



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEX TUN 21.0016X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 2	<a href="#">Issue 1 (2023-04-18)</a> <a href="#">Issue 0 (2021-12-07)</a>
Date of Issue:	2024-01-19		
Applicant:	<b>ARCA-REGLER GmbH</b> Kempener Straße 18 47918 Tönisvorst Germany		
Equipment:	<b>Electropneumatic positioner ARCAPRO 827A.ab-cde-fgh-i-j</b>		
Optional accessory:			
Type of Protection:	<b>Intrinsic safety "i"</b>		
Marking:	Ex ia IIC T6...T4 Gb or Ex ic IIC T6...T4 Gc		

Approved for issue on behalf of the IECEx  
Certification Body:

**Christian Roder**

Position:

**Head of IECEx Certification Body**

Signature:  
(for printed version)

Date:  
(for printed version)

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 [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**TÜV NORD CERT GmbH**  
Hanover Office  
Am TÜV 1, 30519 Hannover  
Germany





# IECEX Certificate of Conformity

Certificate No.: **IECEX TUN 21.0016X**

Page 2 of 4

Date of issue: 2024-01-19

Issue No: 2

Manufacturer: **ARCA-REGLER GmbH**  
Kempener Straße 18  
47918 Tönisvorst  
**Germany**

Manufacturing  
locations:

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

This Certificate **does not** indicate compliance with 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/TUN/ExTR21.0018/02](#)

Quality Assessment Report:

[DE/TUN/QAR21.0001/01](#)



# IECEX Certificate of Conformity

Certificate No.: **IECEX TUN 21.0016X**

Page 3 of 4

Date of issue: 2024-01-19

Issue No: 2

### EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Electropneumatic positioner ARCAPRO 827A.ab-cde-fgh-i-j with options (for details see attachment)

### SPECIFIC CONDITIONS OF USE: YES as shown below:

Ex i  
Intrinsic Safety

The electro-pneumatic positioner ARCAPRO 827A with type code (827A. X\*-\*\*\*-\*\*\*-\*) can also be operated with clean, dry, natural gas in locations where pressurized air is not readily available.

As a requirement for operation with natural gas all inserted electronics of the ARCAPRO 827A, including optional modules, must comply with the available safety requirements protection type “Ex ia” and an electric connection with protection level “ia”.

Sufficient ventilation for this operating condition must be ensured to avoid a Zone 0 atmosphere around the device. Operating instructions must be adhered to.

The connecting and disconnecting of not energy limited circuits to the terminals and the plugging respectively unplugging of the M12 connector and of the internal plug- and socket connectors under voltage is permitted only if the presence of hazardous atmosphere can be excluded.

The capacitance of the labels exceeds the allowed value of 3 pF. Operating instructions must be observed.

When retrofitting, the optional modules listed below must be marked on the manufacturer's label of the device by ticking the corresponding checkbox:

General

Type designation modules	Identification of the checkbox on the label	Marking on the PCBA for retrofitting into an existing device
Binary Module	DIO	6DR4004-6A
Digital I/O Module	DIO-2	6DR4004-6A, A5E52635850
Slot-type initiator module	ILS	6DR4004-6G
Inductive Limit Switches	ILS-2	6DR4004-6G, A5E52635888
Contact module	MLS	6DR4004-6K
Mechanic Limit Switches	MLS-2	6DR4004-6K, A5E52659309
Analog Output Module	AOM	6DR4004-6J
Analog Input Module	AIM	6DR4004-6F
Internal NCS module	iNCS	6DR4004-5LE



# IECEX Certificate of Conformity

Certificate No.: **IECEX TUN 21.0016X**

Page 4 of 4

Date of issue: 2024-01-19

Issue No: 2

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Optional feature Bluetooth Adapter SITRANS AW050

Modifications to AIM-Modul, 6DR4004-6F

- Displacement of the connection terminal X1

Modifications to Digital I/O Module (DIO), 6DR4004-6A

- Extension of the maximum permissible rating: Ui, Digital Input
- Extension of the maximum permissible ratings: Ui, Pi, li, Digital Output

Modifications to Inductive Limit Switches (ILS), 6DR4004-6G

- Extension of the maximum permissible ratings: Ui, Digital Output, slot initiators
- Extension of the maximum permissible ratings: Ui, Pi, li, Digital Output, fault signal

Modifications to Mechanic Limit Switches (MLS), 6DR4004-6K

- Extension of the maximum permissible ratings: Ui, Pi, li, Digital Output, fault signal

Modifications to Basic electronics, 2/4 wire HART, NoN-HART

- Alternative IC, Operational Amplifier with designation N100, N500
- Alternative IC, EEPROM with designation D202
- Alternative Reference diode with designation N101
- Alternative Transistor with designation V118

Modifications to Basic electronics, 2 wire, NCS-onboard

- Remove Resistor 10 K $\Omega$  with designation R235
- Alternative IC,  $\mu$ -controller, MCU\_P\_M16 with designation D203
- Alternative IC, HART-Modem, with designation D500

Coating on PCBA's and operation with natural gas j = NG

Modifications to NCS-Module 6DR4004-6N, 6DR4004-5LE

- Alternative Resistor with designation R7, R11
- Alternative IC OPA with designation N1

Modification AOM-Module, 6DR4004-6J

- Alternative I-Coupler with designation U100, U200
- Replacement Diodes with designation V106, V107, V108, V109
- Alternative IC OPA, with designation N101
- Adjustment of the connection value "Ci"

Editorial changes and clarifications in the presentation of technical data.

## Annex:

[Attachment IECEx TUN 21.0016X issue Nr. 2.pdf](#)

**Page 1 of 11**  
**Attachment to IECEx TUN 21.0016 X issue No.: 2**

Product:

The explosion proof electropneumatic positioner ARCAPRO serves as a coupling assembly between electrical controllers or control devices and pneumatic actuators. Together with the pneumatic actuator, it forms a control loop in which the actual value  $x$  is the position of the actuator stem for linear actuators or the position of the actuator shaft for rotary actuators and the reference variable is the control current of a controller or a manual control station from 0/4 to 20 mA. This signal is transmitted analog or via 2-wire HART or PA or FF communication.

From the comparison of the setting and actual value, the microcontroller generates pneumatic actuation increments, which are applied to the drive via piezo-controlled valves. The volume of the drive integrates the setting increments to the signal pressure  $y$ , which moves the drive rod or the drive shaft in approximately proportional fashion.

The pneumatic drives are available in single and double-acting versions. In the single-acting version, only one volume is ventilated, and the pressure generated works against a spring. In the double-acting version, two volumes work against each other; when one volume is ventilated, the counter volume is vented.

The basic unit can be output with a position feedback AOM, which means that the manipulated variable  $y$  (valve position) is output as current (4-20 mA).

**Built-in basic electronics and their dependencies on other equipment features**

1	2	3	-	4	5	6	-	7	8	9	-	10		11
<b>827A.</b>	<b>a</b>	<b>b</b>	<b>-</b>	<b>c</b>	<b>d</b>	<b>e</b>	<b>-</b>	<b>f</b>	<b>g</b>	<b>h</b>	<b>-</b>	<b>i</b>	<b>-</b>	<b>j</b>

Built-in basic electronics	Dependent on type of explosion protection <b>Index (a)</b>	Dependent on type of basic device connection <b>Index (b)</b>	Dependent on type of communication <b>Index (e)</b>	Dependent on type of options <b>Index (j)</b>	
2-Wire / Ex PCBA-No.: C73451-A430-L250 (ARCA No. 2255289) or PCBA-No.: A5E51252080 (coated version) (ARCA No. 3175367) or PCBA-No.: A5E49830025 (ARCA No. 3175008) or PCBA-No.: A5E52161392 (coated version) (ARCA No. 3182042)	<b>X = Ex i (IS)</b>	<b>2 = 2 wire</b>	<b>0 = Without</b>	If Operation with natural gas <b>NG</b> then <b>a = X</b>	<b>or</b>
2-Wire / HART / Ex PCBA-No.: A5E50576243 (ARCA No. 3175010) or PCBA-No.: A5E52164428 (coated version) (ARCA No. 3182044)	<b>X = Ex i (IS)</b>	<b>2 = 2 wire</b>	<b>H = HART</b>	If Operation with natural gas <b>NG</b> then <b>a = X</b>	<b>or</b>
2-/3-/4-Wire / HART / Ex PCBA-No.: C73451-A430-L200 (ARCA No. 2255288) or PCBA-No.: A5E44298157 (coated version) (ARCA No. 3175363)	<b>X = Ex i (IS)</b>	<b>4 = 2/3/4 wire</b>	<b>H = HART</b>	If Operation with natural gas <b>NG</b> then <b>a = X</b>	<b>or</b>
Profibus (PA) / Ex PCBA-No.: A5E00095037 (ARCA No. 2264815) or PCBA-No.: A5E44541826 (coated version) (ARCA No. 3175364)	<b>X = Ex i (IS)</b>	<b>2 = 2 wire</b>	<b>P = Profibus PA</b>	If Operation with natural gas <b>NG</b> then <b>a = X</b>	<b>or</b>
Foundation Fieldbus (FF) / Ex PCBA-No.: A5E00164801 (ARCA No. 3003862) or PCBA-No.: A5E51252093 (coated version) (ARCA No. 3175369)	<b>X = Ex i (IS)</b>	<b>2 = 2 wire</b>	<b>F = Foundation Fieldbus</b>	If Operation with natural gas <b>NG</b> then <b>a = X</b>	

