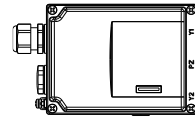


Technical Data Sheet

Positioner ARCASMART type 826



TD_826

General data

Installation	on linear actuators	ARCA-integrated or integrated acc. to VDI/VDE 3847-1 or acc. to IEC 60534-6 (NAMUR), stroke range 10 – 200 mm
	on rotary actuators	Integrated acc. to VDI/VDE 3847-2 or acc. to VDI/VDE 3845 Angle of rotation 10 – 100°
Housing material	metal housing	Aluminium cast EN AC-AISi12(Fe)
	with plastic cover	Polycarbonate
Protection class		IP 66 according to IEC/EN 60529 / NEMA 4X
Mounting position		Any, although in wet environments the pneumatic connections and exhaust opening must not face upwards
Vibration resistance		98 m/s ² , 27 – 300 Hz recommended continuous operation range of the complete valve ≤ 30 m/s ²
Classification acc. to PED 2014/68/EU		For fluid group 1 gases; meets the requirements in article 4, paragraph 3 (good engineering practice)
CE mark		See declaration of conformity for applied directives and standards
Dimensions		See Figure 1
Weight	Aluminium	approx. 1.0 kg
Connections	Electrical	Screw terminals 2.5 AWG30-14, cable inlet M20 x 1.5 or 1/2-14NPT
	Pneumatic	G 1/4 DIN 45141 or 1/4-18NPT

Controller

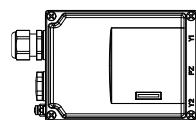
Controller unit	Five-point controller	Adaptive
Dead zone	Adjustable max. value	± 0.1 - 3 %
	Minimisation of the max. value	Always activated
Analogue input	Sampling interval	50 ms
	Resolution	0.05 %
Position detection	Sampling interval	10 ms
	Temperature influence effect	0.1 %/10 K

Pneumatic data

Functional principle	Standard	vents on failure of electrical or pneumatic auxiliary energy
Supply air pressure		1.4 – 7 bar
Air quality	Solids	ISO 8573-1 Class 3
	Dew point	ISO 8573-1 Class 3 (- 40 °C, at least 20 K below ambient temperature)
	Oil content	ISO 8573-1 Class 3
Air consumption		< 36 x 10 ⁻³ Nm ³ /h in stationary operation
Flow rate (unthrottled)	Supply air valve at Δp	4 bar – 7.1 Nm ³ /h, 6 bar – 9.8 Nm ³ /h
	Exhaust air valve at Δp	4 bar – 13.7 Nm ³ /h, 6 bar – 19.2 Nm ³ /h
Valve leakage		< 0.6 x 10 ⁻³ Nm ³ /h

Technical Data Sheet

Positioner ARCASMART type 826



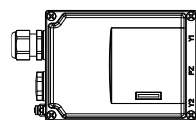
TD_826

Electrical data

Analogue input AI	Input signal	4 – 20 mA
	Current to maintain the auxiliary energy	≥ 3.8 mA
	Max. load voltage	6.5 V equates to 325Ω at 20 mA
	Static destruction limit	± 40 mA
Analogue output AO	Nominal signal range	4 – 20 mA
	Dynamic range I_0	$\geq 3.6 - 20.5$ mA
	Supply voltage U_H	12 – 30 V
	External load R_B [kΩ]	$\leq (U_H [V] - 12) / I_0 [mA]$
	Resolution of nominal signal range	0.05 %
	Transmission error nominal signal range	± 0.3 %
	Max. temperature influence effect	0.1 %/10 K
	Max. residual ripple	0.5 %
	Galvanic isolation	Galvanically isolated from the other electrical inputs/outputs
Digital input DI	Signal status 0, zero-potential contact, open	> 300 kΩ
	Signal status 1, zero-potential contact, closed	< 3 kΩ
	Galvanic isolation	Galvanically connected with analogue input; Galvanically isolated from the outputs
	Contact load	Only applicable for zero-potential contact; Max. contact load ≤ 20 μA at 3 V
Digital output DO	Max. supply voltage U_H	35 V
	Limit current consumption to	50 mA
	Signal status High	Conductive, max. terminal voltage 3 V
	Signal status Low	Blocked, $I < 60$ μA

