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 19.0010

Issue No: 0

Certificate history:
Issue No. 0 (2019-03-04)

Status: **Current**

Date of Issue: **2019-03-04**

Applicant: **SAMSON AG Mess- und Regeltechnik**
Weismüllerstr. 3
60314 Frankfurt am Main
Germany

Equipment: **Positioner TROVIS 3730-1...**

Optional accessory:

Type of Protection: **"ia", "nA", "tb"**

Marking:

Ex ia IIC T4/T6 Gb and **Ex ia IIIC T85 °C Db** or

Ex tb IIIC T85 °C Db or

Ex nA IIC T4/T6 Gc and **Ex tb IIIC T85 °C Db** or

Ex nA IIC T4/T6 Gc

Approved for issue on behalf of the IECEx Certification Body:

Dr.-Ing. Frank Lienesch

Position:

Head of Department "Explosion Protection in Sensor Technology and Instrumentation"

Signature:
(for printed version)

Date:

11.3.19

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.

Certificate issued by:

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

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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Manufacturer: **SAMSON AG Mess- und Regeltechnik**
Weismüllerstr. 3
60314 Frankfurt am Main
Germany

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 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
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:

DE/PTB/ExTR19.0006/00

Quality Assessment Report:

DE/TUN/QAR06.0011/08

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The positioner of type TROVIS 3730-1-... is a single-acting positioner intended for the installation on pneumatic control valves. For further information reference is made to the annex.

SPECIFIC CONDITIONS OF USE: NO

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Additional information:

Annex:

Annex IECEx PTB 19.0010-00.pdf

Applicant:

SAMSON AG Mess- und Regeltechnik

Weismüllerstraße 3, 60019 Frankfurt, Germany

Electrical Apparatus:

Positioner TROVIS 3730-1...

The thermal and electrical data are represented as follows:

For general relationship between temperature class and the permissible ambient temperature ranges, reference is made to the following tables:

Applies to type of protection: „ia“

Gas group	Tempera-tureclass	Permissible ambient temperature range	Permissible ambient temperature range *)
IIC	T6	-40 °C ... 55 °C	-40 °C ... 45 °C
	T4	-40 °C ... 80 °C	-40 °C ... 70 °C

*) For the optional operation with inductive limit contact, type 3

Applies to type of protection: „nA”

Gas group	Tempera-tureclass	Permissible ambient temperature range
IIC	T6	-40 °C ... 55 °C
	T4	-40 °C ... 80 °C

Applies to type of protection „ia“

Dust group	Max. surface temperature	Permissible ambient temperature range
IIIC	T 85 °C	-40 °C ... 55 °C

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Bundesallee 100, 38116 Braunschweig, Germany
Postfach 33 45, 38023 Braunschweig, Germany
Telephone +49 531 592-0, Telefax +49 531 592-3605

Applies to type of protection „tb“

Dust group	Max. surface temperature	Permissible ambient temperature range
IIIC	T 85 °C	-40 °C ... 70 °C

Electrical data for type of protection „ia“:

Signal circuit
(terminals +11, -12)

type of protection Intrinsic Safety Ex ia IIC / IIIC
only for connection to a certified intrinsically safe circuit

Maximum values:

U_i = 28 V
I_i = 115 mA
P_i = 1 W
C_i = 5 nF
L_i = negligible

Software-limit contacts
(terminals +45, -46, +55, -56)

type of protection Intrinsic Safety Ex ia IIC / IIIC
only for connection to a certified intrinsically safe circuit

Maximum values:

U_i = 16 V
I_i = 52 mA
P_i = 169 mW
C_i = 15.9 nF
L_i = negligible

Limit contact, inductive
(terminals +41, -42, +51, -52)

type of protection Intrinsic Safety Ex ia IIC / IIIC
only for connection to a certified intrinsically safe circuit

Maximum values:

Type 2			Type 3		
U_i =	16	V	U_i =	16	V
I_i =	25	mA	I_i =	52	mA
P_i =	64	mW	P_i =	169	mW
C_i =	35	nF	C_i =	35	nF
L_i =	100	µH	L_i =	100	µH

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Repeater (terminals +31, -32)	type of protection Intrinsic Safety Ex ia IIC / IIIC only for connection to a certified intrinsically safe circuit Maximum values: U_i = 28 V I_i = 115 mA P_i = 1 W C_i = 5 nF L_i = negligible

Electrical data for type of protection „nA“ and „tb“:

Signal circuit (terminals +11, -12)	I_N = 4 ... 20 mA; U_N = 6.5 V; P_N = 140 mW
Software-limit contacts (terminals +45, -46, +55, -56)	U_N = 8.2 V; R_i = 1 kΩ; P_N = 17 mW
Limit contact, inductive (terminals +41, -42, +51, -52)	U_N = 8.2 V; R_i = 1 kΩ; P_N = 17 mW
Repeater (terminals +31, -32)	U_N = 24 V; P_N = 518 mW

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