



# 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](http://www.iecex.com)

Certificate No.:	<b>IECEx LCI 11.0025X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 4	Issue 3 (2020-06-26)
Date of Issue:	2022-02-24		Issue 2 (2013-11-29)
			Issue 1 (2012-01-16)
			Issue 0 (2011-04-08)
Applicant:	<b>Metrix Instrument Co.</b> 8824 Fallbrook Drive Houston, Texas 77064 <b>United States of America</b>		
Equipment:	<b>ST5484E-***-****-** Vibration transmitters &amp; SW5484E-***-**8*-** Vibration switches, with conduit capped elbow</b>		
Optional accessory:			
Type of Protection:	<b>Flameproof "db"</b>		
Marking:	Ex db IIC T4 Gb <i>(refer to Annex for full marking)</i>		

Approved for issue on behalf of the IECEx  
Certification Body:

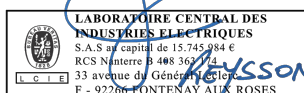
Position:

Signature:  
(for printed version)

Date:  
(for printed version)

**Jérôme REYSSON**

**Certification Officer**



2022-02-24

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Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)**  
**33 Avenue du General Leclerc**  
**Fontenay-aux-Roses FR-92260**  
**France**



**LCIE**

METRIX DOC NO: 1185351  
REV: D



# IECEx Certificate of Conformity

Certificate No.: **IECEx LCI 11.0025X**

Page 2 of 4

Date of issue: 2022-02-24

Issue No: 4

Manufacturer: **Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

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:

[FR/LCI/ExTR11.0026/00](#)  
[FR/LCIE/ExTR20.0043/00](#)

[FR/LCI/ExTR11.0026/01](#)  
[FR/LCIE/ExTR22.0018/00](#)

[FR/LCI/ExTR11.0026/02](#)

Quality Assessment Report:

[GB/BAS/QAR10.0017/07](#)



# IECEx Certificate of Conformity

Certificate No.: **IECEx LCI 11.0025X**

Page 3 of 4

Date of issue: 2022-02-24

Issue No: 4

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The ST5484E Vibration Transmitter is used to detect vibration level of machines and combines an accelerometer and a signal conditioner in a single unit. It transmits at the output a current in the range 4-20 mA, proportional to the vibration level. It can also be provided with an optional dynamic output.

The SW5484E Vibration Switch adds switching featured, when compared to the ST5484E, which can be used in auto-shutdown circuit that trips the machine under high vibration conditions.

Refer to Annex for full equipment description, range details and ratings.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

- The final user shall use an Ex d certified entry device at the elbow's entry while respecting the installation requirements of IEC 60079-14. For ST5484E transmitters with flying leads, a flameproof entry device with sealing compound (barrier seal) shall be used.
- The equipment does not incorporate an external earth facility. It is the responsibility of the user to ensure adequate earth continuity.
- The disassembling of the device from its conduit capped elbow is not allowed.



# IECEx Certificate of Conformity

Certificate No.: **IECEx LCI 11.0025X**

Page 4 of 4

Date of issue: 2022-02-24

Issue No: 4

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

### Issue 1:

- Normative update according to IEC 60079-0 Ed. 5.
- Modification of ST5484E vibration transmitter : change of EMI filters, modification of one printed circuit board, addition of a new casting compound.

### Issue 2 :

- Normative update according to IEC 60079-0 Ed 6.0.
- Change of the Metrix reference for the conduit elbow: 8200-001 become 8200-001-IEC.
- Modification of the model reference: ST5484E-XXX-Y3Z-WW becomes ST5484E-XXX-Y6Z-WW or ST5484E-XXX-Y8Z-WW.

### Issue 3 :

- Normative updates according to IEC 60079-0 Ed. 7.0 and IEC 60079-1 Ed. 7.0.
- Update of technical documents.
- Update of the type designation (range details).
- Adding of a version elbow Y-3-EX with integrated terminal block.
- Change of the Metrix reference for the conduit elbow: 8200-001-IEC to 8200-XXX-IEC (Y-3-EX elbow with or without integrated terminal block plus a certified Ex db reducer).
- Update of special conditions for a safe use.

