



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 CML 23.0190X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2024-06-07
Applicant: **METRIX INSTRUMENT CO.**
8824 Fallbrook
Houston
TEXAS 77064
USA
United States of America
Equipment: **Signal Conditioner (5580, SW5580)**
Optional accessory:
Type of Protection: **Increased Safety Ex "ec" and Restricted Breathing Ex "nC"**
Marking: Ex ec nC IIC T4 Gc
5580 model: $-40^{\circ}\text{C} \leq T_a \leq 85^{\circ}\text{C}$
SW5580 model: $-40^{\circ}\text{C} \leq T_a \leq +65^{\circ}\text{C}$

Approved for issue on behalf of the IECEx
Certification Body:

L A Brisk

Position:

Assistant Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

07 June 2024

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:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom



METRIX DOC NO: 1915576
REV: B



IECEX Certificate of Conformity

Certificate No.: **IECEX CML 23.0190X**

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Date of issue: 2024-06-07

Issue No: 0

Manufacturer: **METRIX INSTRUMENT CO.**
8824 Fallbrook
Houston
TEXAS 77064
USA
United States of America

Manufacturing locations: **METRIX INSTRUMENT CO.**
8824 Fallbrook
Houston
TEXAS 77064
USA
United States of America

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 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Report:

[GB/CML/ExTR24.0100/00](#)

Quality Assessment Report:

[GB/BAS/QAR10.0017/09](#)

METRIX DOC NO: 1915576
REV: B



IECEX Certificate of Conformity

Certificate No.: **IECEX CML 23.0190X**

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Date of issue: 2024-06-07

Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Signal Conditioner (5580, SW5580) consists of two models, the 5580 and the SW5580. The 5580 is a DIN rail mounted smart vibration signal conditioner and consists of a non-metallic enclosure containing PCBs. The SW5580 is similar to 5580, but each channel of the SW5580 comes with two relays, either dry contacts or solid-state relay contacts, that can be configured for alarm level and time delay. The primary protection concept for this equipment is Ex ec, while the relays are assessed as Ex nC.

See Annex for full description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

See Annex for Specific Conditions of Use

Annex:

[IECEX CML 23.0190X Iss. 0 Annex.pdf](#)

Annexe to: IECEx CML 23.0190X, Issue 0
Apparatus: Signal Conditioner (5580, SW5580)
Applicant: Metrix Instrument Co.



Description

The Signal Conditioner (5580, SW5580) consists of two models, the 5580 and the SW5580. The 5580 is a DIN rail mounted smart vibration signal conditioner and consists of a non-metallic enclosure containing PCBs. The SW5580 is similar to 5580, but each channel of the SW5580 comes with two relays, either dry contacts or solid-state relay contacts, that can be configured for alarm level and time delay. The primary protection concept for this equipment is Ex ec, while the relays are assessed as Ex nC.

The 5580 and SW5580 receive signals from velocity sensors, accelerometers, or shaft observing proximity probe systems to produce a 4-20 mA output proportional to the measured variable and an amplified raw signal. This allows for a configurable signal input type for one or two independent channels plus a configurable scaling output either to peak or RMS units. For each channel, a green LED indicates sensor and cable integrity. In the event of sensor failure, the LED changes to red and the output currents driven below 3.6 mA, thereby signalling a malfunction. A BNC connector gives access to the raw input signal for local analysis. A built-in 4 digit LCD display is used to display both dynamic input and 4-20 mA output signal. Isolation is provided between input, outputs and supply.

Notes:

- IECEx ETL 21.0036X is superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by IECEx ETL 21.0036X.
- Where IECEx ETL 21.0036X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

Conditions of Manufacture

None.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- Equipment shall be installed in an IECEx Ex certified enclosure, in accordance with IEC 60079-0. The enclosure shall provide a minimum ingress protection of IP54. The equipment must be mounted on a vertical or horizontal rail within the enclosure.
- The maximum internal equipment surface temperature, measured according to IEC 60079-0, Clause 26.5.1, is as follows.

Product	Thermal rise	Ambient	Required Enclosure Service Temperature range
SW5580	27K	-40°C to +65°C	-40°C to +92°C min
5580	27K	-40°C to +85°C	-40°C to +112°C min

The end user must verify that the enclosure in which this equipment is installed is suitably rated for the service temperature range per the table above.



Certificate Annex IECEx
Version: 10.0 Approval: Approved



Eurofins E&E CML Limited
Newport Business Park, New Port Road
Ellesmere Port, CH65 4LZ, UK





- iii. Coaxial connections are provided for the access to the input signal reference circuit ground. Care shall be taken whilst installing the equipment to ensure a dielectric isolation of 500Vrms is maintained as per IEC 60079-7 Clause 6.1.
- iv. The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.
- v. Transient protection shall be provided on the supply to limit transients to 33.6VDC maximum.