### Enclosure types

1	2	3	-	4	5	6	-	7	8	9	-	10		11
827A.	a	b	-	c	d	e	-	f	g	h	-	i	-	j

Enclosure type	ARCA Index (f)
Aluminum (SA)	M
Stainless steel	E
Aluminum (SA+DA)	A

### Further equipment features

1	2	3	-	4	5	6	-	7	8	9	-	10		11
827A.	a	b	-	c	d	e	-	f	g	h	-	i	-	j

<b>Optional modules installed</b> Index (c)	0, A
<b>Limit monitor installed</b> Index (d)	0, B, S, K, D, I, M
<b>Enclosure</b> Index (f)	M, E, A
<b>Pneumatics</b> Index (g)	1, 2
<b>Position detection</b> Index (h)	0, 1, 2
<b>Connection thread electrical / pneumatic</b> Index (i)	G, N, M, P, R, S
<b>Order Codes</b> Index (j)	FIP, LT, SA, SB, SS, SW, NG, BT

**Type designation, Type code Optional built-in modules**

1	2	3	-	4	5	6	-	7	8	9	-	10		11
827A.	a	b	-	c	d	e	-	f	g	h	-	i	-	j

Designation	Type number	Controlled by type code
Binary Module (DIO)	6DR4004-6A C73451-A430-L2, RS-11/018	Index (d) = B
Digital I/O Module (DIO-2)	6DR4004-6A A5E52635850, RS-AA/001	Index (d) = D
Slot-type initiator module (ILS)	6DR4004-6G A5E00068028, RS-04/007	Index (d) = S
Inductive Limit Switches (ILS-2)	6DR4004-6G A5E52635888, RS-AA/001	Index (d) = I
Contact module (MLS)	6DR4004-6K A5E00303739, RS-02/007	Index (d) = K
Mechanic Limit Switches (MLS-2)	6DR4004-6K A5E52659309, RS-AA/001	Index (d) = M
Analog Output Module (AOM)	6DR4004-6J A5E52424383, RS-AA/002	Index (c) = A
	6DR4004-6J A5E44681475, RS-AA/003	
Analog Input Module (AIM)	6DR4004-6F A5E42389097, RS-AC/003	Index (h) = 2
Internal NCS module (iNCS)	6DR4004-5LE A5E35383917, RS-AB/009	Index (h) = 1

**Maximum permissible ambient temperature ranges ARCAPRO Type 827A**

<b>Electropneumatic Positioner ARCAPRO 827A 827A.ab-cde-fgh-i-j</b> with types of protection Ex ia/ic		
	Temperature class T4	Temperature class T6
No exceptions on the full scope of the Ex-approved equipment features.	-30 °C ≤ Ta ≤ +80 °C	-30 °C ≤ Ta ≤ +50 °C
with the data (j = LT)	-40 °C ≤ Ta ≤ +80 °C	-40 °C ≤ Ta ≤ +50 °C
with the data (c = 0) and (h = 2) and T6: (h ≠ 1)	-30 °C ≤ Ta ≤ +80 °C	-30 °C ≤ Ta ≤ +60 °C
with the data (e ≠ P, F) and (c = 0) and (h = 2) and (j = LT) and T6: (h ≠ 1)	-40 °C ≤ Ta ≤ +80 °C	-40 °C ≤ Ta ≤ +60 °C

