Place, Suite A, West Melbourne, Florida 32904, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa04ATEX0260X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

Baseefa Customer Reference No. **5229**

Project File No. **06/0512**

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

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13 **Schedule**

14 **Certificate Number Baseefa04ATEX0260X/3**

15 **Description of the variation to the Equipment or Protective System**

Variation 3.1

To permit the maximum permitted ambient temperature for the FP32 Fieldbus Surge Protection Device to be increased from 60°C to 70°C. This increase applies to existing Surge Protection Devices, when supplied from either a Group IIB source, as in the original schedule or a Group IIC source as detailed in Variation 0.1. For clarity the revised apparatus code is reproduced below:-

The FP32 Fieldbus Surge Protection Device may be considered to be coded ⟨Ex⟩ II 1G EEx ia IIB T3 (-40°C ≤ Ta ≤ 70°C) when supplied from a Certified [EEx ia] Group IIB source.

Field Connectors - S1, S2, Screen and Earth.

$U_i = 17.5V$
$I_i = 380mA$
$P_i = 5.32W$
$C_i = 0$
$L_i = 0$

Surge Protected Connectors – S3, S4, Screen and Earth

$U_o = U_i$
$I_o = I_i$
$P_o = P_i$

OR

The FP32 Fieldbus Surge Protection Device is considered to be coded ⟨Ex⟩ II 1G EEx ia IIC T4 (-40°C ≤ Ta ≤ 70°C) when supplied from a Certified [EEx ia] Group IIC source.

Field Connectors - S1, S2, Screen and Earth

$U_i = 17.5V$
$I_i = 183mA$
$P_i = 2.56W$
$C_i = 0$
$L_i = 0$

Surge Protected Connectors – S3, S4, Screen and Earth

$U_o = U_i$
$I_o = I_i$
$P_o = P_i$

Since there have been no physical changes to the apparatus to permit this increase in ambient temperature, the alternative maximum ambient temperature may be considered to apply even if the existing units are marked with the 60°C upper limit.

16 Report Number

None

17 Special Conditions for Safe Use

None additional to those listed previously

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
1100439	1-6	C	31 July 06	FP32 Fieldbus Surge Protection Device