Technical Data Sheet

Positioner ARCASMART type 826



TD_826

Marking for explosion protection

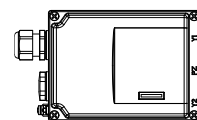
	ATEX/IECEx	FM	CSA
Intrinsically safe "Ex ia" (Aluminium/plastic cover)	II 2 G Ex ia IIC T4 Gb II 3 G Ex ic IIC T4 Gc	CI I Zn 1 AEx ia IIC T4 Gb IS CI I Div 1, 2 Gp A-D	Ex ia IIC T4 Gb Ex ic IIC T4 Gc IS CI I Div 1, 2 Gp A-D
Increased safety "Ex ec" (Aluminium/plastic cover)	II2G Ex ia IIC T4 Gb II3G Ex ic IIC T4 Gc II3G Ex ec IIC T4 Gc	CI I Zn 1 AEx ia IIC T4 Gb CI I Zn 2 AEx ec IIC T4 Gc IS CI I Div 1, 2 Gp A-D NI CI I Div 2 Gp A-D	Ex ia IIC T4 Gb Ex ic IIC T4 Gc Ex ec IIC T4 Gc IS CI I Div 1, 2 Gp A-D CI I Div 2 Gp A-D
Protection by housing "Ex tb" (Aluminium/plastic cover)	II2G Ex ia IIC T4 Gb II3G Ex ic IIC T4 Gc II3G Ex ec IIC T4 Gc II2D Ex tb IIIC T100°C Db	CI I Zn 1 AEx ia IIC T4 Gb CI I Zn 2 AEx ec IIC T4 Gc Zn 21 AEx tb IIIC T100°C Db IS CI I Div 1, 2 Gp A-D NI CI I Div 2 Gp A-D DIP CI II, III Div 1 Gp E-G	Ex ia IIC T4 Gb Ex ic IIC T4 Gc Ex ec IIC T4 Gc Ex tb IIIC T100°C Db IS CI I Div 1, 2 Gp A-D CI I Div 2 Gp A-D CI II, III Div 1 Gp E-G

Explosion protection electrical data

Ignition protection class		Ex "ia"	Ex "ec"; "tb"
Permissible ambient temperature	Temperature class T4	-20 °C – +80 °C	
Analogue input AI	Connection to electrical circuits with the following maximum values	$U_i \leq 30 \text{ V}$	$U_n \leq 30 \text{ V}$
		$I_i \leq 100 \text{ mA}$	$I_n \leq 100 \text{ mA}$
		$P_i \leq 750 \text{ mW}$	-
		$C_i \leq 6 \text{ nF}$	-
		$L_i \leq 221 \text{ } \mu\text{H}$	-
Analogue output AO	Connection to electrical circuits with the following maximum values	$U_i \leq 30 \text{ V}$	$U_n \leq 30 \text{ V}$
		$I_i \leq 100 \text{ mA}$	$I_n \leq 100 \text{ mA}$
		$P_i \leq 750 \text{ mW}$	-
		$C_i \leq 7 \text{ nF}$	-
		$L_i \leq 66 \text{ } \mu\text{H}$	-
	Galvanic isolation	Galvanically isolated from the other electrical inputs/outputs	

