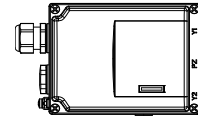


# Technical Data Sheet

## Positioner ARCASMART® Type 826



TD\_826

### General data

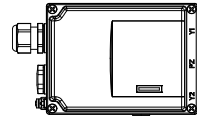
|   |                           |   |
|---|---------------------------|---|
| <b>Mounting</b>                           | on linear actuators       | ARCA-integrated or integrated acc. to VDI/VDE 3847-1 or acc. to IEC 60534-6 (NAMUR), range of stroke 10...200 mm          |
|   | on quarter-turn actuators | Integrated acc. to VDI/VDE 3847-2 or acc. to VDI/VDE 3845<br>Angle of rotation 10...100°                                  |
| <b>Enclosure material</b>                 | Metal                     | Aluminium cast EN AC-AISi12(Fe)   |
|   | with plastic cover        | Polycarbonate   |
| <b>Degree of protection</b>               |                           | IP 66 acc. to IEC/EN 60529 / NEMA 4X  |
| <b>Installation position</b>              |                           | Any installation position possible; pneumatic connections and exhaust opening must not point upwards for wet applications |
| <b>Vibration resistance</b>               |                           | 98 m/s <sup>2</sup> , 27 ... 300 Hz<br>Recommended continuous range for complete fitting ≤ 30 m/s <sup>2</sup>            |
| <b>Classification acc. PED 2014/68/EU</b> |                           | For fluid group 1 gases; fulfils requirements in article 4, paragraph 3 (good engineering practice)                       |
| <b>CE marking</b>                         |                           | Applicable directives and standards see declaration of conformity   |
| <b>Dimensions</b>                         |                           | See dimensional drawing figure 1  |
| <b>Weights</b>                            | Aluminium                 | Approx. 1,0 kg  |
| <b>Connections</b>                        | Electric                  | Screw terminals 2,5 AWG30-14, cable inlet M20x1,5 or 1/2-14NPT  |
|   | Pneumatic                 | G 1/4 DIN 45141 or 1/4-18NPT  |

### Controller

|                           |                              |                  |
|---------------------------|------------------------------|------------------|
| <b>Controller unit</b>    | Five-point switch            | Adaptive         |
| <b>Dead zone</b>          | Adjustable max. value        | ± 0,1 ... 3 %    |
|                           | Minimizing of max. value     | Always activated |
| <b>Analogue input</b>     | Sampling time                | 50 ms            |
|                           | Resolution                   | 0,05 %           |
| <b>Position detection</b> | Sampling time                | 10 ms            |
|                           | Temperature influence effect | 0,1 %/10 K       |

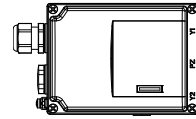
### Pneumatic Data

|                                |                         |  |
|--------------------------------|-------------------------|--|
| <b>Operation</b>               | Standard                | At failure of electrical or pneumatic energy exhausting                |
| <b>Inlet air pressure</b>      |                         | 1,4 ... 7 bar  |
| <b>Air quality</b>             | Solids                  | ISO 8573-1 Class 3   |
|                                | Dew point               | ISO 8573-1 Class 3 (min. 20 K below ambient temperature)               |
|                                | Oil content             | ISO 8573-1 Class 3   |
| <b>Air consumption</b>         |                         | < 36 x 10 <sup>-3</sup> Nm <sup>3</sup> /h during stationary operation |
| <b>Flow rate (unthrottled)</b> | Air supply valve at Δp  | 4 bar - 7,1 Nm <sup>3</sup> /h, 6 bar - 9,8 Nm <sup>3</sup> /h         |
|                                | Air exhaust valve at Δp | 4 bar - 13,7 Nm <sup>3</sup> /h, 6 bar - 19,2 Nm <sup>3</sup> /h       |
| <b>Valve leakage</b>           |                         | < 0,6 x 10 <sup>-3</sup> Nm <sup>3</sup> /h                            |



