



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX BAS 12.0032X** Page 1 of 4 **Certificate history:**
Issue 0 (2015-07-16)

Status: **Current** Issue No: 1

Date of Issue: 2019-10-25

Applicant: **Metrix Instrument Company**
8824 Fallbrook
Houston
Texas 77064
United States of America

Equipment: **MX2032, MX2033 & MX2034 Digital Proximity Systems**

Optional accessory:

Type of Protection: **Intrinsic safety**

Marking: **Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +85°C)**

Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair

Position:

Technical Manager

Signature:
(for printed version)

M POWNEY
Certification
Manager

Date:

M Powney
28/10/19

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom

METRIX DOCUMENT NO: 1456014
REV: C



IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 12.0032X**

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Date of issue: 2019-10-25

Issue No: 1

Manufacturer: **Metrix Instrument Company**
8824 Fallbrook
Houston
Texas 77064
United States of America

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/BAS/ExTR12.0040/00](#)

[GB/BAS/ExTR18.0206/00](#)

Quality Assessment Report:

[GB/BAS/QAR10.0017/06](#)



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Certificate No.: **IECEX BAS 12.0032X**

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Date of issue: 2019-10-25

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Product Description

The MX2032-AA-BB-CC-DD, MX2033-AA-BB-CC-DD and MX2034-AA-BB-CC-DD-EE-FF are normally supplied as part of the Digital Proximity System (DPS).

The letters after the main model number denote configuration options not affecting certification except for the MX2034 EE = X4 X5 or X6 that is not covered by this certificate.

The units comprise three potted printed circuit boards housed inside a DIN rail mountable enclosure. A coaxial RF connector is present to enable a proximity probe to be connected using an extension cable, and 3 way accepts the user connections. The MX2034 also includes a BNC connector for dynamic output.

TERMINAL PARAMETERS

MX2032 & MX2034 Input Terminals Pin 1(Loop-) & Pin 2(Loop+)

$U_i = 28V$

$I_i = 93mA$

$P_i = 0.66W$

$C_i = 18nF$

$L_i = 2\mu H$

The equipment is to be powered only from resistively limited sources.

MX2032 & MX2034 Input Terminals Pin 3(Test) w.r.t Pin 1(Loop-) & Pin 2(Loop+)

$U_m = 0V$

This connection is not for use in hazardous areas.

MX2033 Input Terminals Pin 1(-V_r), Pin 2(COM) & Pin 3(Sig)

$U_i = 28V$

$I_i = 138mA$

$P_i = 0.81W$

$C_i = 18nF$

$L_i = 2\mu H$

The equipment is to be powered only from resistively limited sources.

MX 2034 BNC - Dynamic Output Connector

$U_m = 0$

This connection is not for use in hazardous areas.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The protection concept used must be irrevocably marked on the label during installation.
2. For the MX2032 and 2034, the user terminal pin 3 is not for use in hazardous areas.
3. For the MX2034, the top BNC output connector is not for use in hazardous areas.
4. To reduce the risk of electrostatic ignition the equipment must be cleaned only with a damp cloth.

METRIX DOCUMENT NO: 1456014
REV: C



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 1.1

To permit minor electrical changes and minor drawing changes.

ExTR: **GB/BAS/ExTR18.0206/00**

File Reference: **18/0441**



The following pages are the prior revisions of this certificate.



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INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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Certificate No.: IECEx BAS 12.0032X issue No.:0 Certificate history:

Status: **Current**

Date of Issue: 2015-07-16 Page 1 of 3

Applicant: **Metrix Instrument Company**
8824 Fallbrook
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Electrical Apparatus: **MX2032, MX2033 & MX2034 Digital Proximity Systems**
Optional accessory:


Type of Protection: **Intrinsic safety**

Marking: **Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +85°C)**

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Technical Manager

Signature:
(for printed version)



16-7-15

Date:

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Additional Manufacturing location
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STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 6.0

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
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GB/BAS/QAR10.0017/03



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The MX2032, MX2033 and MX2034 are normally supplied as part of the Digital Proximity System (DPS). The units comprise three potted printed circuit boards housed inside a DIN rail mountable enclosure. A coaxial RF connector is present to enable a proximity probe to be connected using an extension cable, and screw terminal plug and socket assembly accepts the user connections. The MX2034 also includes a BNC connector for dynamic output.

See annex for terminal parameters.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The protection concept used must be irrevocably marked on the label during installation.
2. For the MX2032 and 2034, the user terminal pin 3 is not for use in hazardous areas.
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Annex: IECEx BAS 12.0032X Annex 0.pdf

TERMINAL PARAMETERS

MX2032 & MX2034 Input Terminals Pins 1 & 2

$$\begin{aligned}U_i &= 28V \\I_i &= 93mA \\P_i &= 0.66W \\C_i &= 18nF \\L_i &= 2\mu H\end{aligned}$$

The equipment is to be powered only from resistively limited sources.

MX2032 & MX2034 Input Terminals Pins 3 w.r.t Pins 1 & 2

$$U_m = 0V$$

This connection is not for use in hazardous areas.

MX2033 Input Terminals Pins 1, 2 & 3

$$\begin{aligned}U_i &= 28V \\I_i &= 138mA \\P_i &= 0.81W \\C_i &= 18nF \\L_i &= 2\mu H\end{aligned}$$

The equipment is to be powered only from resistively limited sources.

MX 2034 Dynamic Output Connector

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