### Issue 4:

- Addition of the SW5484E Vibration switch.
- Update of technical documents (includes a minor modification to DC power board).
- Update of specific conditions of use.

## Annex:

[Annex 01 to certificate IECEx LCI 11.0025X issue 4.pdf](#)



## Annex 01 to Certificate IECEX LCI 11.0025X issue 4



### FULL EQUIPMENT DESCRIPTION

The ST5484E Vibration Transmitter is used to detect vibration level of machines and combines an accelerometer and a signal conditioner in a single unit. It transmits at the output a current in the range 4-20 mA, proportional to the vibration level. It can also be provided with an optional dynamic output.

The SW5484E Vibration Switch adds switching featured, when compared to the ST5484E, which can be used in auto-shutdown circuit that trips the machine under high vibration conditions.

Each device consists of a stainless steel housing in cylindrical shape, having a 1 inch NPT external thread. The electronics (i.e. the printed circuit boards fitted with electronic components) is mounted in the metallic housing which is filled with potting compounds. By this way, the electronics is totally encased in the potting compounds.

The device is screwed into a certified conduit capped elbow of type Y-3-EX from Killark providing the flameproof type of protection "db". This assembly forms the complete product and it is secured with thread lock to prevent unscrewing the device from the capped elbow.

Depending on the model, the electrical connection of ST5484E is done via:

- 2-Pin or 4-Pin terminal block;
- Flying leads (2-wire or 4-wire);

A terminal block can also be mounted inside the conduit capped elbow to make the connection easier.

The SW5484E Vibration Switch is manufactured with a permanent cable (flying leads version). The selection of the cable shall be done in function of the ambient operating temperature range of the device and by taking into account a heating of 5 K at the entry.

#### Integrated IECEx Ex equipment:

Product designation	Manufacturer	Type	Certificate number	Marking & T <sub>amb</sub>	Reference standards
Capped elbow	Killark	Y-3-EX	IECEX QPS 16.0012X	Ex db IIC Gb Ex tb IIIC Db IP66  T <sub>amb</sub> : -50°C to +100°C	IEC 60079-0:2017 Ed. 7.0 IEC 60079-1:2014 Ed. 7.0 IEC 60079-31:2013 Ed. 2

### RATINGS

Supply voltage: 11-30 V DC

For SW5484E, the maximum current which can pass through each solid-state switch is 100 mA DC only.

### MARKING

METRIX

Address : ...

Type : ST5484E-\*\*\*-\*\*\*\*-\*\*<sup>(1)</sup> or SW5484E-\*\*\*-\*\*8\*-\*\*<sup>(1)</sup>

Serial number : ...

Year of construction : ...

Ex db IIC T4 Gb

IECEX LCI 11.0025X

-40 °C ≤ T<sub>amb</sub> ≤ +100 °C

<sup>(1)</sup> Completed as per the type

## RANGE DETAILS

For ST5484E Vibration transmitter:

ST5484E — \*\*\* — \*\* \* \* — \* \*

(A) (B) (C) (D) (E) (F)

(A) : Range (full scale)			
***			
Description			
Model ST5484E		A1	A2
Peak	RMS		
121	151	1.0 IPS	25.4 mm/s
122	152	0.5 IPS	12.7 mm/s
123	153	2.0 IPS	50.8 mm/s
124	154	5.0 IPS	125 mm/s
126	156	0.8 IPS	20.3 mm/s
132	162	3.0 IPS	76.2 mm/s

(D) : Connection type	
* Description	
0	24" Flying leads, 2-wire; (4-20 mA output only)
1	24" Flying leads, 4-wire; (4-20 mA output only and dynamic raw acceleration signal)
2	Terminal block, 2-wire; (4-20 mA output only)
3	Terminal block, 4-wire; (4-20 mA output only and dynamic raw acceleration signal)
5	72" Flying leads, 2-wire; (4-20 mA output only)
6	72" Flying leads, 4-wire; (4-20 mA output only and dynamic raw acceleration signal)