**Maximum permissible electrical ratings**

<b>Basic electronic, 827A.X2...</b> <b>2-wire, 4...20 mA, without HART communication</b> Marking on the PCBA: C73451-A430-L250 or A5E49830025 or A5E51252080 (coated version) , A5E52161392 (coated version)					
<b>Auxiliary power supply / control current 4...20 mA</b> <ul style="list-style-type: none"> <li>Terminals 6(+) and 7/8(-) if PCBA C73451-A430-L250 or A5E51252080 (coated version)</li> <li>Terminals 6(+) and 7(-) if PCBA A5E49830025 or A5E52161392 (coated version)</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>	<b><math>L_i</math></b>
	30 V	100 mA	1 W	11 nF	209 $\mu$ H
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>		<b><math>C_i</math></b>	<b><math>L_i</math></b>
30 V	100 mA		11 nF	209 $\mu$ H	
<b>Digital input galvanically connected to auxiliary power supply / control current</b> <ul style="list-style-type: none"> <li>Terminals 9(+) and 10(-)</li> <li>Jumpered or connected to switch contact</li> </ul>					

<b>Basic electronic 827A.X2-**H...</b> <b>2-wire, 4...20 mA, HART communication</b> Marking on the PCBA: A5E50576243 or A5E52164428 (coated version)					
<b>Auxiliary power supply / control current 4...20 mA</b> <ul style="list-style-type: none"> <li>Terminals 6(+) and 7(-)</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>	<b><math>L_i</math></b>
	30 V	100 mA	1 W	11 nF	209 $\mu$ H
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>		<b><math>C_i</math></b>	<b><math>L_i</math></b>
30 V	100 mA		11 nF	209 $\mu$ H	
<b>Digital input galvanically connected to auxiliary power supply / control current</b> <ul style="list-style-type: none"> <li>Terminals 9(+) and 10(-)</li> <li>Jumpered or connected to switch contact</li> </ul>					

<b>Basic electronic 827A.X4-**H...</b> <b>2- / 3- / 4- wire, 4...20 mA, HART communication</b> Marking on the PCBA: C73451-A430-L200 or A5E44298157 (coated version)					
<b>Auxiliary power supply / control current 4...20 mA</b> <ul style="list-style-type: none"> <li>Jumper between terminal 6 and 4/5</li> <li>Control current connection terminals 3(+) and 7/8(-)</li> </ul> <b>3/4-wire basic device with HART</b> <ul style="list-style-type: none"> <li>Auxiliary power supply 18...30 V</li> <li>Terminals 2(+) and 4/5(-)</li> </ul> <b>Control current 4...20 mA</b> <ul style="list-style-type: none"> <li>Terminals 6(+) and 7/8(-)</li> <li>4-wire: auxiliary power supply and control current electrical isolated</li> <li>3-wire: common base point terminals 4/5 and 7/8</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>	<b><math>L_i</math></b>
	30 V	100 mA	1 W	11 nF	312 $\mu$ H
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>		<b><math>C_i</math></b>	<b><math>L_i</math></b>
30 V	100 mA		11 nF	312 $\mu$ H	

**Digital input galvanically connected to auxiliary power supply / control current**  
• Terminals 9(+) and 10(-)  
• Jumpered or connected to switch contact

<b>Basic electronic</b>				
<b>Profibus (PA) communication, 827A.X*-**P...</b> marking on the PCBA: A5E00095037, A5E44541826 (coated version)				
<b>Foundation Fieldbus (FF) communication, 827A.X*-**F...</b> marking on the PCBA: A5E00164801, A5E51252093 (coated version)				
<b>PA/FF bus circuit</b> • Terminals 6(+) and 7(-)	<b>Type of protection: Ex ia</b> For supply with a certified FISCO power supply. Maximum values:			
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>
	17.5 V	380 mA	5.32 W	(*1)
	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:			
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>
	24 V	250 mA	1.2 W	(*1)
	<b>Type of protection: Ex ic</b> For supply with a FISCO power supply. Maximum values:			
	<b><math>U_i</math></b>	<b><math>I_i</math></b>		<b><math>C_i</math></b>
	17.5 V	570 mA		(*1)
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:			
<b><math>U_i</math></b>			<b><math>C_i</math></b>	
32 V			(*1)	
<b>Safe input</b> • Terminals 81(+) and 82(-) • Galvanically safe isolated from PA/FF bus circuit and digital input	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:			
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>
	30 V	100 mA	1 W	(*1)
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:			
	<b><math>U_i</math></b>	<b><math>I_i</math></b>		<b><math>C_i</math></b>
	30 V	100 mA		(*1)
<b>Digital input galvanically connected to auxiliary power supply / control current</b> • Terminals 9(+) and 10(-) • Jumpered or connected to switch contact				

