

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: **Baseefa14ATEX0288X**

4 Equipment or Protective System: **93ZX-FB-**-** Fieldbus Barrier System**

5 Manufacturer: **Measurement Technology Limited**

6 Address: **Butterfield, Luton, LU2 8DL**

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, 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. **GB/BAS/ExTR14.0258/00**

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

**EN 60079-0:2012 EN 60079-1:2007 EN 60079-7:2007 EN 60079-11:2012 EN 60079-18:2009
EN 60079-31:2014**

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 :

⊕ II 2(1)GD Ex d e ib mb [ia Ga] IIC T4 Gb Ex tb IIIC T80°C Db (-30°C ≤T_a ≤+65°C)

Baseefa Customer Reference No. **0703**

Project File No. **14/0479**

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R S SINCLAIR

GENERAL MANAGER

On behalf of SGS Baseefa Limited

13

Schedule

14

Certificate Number Baseefa14ATEX0288X

15 Description of Equipment or Protective System

The 93ZX-FB-**-** Fieldbus Barrier System comprises one or two 937X-FB-**-** Fieldbus Barrier Modules (Baseefa09ATEX0184U) housed inside an appropriately certified stainless steel enclosure. Each 937X-FB-**-** Fieldbus Barrier Module is either a 6 way simplex unit, a 12 way simplex unit or a 5 way redundant unit.

The 93ZX-FB-**-** Fieldbus Barrier System is designed to be supplied from a power supply conforming to IEC 61158 and produce several Spur outputs that are each compliant with the FISCO Power Supply requirements. The Spur outputs are isolated from the input supply but are not isolated from each other. Electrical connections are made via screw terminals.

The 93ZX-FB-**-** Fieldbus Barrier System has a certification temperature range of -30°C to +65°C.

Terminal Parameters - SPUR+ve Output Terminal and Shield Terminal w.r.t Spur-ve (each channel)

9387 & 9388 Units - Simplex Models

U_o	= 17.5V
$I_{o\ peak}$	= 249.5mA
$I_{o\ continuous}$	= 113mA
P_o	= 982mW
U_i	= 17.5V
C_i	= 0
L_i	= 0

The capacitance and either the inductance or inductance to resistance ratio (L/R) of the load connected to hazardous area terminals TB1 must not exceed the following values:

GROUP	CAPACITANCE (μ F)	INDUCTANCE (mH)	OR	L/R RATIO (μ H/ohm)
IIC	0.339	0.57		32.5
IIB	1.97	2.28		130
IIA	8.2	4.57		260

The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and lumped capacitance, up to 50% of each of the L and C values is allowed.

9391 - Redundant Models

U_o	= 16.4V
$I_{o\ peak}$	= 246mA
$I_{o\ continuous}$	= 215mA
P_o	= 912mW
U_i	= 17.5V
C_i	= 0
L_i	= 0

The capacitance and either the inductance or inductance to resistance ratio (L/R) of the load connected to hazardous area terminals TB1 must not exceed the following values:

GROUP	CAPACITANCE (μF)	INDUCTANCE (mH)	OR	L/R RATIO ($\mu\text{H}/\text{ohm}$)
IIC	0.424	0.59		35.2
IIB	2.51	2.35		140
IIA	10.0	4.70		281

The above load parameters apply where:

2. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and lumped capacitance, up to 50% of each of the L and C values is allowed.

16 Report Number

GB/BAS/ExTR14.0258/00

17 Specific Conditions of Use

1. The equipment shall only be powered from supplies conforming to IEC 61158.
2. When a Trunk Surge Module is fitted, the power input circuit will not withstand a 500V a.c. isolation test to earth. This must be taken into account during installation.
3. When one or more Spur Surge Modules are fitted, the spur outputs will not withstand a 500V a.c. isolation test to earth. This must be taken into account during installation.
4. Potential electrostatic hazard. The equipment should only be cleaned with a damp cloth.

18 Essential Health and Safety Requirements

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

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
CI9391-1	1	1	10.14	939X Stainless Steel Final Assy
CI9391-3	1	1	10.14	93ZX Encl Cert Label

These drawings are held with IECEx BAS 14.0133X.