



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 LCIE 18.0023X**

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Certificate history:

[Issue 0 \(2018-08-30\)](#)

Status: **Current**

Issue No: 1

Date of Issue: 2022-04-01

Applicant: **MEGGITT SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Equipment: **Signal Conditioner IPC 707 - Type : 244-707-000-xxx-A_**

Optional accessory:

Type of Protection: **Ex ia, Ex ec**

Marking: Ex ia IIC T6...T4 Ga

Ex ec IIC T6...T4 Gc

Refer to the attachment for full marking

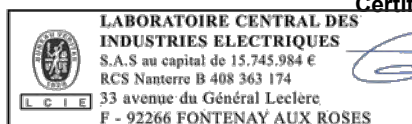
Approved for issue on behalf of the IECEx
Certification Body:

Julien GAUTHIER

Position:

Certification Officer

Signature:
(for printed version)



Date:
(for printed version)

2022-04-01

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Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
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FR-92260 Fontenay-aux-Roses
France





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Date of issue: 2022-04-01

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Manufacturer: **MEGGITT SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Manufacturing
locations: **MEGGITT SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[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:

[FR/LCIE/ExTR22.0026/00](#)

[FR/LCIE/ExTR22.0027/00](#)

Quality Assessment Report:

[FR/LCI/QAR06.0006/16](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

IPC 707 Signal conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

The electronic circuitry of the IPC 707 signal conditioner is totally potted and incorporated into an aluminium enclosure. IPC 707 Signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

Signal side output configurations could be as following:

- Voltage output: 3-wires transmission mode,
- Current output: 2-wires transmission mode.

Refer to the attachment for full description.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Ambient temperature range: -40°C to +85°C.
- The apparatus must be connected according to instruction manual.

a. Ex ia protection mode:

- The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard IEC 60079-25.
- The equipment contains more than 15% of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.
- The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of IEC 60079-14 standard.

b. Ex ec protection mode:

- For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at least IP54.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1 standard.
- Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to equipment.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Ex ia protection mode :

- Normative update according to IEC 60079-0:Ed:7 standard.
- Extension of the range, Reference 244-707-000-012-A2 becomes 244-707-000-xxx-A2.

Ex ec protection mode :

- Normative update according to IEC 60079-0:Ed:7 and IEC 60079-7:Ed:5.1 standards.
- Extension of the range, Reference 244-707-000-012-A3 becomes 244-707-000-xxx-A3.

Annex:

[Annex 01 to Certificate IECEx LCIE 18.0023X issue 01_1.pdf](#)

FULL EQUIPMENT DESCRIPTION

Functional description:

IPC 707 Signal Conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

Signal side output configurations could be as following:

- voltage output: 3-wires transmission mode,
- current output: 2-wires transmission mode.

Mechanical description:

Electronic circuitry of the IPC 707 signal conditioner is totally potted and incorporated into an aluminium enclosure. IPC 707 Signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

MARKING

Ex ia type of protection

Complete marking:

Vibro-Meter or MEGGITT SA or MFR S3960

Address: ...

Type: 244-707-000-xxx-A2

Serial number: ...

Year of construction : ...

Ex ia IIC T6 ...T4 Ga (*)

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$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +85^{\circ}\text{C}$

$U_i : \dots\text{V}, I_i : \dots\text{mA}, P_i : \dots\text{mW}, C_i : \dots\text{nF}, L_i : \dots\text{μH}. \quad (**)$

$U_o : \dots\text{V}, I_o : \dots\text{mA}, P_o : \dots\text{mW}, C_o : \dots\text{μF}, L_o : \dots\text{mH}.$

(**) : Intrinsic safety electrical parameters are identified as following :

Reduced marking:

Vibro-Meter or MEGGITT SA or MFR S3960

Address: ...

Type: 244-707-000-xxx-A2

Serial number: ...

Year of construction: ...

Ex ia IIC T6...T4 Ga (*)

IECEX LCIE 18.0023X

(*) Temperature classification shall be as following:

Ex ec type of protection

Complete marking:

Vibro-Meter or MEGGITT SA or MFR S3960

Address: ...

Type: 244-707-000-xxx-A3(*)

Serial number: ...

Year of construction: ...

Ex ec IIC T6 ... T4 Gc (**)

IECEX LCIE 18.0023X

$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +85^{\circ}\text{C}$

$U_{\text{max}} : 30\text{ V}, I_{\text{max}} : 20\text{ mA}.$

WARNING – DO NOT SEPARATE WHEN ENERGIZED.

WARNING – SEPARATE ONLY IN A NON-HAZARDOUS AREA.

(*) : completed with type designation.

(**): see temperatures table.

Reduced marking:

Vibro-Meter or MEGGITT SA or MFR S3960

Address: ...

Type: 244-707-000-xxx-A3 (*)

Serial number: ...

Year of construction: ...

Ex ec IIC T6 ... T4 Gc (**)

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(*) : completed with type designation.

(**) Temperature classification shall be as following:

Temperature classification	Ambient operating temperature range
T6	$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +70^{\circ}\text{C}$
T5	$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +80^{\circ}\text{C}$
T4	$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +85^{\circ}\text{C}$

RANGE DETAILS

Ex i model:

244 – 707 - 000	**	*	A2
			Minor modification number = 0 to 9 Each modification increase the number by 1
			Customized version (transfer, filter, installation) = 00 to 99
			Product Type

Ex e model:

244 – 707 - 000	**	*	A3
			Minor modification number = 0 to 9 Each modification increase the number by 1
			Customized version (transfer, filter, installation) = 00 to 99
			Product Type

RATINGS

Ex ia type of protection:

Terminal	Intrinsic safety electrical parameters	
J0 (SUP, COM)	U_i : 28V,	C_i : 2,2 nF, L_i : 1 μ H.
J0 (OUT, COM)	I_i : 100 mA, P_i : 700 mW	C_i : 9,6 nF, L_i : 565 μ H.
J1 (IN+, COM) (IN-, COM)	U_o : 6,6V, I_o : 66 mA, P_o : 107 mW, C_o : 5,69 μ F, L_o : 3,435 mH.	

Ex ec type of protection:

U_{max} : 30 V, I_{max} : 20 mA.

FULL CONDITIONS OF CERTIFICATION

Ex ia type of protection:

- Ambient temperature range: -40°C to +85°C.
- The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard IEC 60079-25.
- The apparatus must be connected according to instruction manual.
- The equipment contains more than 15% of aluminium. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.



Annex 01 to Certificate IECEx LCIE 18.0023 X issue 01



- e) The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of IEC 60079-14 standard.

Ex ec type of protection:

- a) Ambient temperature range: -40°C to +85°C.
- b) For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at least IP54.
- c) The apparatus must be connected according to instruction manual.
- d) The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1 standard.
- e) Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.