(B) : Housing material and stud size	
** Description	
0-9, 20	303 stainless steel housing, multiple stud sizes
10-19, 30	316 stainless steel housing, multiple stud sizes

(C) : Hazardous area certification	
* Description	
8	(F. P.) ATEX/IECEx, Ex db IIC T4 Gb (includes elbow)
G	(F. P.) ATEX/IECEx, Ex db IIC T4 Gb (includes integrated terminal block elbow)

(E) : High pass (-3 dB)	
* Description	
0	2 Hz
1	5 Hz
2	10 Hz
3	20 Hz
4	50 Hz
5	100 Hz
6	200 Hz
X	Custom

(F) : Low pass (-3 dB)	
* Description	
0	1500 Hz
1	500 Hz
2	1000 Hz
3	2000 Hz
4	250 Hz
5	230 Hz
X	Custom

For SW5484E Vibration switch:

SW5484E — \*\*\* — \*\* \* \* — \* \*

(A) (B) (C) (D) (E) (F)

(A) : Range (full scale)			
***		Description	
Model SW5484E		A1	A2
Peak	RMS		
121	151	1.0 IPS	25.4 mm/s
122	152	0.5 IPS	12.7 mm/s
123	153	2.0 IPS	50.8 mm/s
124	154	5.0 IPS	125 mm/s
126	156	0.8 IPS	20.3 mm/s
132	162	3.0 IPS	76.2 mm/s

(E) : High pass (-3 dB)	
*	Description
0	2 Hz
1	5 Hz
2	10 Hz
3	20 Hz
4	50 Hz
5	100 Hz
6	200 Hz
X	Custom

(B) : Housing material and stud size	
**	Description
10-19, 30	316 stainless steel housing, multiple stud sizes

(C) : Hazardous area certification	
*	Description
8	ATEX/IECEX Ex db IIC T4 Gb (explosion proof, includes Y-3-EX capped elbow)

(D) : Connection type	
*	Description
7	5 meter (16.5 feet) Flying leads, 8-wire
9	10 meter (33 feet) Flying leads, 8-wire

(F) : Low pass (- 3 dB)	
*	Description
0	1500 Hz
1	500 Hz
2	1000 Hz
3	2000 Hz
4	250 Hz
5	230 Hz
X	Custom

## ROUTINE TESTS

None.



**The following pages are the prior revisions of this certificate.**





# 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](http://www.iecex.com)

Certificate No.: **IECEx LCI 11.0025X**

Page 1 of 4

Certificate history:

Status: **Current**

Issue No: 3

Issue 2 (2013-11-29)

Issue 1 (2012-01-16)

Issue 0 (2011-04-08)

Date of Issue: 2020-06-26

Applicant: **Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

Equipment: **Vibration transmitters with conduit elbow - ST5484E series**

Optional accessory:

Type of Protection: **Flameproof "db"**

Marking: **Ex db IIC T4 Gb**  
(see attachment for full marking)

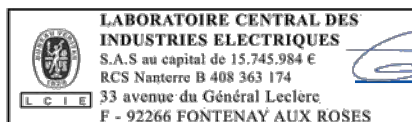
Approved for issue on behalf of the IECEx  
Certification Body:

**Julien GAUTHIER**

Position:

**Certification Officer**

Signature:  
(for printed version)



Date:

2020-06-26

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**Laboratoire Central des Industries Electriques (LCIE)**  
33 Avenue du General Leclerc  
Fontenay-aux-Roses FR-92260  
France



**METRIX DOC NO: 1185351**  
**REV: C**



# IECEx Certificate of Conformity

Certificate No.: **IECEx LCI 11.0025X**

Page 2 of 4

Date of issue: 2020-06-26

Issue No: 3

Manufacturer: **Metrix Instrument Co.**  
8824 Fallbrook Drive  
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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition: 7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 7.0