Certificate Annex IECEX
Version: 10.0 Approval: Approved



Eurofins E&E CML Limited
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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

Certificate No.: **IECEX ETL 21.0036X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2021-07-26
Applicant: **Metrix Instruments Co. LP**
8824 Fallbrook Dr
Houston 77064-4855
United States of America
Equipment: **Signal Conditioner**
Optional accessory:
Type of Protection: **Increased Safety "ec", Sealed Device "nC"**
Marking: Ex ec nC IIC T4 Gc
IECEX ETL 21.0036X
5580 (-40°C ≤ Ta +85°C)
SW5580 (-40°C ≤ Ta +65°C)

Approved for issue on behalf of the IECEx
Certification Body:

Todd L. Relyea

Position:

Certification Officer

Signature:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

Intertek
3933 US Route 11 South
Cortland NY 13045-2995
United States of America

intertek

METRIX DOC NO: 1915576
REV; A



IECEX Certificate of Conformity

Certificate No.: **IECEX ETL 21.0036X**

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Date of issue: 2021-07-26

Issue No: 0

Manufacturer: **Metrix Instruments Co. LP**
8824 Fallbrook Dr
Houston 77064-4855
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 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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:

[US/ETL/ExTR13.0047/00](#)

[US/ETL/ExTR21.0040/00](#)

Quality Assessment Report:

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



IECEX Certificate of Conformity

Certificate No.: **IECEX ETL 21.0036X**

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Date of issue: 2021-07-26

Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The products covered by this report are DIN rail mounted smart vibration signal conditioners and switch (SW5580 model only) from Metrix. The SW5580 is similar to 5580, but each channel comes with two relays either dry contacts or solid state relay contacts that can be configured for alarm level and time delay.

They have been designed to accept signals from machine casing mounted velocity sensors, accelerometers or shaft observing proximity probe systems and produce a 4-20 mA output proportional to the measured variable and an amplified raw signal. It provides the user with a configurable signal input type for one or two independent channels plus a configurable feature to scale output either to peak or RMS units. For each channel, a green LED indicates sensor and cable integrity. In the event of sensor failure, the LED changes to red and the output current is driven below 3.6 mA, thereby signalling a malfunction. A BNC connector gives access to the raw input signal for local analysis. A built-in 4-digit LCD display is used to display both dynamic input and 4-20 mA output signal. Isolation is provided between input, outputs and supply.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The maximum internal equipment surface temperature measured according test conducted per Clause 26.5.1 IEC/EN/UL/CSA 60079-0 Standard was 91.84°C (@ 65°C ambient) for SW5580 model and 111.84°C (@ 85°C ambient) for 5580 model. End user must verify that the enclosure in which this equipment is installed is suitably rated for service per these temperatures.
- Equipment shall be installed in an Ex certified enclosure that is tool secured which provides a minimum ingress protection of IP54. The equipment must be mounted on a vertical or horizontal rail within the enclosure.
- Coaxial connections provided for the access to the input signal reference circuit ground. Care shall be taken whilst installing the equipment to ensure a dielectric isolation of 500Vrms is maintained.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.
- Transient protection shall be provided on the supply to limit transients not to exceed 33.6VDC.

Annex:

[G104621114_Annex for IECEx Certificate of Conformity.pdf](#)



Annex to IECEx Certificate of Conformity

Certificate No.	IECEX ETL 21.0036X	Issue No. 0
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
PARTS LIST, ANALOG PCB, 5580, SIGNAL CONDITIONER, AGENCY	100995-AGENCY	B	05/11/2021
PARTS LIST, DIGITAL PCB, 5580, SIGNAL CONDITIONER, RoHS, AGENCY	100998-AGENCY	A	10/26/2020
PARTS LIST, ASSY, INTERCONNECT PCB, 5580, SIGNAL CONDITIONER, RoHS, AGENCY	101050-AGENCY	B	05/11/2021
PARTS LIST, ASSY, INTERCONNECT PCB, SW5580, SOLID STATE SWITCHES, RoHS, AGENCY	101051-AGENCY	B	05/11/2021
PARTS LIST, INTERCONNECT PCB, SW5580, ELECTROMECHANICAL RELAYS, SWITCH, AGENCY	101004-AGENCY	B	05/11/2021
PARTS LIST, FRONT PCB, 5580, SIGNAL CONDITIONER, AGENCY	101001-AGENCY	B	05/11/2021
Analog BOARD-AGENCY	100993-AGENCY	B	05/11/2021
SCH, DIGITAL PCB, 5580, SIGNAL CONDITIONER, RoHS, AGENCY	100996-AGENCY	A	07/23/2020
INTERCONNECT BOARD, AGENCY	101002-AGENCY	B	05/11/2021
Front Panel-AGENCY	100999-AGENCY	B	05/11/2021
5580 Smart Vibration Signal Conditioner & SW5580 Dual Channel Configurable Switch Datasheet	1899675	B	June 2021
Installation Manual	1874512	B	June 2021
SIDE LABEL, AGENCY APPROVALS, SIGNAL CONDITIONER, 5580 & SMART SWITCH, SW5580, AGENCY	101031-XXX-AGENCY	B	06/08/2021

Note: An * is included before the title of documents that are new or revised.