**Electrical data**

|                           |  |   |  |
|---------------------------|--|---|--|
| <b>Analogue input AI</b>  | Input signal   | 4 ... 20 mA   |  |
|                           | Current to maintain the power supply                   | ≥ 3,8 mA  |  |
|                           | Max. load voltage                                      | 6,5 V corresponds to 325Ω at 20 mA                                |  |
|                           | Static destruction limit                               | ± 40 mA   |  |
| <b>Analogue output AI</b> | Nominal signal range                                   | 4 ... 20 mA   |  |
|                           | Dynamic range I <sub>0</sub>                           | ≥ 3,6 ... 20,5 mA   |  |
|                           | Supply voltage U <sub>H</sub>                          | 12 ... 30 V   |  |
|                           | External load R <sub>B</sub> [kΩ]                      | ≤ (U <sub>H</sub> [V] – 12) / I <sub>0</sub> [mA]                 |  |
|                           | Resolution 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        | Disconnected from the other electrical in- and outputs |   |  |
| <b>Digital input DI</b>   | Signal status 0, dry contact open                      | > 300 kΩ  |  |
|                           | Signal status 1, dry contact closed                    | < 3 kΩ  |  |
|                           | Galvanic isolation                                     | Connected with analogue input; disconnected from the outputs      |  |
|                           | Contact load   | Only applicable to dry contact; max. contact load < 20 μA bei 3 V |  |
| <b>Digital output DI</b>  | Max. supply voltage U <sub>H</sub>                     | 35 V  |  |
|                           | Current consumption must be restricted to              | 50 mA   |  |
|                           | Signal status High                                     | Conductive, max. terminal voltage 3 V                             |  |
|                           | Signal status Low                                      | Blocked, I < 60 μA  |  |



**Dimensional drawings**

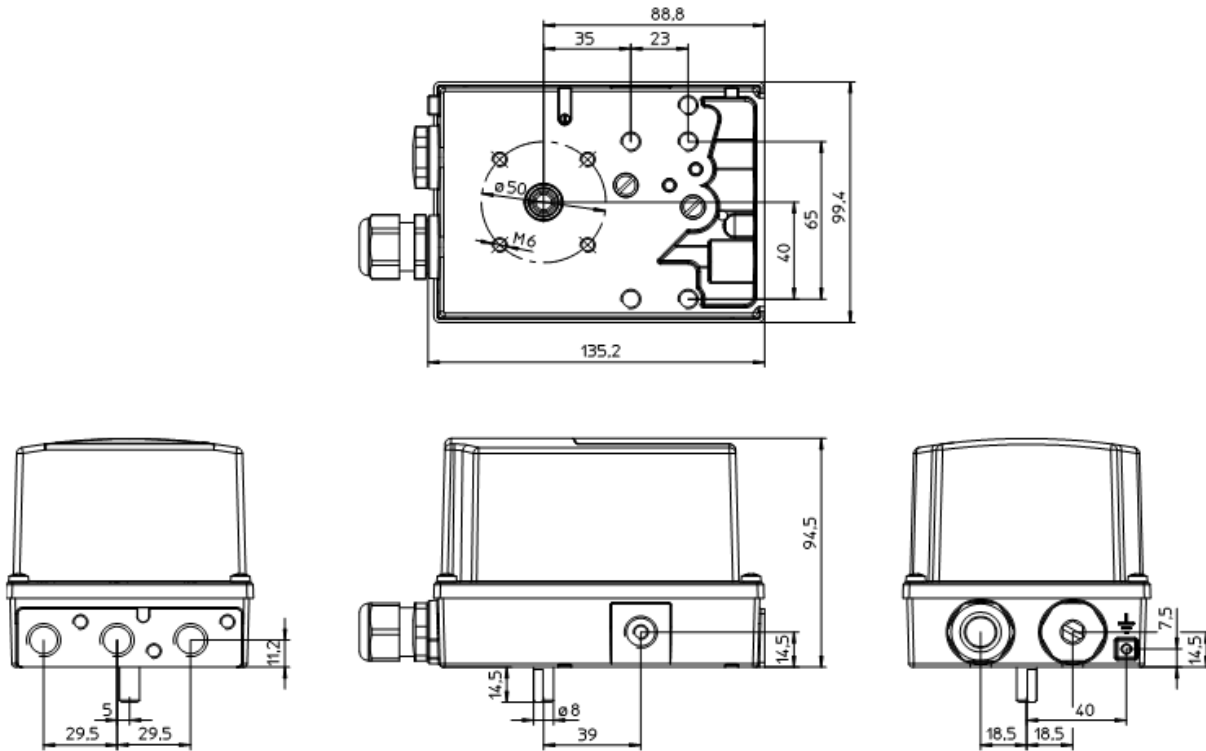
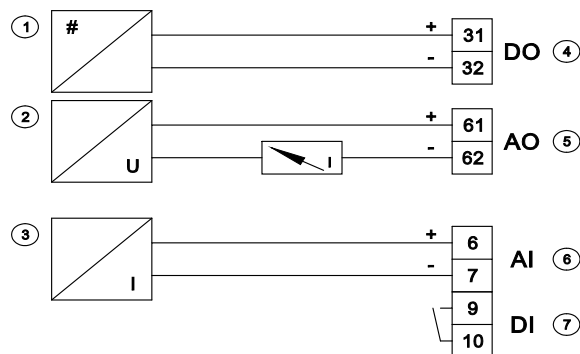


