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 IBE 19.0011X**

Certificate history:
Issue 0 (2020-01-13)

Status: **Current**

Issue No: 1

Date of Issue: 2024-12-16

Applicant: **GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG**
Fritz-Müller-Straße 6-8
74653 Ingelfingen
Germany

Equipment: **Combi Switch box with integrated pilot valve type GEMÜ 4242**

Optional accessory:

Type of Protection: **Increased safety "ec" or increased safety "ec" in combination with type of protection "n" or protection by enclosure "tc"**

Marking: Ex ec nC IIC T4 Gc

Ex tc IIIC T100 °C Dc

0 °C ≤ T_{amb} ≤ +55 °C

Version ASI 5

Ex ec IIC T4 Gc

Ex tc IIIC T100 °C Dc

0 °C ≤ T_{amb} ≤ +55 °C

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

Position: **Head of department Certification Body**

Signature:
(for printed version)

Date:
(for printed version)

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:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany

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Manufacturer: **GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG**
Fritz-Müller-Straße 6-8
74653 Ingelfingen
Germany

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 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

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:

DE/IBE/ExTR18.0048/00 DE/IBE/ExTR18.0048/01

Quality Assessment Report:

DE/IBE/QAR19.0001/04

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Combi Switch box with integrated pilot valve type GEMÜ 4242 is intended for the mounting on pneumatically actuated linear actuators. The position of the valve spindle is reliably detected and evaluated electronically. Integrated pilot valves allow direct control of the process valve connected to it. The current position of the valve is indicated by far-sighted LEDs and is fed back via electrical signals.

The Combi Switch box is provided in two sizes and consists of a transparent plastic cover and the socket which is either made of aluminium or stainless steel for size one or plastic as well as stainless steel for size two. Inside the housing, there are the PCB boards with electronic components, LEDs as position indicator, up to two pilot valves and the non incendive sliding contact. The version ASI 5 contains hall sensors instead of potentiometer.

Optionally the combi switch box may be equipped with an RFID chip for electronic recognition.

The combi switch box is provided in different versions:

- AS-Interface – ASI 3 with potentiometer
- AS-Interface – ASI 5 with hall sensors and Bluetooth interface, optionally
- IO-Link
- DeviceNet
- 24 V

Technical data

ambient temperature range:	0 °C…+55 °C				
degree of protection (acc. to IEC 60529)	minimum IP64				
Type	AS-Interface 3	AS-Interface 5	IO-Link	DeviceNet	24 V
Ordering code Field bus	A2, A3, A4	A5, A5D	IOL	DN	000
rated voltage	26.5 … 31.6 V DC	26.5 … 31.6 V DC	24 V DC (18...30 V DC)	11...25 V DC	24 V DC (18...30 V DC)
nominal current (typically)	≤ 150 mA	≤ 120 mA	≤ 120 mA	≤ 100 mA	≤ 120 mA

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Connecting cables and connectors must be protected against damage.
- Dust layers > 5 mm must be avoided.
- The plastic housing must be protected against intensive electrostatic charging processes.
- The surface may only be cleaned with a damp cloth.
- The M12 connectors may only be disconnected in the de-energised state.
- The Combi Switch box in size 2 was not subjected to the impact test according to IEC 60079-0, 26.4.2 and shall be installed protected against mechanical loads.
- The optional RFID chip may only be read if no explosive atmosphere is present.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
The ambient temperature range is 0…+55 °C.

The devices comply with the requirements of current standards.

Alternative O-Rings have been assessed.

A new version with hall sensors (ASI 5) has been added.