Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # CONFORMITY STATEMENT

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) Test Certificate Number:

PTB 10 ATEX 2008 X

(4) Equipment: Digital positioner, type 3730-6-810

(5) Manufacturer: SAMSON AG Mess- und Regeltechnik

(6) Address: Weismüllerstr. 3, 60314 Frankfurt, Germany

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

(8) The Physikalisch-Technische Bundesanstalt, on the basis of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential assessment and test report PTB Ex 10-29352.

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

EN 60079-0:2006 **EN 60079-15:2005** **EN 61241-0:2006** **EN 61241-1:2004**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This Conformity Statement relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

II 3 G Ex nA II T6 or II 3 G Ex nL IIC/IIB T6 or II 3 D Ex tD A22 IP66 T80 °C

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, August 18, 2010

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 56

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(13) # SCHEDULE

(14) ## CONFORMITY STATEMENT PTB 10 ATEX 2008 X

(15) Description of equipment

The digital positioner of type 3730-6-810 with HART communication is a single or double acting positioner. It is used for the conversion of electrical actuating signals into pneumatic actuating pressure signals.

The equipment is installed inside the hazardous area.

For relationship between type of protection, temperature class, options and permissible ambient temperature range, reference is made to the table:

Type of protection / Options		Permissible ambient temperature range
Ex nA IIC or Ex nL IIC	T6	-55 °C ... 60 °C
	T5	-55 °C ... 70 °C
	T4	-55 °C ... 80 °C
Option, structure-borne sound sensor		-40 °C ... 60 °C
		-40 °C ... 70 °C
		-40 °C ... 80 °C

Electrical data

Signal circuit (terminals 11/12) ..... type of protection Ex nA II

Maximum operational values:

I = 4 ... 20 mA

or

type of protection Ex nL IIC/IIB

U = 32 V
I = 132 mA
P = 1.2 W

L = negligibly low
C = 5.3 nF

Position check-back ..... type of protection Ex nA II
or binary input
or structure-borne sound sensor
(terminals 31/32)

Maximum operational values:
I = 4 ... 20 mA

or

type of protection Ex nL IIC/IIB

U = 32 V
I = 132 mA

L = negligibly low
C = 56.3 nF

Inductive limit contact ..... type of protection Ex nA II
(terminals 41/42)

Maximum operational values:

U = 8 V
I = 8 mA

or

type of protection Ex nL IIC/IIB

U = 20 V
I = 52 mA
P = 169 mW

or

U = 20 V
I = 25 mA
P = 64 mW

L = 100 µH
C = 30 nF

For relationship between temperature class, permissible ranges of the ambient temperature, maximum short-circuit currents and maximum power for analyzing units, reference is made to the table:

Temperature class	Permissible ambient temperature range	I_o / P_o
T6	... 45 °C	52 mA / 169 mW
T5	-55 °C ... 60 °C	
T4	... 75 °C	
T6	... 60 °C	25 mA / 64 mW
T5	-55 °C ... 80 °C	
T4	... 80 °C	

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 2008 X

Software-limit contact ..... type of protection Ex nA II
(terminals 41/42 and 51/52)

Maximum operational values:

U = 8 V
I = 8 mA

or

type of protection Ex nL IIC/IIB

U = 20 V
I = 60 mA
P = 400 mW

L = negligibly low
C = 5.3 nF

Magnet valve ..... type of protection Ex nA II
(terminals 81/82)

Maximum operational values:

U = 6 ... 24 V DC

or

type of protection Ex nL IIC/IIB

U = 32 V
I = 132 mA

L = negligibly low
C = 5.3 nF

Fault signal output ..... type of protection Ex nA II
(terminals 83/84)

Maximum operational values:

U = 8 V
I = 8 mA

or

type of protection Ex nL IIC/IIB

U = 20 V
I = 60 mA
P = 400 mW

L = negligibly low
C = 5.3 nF

Serial SSP interface..... type of protection Ex nA II
(plug connector)

Maximum operational values:

U = 8 V DC
I = 20 mA

or

type of protection Ex nL IIC/IIB

U = 20 V
I = 60 mA
P = 200 mW

L = negligibly low
C = 5.3 nF

External position sensor..... type of protection Ex nA II
(Analog PCB, pins p9, p10, p11) or Ex nL IIC/IIB

Maximum operational values:

U = 7.88 V
I = 61 mA
P = 120 mW

L = 10 mH
C = 1 µF

(16) Assessment and test report PTB Ex 10-29352

(17) Special conditions for safe use

Type of protection Ex nA II:

A fuse according to IEC 60127-2/II, 250 V F or IEC 60127-2/VI, 250 V T with a nominal fuse current of max. 80 mA shall be connected in series to the signal circuit and to the position check-back circuit.

A fuse according to IEC 60127-2/II, 250 V F or IEC 60127-2/VI, 250 V T with a nominal fuse current of max. 40 mA shall be connected in series to the serial SSP interface.

All fuses shall be installed outside of the hazardous area.

Type of protection Ex nL IIC:

No fuses are required for the operation with energy-limited circuits of type of protection Ex nL IIC.

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SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 2008 X

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

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