Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

(1) # EU-TYPE EXAMINATION CERTIFICATE

(Translation)

(2) Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 18 ATEX 2001 **Issue: 0**

(4) Product: Positioner TROVIS 3730-1-...

(5) Manufacturer: SAMSON AG Mess- und Regeltechnik

(6) Address: Weismüllerstraße 3, 60314 Frankfurt, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 18-28026.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2018 **EN 60079-11:2012** **EN 60079-15:2010** **EN 60079-31:2014**

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 2 G Ex ia IIC T4/T6 Gb	**and**	**II 2 D Ex ia IIIC T85 °C Db**	**or**		
II 2 D Ex tb IIIC T85 °C Db				**or**	
II 3 G Ex nA IIC T4/T6 Gc	**and**	**II 2 D Ex tb IIIC T85 °C Db**	**or**		
II 3 G Ex nA IIC T4/T6 Gc					

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, October 25, 2018
On behalf of PTB:

Dr.-Ing. F. Lienesch
Direktor und Professor

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(13) # SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 18 ATEX 2001, Issue: 0**

(15) Description of Product

The positioner of type TROVIS 3730-1-... is a single-acting positioner intended for the installation on pneumatic control valves.

The positioner of type TROVIS 3730-1-... max be manufactured and operated according to the test documents listed in the test report.

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	Temperature class	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	Temperature class	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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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
U_i = 16 V
I_i = 25 mA
P_i = 64 mW
C_i = 35 nF
L_i = 100 µH

Type 3
U_i = 16 V
I_i = 52 mA
P_i = 169 mW
C_i = 35 nF
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

(16) Test Report PTB Ex 18-28026

(17) Specific conditions of use

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB

Braunschweig, October 25, 2018

Dr.-Ing. F. Lienesch
Direktor und Professor