



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

Certificate No.: IECEx CES 12.0016X

Issue No: 4

Certificate history:

Status: **Current**

Issue No. 4 (2018-08-21)

Issue No. 3 (2017-06-15)

Date of Issue: **2018-08-21**

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Issue No. 2 (2015-10-30)

Issue No. 1 (2013-05-03)

Issue No. 0 (2012-10-08)

Applicant: **Piusi S.p.A.**
Via Antonio Pacinotti, 16A
I-46029 Suzzara (MN)
Italy

Equipment: **Pumps motors, types EX50 12V, EX50 230V and EX75 12V**

Optional accessory:

Type of Protection: **Flameproof enclosures 'd'**

Marking:
Ex db IIB T4 Gb

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

Mirko Balaz

Position:

Head of IECEx CB

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

Certificate issued by:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
Via Rubattino 54
20134 Milano
Italy



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Manufacturer: **Piusi S.p.A.**
Via Antonio Pacinotti, 16A
I-46029 Suzzara (MN)
Italy

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

*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:

[IT/CES/ExTR12.0020/00](#)
[IT/CES/ExTR12.0020/03](#)

[IT/CES/ExTR12.0020/01](#)

[IT/CES/ExTR12.0020/02](#)

Quality Assessment Report:

[DE/TPS/QAR18.0005/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Electro-pumps type **EX50 12V**, **EX50 230V** and **EX75 12V** are transportable apparatuses made of an electric motor and relevant junction box and electronics held in the same flameproof enclosure. The electric motors are equipped with protecting devices of different type and principle of operation:

- Automatic reset thermal protection, in the model EX50 230V, with a pre-set threshold;
- Manual reset circuit-breakers, in the models EX50 and EX75 12V, with a pre-set threshold;

A stretch of the motor shaft, between the electrical and the hydraulic part, is ventilated through three radial openings which allow the air exchange and create a separation zone between the hydraulic circuit and the motor enclosure. These electro-pumps are foreseen for discontinuous service as defined in the table below. This certificate bases on the assumption the operation conditions are compliant with the classification zone 1 inside the pump. The apparatus is equipped with an earthing screw which shall be connected, using a suitable cable, to an earthing point, common with the fuel tank, before energizing the motor.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall be attended while working in order to suddenly detect possible malfunctioning, including the intervention of the internal protection device and the pump stop;
- Follow the foreseen type of service, shown on the table at page 2, and avoid using the pump dry or in bypass conditions;
- In case the intervention of the internal protection device repeats, in normal operation conditions, do not attempt to restart the electro-pump but send it to the manufacturer for due checks;
- Before any run, connect tanks and electro-pump, through the special screw, to a common earth;
- The usage shall comply with the classification zone 1 inside the pump;
- Keep clear the three openings which put the stretch of the shaft, between the flame proof enclosure and the pump, in connection with open air;
- The electric connection of the electro-pump, especially when used as portable equipment, shall be carried out in safe zone or shall be suitably protected, using one of the protection methods foreseen by the standard IEC 60079-0;
- The temperature of the fluid processed by the pump shall be inside the ambient temperature range
- The flame-paths of the flame-proof enclosure are identified in the manufacturer's drawings; for information concerning their sizes do contact the manufacturer



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EQUIPMENT (continued):

Electrical characteristics

Model EX50 12V

- Rated voltage: 12 Vdc
- Rated current: 17 A
- Maximum power: 300 W
- Service type: max 30' ON - min 60' OFF
- Thermal protector: Sensata EXT 248-30

Model EX50 230V

- Rated voltage: 230 Vac - 50 Hz / 60 Hz
- Rated current: 0.8 A
- Maximum power: 300 W
- Service type: max 30' ON - min 30' OFF
- Thermal protector: Klixon Sensata 15AM 125A

Model EX75 12V

- Rated voltage: 12 Vdc
- Rated current: 20 A
- Maximum power: 312 W
- Service type: max 30' ON - min 30' OFF
- Thermal protector: Sensata EXT 248-30

Maximum rotating speed: 2700 min⁻¹

Insulation class F

Ambient temperature: $-10^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$

Warning label:

"Do not open when energized"

"Caution - Automatic thermal protected motor"

Installation conditions:

The accessory used for cable entry shall be suitably certified according to the standard IEC 60079-1 and shall be chosen with respect to the requirements of the current electrical installations rules.



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

Variation 4.

Update QAR details: replaced IT/CES/QAR12.0004 with DE/TPS/QAR18.0005/00.