(\*1 = values negligibly small)

**Page 6 of 11**  
**Attachment to IECEx TUN 21.0016 X issue No.: 2**

<b>Option Module:</b> Binary Module, marked by <b>DIO</b> , Type 6DR4004-6A built in ARCAPRO 827A.**-*B...					
<b>Digital output circuits</b> <ul style="list-style-type: none"> <li>• Terminals <ul style="list-style-type: none"> <li>31(+) and 32(-)</li> <li>41(+) and 42(-)</li> <li>51(+) and 52(-)</li> </ul> </li> <li>• Galvanically safe isolated from all other circuits</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>	<b><math>L_i</math></b>
	15 V	25 mA	64 mW	5.2 nF	(*1
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>		<b><math>C_i</math></b>	<b><math>L_i</math></b>
15 V	25 mA		5.2 nF	(*1	
<b>Digital input circuits</b> <ul style="list-style-type: none"> <li>• Terminals 11(+) and 12(-)</li> <li>• Galvanically safe isolated from all other circuits</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Or <b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>		<b><math>C_i</math></b>	<b><math>L_i</math></b>	
	25.2 V		(*1	(*1	
	<b>Digital input galvanically connected to auxiliary power supply / control current</b> <ul style="list-style-type: none"> <li>• Terminals 21(+) and 22(-)</li> <li>• Jumpered or connected to switch contact</li> </ul>				

(\*1 = values negligibly small

<b>Option Module:</b> Digital I/O Module, marked by <b>DIO-2</b> , Type 6DR4004-6A, A5E52635850 built in ARCAPRO 827A.**-*D...					
<b>Digital output circuits</b> <ul style="list-style-type: none"> <li>• Terminals <ul style="list-style-type: none"> <li>31(+) and 32(-)</li> <li>41(+) and 42(-)</li> <li>51(+) and 52(-)</li> </ul> </li> <li>• Galvanically safe isolated from all other circuits</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>	<b><math>P_i</math></b>	<b><math>C_i</math></b>	<b><math>L_i</math></b>
	17.5 V	100 mA	250 mW	5.2 nF	(*1
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>	<b><math>I_i</math></b>		<b><math>C_i</math></b>	<b><math>L_i</math></b>
17.5 V	100 mA		5.2 nF	(*1	
<b>Digital input circuits</b> <ul style="list-style-type: none"> <li>• Terminals 11(+) and 12(-)</li> <li>• Galvanically safe isolated from all other circuits</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Or <b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b><math>U_i</math></b>		<b><math>C_i</math></b>	<b><math>L_i</math></b>	
	32 V		(*1	(*1	
	<b>Digital input galvanically connected to auxiliary power supply / control current</b> <ul style="list-style-type: none"> <li>• Terminals 21(+) and 22(-)</li> <li>• Jumpered or connected to switch contact</li> </ul>				

(\*1 = values negligibly small

**Page 7 of 11**  
**Attachment to IECEx TUN 21.0016 X issue No.: 2**

<b>Option Module:</b> Slot-type initiator module, marked by <b>ILS</b> , Type 6DR4004-6G built in ARCAPRO 827A.**-*S...					
<b>Digital output (fault signal)</b> • Terminals 31(+) and 32(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	15 V	25 mA	64 mW	5.2 nF	(*1
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
15 V	25 mA		5.2 nF	(*1	
<b>Digital output (slot initiators)</b> • Terminals 41(+) and 42(-) 51(+) and 52(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Or <b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	15 V	25 mA	64 mW	36 nF	100 µH

(\*1 = values negligibly small

<b>Option Module:</b> Inductive Limit Switches, marked by <b>ILS-2</b> , 6DR4004-6G, A5E52635888 built in ARCAPRO 827A.**-*I...					
<b>Digital output (fault signal)</b> • Terminals 31(+) and 32(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	17.5 V	100 mA	250 mW	5.2 nF	(*1
	<b>Type of protection: Ex ic</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
17.5 V	100 mA		5.2 nF	(*1	
<b>Digital output (slot initiators)</b> • Terminals 41(+) and 42(-) 51(+) and 52(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Or <b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	16 V	25 mA	64 mW	36 nF	100 µH

