

Translation

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



- (2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**



(3) **Certificate Number** TÜV 12 ATEX 085253 X **issue:** 02

(4) for the product: Electropneumatic positioner ARCAPRO types 827A.ab-cde-fgh-i-k

(5) of the manufacturer: **ARCA-Regler GmbH**

(6) Address: Kempener Straße 18
47918 Tönisvorst, Germany

Order number: 8000488218

Date of issue: 2019-07-01

- (7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.

- (8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 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 ATEX Assessment Report No. 19 203 228866.

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

EN IEC 60079-0: 2018

EN 60079-11: 2012

except in respect of those requirements listed at item 18 of the schedule.

- (10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for 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. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

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

See description of product

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body


Christian Roder

Hanover office, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 12 ATEX 085253 X issue 02**

(15) **Description of product**

The electropneumatic positioner types 827A.*ab-cde-fgh-i-k* are used to control valves resp. flap positions of pneumatic actuators in hazardous locations.

The electropneumatic positioner Series ARCAPRO can be equipped with the following options:

Binary - Module	6DR4004-6A	(specification d = B)
Slot initiators - Module	6DR4004-6G	(specification d = S)
Contact - Module	6DR4004-6K	(specification d = K)
Analog - Module	6DR4004-6J	(specification c = A)
Internal NCS - Sensor	6DR4004-5LE	(specification h = 1)
EMC Filter Module (for external position transmitter)	6DR4004-6F	(specification h = 2)
OPOS-Interface	6DR4004-5PB	

Type reference:

The type designator can be provided with the following data.

a =	X, N
b =	2, 4
c =	0, A
d =	0, B, S, K
e =	0, H, P, F
f =	M, E
g =	1, 2
h =	0, 1, 2
i =	G, N, M, P, R, S
k =	FIP, LT, SA, SB, SS, SW

For details see manufacturer document A5E37132554 "Ex-Typenschild ...".

Schedule to EU-Type Examination Certificate No. TÜV 12 ATEX 085253 X issue 02

Marking:



II 2G Ex ia IIC T6/T4 Gb
II 3G Ex ic IIC T6/T4 Gc

Technical data:

Maximum permissible electrical ratings

Basic device without HART type 827A.a2-cd0-fgh-i-k					
2-wire without HART Auxiliary power supply / control current 4...20 mA Terminals 6(+) and 7/8(-)	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	30 V	100 mA	1 W	11 nF	209 μ H
	Type of protection: Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i		C_i	L_i
	30 V	100 mA		11 nF	209 μ H
Binary input (terminals 9(+)) and 10(-) galvanically connected to auxiliary power supply / control current			jumpered or connected to switch contact		

Basic device with HART type 827A.a2-cdH-fgh-i-k					
2-wire with HART Auxiliary power supply / control current 4...20 mA <ul style="list-style-type: none"> Jumper between terminal 6 and 4/5 Control current connection terminals 3(+) and 7/8(-) 3/4-wire with HART Auxiliary power supply 18...30 V terminals 2(+) and 4/5(-) and Control current 4...20 mA terminals 6(+) and 7/8(-) <ul style="list-style-type: none"> 4-wire: auxiliary power supply and control current electrical isolated 3-wire: common base point (terminals 4/5 and 7/8) 	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	30 V	100 mA	1 W	11 nF	312 μ H
	Type of protection: Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i		C_i	L_i
	30 V	100 mA		11 nF	312 μ H
Binary input (terminals 9(+)) and 10(-) galvanically connected to auxiliary power supply / control current			jumpered or connected to switch contact		

Schedule to EU-Type Examination Certificate No. TÜV 12 ATEX 085253 X issue 02

Basic device with Profibus (PA) type 827A.ab-cdP-fgh-i-k				
Basic device with Foundation Fieldbus (FF) type 827A.ab-cdF-fgh-i-k				
FF/PA bus circuit Terminals 6(+) and 7(-)	Type of protection: Ex ia only for supply with a certified FISCO power supply			
	U_i	I_i	P_i	C_i
	17.5 V	380 mA	5.32 W	(*1)
	Type of protection: Ex ia only for supply with a certified barrier			
	U_i	I_i	P_i	C_i
	24 V	250 mA	1.2 W	(*1)
	Type of protection: Ex ic only for supply with a FISCO power supply			
	U_i	I_i		C_i
	17.5 V	570 mA		(*1)
	Type of protection: Ex ic only for supply with a barrier			
"Safe" input Terminals 81(+) and 82(-) galvanically isolated from bus circuit and binary input	U_i		C_i	L_i
	32 V		(*1)	8 μ H
	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits			
	U_i	I_i	P_i	C_i
	30 V	100 mA	1 W	(*1)
	Type of protection: Ex ic only for the connection to intrinsically safe circuits			
Digital input (terminals 9(+) and 10(-) galvanically connected to auxiliary power supply / control current	U_i	I_i		C_i
	30 V	100 mA		(*1)
	jumped or connected to switch contact			

