



### Translation

# 1 EU-Type Examination Certificate

2 Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

3 EU-Type Examination Certificate Number: **BVS 17 ATEX E 088** Issue: **01**

4 Equipment: **Digital Positioner type 8049-ExPro-0\*\*\* and type 8049-ExPro-1\*\*\***

5 Manufacturer: **Schubert & Salzer Control Systems GmbH**

6 Address: **Bunsenstraße 38, 85053 Ingolstadt, Germany**

7 This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

8 DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of 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 Report No. BVS PP 17.2202 EU.

This issue of the EU-Type Examination Certificate replaces the previous issue of the EU-Type Examination Certificate BVS 17 ATEX E 088.


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

**EN IEC 60079-0:2018**                      **General requirements**  
**EN 60079-11:2012**                      **Intrinsic Safety "I"**

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

11 This EU-Type Examination Certificate relates only to the technical design 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 1G Ex Ia IIC T4 Ga**    for type 8049-ExPro-0\*\*\*  
**II 2G Ex Ia IIC T4 Gb**    for type 8049-ExPro-1\*\*\*

DEKRA Testing and Certification GmbH  
Bochum, 2023-05-02

Signed: Dr. Rolf Krökel

Managing Director



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13 **Appendix**

14 **EU-Type Examination Certificate**  
BVS 17 ATEX E 088 Issue 01

15 **Product description**

15.1 **Subject and type**

Digital Positioner type 8049-ExPro-0\*\*\* and type 8049-ExPro-1\*\*\*

15.2 **Description**

**Reason for this issue:**

The digital Positioner was tested in accordance to the standards listed on page 1. NPT thread options were added, cable gland options were enhanced. The type key and the marking was modified.

**Description of equipment:**

The digital positioners type 8049-ExPro-0\*\*\* and type 8049-ExPro-1\*\*\* are control devices to position pneumatically-controlled actuators. They are suitable for installation on linear and turn actuators.

Type 8049-ExPro-0\*\*\* is suitable for installation in areas where EPL Ga is required.

Type 8049-ExPro-1\*\*\* is suitable for installation in areas where EPL Gb is required.

Type 8049-ExPro-

**Hazardous Location**

For use in Zone 1, Class 1, Division 2	1	*	*	*
For use in Zone 0, Class 1, Division 1	0			

**Electrical connections**

Connection plan

Cable glands 2x M16x1.5 (without RM-4 module)	S0078	0		
Cable glands 2x M16x1.5, 1x M12x1.5 (with RM-4 module)	S0079	1		
Plug 1 1x M12x1 - 4 Pin	S0080	2		
Plug 1 + 2 2x M12x1 - 4 Pin	S0081	3		
Plug 1 + 2 2x M12x1 - 4 Pin	S0082	4		
Plug 1 + 2 2x M12x1 - 4 Pin	S0083	5		
Plug 1 + 2 2x M12x1 - 4 Pin	S0084	6		
US NPT thread with yellow cover plug (without RM-4 module)	S0078	7		
US NPT thread with yellow cover plug (with RM-4 module)	S0079	8		

**Stroke acquisition**

Linear potentiometer - standard		1		
Turn potentiometer		2		
Filter module for ext. potentiometer	S0085	3		
Filter module with Siemens non-contacting-sensor (NCS) 6DR4004-6N**0-*** (TÜV 12 ATEX 107540 X)	S0086	4		
Linear potentiometer - 50 mm		7		

**Option module**

Without		0		
Feedback module RM-4		4		



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The following combinations are not possible:

- 8049-ExPro-0\*7\*
- 8049-ExPro-0\*4
- 8049-ExPro-1\*0
- 8049-ExPro-2\*4
- 8049-ExPro-3\*0
- 8049-ExPro-4\*0
- 8049-ExPro-5\*0
- 8049-ExPro-6\*0
- 8049-ExPro-7\*4
- 8049-ExPro-8\*0

### 15.3 Parameters

#### 15.3.1 Electrical parameters

##### 15.3.1.1 Power Supply / Current Signal Circuit 4...20 mA Terminals 1 (SP 4...20 mA +) / 2 (SP 4...20 mA -)

Nominal voltage range		DC	8...30	V
Nominal current range			3...25	mA
Maximum input voltage	$U_i$	DC	30	V
Maximum input current	$I_i$		120	mA
Maximum input power	$P_i$		1	W
Maximum internal capacitance	$C_i$		negligible	
Maximum internal inductance	$L_i$		negligible	

##### NAMUR Switching Output 1 (ALARM) Terminals 3 (Namur +) / 4 (Namur -)

Nominal voltage		DC	8.2	V
Maximum input voltage	$U_i$	DC	16	V
Maximum input current	$I_i$		25	mA
Maximum input power	$P_i$		64	mW
Maximum internal capacitance	$C_i$		11	nF
Maximum internal inductance	$L_i$		negligible	
Galvanically isolated				

##### Binary Switching Input (linear characteristic) Terminals 5 (binary input +) / 6 (binary input -)

Nominal voltage		DC	2.8	V
Nominal switching current			0.2	mA
Maximum output voltage	$U_o$	DC	5.4	V
Maximum output current	$I_o$		1	mA
Maximum output power	$P_o$		2	mW
Maximum external capacitance	$C_o$		65	$\mu$ F
Maximum external inductance	$L_o$		50	mH





### 15.3.1.2 Type 8049-ExPro-\*\*\*4 (with Feedback-Module)

NAMUR Switching Output 2 (SW2 Switch High)  
Terminals 12 (Namur +) / 13 (Namur -)

NAMUR Switching Output 3 (SW1 Switch Low)  
Terminals 14 (Namur +) / 15 (Namur -)

Values are valid for each of the connections listed above.