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:

[FR/LCI/ExTR11.0026/00](#)  
[FR/LCIE/ExTR20.0043/00](#)

[FR/LCI/ExTR11.0026/01](#)

[FR/LCI/ExTR11.0026/02](#)

Quality Assessment Report:

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



# IECEx Certificate of Conformity

Certificate No.: **IECEx LCI 11.0025X**

Page 3 of 4

Date of issue: 2020-06-26

Issue No: 3

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The vibration transmitter is used to detect vibration level of machines and combines an accelerometer and a signal conditioner in a single unit. It transmits at the output a current in the range 4-20 mA, proportional to the vibration level. It can also be provided with an optional dynamic output.

The full equipment description is given in the attachment.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

- Ambient operating temperature range:  $-40\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +100\text{ }^{\circ}\text{C}$ .
- The user shall use an Ex d certified entry device at the elbow's entry while respecting the installation requirements of IEC/EN 60079-14. Furthermore for flying leads version without terminals, the final user shall use a flameproof entry device with sealing compound (barrier seal) at the elbow's entry.
- The device does not incorporate an external earth facility. It is the responsibility of the user to ensure adequate earth continuity.
- The disassembling of the vibration transmitter from its conduit elbow is not allowed.



# IECEx Certificate of Conformity

Certificate No.: **IECEx LCI 11.0025X**

Page 4 of 4

Date of issue: 2020-06-26

Issue No: 3

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

### Issue 1:

- Normative update according to IEC 60079-0 Ed. 5.
- Modification of ST5484E vibration transmitter : change of EMI filters, modification of one printed circuit board, addition of a new casting compound.

### Issue 2 :

- Normative update according to IEC 60079-0 Ed 6.0.
- Change of the Metrix reference for the conduit elbow: 8200-001 become 8200-001-IEC.
- Modification of the model reference: ST5484E-XXX-Y3Z-WW becomes ST5484E-XXX-Y6Z-WW or ST5484E-XXX-Y8Z-WW.

### Issue 3 :

- Normative updates according to IEC 60079-0 Ed. 7.0 and IEC 60079-1 Ed. 7.0.
- Update of technical documents.
- Update of the type designation (range details).
- Adding of a version elbow Y-3-EX with integrated terminal block.
- Change of the Metrix reference for the conduit elbow: 8200-001-IEC to 8200-XXX-IEC (Y-3-EX elbow with or without integrated terminal block plus a certified Ex db reducer).
- Update of special conditions for a safe use.

## Annex:

[Annex 01 to Certificate IECEx LCI 11.0025X issue 3.pdf](#)



## Annex 01 to Certificate IECEX LCI 11.0025X issue 3



### FULL EQUIPMENT DESCRIPTION

The vibration transmitter is used to detect vibration level of machines and combines an accelerometer and a signal conditioner in a single unit. It transmits at the output a current in the range 4-20 mA, proportional to the vibration level. It can also be provided with an optional dynamic output.

The vibration transmitter has a stainless steel housing, in cylindrical shape, having a 1 inch NPT external thread. It is screwed into a certified conduit elbow of type Y-3-EX from Killark providing the flameproof type of protection "db". The assembly is secured with thread lock to prevent unscrewing the sensor from the conduit elbow.

The electrical connection is done via a two or four pin terminal block OR via flying leads (2-wire or 4-wire). A terminal block also may be mounted inside the conduit elbow to make the connection easier.

The complete references of the conduit elbow are:

Product designation	Manufacturer	Type	Certificate number	Marking & T <sub>amb</sub>	Reference standards
Capped elbow	Killark	Y-3-EX	IECEX QPS 16.0012X	Ex db IIC Gb Ex tb IIIC Db IP66 T <sub>amb</sub> : -50°C to +100°C	IEC 60079-0:2017 Ed. 7.0 IEC 60079-1:2014 Ed ; 7.0 IEC 60079-31:2013 Ed. 2

### MARKING

Metrix

Type: ST5484E-\*\*\*-\*\*\*\*-\*\* (1)

Serial number: ...