Explanation:

(*1 : values negligibly small

Schedule to EU-Type Examination Certificate No. TÜV 12 ATEX 085253 X issue 02

Option Binary - Module 6DR4004-6A					
Binary outputs Terminals 31(+) and 32(-) 41(+) and 42(-) 51(+) and 52(-) galvanically safe isolated from each other	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	15 V	25 mA	64 mW	5.2 nF	(*1)
	Type of protection: Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i		C_i	L_i
	15 V	25 mA		5.2 nF	(*1)
Binary inputs Terminals 11(+) and 12(-) galvanically safe isolated from binary outputs and basic device Terminals 21(+) and 22(-) jumpered, galvanically not isolated from basic device	Type of protection : Ex ia only for the connection to certified intrinsically safe circuits or Type of protection : Ex ic only for the connection to intrinsically safe circuits				
	U_i			C_i	L_i
	25.2 V			(*1)	(*1)

Explanation:

(*1 : values negligibly small

Option Slot initiators - Module 6DR4004-6G					
Binary output (fault signal) Terminals 31(+) and 32(-)	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	15 V	25 mA	64 mW	5.2 nF	(*1)
	Type of protection: Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i		C_i	L_i
	15 V	25 mA		5.2 nF	(*1)
Binary outputs (slot initiators) Terminals 41(+) and 42(-) 51(+) and 52(-)	Type of protection : Ex ia only for the connection to certified intrinsically safe circuits or Type of protection : Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	15 V	25 mA	64 mW	161 nF	120 μ H

Explanation:

(*1 : values negligibly small

Schedule to EU-Type Examination Certificate No. TÜV 12 ATEX 085253 X issue 02

Option Contact - Module 6DR4004-6K					
Binary output (fault signal) Terminals 31(+) and 32(-)	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	15 V	25 mA	64 mW	5.2 nF	(*1
	Type of protection: Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i		C_i	L_i
	15 V	25 mA		5.2 nF	(*1
Binary outputs Terminals 41(+) and 42(-) 51(+) and 52(-)	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	30 V	100 mA	750 mW	(*1	(*1
	Type of protection: Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i		C_i	L_i
	30 V	100 mA		(*1	(*1

Explanation:

(*1 : values negligibly small

Option Analog - Module 6DR4004-6J					
Current output Terminals 61(+) and 62(-) galvanically isolated from Binary - Module and basic device	Type of protection: Ex ia only for the connection to certified intrinsically safe circuits				
	U_i	I_i	P_i	C_i	L_i
	30 V	100 mA	1 W	11 nF	(*1
	Type of protection: Ex ic only for the connection to intrinsically safe circuits				
	U_i	I_i		C_i	L_i
	30 V	100 mA		11 nF	(*1

Explanation:

(*1 : values negligibly small

Schedule to EU-Type Examination Certificate No. TÜV 12 ATEX 085253 X issue 02

Option EMC Filter Module 6DR4004-6F					
Connection module with filter elements	Types of protection: Ex ia, Ex ic supplied via basic device with Profibus PA or Foundation Fieldbus FF type 827A.ab-cde-fgh-i-k with the specifications (h = 2) and (e = P or F)				
	U_o	I_o	P_o	C_o	L_o
	5 V	static: 75 mA short-time: 160 mA	120 mW	1 μ F	1 mH
	Types of protection: Ex ia, Ex ic for supply via the other basic devices Typ 827A.ab-cde-fgh-i-k with the specifications (h = 2) und (e = 0 oder H)				
	U_o	I_o	P_o	C_o	L_o
	5 V	100 mA	33 mW	1 μ F	1 mH

Maximum permissible ambient temperature ranges

	Temperature class T4	Temperature class T6
Type 827A.ab-cde-fgh-i-k with the specifications (b = 2 or 4) resp. (e = P or F)	$-30^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$	$-30^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Type 827A.ab-cde-fgh-i-k with the specifications (k = LT) and (b = 2 or 4) resp. (e = P or F)	$-40^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$	$-40^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Type 827A.ab-cde-fgh-i-k with the specifications (c = 0) and (e = 0 or H) and (d = 0 or B or S or K)	$-30^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$	$-30^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
Type 827A.ab-cde-fgh-i-k with the specifications (k = LT) and (c = 0) and (e = 0 or H) and (d = 0 or B or S or K)	$-40^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$	$-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

(16) Drawings and documents are listed in the ATEX Assessment Report No. 19 203 228866

Schedule to EU-Type Examination Certificate No. TÜV 12 ATEX 085253 X issue 02

(17) Specific Conditions for Use

The following special conditions for use must be observed.

The electro-pneumatic positioners ARCAPRO types 827A.*ab-cde-fgh-i-k* 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, the entire inserted electronics must electrically connected with devices of type of protection "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 electropneumatic positioners ARCAPRO types 827A.*ab-cde-fgh-i-k* must be erected in such a way that the plastic window is only exposed to a low level of hazard of mechanical damage.

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

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -