



## ECON® Electric actuator Series: ELA80-3000 Type: 7907EXD Explosion-proof



### Characteristics

**Series:** ELA80-3000

**Type:** 7907EXD

**Transmission:** Quarter turn

**Top flange standard:** ISO 5211

**Square type:** Double square

**Explosion-proof:** Yes

**Ex-class:** II 2G Ex db IIB T4 Gb, II 2D Ex tb IIIC T135 °C Db

**Emergency manual operation:** Yes

**Potential free switch contact:** Yes

**Torque switch:** Yes

**With mechanical setting indicator:** Yes

**Material housing:** Aluminium

**Material cover:** Aluminium

**Surface protection:** Polyester coated

**Material shaft:** Steel

**Material mounting garniture:** Stainless steel

**Min. ambient temperature:** -20 °C

**Max. ambient temperature:** 60 °C

### Application

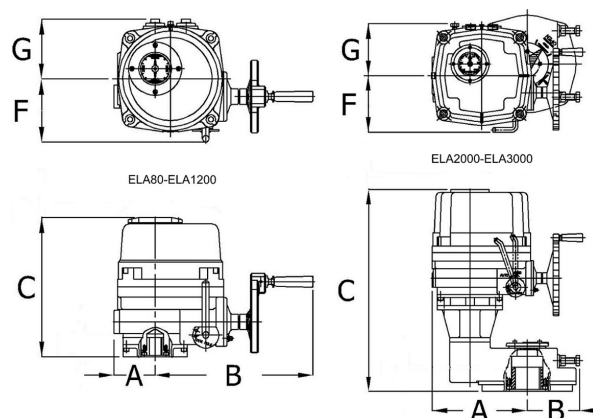
- Suitable for ball valves, ball check valves, butterfly valves and valves without stuffing box/plug valves.
- Industrial and maritime applications.

### Technical Information

- Connection voltages: 24 VDC or 24 VAC; 1 phase 50/60 Hz: 115 VAC or 230 VAC  $\pm$  10%; 3 phases 50/60 Hz: 230 VAC, 380 VAC, 440 VAC or 460 VAC  $\pm$  10%.
- IP67 or IP68 protection class (10 m/72 h).
- Ambient temperature: -20°C to +80°C.
- Explosion-proof housing according to: II 2G Ex db IIB T4 Gb, II 2D Ex tb IIIC T1 35°C Db.
- Provided with heater for anti-condensation.
- Thermal protection of the electric motor.

### Options

- Proportional control unit for modulating purposes [input/output 0~10 VDC 2~10 VDC/4~20 mA].
- Angle of rotation can be increased to 120°, 180° or 270° [ELA80 to ELA1200].
- Fail-safe version with battery pack [ELA80 to ELA300].
- Fieldbus systems: ASI bus, Modbus, PROFIBUS and CANopen.
- Additional cut-outs [SPDT 2x 250 VAC - 10 A] [ELA150 to ELA3000].
- Local control unit [LCU].
- Potentiometer [0~1 kΩ].
- Position transmitter [output 4~20 mA].



Size table:

| Model     | A<br>mm | B<br>mm | C<br>mm | F<br>mm | G<br>mm | Weight<br>kg |
|-----------|---------|---------|---------|---------|---------|--------------|
| ELA80Ex   | 59      | 246.3   | 237.4   | 150     | 92.5    | 7.5          |
| ELA100Ex  | 59      | 246.3   | 237.4   | 150     | 92.5    | 7.5          |
| ELA150Ex  | 82.5    | 305.8   | 270.4   | 142     | 106.3   | 16.5         |
| ELA200Ex  | 82.5    | 305.8   | 270.4   | 142     | 106.3   | 16.5         |
| ELA300Ex  | 92      | 327.3   | 305.9   | 165     | 113     | 22           |
| ELA500Ex  | 92      | 327.3   | 305.9   | 165     | 113     | 23           |
| ELA600Ex  | 92      | 327.3   | 305.9   | 165     | 113     | 23           |
| ELA800Ex  | 112     | 347.3   | 330     | 186     | 116     | 29           |
| ELA1200Ex | 112     | 347.3   | 330     | 186     | 116     | 29           |
| ELA2000Ex | 268     | 140     | 563     | 186     | 120     | 75           |
| ELA3000Ex | 268     | 140     | 563     | 186     | 120     | 75           |

| Technical info table |                              |                                  |                                              |                            |                    |                    |
|----------------------|------------------------------|----------------------------------|----------------------------------------------|----------------------------|--------------------|--------------------|
| Model                | Maximum torque<br>Nm [in-lb] | Operating time<br>s/90°[50/60Hz] | Duty cycle<br>according to<br>IEC 60034-1 S4 | Hand wheel turns<br>Number | Maximum Power<br>W | Weight<br>kg [lbs] |
| ELA80                | 78 [694]                     | 16/13                            | 70% <sup>2</sup>                             | 10                         | 107 <sup>3</sup>   | 7,5 [16.5]         |
| ELA100               | 98 [868]                     | 20/17                            | 70% <sup>2</sup>                             | 10                         | 107 <sup>3</sup>   | 7,5 [16.5]         |
| ELA150               | 147 [1,302]                  | 25/21                            | 0.7                                          | 11                         | 216                | 16,5 [36.4]        |
| ELA200               | 196 [1,736]                  | 25/21                            | 0.7                                          | 11                         | 216                | 16,5 [36.4]        |
| ELA300               | 294 [2,604]                  | 31/26                            | 0.7                                          | 13.5                       | 187                | 22 [48.5]          |
| ELA500               | 490 [4,340]                  | 31/26                            | 0.7                                          | 13.5                       | 410                | 23 [50.7]          |
| ELA600               | 588 [5,208]                  | 31/26                            | 0.7                                          | 13.5                       | 410                | 23 [50.7]          |
| ELA800               | 785 [6,944]                  | 37/31                            | 0.7                                          | 16.5                       | 483                | 29 [63.9]          |
| ELA1200              | 1177 [10,416]                | 37/31                            | 0.7                                          | 16.5                       | 483                | 29 [63.9]          |
| ELA2000              | 1961 [17,359]                | 37/31 <sup>1</sup>               | 0.5                                          | 49.5                       | 483                | 75 [165.3]         |
| ELA2700              | 2678 [23,435]                | 56/47 <sup>1</sup>               | 0.5                                          | 49.5                       | 483                | 75 [165.3]         |
| ELA3000              | 2942 [26,039]                | 112/93                           | 0.5                                          | 49.5                       | 483                | 75 [165.3]         |