(\*1 = values negligibly small

**Page 8 of 11**  
**Attachment to IECEx TUN 21.0016 X issue No.: 2**

<b>Option Module:</b> Contact module, marked by <b>MLS</b> , 6DR4004-6K built in ARCAPRO 827A.**-*K...					
<b>Digital output (fault signal)</b> • Terminals 31(+) and 32(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	15 V	25 mA	64 mW	5.2 nF	(*1)
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	15 V	25 mA		5.2 nF	(*1)
<b>Digital output</b> • Terminals 41(+) and 42(-) 51(+) and 52(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	30 V	100 mA	750 mW	(*1)	(*1)
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	30 V	100 mA		(*1)	(*1)

(\*1 = values negligibly small)

<b>Option Module:</b> Mechanic Limit Switches, marked by <b>MLS-2</b> , 6DR4004-6K, A5E52659309 built in ARCAPRO 827A.**-*M...					
<b>Digital output (fault signal)</b> • Terminals 31(+) and 32(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	17.5 V	100 mA	250 mW	5.2 nF	(*1)
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	17.5 V	100 mA		5.2 nF	(*1)
<b>Digital output</b> • Terminals 41(+) and 42(-) 51(+) and 52(-)	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	30 V	100 mA	750 mW	(*1)	(*1)
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	30 V	100 mA		(*1)	(*1)

(\*1 = values negligibly small)

**Page 9 of 11**  
**Attachment to IECEx TUN 21.0016 X issue No.: 2**

<b>Option Module:</b> Analog Output Module, marked by <b>AOM</b> , Type 6DR4004-6J, built in ARCAPRO 827A.**-A...					
<b>Current output</b> <ul style="list-style-type: none"> <li>• Terminals 61(+) and 62(-)</li> <li>• Galvanically safe isolated from other circuits</li> </ul>	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	30 V	100 mA	1 W	2 nF	(*1)
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
30 V	100 mA		2 nF	(*1)	

(\*1 = values negligibly small)

<b>Option Module:</b> Internal NCS Module, marked by <b>iNCS</b> , 6DR4004-5LE					
Power supply and signal circuits electrical connected to the basic device	<b>Type of protection: Ex ia</b> For connection to certified intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>	<b>P<sub>i</sub></b>	<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
	5 V	160 mA	120 mW	110 nF	270 µH
	<b>Type of protection: Ex ic</b> For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>i</sub></b>	<b>I<sub>i</sub></b>		<b>C<sub>i</sub></b>	<b>L<sub>i</sub></b>
5 V	160 mA		110 nF	270 µH	

<b>Option Module:</b> Analog Input Module, marked by <b>AIM</b> , Type 6DR4004-6F built in ARCAPRO 827A.**_***_**2...					
<b>Connection module with filter elements intent to use for connection of:</b>  Position Transmitter 6DR4004-1ES or 6DR4004-2ES or 6DR4004-3ES or 6DR4004-4ES (only Ex ia, Ex ic, Ex db ia, Ex tb) or Non-Contacting Sensor (NCS) 6DR4004-6N	<b>Type of protection: Ex ia</b> supplied via basic device with Profibus PA or Foundation Fieldbus FF For connection to certified intrinsically safe circuits. Or <b>Type of protection: Ex ic</b> supplied via basic device with Profibus PA or Foundation Fieldbus FF For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>o</sub></b>	<b>I<sub>o</sub></b>	<b>P<sub>o</sub></b>	<b>C<sub>o</sub></b>	<b>L<sub>o</sub></b>
	5 V	static: 75 mA  short-time: 160 mA	120 mW	1 µF	1 mH
	<b>Type of protection: Ex ia</b> for supply via the other basic devices. For connection to certified intrinsically safe circuits. Or <b>Type of protection: Ex ic</b> for supply via the other basic devices. For connection to intrinsically safe circuits. Maximum values:				
	<b>U<sub>o</sub></b>	<b>I<sub>o</sub></b>	<b>P<sub>o</sub></b>	<b>C<sub>o</sub></b>	<b>L<sub>o</sub></b>
5 V	100 mA	33 mW	1 µF	1 mH	