Technical Data Sheet

Positioner ARCASMART type 826



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Dimensional drawings

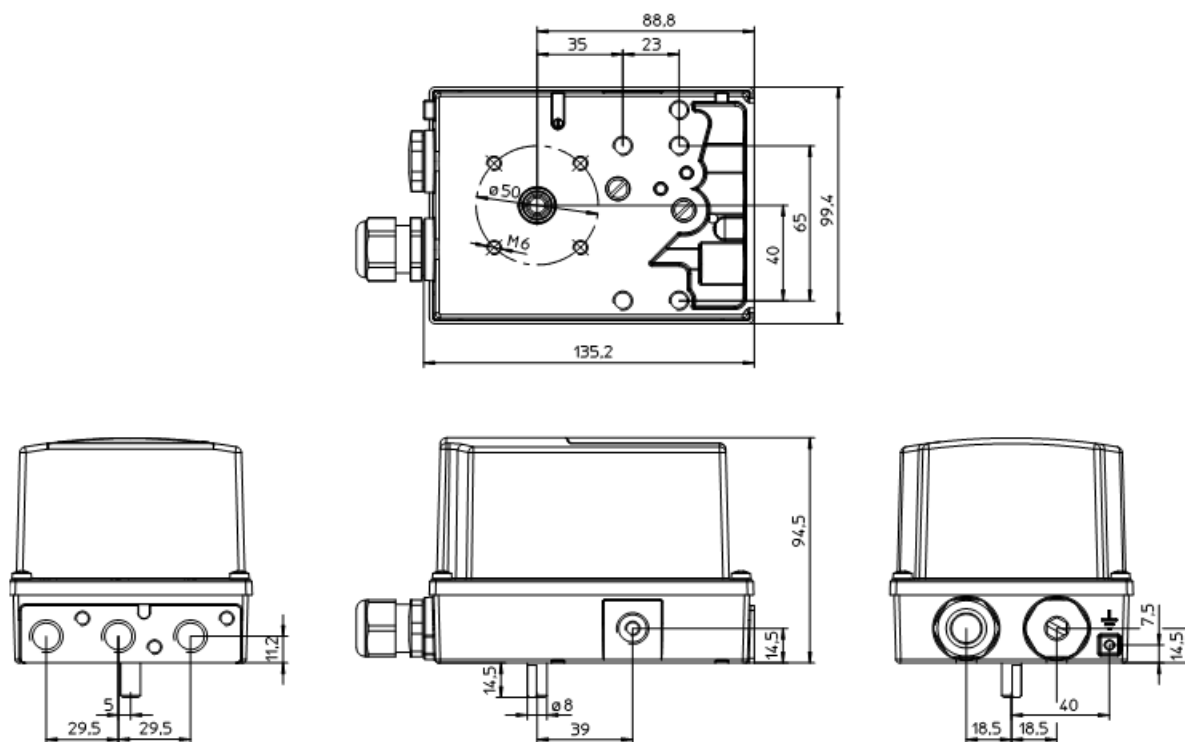
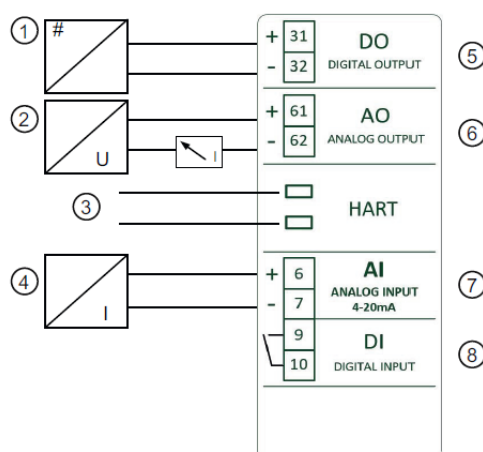


Fig. 1

Electrical connection

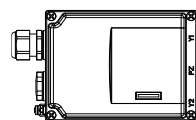


- | | |
|------------------------------|--|
| ① Switching amplifier | ⑤ Digital output |
| ② Power source DC 12 to 30 V | ⑥ Analogue output position feedback |
| ③ Hart plug | ⑦ Analogue input current input 4 – 20 mA |
| ④ Signal source 4 – 20 mA | ⑧ Digital input (zero-potential contact) |

Fig. 2

Technical Data Sheet

Positioner ARCASMART type 826



TD_826

Order keys for ARCASMART® type 826

1. Series		7. Housing material / cover	
826		M	Anodised aluminium
		K	Anodised aluminium / plastic
2. Explosion protection ¹⁾		8. Pneumatics	
E	not explosion proof	1	Single-acting
X	explosion protected "ia" II2G ²⁾	2	Double-acting
S	explosion protected "ec" II3G		
D	explosion protected "tb" II2D		
3. Connection to base device		9. Position detection	
2	2-wire	0	Standard (contactless)
4. Analogue output		10. Connection thread, electric / pneumatic	
0	without analogue module	G	M20x1.5 / G 1/4
A	with analogue module	N	1/2" NPT / 1/4" NPT
5. Binary output		M	M20x1.5 / 1/4" NPT
0	without binary module	P	1/2" NPT / G 1/4
B	with binary module		
6. Communication		11. Options Z	
0	without communication	SE	Silencer, rust-proof stainless steel
H	HART	ZD	Supply air throttle
		KA	Customised design

¹⁾ Approvals: ATEX; IECEx; FM; CSA, others on request

²⁾ Only with aluminium cover

Example:

826.E2-000-	<i>Positions 1 – 6</i>
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Positioner 826 – without explosion protection – 2-wire connection – without analogue module – without digital module – without communication

M10-G-Z KA	<i>Positions 7 – 11</i>
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Aluminium housing – single-acting – mechanical actuator (standard) – connection thread: electric M20 x 1.5 / pneumatic G 1/4 / customer-specific design

Accessories

Mounting kits	for integrated mounting to ARCA linear actuators type 812
	for integrated mounting to ARCA linear actuators type 813
	for integrated mounting to linear actuators according to VDI/VDE 3847-1
	for mounting to linear actuators according to IEC 534 (NAMUR)
	for integrated mounting to ARCA rotary actuators type 840
	for mounting to rotary actuators according to VDI/VDE 3845
Gauge groups	Gauge group for single-acting or double-acting positioners