



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 CSA 16.0032U

Issue No: 3

Certificate history:

Issue No. 3 (2018-06-08)

Issue No. 2 (2018-01-18)

Issue No. 1 (2017-05-18)

Issue No. 0 (2016-11-06)

Status: **Current**

Page 1 of 4

Date of Issue: **2018-06-08**

Applicant: **Sermatex Grun Equipamentos Eletricos Ltda**
Rua Coronel Tristao 203
02925-000 Sao Paulo
Brazil

Equipment: **Actuator and Signal Elements**

Optional accessory:

Type of Protection: **Ex db; Ex tb**

Marking:

Ex db IIC or Ex db IIB+H2

Ex tb IIIC

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

Dorin Stochitoiu

Position:

Technical Advisor

*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:

CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada





IECEX Certificate of Conformity

Certificate No: IECEX CSA 16.0032U Issue No: 3

Date of Issue: 2018-06-08 Page 2 of 4

Manufacturer: **Sermatex Grun Equipamentos Eletricos Ltda**
Rua Coronel Tristao 203
02925-000 Sao Paulo
Brazil

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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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:

[CA/CSA/ExTR16.0032/00](#) [CA/CSA/ExTR16.0032/01](#) [CA/CSA/ExTR16.0032/02](#)
[CA/CSA/ExTR16.0032/03](#)

Quality Assessment Report:

[NO/PRE/QAR16.0039/00](#)



IECEX Certificate of Conformity

Certificate No: IECEx CSA 16.0032U

Issue No: 3

Date of Issue: 2018-06-08

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Actuators and signal elements, type designation SG-EX 22 or SG-EX 26, sizes 25, 40 and 57, are intended for installation in certified enclosures rated for Gb (gas) or Db (dust).

The actuating elements are pressure-operated or rotary switches; the signal elements are provided with a window. The illuminated button is a combined actuating and signal element.

For flameproof enclosures, the actuators and signal elements are to be screwed into M22x1.5 or 3/4" NPSM threaded holes of certified flameproof enclosures. The threads must meet the minimum requirements specified in IEC 60079-1. The enclosure wall must be at least 8 mm thick for M22x1.5 thread or 9.1 mm thick for 3/4" NPSM thread. The maximum thickness of the enclosure wall is limited by the size of the actuating and signal elements.

For protection by enclosure (dust), the actuators and signal elements are to be screwed into M22x1.5 or 3/4" NPSM threaded holes of certified dustproof enclosures. The threads must meet the minimum requirements specified in IEC 60079-31. The maximum thickness of the enclosure wall is limited by the size of the actuating and signal elements.

Schedule of Limitations:

- i. For flameproof applications, the actuators and signalling elements shall only be installed in Ex d enclosures with maximum internal volume of 35 litres and approved for at least Group IIC according to IEC 60079-1
- ii. For flameproof applications, the actuators and signaling elements shall only be installed in Ex d enclosures with maximum internal volume of 160 litres and approved for Group IIB+H2 according to IEC 60079-1.
- ii. For flameproof applications, the actuators and signaling elements shall only be installed in Ex d enclosures with maximum internal explosion pressure of 20 bar for Group IIC or Group IIB+H2 according to IEC 60079-1.
- iii. The actuators and signaling elements shall only be used for a service temperature range of -50°C to +60°C.
- iv. For flameproof applications, the actuators and signaling elements shall only be threaded in enclosure walls having a minimum length of 8.0 mm for M22.15 thread, and at least 5 threads engaged for 3/4" NPSM thread according to table 4, from EN 60079-1/IEC 60079-1. The maximum thickness of the enclosure wall is limited by size (length) of the actuating and signal elements
- v. For dustproof applications, the actuators and signalling elements shall only be threaded in enclosure wall having a minimum length of 3.0 mm for M22x1.5 thread or 3.7 mm for 3/4" NPSM thread, and at least threads engaged according to EN 60079-31/IEC 60079-31. The maximum thickness of the enclosures wall is limited by size (length) of the actuating and signal elements. The elements have to be fixed in the electrical equipment in such a way that rotation and accidental loosening will be prevented.
- vi. For the pilot light and illumined buttons the maximum load for LED is 2 W.
- vii. The outer molding of the elements has to be tightened according manufacturer's instructions.
- viii. The manufacturer's instructions for operation must be followed.

SPECIFIC CONDITIONS OF USE: NO



IECEX Certificate of Conformity

Certificate No: IECEx CSA 16.0032U

Issue No: 3

Date of Issue: 2018-06-08

Page 4 of 4

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

Issue 1: Increase the maximum internal volume from 35 litres to 160 litres for flameproof applications of the actuators and signaling elements and approved for Group IIB+H₂ only according to IEC 60079-1; Addition of signaling element made of polycarbonate; addition of length body size 57.

,

Issue 2: Addition of ¼" NPSM external thread size of the actuators and signalling elements for Group IIC; and addition of alternate resin for the signalling elements.

,

Issue 3: Expansion of LED power to 2 W and revision of the drawings to include the change of the LED power and plastic material of the actuators.

,