**Page 10 of 11**  
**Attachment to IECEx TUN 21.0016 X issue No.: 2**

Details of Change:

Optional feature Bluetooth Adapter SITRANS AW050

Modifications to AIM-Modul, 6DR4004-6F

Displacement of the connection terminal X1

Modifications to Digital I/O Module (DIO), 6DR4004-6A

Extension of the maximum permissible rating: Ui, Digital Input

Extension of the maximum permissible ratings: Ui, Pi, li, Digital Output

Modifications to Inductive Limit Switches (ILS), 6DR4004-6G

Extension of the maximum permissible ratings: Ui, Digital Output, slot initiators

Extension of the maximum permissible ratings: Ui, Pi, li, Digital Output, fault signal

Modifications to Mechanic Limit Switches (MLS), 6DR4004-6K

Extension of the maximum permissible ratings: Ui, Pi, li, Digital Output, fault signal

Modifications to Basic electronics, 2/4 wire HART, NoN-HART

Alternative IC, Operational Amplifier with designation N100, N500

Alternative IC, EEPROM with designation D202

Alternative Reference diode with designation N101

Alternative Transistor with designation V118

Modifications to Basic electronics, 2 wire, NCS-onboard

Remove Resistor 10 K $\Omega$  with designation R235

Alternative IC,  $\mu$ -controller, MCU\_P\_M16 with designation D203

Alternative IC, HART-Modem, with designation D500

Coating on PCBA's and operation with natural gas j = NG

Modifications to NCS-Module 6DR4004-6N, 6DR4004-5LE

Alternative Resistor with designation R7, R11

Alternative IC OPA with designation N1

Modification AOM-Module, 6DR4004-6J

Alternative I-Coupler with designation U100, U200

Replacement Diodes with designation V106, V107, V108, V109

Alternative IC OPA, with designation N101

Adjustment of the connection value "Ci"

Editorial changes and clarifications in the presentation of technical data.

**Page 11 of 11**  
**Attachment to IECEx TUN 21.0016 X issue No.: 2**

Special Conditions for Safe Use / Notes for Erection:

<p>Ex i Intrinsic Safety</p>	<p>The electro-pneumatic positioner ARCAPRO 827A with type code (827A. X*-***_***-*) can also be operated with clean, dry, natural gas in locations where pressurized air is not readily available.</p> <p>As a requirement for operation with natural gas all inserted electronics of the ARCAPRO 827A, including optional modules, must comply with the available safety requirements protection type “Ex ia” and an electric connection with protection level “ia”.</p> <p>Sufficient ventilation for this operating condition must be ensured to avoid a Zone 0 atmosphere around the device.</p> <p>Operating instructions must be adhered to.</p>		
<p>General</p>	<p>The connecting and disconnecting of not energy limited circuits to the terminals and the plugging respectively unplugging of the M12 connector and of the internal plug- and socket connectors under voltage is permitted only if the presence of hazardous atmosphere can be excluded.</p>		
	<p>The capacitance of the labels exceeds the allowed value of 3 pF. Operating instructions must be observed.</p>		
	<p>When retrofitting, the optional modules listed below must be marked on the manufacturer's label of the device by ticking the corresponding checkbox:</p>		
	<p>Type designation modules</p>	<p>Identification of the checkbox on the label</p>	<p>Marking on the PCBA for retrofitting into an existing device</p>
	<p>Binary Module</p>	<p>DIO</p>	<p>6DR4004-6A</p>
	<p>Digital I/O Module</p>	<p>DIO-2</p>	<p>6DR4004-6A, A5E52635850</p>
	<p>Slot-type initiator module</p>	<p>ILS</p>	<p>6DR4004-6G</p>
	<p>Inductive Limit Switches</p>	<p>ILS-2</p>	<p>6DR4004-6G, A5E52635888</p>
	<p>Contact module</p>	<p>MLS</p>	<p>6DR4004-6K</p>
	<p>Mechanic Limit Switches</p>	<p>MLS-2</p>	<p>6DR4004-6K, A5E52659309</p>
	<p>Analog Output Module</p>	<p>AOM</p>	<p>6DR4004-6J</p>
	<p>Analog Input Module</p>	<p>AIM</p>	<p>6DR4004-6F</p>
	<p>Internal NCS module</p>	<p>iNCS</p>	<p>6DR4004-5LE</p>