Year of construction: ...

Ex db IIC T4 Gb

IECEX LCI 11.0025X

-40 °C ≤ T<sub>amb</sub> ≤ +100 °C

(1) Completed as per the range details

**METRIX DOC NO: 1185351**  
**REV: C**

## RANGE DETAILS

The type designation of the vibration transmitter is given as follows:

ST5484E — \*\*\* — \*\* \* \* — \* \*

(A) (B) (C) (D) (E) (F)

(A) : Range (full scale)			
***		Description	
Model ST5484E		A1	A2
Peak	RMS		
121	151	1.0 IPS	25.4 mm/s
122	152	0.5 IPS	12.7 mm/s
123	153	2.0 IPS	50.8 mm/s
124	154	5.0 IPS	125 mm/s
126	156	0.8 IPS	20.3 mm/s
132	162	3.0 IPS	76.2 mm/s

(D) : Connection type	
*	
Description	
0	24" Flying leads, 2-wire; (4-20 mA output only)
1	24" Flying leads, 4-wire; (4-20 mA output only and dynamic raw acceleration signal)
2	Terminal block, 2-wire; (4-20 mA output only)
3	Terminal block, 4-wire; (4-20 mA output only and dynamic raw acceleration signal)
5	72" Flying leads, 2-wire; (4-20 mA output only)
6	72" Flying leads, 4-wire; (4-20 mA output only and dynamic raw acceleration signal)

(B) : Housing material and stud size	
**	
Description	
0-9, 20	303 stainless steel housing, multiple stud sizes
10-19, 30	316 stainless steel housing, multiple stud sizes

(C) : Hazardous area certification	
*	
Description	
8	(F. P.) ATEX/IECEx, Ex db IIC T4 Gb (includes elbow)
G	(F. P.) ATEX/IECEx, Ex db IIC T4 Gb (includes integrated terminal block elbow)

(E) : High pass (-3 dB)	
*	
Description	
0	2 Hz
1	5 Hz
2	10 Hz
3	20 Hz
4	50 Hz
5	100 Hz
6	200 Hz
X	Custom

(F) : Low pass (-3 dB)	
*	
Description	
0	1500 Hz
1	500 Hz
2	1000 Hz
3	2000 Hz
4	250 Hz
5	230 Hz
X	Custom

## RATINGS

Power supply: 11 to 30 V DC

## ROUTINE TESTS

None.

METRIX DOC NO: 1185351  
REV: C



**The following pages are the prior revisions of this certificate.**



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx LCI 11.0025X issue No.: 2  
Status: **Current**  
Date of Issue: **2013-11-29** Page 1 of 4

Certificate history:  
Issue No. 2 (2013-11-29)  
Issue No. 1 (2012-1-16)  
Issue No. 0 (2011-4-8)

Applicant: **Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

Electrical Apparatus: **Vibration Transmitter with conduit elbow type ST5484E...**  
Optional accessory:

Type of Protection: **Flameproof "d"**

Marking: METRIX Address : .....  
Type : ST5484E... (1)  
Serial number : .....  
Year of construction : .....  
Ex d IIC T4 Gb  
IECEx LCI 11.0025 X  
(1)see attachment

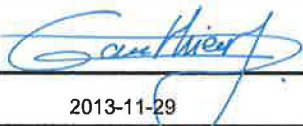
Approved for issue on behalf of the IECEx  
Certification Body:

Julien GAUTHIER

Position:

Certification Officer

Signature:  
(for printed version)

  
2013-11-29

Date:

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)**  
33 Avenue du General Leclerc  
FR-92260 Fontenay-aux-Roses  
France

Documents relative to LCIE certification activities (Certificates, QARs, ExTRs) can be registered under the references "LCI" or "LCIE".



