



(1) **EC-Type Examination Certificate**

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

(3) EC Type Examination Certificate Number

EPS 11 ATEX 1 380

Rev: 2

(4) Equipment: Electrical controller Type ExReg... with ExPro-C.. Sensors

(5) Manufacturer: Schischek GmbH

(6) Address: Mühlsteig 45
90579 Langenzenn, Germany

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

(8) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23rd 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 of the Directive. The examination and test results are recorded in the confidential report 11TH0450.

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

EN 60079-0:2012+A11:2013

EN 60079-7:2007

EN 60079-11:2012

EN 60079-18:2009

EN 60079-31:2014

(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 EC Type Examination Certificate relates only to the design and the 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 2(1)G Ex e mb ib [Ia Ga] IIC T6 Gb

II 2(1)D Ex tb ib [Ia Da] IIIC T80°C Db IP66

Certification department of explosion protection

Nürnberg, August 25, 2015



D. Zitzmann





(13)

Annexe

(14) **EC Type Examination Certificate EPS 11 ATEX 1 380**

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(15) Description of equipment:

The controller type ExReg is used for the control of processes in hazardous locations of zone 1 or zone 21 together with linear or rotary drives. The input values for pressure (ExReg-P, ExReg-V), humidity and temperature (ExReg-D mit ExPro-C) are measured by internal sensors. The appropriate sensors ExPro-C...for temperature and humidity can be used with different length, filters and connection methods. The intended use of the sensors ExPro is limited for category 2G/D and 3G/D. The internal and external sensors are supplied by intrinsic safe circuits. Also the display and buttons are part of intrinsic safe circuit. External sensors can be connected to the intrinsic safe "ia" outputs of version ExReg-A.. for use inside zone 0/20, depending that the sensor has a category 1 approval. The supply terminals and terminals for sensor output and external devices are protected by type of protection "increased safety e". The main part of equipment including fuses and temperature fuses is protected by type of protection "encapsulation m". Also the intrinsic safe part is potted for exclusion of gas. Temperature range is from -20°C to +50°C. The enclosure is either made of aluminum or stainless steel (VA) depending on the type.

Electrical data:

Supply of device and drive
(Terminal 1,2 and 4,5):

$U = 24 \text{ V AC/DC } \pm 20 \%$, AC 50....60Hz
 $U_m = 30 \text{ V}$

Switch contact:
(Terminal 2,3)

$U = 24 \text{ V AC/DC } \pm 20 \%$, AC 50....60Hz
 $I_{max} = 0,5 \text{ A}$
 $P_{max} = 0,5 \text{ W}$
 $U_m = 30 \text{ V}$

Drive analog Set Point:
(Terminal 6,7)

$I = 4 - 20 \text{ mA}$
 $U_m = 30 \text{ V}$

Drive analog value:
(Terminal 8,7)

$U = 0 - 10 \text{ V}$
 $U_m = 30 \text{ V}$

ExReg-P ; ExReg-D ; Ex-Reg-V

Controller Set Point analog input
(Terminal 9, 10)

$U = 0 - 10 \text{ V}$

ExReg-P-A ; ExReg-D-A ; ExReg-V-A

Drive position analog output
(Terminal 9, 10)

$U = 0 - 10 \text{ V}$

Controller value analog output
(Terminal 11, 12)

$U = 0 - 10 \text{ V}$

Controller set point analog input
(Terminal 13, 12)

$U = 0 - 10 \text{ V}$



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ExReg-P-B ; ExReg-D-B ; ExReg-V-B

BUS A1, B1 (Terminal 10, 11)

$U_m = 7 \text{ V}$

$P_{\text{max_in}} = P_{\text{max_out}} = 410 \text{ mW}$

BUS A2, B2 (Terminal 12, 13)

$U_m = 7 \text{ V}$

$P_{\text{max_in}} = P_{\text{max_out}} = 410 \text{ mW}$

ExReg-A

Sensor value analog input
(Terminal 9, 10)

$U = 0 - 10 \text{ V}$

Controller value analog output
(Terminal 11, 12)

$U = 0 - 10 \text{ V}$

Controller setpoint analog input
(Terminal 13, 12)

$U = 0 - 10 \text{ V}$

Connections in Exi

Output for

ExReg-P

Digital internal pressure sensor

Type of protection Ex ia IIC

Max. values:

$U_o = 7 \text{ V}$

$I_o = 83 \text{ mA}$

$P_o = 415 \text{ mW}$

For connection of digital pressure sensor
SCPB-Pa-xxx/xxxi2C-F3.3-SCH



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ExPro-C, ExReg_D

Digital internal temperature and humidity sensor

Type of protection Ex ia IIC

Max. values:

$U_0 = 7 \text{ V}$

$I_0 = 125 \text{ mA}$

$P_0 = 219 \text{ mW}$

For connection of digital temperature and humidity sensors by company Sensirion type SHT1x.

ExReg-A

External sensors in two- or three- wire connection

Type of protection Ex ia/ib IIC

Max. values: .

$U_0 = 7 \text{ V}$

$I_0 = 9 \text{ mA}$

$P_0 = 15 \text{ mW}$

Linear characteristic

C_i negligible

L_i negligible

(16) Test report: 11TH0450

(17) Special conditions for safe use:

none

(18) Essential health and safety requirements:

Met by standards.

Certification department of explosion protection

Nürnberg, August 25, 2015



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