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 PTB 17.0038X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2017-10-09)
Date of Issue:	2020-06-15		
Applicant:	**Dynisco Instruments** 38 Forge Parkway, Franklin, MA 02038, USA **United States of America**		
Equipment:	**Pressure transmitter, type series SPX-T and SPXGEN2**		
Optional accessory:			
Type of Protection:	**Intrinsic Safety**		
Marking:	**Ex ia IIC T6/T4 Ga** or **Ex ia IIC T6/T4 Gb**		

Approved for issue on behalf of the IECEx Certification Body: **Dr.-Ing. F. Lienesch**

Position: **Head of Department "Explosion Protection in Sensor Technology and Instrumentation"**

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:

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

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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Certificate No.: **IECEx PTB 17.0038X**

Date of issue: 2020-06-15 Issue No: 1

Manufacturer: **Dynisco Instruments**
38 Forge Parkway, Franklin, MA 02038, USA
United States of America

Additional 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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11:2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26:2014-10 Edition:3.0	Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

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/PTB/ExTR17.0044/00 DE/PTB/ExTR17.0044/01

Quality Assessment Report:

GB/SIR/QAR17.0006/01

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

The pressure transmitters of type series SPX-T and SPXGEN2 are used to convert a mechanical quantity (pressure) into a proportional electrical quantity in the field of process control. Both type series are supplied by an intrinsically safe 4…20 mA current loop with superimposed digital data communication in accordance with the HART-protocol. The conditioned measured value is available as an analog 4…20 mA current signal.

For further information reference is made to the annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The housing of the pressure transmitters, type series SPX-T and SPXGEN2 shall be connected reliably to the local equipotential bonding system.
2. Those variants of the pressure transmitters, type series SPX-T and SPXGEN2 which include the material aluminium, shall be installed in such a way that sparking as a result of impact or friction between aluminium and steel is excluded. Impact or friction between aluminium and stainless steel is allowed if the existence of rust particles can be excluded.
3. For application as category-1-equipment the connecting cable shall be equipped with a suitable conductive coating ($R_{surface} < 10^9\ \Omega$) to avoid possible electrostatic charge.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Adaption to the current state of standards
- Revision of the type labels (change of the identification number of the notified body responsible for manufacturer surveillance)
- Revision of the operating manual
- Revision of the safety description

Annex:

Annex to IECEx PTB 17.0038X-issue-1.pdf

Applicant: Dynisco Instruments

Electrical apparatus: Pressure transmitter, type series SPX-T and SPXGEN2

The pressure transmitters of type series SPX-T and SPXGEN2 are used to convert a mechanical quantity (pressure) into a proportional electrical quantity in the field of process control. Both type series are supplied by an intrinsically safe 4…20 mA current loop with superimposed digital data communication in accordance with the HART-protocol. The conditioned measured value is available as an analog 4…20 mA current signal. Type series SPX-T is optionally provided with an additional intrinsically safe 4…20 mA current loop which is used to display temperature, however, without digital data communication, as well as an optionally available secondary resistive temperature detector (RTD). HALL-switches (SPX-T) or pushbuttons (SPXGEN2) enable adjustments of Zero and Span. These are installed inside the enclosure. The transmitters may be operated as zone 0- or zone 1- equipment according to the specifications listed below.

Zone 0 equipment:

For application as zone 0 equipment the following marking and ambient temperatures apply:

Marking: **Ex ia IIC T6/T4 Ga**

For relationship between maximum permissible ambient temperature, maximum permissible medium temperature and temperature class reference is made to the following table:

temperature class	T6	T4
max. permissible ambient temperature	50 °C	85 °C
max. permissible medium temperature	60 °C	85 °C

The minimum permissible ambient and medium temperature is: -20 °C.

Zone 1 equipment:

For application as zone 1 equipment the following marking and ambient temperatures apply:

Marking: **Ex ia IIC T6/T4 Gb**

For relationship between maximum permissible ambient temperature, maximum permissible medium temperature and temperature class reference is made to the following table:

temperature class	T6	T4
max. permissible ambient temperature	60 °C	85 °C
max. permissible medium temperature	60 °C	85 °C

The minimum permissible ambient and medium temperature is: -20 °C.

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Bundesallee 100, 38116 Braunschweig, Germany
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Electrical data:

SPX-T and SPXGEN2

Supply and evaluation circuit (plug connector or open ended cable, terminals: PWR+/SIG+, PWR-/SIG- , RCAL+, RCAL-)	type of protection Intrinsic Safety Ex ia IIC only for connection to a certified intrinsically safe circuit Maximum values: U_i = 30 V I_i = 100 mA P_i = 750 mW C_i ≤ 4.5 nF L_i ≤ 40 µH only passive components without internal power source and without external circuits shall be connected to the terminals RCAL+/ RCAL-
Sensor circuit	internal, in type of protection Intrinsic Safety

SPX-T

Supply and evaluation circuit (plug connector or open ended cable, terminals: PWR+/SIG+, PWR-/SIG-, RCAL+, RCAL-, RTD-, RTD+, RTD+ 2nd PWR+/SIG+, 2nd PWR-/SIG-)	type of protection Intrinsic Safety Ex ia IIC only for connection to a certified intrinsically safe circuit Maximum values per circuit: U_i = 30 V I_i = 100 mA P_i = 750 mW C_i ≤ 4.5 nF L_i ≤ 40 µH only passive components without internal power source and without external circuits shall be connected to the terminals RCAL+/ RCAL-
Sensor circuit	internal, in type of protection Intrinsic Safety

Specific conditions of use

1. The housing of the pressure transmitters, type series SPX-T and SPXGEN2 shall be connected reliably to the local equipotential bonding system.
2. Those variants of the pressure transmitters, type series SPX-T and SPXGEN2 which include the material aluminium, shall be installed in such a way that sparking as a result of impact or friction between aluminium and steel is excluded. Impact or friction between aluminium and stainless steel is allowed if the existence of rust particles can be excluded.
3. For application as category-1-equipment the connecting cable shall be equipped with a suitable conductive coating ($R_{surface} < 10^9$ Ω) to avoid possible electrostatic charge.

In accordance with the field of application the marking reads:

Ex ia IIC T6/T4 Ga or Ex ia IIC T6/T4 Gb

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