METRIX DOC NO: 1185351  
REV: B





# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2013-11-29

Issue No.: 2

Page 2 of 4

Manufacturer: **Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

Additional Manufacturing location  
(s):

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 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 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6

*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:

FR/LCI/ExTR11.0026/00

FR/LCI/ExTR11.0026/01

FR/LCI/ExTR11.0026/02

##### Quality Assessment Report:

GB/BAS/QAR10.0017/00

GB/BAS/QAR10.0017/01

GB/BAS/QAR10.0017/02



# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2013-11-29

Issue No.: 2

Page 3 of 4

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The vibration transmitter is used to detect vibration level of machine, it provides at the output a current, in the range 4-20 mA, function of the vibration level.  
The vibration transmitter can be used associated with a conduit elbow from Killark reference Y-3-EX providing a flameproof protection type "d".  
The Killark elbow sub-assembly is an already certified product for flameproof protection concept, Metrix reference is 8200-001-IEC, marking is: Ex d IIC IP56

### CONDITIONS OF CERTIFICATION: YES as shown below:

- Temperature range:  $-40^{\circ}\text{C} \leq T_{amb} \leq +100^{\circ}\text{C}$ .
- Use of conduit elbow, Metrix reference: 8200-001-IEC, which is a Killark product with reference: Y-3-EX.



# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2013-11-29

Issue No.: 2

Page 4 of 4

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Issue 1:

- update of IEC 60079-0 Ed 5 standard.
- modification of ST5484E vibration transmitter : change of EMI filters, modification of one printed circuit board, addition of a new casting compound.

### Issue 2 :

- normative update according to IEC 60079-0 Ed 6.0 standard
- change of reference for the conduit elbow : 8200-001 become 8200-001-IEC
- modification of the model reference : ST5484E-XXX-Y3Z-WW become ST5484E-XXX-Y6Z-WW or ST5484E-XXX-Y8Z-WW.

Annex: LCIE 11.0025X-attachment 1.pdf

METRIX DOC NO: 1185351  
REV: B

**Designation of the model : ST5484-aaa-bcd-ef :**

aaa : range

Model ST5484E-		A1	A2
Peak	RMS		
121	151	1,0 IPS	25,4 mm/s
122	152	0,5 IPS	12,7 mm/s
123	153	2,0 IPS	50,8 mm/s
124	154	5,0 IPS	125 mm/s
126	156	0,8 IPS	20,3 mm/s
132	162	3,0 IPS	76,2 mm/s

b : housing material and stud size

0-9, 20	303 SST housing, multiple stud sizes
10-19, 30	316 SST housing, multiple stud sizes

c : hazardous area certification

3	ATEX, Ex ia IIC T4 Ga
5	INMETRO, Ex ia IIC T4 Ga
6	INMETRO, Ex d IIC T4 Gb
7	IECEX, Ex ia IIC TA Ga
8	ATEX/IECEX, Ex d IIC T4 Gb

d : dynamic output

0, 2, 4, 5	4-20mA output only
1, 3, 6	Dynamic output = 100mV/g

e : high pass (-3db)

0	2 Hz
1	5 Hz
2	10 Hz
3	20 Hz
4	50 Hz
5	100 Hz
6	200 Hz
X	CUSTOM

f : low pass (-3db)

0	1500 Hz
1	500 Hz
2	1000 Hz
3	2000 Hz
4	250 Hz
5	230 Hz
X	CUSTOM



**The following pages are the prior revisions of this certificate.**



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:

IECEx LCI 11.0025 X

issue No.:1

Certificate history:

Issue No. 1 (2012-1-16)

Issue No. 0 (2011-4-8)

Status:

Current

Date of Issue:

2012-01-16

Page 1 of 4

Applicant:

**Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

Electrical Apparatus:

**Vibration Transmitter with conduit elbow**

Optional accessory:

Type of Protection:

**Flameproof "d"**

Marking:

METRIX Address : .....  
Type : ST5484E Serial number : .....  
Year of construction : .....  
Ex d IIC T4 Gb  
IECEx LCI 11.0025 X

Approved for issue on behalf of the IECEx  
Certification Body:

Julien GAUTHIER

Position:

Certification Officer

Signature:  
(for printed version)

Date:

2012-01-16

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 the [Official IECEx Website](http://Official IECEx Website).

Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)**  
33 Avenue du General Leclerc  
FR-92260 Fontenay-aux-Roses  
France





# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2012-01-16

Issue No.: 1

Page 2 of 4

Manufacturer: **Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

Manufacturing location(s):

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 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 : 2007-10** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition: 5

**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6

*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:

[FR/LCI/ExTR11.0026/01](#)

### Quality Assessment Report:

[GB/BAS/QAR10.0017/00](#)





# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2012-01-16

Issue No.: 1

Page 3 of 4

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The vibration transmitter is used to detect vibration level of machine, it provides at the output a current, in the range 4-20 mA, function of the vibration level.

The vibration transmitter can be used associated with a conduit elbow from Killark reference Y-3-EX providing a flameproof protection type "d".

The Killark elbow sub-assembly is an already certified product for flameproof protection concept, Metrix reference is 8200-001, marking is: Ex d IIC IP56

### CONDITIONS OF CERTIFICATION: YES as shown below:

- Temperature range:  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +100^{\circ}\text{C}$ .
- Use of conduit elbow, Metrix reference: 8200-001, which is a Killark product with reference: Y-3-EX.







# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2012-01-16

Issue No.: 1

Page 4 of 4

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Update of standard editions IEC 60079-0 (2009).

Modification of ST5484E vibration transmitter:

- Change of EMI filters.
- Modification of one printed circuit board.
- Addition of a new casting compound.



**The following pages are the prior revisions of this certificate.**



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:

IECEx LCI 11.0025X

issue No.:0

Certificate history:

Status:

Current

Date of Issue:

2011-04-08

Page 1 of 3

Applicant:

**Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

Electrical Apparatus:  
*Optional accessory:*

**Vibration Transmitter with conduit elbow**

Type of Protection:

**Flameproof "d"**

Marking:

**METRIX**  
**Address : .....**  
**Type : ST5484E**  
**Serial number : .....**  
**Year of construction : .....**  
**Ex d IIC T4**  
**IECEx LCI 11.0025 X**

*Approved for issue on behalf of the IECEx  
Certification Body:*

Marc Gillaux

*Position:*

Certification Manager

*Signature:  
(for printed version)*

*Date:*

08 AVR. 2011

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)**  
**33 Avenue du General Leclerc**  
**FR-92260 Fontenay-aux-Roses**  
**France**





# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2011-04-08

Issue No.: 0

Page 2 of 3

Manufacturer: **Metrix Instrument Co.**  
8824 Fallbrook Drive  
Houston, Texas 77064  
**United States of America**

Manufacturing location(s):

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 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 : 2004** Electrical apparatus for explosive gas atmospheres - Part 0: General requirements  
Edition: 4.0

**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6

*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:

FR/LCI/ExTR11.0026/00

Quality Assessment Report:

GB/BAS/QAR10.0017/00





# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 11.0025X

Date of Issue: 2011-04-08

Issue No.: 0

Page 3 of 3

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The vibration transmitter is used to detect vibration level of machine, it provides at the output a current, in the range 4-20 mA, function of the vibration level. The vibration transmitter can be used with a conduit elbow from Killark reference Y-3-EX providing a flameproof protection type "d".

The vibration transmitter ST5484E sub-assembly is an already certified product for intrinsic protection concept, marking is: Ex ia IIC T4

The Killark elbow sub-assembly is an already certified product for flameproof protection concept, Metrix reference is 8200-001, marking is: Ex d IIC IP56

### CONDITIONS OF CERTIFICATION: YES as shown below:

- Temperature range:  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +100^{\circ}\text{C}$ .
- Use of conduit elbow, Metrix reference: 8200-001, which is a Killark product with reference: Y-3-EX.