Nominal voltage		DC	8.2	V
Maximum input voltage	$U_i$	DC	16	V
Maximum input current	$I_i$		25	mA
Maximum input power	$P_i$		64	mW
Maximum internal capacitance	$C_i$		11	nF
Maximum internal inductance	$L_i$		negligible	
Galvanically isolated				

Feedback Output (Loop) 4...20 mA  
Terminals 10 (FB 4...20 mA +) / 11 (FB 4...20 mA -)

Nominal voltage range		DC	8...30	V
Nominal current range			3...25	mA
Maximum input voltage	$U_i$	DC	30	V
Maximum input current	$I_i$		120	mA
Maximum input power	$P_i$		1	W
Maximum internal capacitance	$C_i$		negligible	
Maximum internal inductance	$L_i$		negligible	
Galvanically isolated				

### 15.3.1.3 Type 8049-ExPro-\*\*\*3\*

External Positioning Potentiometer Circuit (trapezoidal characteristic)

Plug 4 Pin 1...8

Nominal voltage		DC	2.8	V
Maximum output voltage	$U_o$	DC	5.4	V
Maximum output current	$I_o$		66	mA
Maximum output power	$P_o$		89	mW
Maximum external capacitance	$C_o$		61	$\mu$ F
Maximum external inductance	$L_o$		8	mH

### 15.3.1.4 Type 8049-ExPro-\*\*\*4\*

Siemens "non-contacting-sensor" (NCS) 6DR4004-6N\*\*0-\*\*\* is connected to the device with a maximum cable length of 5 m.  
(TÜV 12 ATEX 107540 X)

### 15.3.1.5 Types 8049-ExPro-\*\*\*2\*\*

8049-ExPro-\*\*\*3\*\*

8049-ExPro-\*\*\*4\*\*

8049-ExPro-\*\*\*5\*\*

8049-ExPro-\*\*\*6\*\*

Power Supply / Namur Switching Output / Binary Switching Input / Current Signal Circuit 4...20 mA (terminals 1...6) and the circuits on the Feedback-Module (terminals 10...15) may be connected to Plug 1 and Plug 2 in accordance to table 1 optionally.





Table 1: Pin configuration of Plug 1 and Plug 2

	Plug 1	Plug 2
S0080	Pin 1: Terminal 1 (SP 4...20 mA +) Pin 2: Terminal 2 (SP 4...20 mA -) Pin 3: Terminal 3 (Namur +) Pin 4: Terminal 4 (Namur -)	--
S0081	Pin 1: Terminal 1 (SP 4...20 mA +) Pin 2: Terminal 2 (SP 4...20 mA -) Pin 3: Terminal 3 (Namur +) Pin 4: Terminal 4 (Namur -)	Pin 1: Terminal 10 (FB 4...20 mA +) Pin 2: Terminal 11 (FB 4...20 mA -) Pin 3: Terminal 14 (Namur +) Pin 4: Terminal 15 (Namur -)
S0082	Pin 1: Terminal 1 (SP 4...20 mA +) Pin 2: Terminal 2 (SP 4...20 mA -) Pin 3: Terminal 3 (Namur +) Pin 4: Terminal 4 (Namur -)	Pin 1: Terminal 10 (FB 4...20 mA +) Pin 2: Terminal 11 (FB 4...20 mA -) Pin 3: Terminal 12 (Namur +) Pin 4: Terminal 13 (Namur -)
S0083	Pin 1: Terminal 1 (SP 4...20 mA +) Pin 2: Terminal 2 (SP 4...20 mA -) Pin 3: Terminal 3 (Namur +) Pin 4: Terminal 4 (Namur -)	Pin 3: Terminal 12 (Namur +) Pin 4: Terminal 13 (Namur -) Pin 3: Terminal 14 (Namur +) Pin 4: Terminal 15 (Namur -)
S0084	Pin 1: Terminal 1 (SP 4...20 mA +) Pin 2: Terminal 2 (SP 4...20 mA -) Pin 3: Terminal 10 (FB 4...20 mA +) Pin 4: Terminal 11 (FB 4...20 mA -)	Pin 3: Terminal 12 (Namur +) Pin 4: Terminal 13 (Namur -) Pin 3: Terminal 14 (Namur +) Pin 4: Terminal 15 (Namur -)

### 15.3.1.6 All Types

External Communication Interface

Connector PC-COM

When no explosive atmosphere is present, the interface can be used as a non-intrinsically safe circuit during maintenance and service.

Nominal voltage		2.8	V
Maximum voltage	$U_m$	6.1	V

### 15.3.2 Thermal parameter

Ambient temperature range  $-10\text{ °C} \leq T_{amb} \leq 75\text{ °C}$

### 16 Report Number

BVS PP 17.2202 EU, as of 2023-05-02

### 17 Specific Conditions of Use

None

### 18 Essential Health and Safety Requirements

Met by compliance with the requirements mentioned in item 9.



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19 **Remarks and additional information**

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH  
Bochum, 2023-05-02  
BVS-Rip/Mu A 20230092 / 342983700

Managing Director



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