Figure 1

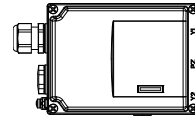
**Electrical connection**



- ① Switching amplifier
- ② Power supply DC 9 to 30 V
- ③ Power supply 4 to 20 mA
- ④ Digital output
- ⑤ Analogue output position feedback
- ⑥ Analogue input current input 4 bis 20 mA
- ⑦ Digital input (dry contact)

Figure 2

**Technical Data Sheet  
Positioner ARCASMART® Typ 826**



**TD\_826**

**Order keys for ARCASMART® Type 826**

|                                     |                         |  |                                      |
|-------------------------------------|-------------------------|--|--------------------------------------|
| <b>1. Series</b>                    |                         | <b>7. Enclosure material / cover</b>               |                                      |
| 826                                 |                         | M  | Aluminium anodized                   |
|                                     |                         | K  | Aluminium anodized / Plastic         |
| <b>2. Explosion protection</b>      |                         | <b>8. Pneumatics</b>                               |                                      |
| E                                   | Without                 | 1  | Single-acting                        |
|                                     |                         | 2  | Double-acting                        |
| <b>3. Connection of base device</b> |                         | <b>9. Position detection</b>                       |                                      |
| 2                                   | 2 – wire                | 0  | Standard (without direct contact)    |
| <b>4. Analogue output</b>           |                         | <b>10. Connection thread, electric / pneumatic</b> |                                      |
| 0                                   | Without analogue module | G  | M20x1,5 / G 1/4                      |
| A                                   | With analogue module    | N  | 1/2" NPT / 1/4" NPT                  |
| <b>5. Binary output</b>             |                         | M  | M20x1,5 / 1/4" NPT                   |
| 0                                   | Without binary module   | P  | 1/2" NPT / G 1/4                     |
| B                                   | With binary module      |  |                                      |
| <b>6. Communication</b>             |                         | <b>11. Options Z</b>                               |                                      |
| 0                                   | Without communication   | SE   | Silencer, stainless steel            |
|                                     |                         | ZD   | Air supply throttle                  |
|                                     |                         | KA   | Special design acc. to specification |

**Example:**

|                    |                   |
|--------------------|-------------------|
| <b>826.E2-000-</b> | <i>Stelle 1-6</i> |
|--------------------|-------------------|

Positioner 826 – without explosion proof – 2-wire connection – without analogue module – without digital module – without communication

|                   |                    |
|-------------------|--------------------|
| <b>M10-G-Z KA</b> | <i>Stelle 7-11</i> |
|-------------------|--------------------|

Aluminium enclosure – single acting – mechanical actuation (standard) – connection thread electric M20x1,5 / pneumatic G 1/4 / special design acc. to spec.

**Accessories**

|                      |  |
|----------------------|--|
| <b>Mounting kits</b> | for integrated mounting to ARCA linear actuators type 812          |
|                      | for integrated mounting to ARCA linear actuators type 813          |
|                      | for integrated mounting to linear actuators acc. to VDI/VDE 3847-1 |
|                      | for mounting to linear actuators acc. to IEC 534 (NAMUR)           |
|                      | for integrated mounting to ARCA-quarter turn actuators type 840    |
|                      | for mounting to quarter turn actuators acc. to VDI/VDE 3845        |
| <b>Gauge groups</b>  | Gauge group for single or double acting positioners                |