



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 PTB 15.0017U Issue No: 0 Certificate history:
Issue No. 0 (2015-06-11)

Status: **Current** Page 1 of 3

Date of Issue: **2015-06-11**

Applicant: **Sermatex Grün Equipamentos Elétricos Ltda**
Rua Coronel Tristao 203,
02925-000 Sao Paulo
Brazil

Equipment: **Actuators and signal elements, type SG-EX 22-xxxx-x-1**
Optional accessory:

Type of Protection: **flameproof enclosure (d) or protection by enclosure (tb)**

Marking: Ex db IIC or
Ex tb IIIC

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

Dr.-Ing. D. Markus

Position:

Head of Working Group "Flame Transmission Processes"

*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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





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Manufacturer: **Sermatex Gr̃n Equipamentos El̃tricos 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 electrical 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 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition:1	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:

[DE/PTB/ExTR15.0023/00](#)

Quality Assessment Report:

[DE/PTB/QAR14.0001/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description of equipment

Actuators and signal elements, type SG-EX 22-xxxx-x-1 in sizes 13, 25 and 40, for installation in separately certified enclosures of the following types of protection:

- Flameproof Enclosure (d) or
- Protection by Enclosure (tb)

Technical Data and Schedule of Limitations see Annex.

CONDITIONS OF CERTIFICATION: NO

Annex:

[CoCA PTB 150017, Issue No. 0.pdf](#)



Applicant: Sermatex Grün Equipamentos Elétricos Ltda
Rua Coronel Tristão 203
02925-000 São Paulo
Brazil

Electrical Apparatus: Actuators and signal elements, type SG-EX 22-xxxxx-x-1

Description of equipment

Actuators and signal elements, type SG-EX 22-xxxxx-x-1 in sizes 13, 25 and 40, for installation in separately certified enclosures of the following types of protection:

- Flameproof Enclosure (d) or
- Protection by Enclosure (tb)

Technical data

Screw thread M 22 x 1.5
Torque min. 3 Nm, max. 6 Nm

Service temperatures

Actuators -50°C to +100°C
Signal elements and illuminated pushbuttons -50°C to +70°C

Type of protection, Flameproof Enclosure 'd'

Field of application Enclosure with reference pressure up to max. 20 bar
Minimum wall thickness 10 mm
Required depth of engagement min. 8 mm
Number of engaged threads min. 5

Type of protection, Protection by Enclosure 'tb'

Enclosure wall thickness, min. 3 mm
Degree of protection IP 6X



Schedule of limitations

1. The actuating and signal elements are intended for installation in separately certified enclosures of Flameproof Enclosure (d) or Protection by Enclosure (tb) type of protection.
2. Installation in flameproof enclosures
 - 2.1 The elements must be included in the **type test** in accordance with EN 60079-1, section 15.2 (test for non-transmission of internal ignition) as required for the IIA, IIB or IIC classification of the corresponding electrical equipment/enclosure.
 - 2.2 If the reference pressure exceeds 20 bar, the actuating and signal elements must be included in the **type test** in accordance with EN 60079-1, section 15.1.3 (overpressure test) for the corresponding electrical equipment/enclosure.
3. The use of accessory elements (e.g. locking unit) between the components and the enclosure is only permitted in enclosures of flameproof enclosure type of protection.

It must (especially for size 13) be checked from case to case that the a.m. requirements for the minimum depth of engagement and the minimum number of engaged threads are complied with.
4. The elements must not be installed in through holes.
5. The enclosure walls must have the specified minimum thickness. The maximum thickness of the enclosure wall is limited by the size (length) of the actuating and signal elements.
6. The elements have to be fixed in the electrical equipment, in such a way that rotation and accidental loosening will be prevented. This can be done with the included lock nut (tightening torque 2 Nm) or a temperature-resistant adhesive (e.g. Loctite 641).

When a lock nut is used, care must be taken to ensure that an engagement of two threads is still available for fixing the lock nut.
7. The elements have to be tightened at the aluminium body of the attachments with the aid of the Sermatex adapters.
8. The manufacturer's instructions for operation must be followed.