Notes:

1. Operation time of 115V 1Ph actuators is 112/93 s/90°.

2. Duty ratings: ELA80 and ELA100 in 380 VAC/3Ph - S4-70% and 440 VAC/3Ph - S4-40%.

3. Maximum power at 3 Phase for S4-70% 164W, S4-40% 348W.

| Rated current table |            |                                 |                                             |                                             |                                             |                               |
|---------------------|------------|---------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|-------------------------------|
| Model               | 12VDC<br>A | 24VDC [24VAC] <sup>1</sup><br>A | 115VAC <sup>2</sup> , 1 Phase<br>A[50/60Hz] | 230VAC <sup>2</sup> , 1 Phase<br>A[50/60Hz] | 230VAC <sup>2</sup> , 3 Phase<br>A[50/60Hz] | 380VAC, 3 Phase<br>A[50/60Hz] |
| ELA80               | 6.4        | 3.7                             | 1,0/1,0                                     | 0,5/0,5                                     |                                             | 0,3/,04                       |
| ELA100              | 9.5        | 4                               | 1,0/1,0                                     | 0,5/0,5                                     |                                             | 0,3/0,4                       |

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| Model                                              | Rated current table |                            |                               |                               |                               |                 |
|----------------------------------------------------|---------------------|----------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------|
|                                                    | 12VDC               | 24VDC [24VAC] <sup>1</sup> | 115VAC <sup>2</sup> , 1 Phase | 230VAC <sup>2</sup> , 1 Phase | 230VAC <sup>2</sup> , 3 Phase | 380VAC, 3 Phase |
|                                                    | A                   | A                          | A[50/60Hz]                    | A[50/60Hz]                    | A[50/60Hz]                    | A[50/60Hz]      |
| ELA150                                             |                     | 6.2                        | 1,6/1,8                       | 0,8/0,9                       | 0,7/0,5                       | 0,4/0,3         |
| ELA200                                             |                     | 6.5                        | 1,6/1,8                       | 0,8/0,9                       | 0,7/0,5                       | 0,4/0,3         |
| ELA300                                             |                     | 3                          | 1,4/1,7                       | 0,7/0,9                       | 0,5/0,4                       | 0,4/0,3         |
| ELA500                                             |                     |                            | 4,3/3,6                       | 1,4/1,3                       | 0,9/0,8                       | 0,6/0,5         |
| ELA600                                             |                     |                            | 4,3/3,6                       | 1,4/1,3                       | 0,9/0,8                       | 0,6/0,5         |
| ELA800                                             |                     |                            | 3,6/5,0                       | 1,9/2,8                       | 1,5/1,1                       | 0,9/0,7         |
| ELA1200                                            |                     |                            | 3,6/5,0                       | 1,9/2,8                       | 1,5/1,1                       | 0,9/0,7         |
| ELA2000                                            |                     |                            | 3,6/5,0                       | 1,9/2,8                       | 1,5/1,1                       | 0,9/0,7         |
| ELA2700                                            |                     |                            | 3,6/5,0                       | 1,9/2,8                       | 1,5/1,1                       | 0,9/0,7         |
| ELA3000                                            |                     |                            | 3,6/5,0                       | 1,9/2,8                       | 1,5/1,1                       | 0,9/0,7         |
| Notes:                                             |                     |                            |                               |                               |                               |                 |
| 1. 24VAC actuators have 24VDC motors.              |                     |                            |                               |                               |                               |                 |
| 2. 115VAC and 230VAC ±5% according to IEC 60034-1. |                     |                            |                               |                               |                               |                 |

| Model     | Connection voltage | Mounting flange | Mounting flange 2 | Square dimensions | Square depth | Stem shape    | Torque | Level of protection (IP value) | Type of regulation | Article  |
|-----------|--------------------|-----------------|-------------------|-------------------|--------------|---------------|--------|--------------------------------|--------------------|----------|
|           |                    |                 |                   | mm                | mm           |               | Nm     |                                |                    |          |
| ELA80Ex   | 24V DC             | F07             |                   | 17                | 33           | Double square | 78     | IP67                           | Open-close         | 13468468 |
| ELA80Ex   | 230V AC            | F07             |                   | 17                | 33           | Double square | 78     | IP67                           | Open-close         | 13274211 |
| ELA100Ex  | 24V DC             | F07             |                   | 17                | 33           | Double square | 98     | IP67                           | Open-close         | 13274212 |
| ELA100Ex  | 230V AC            | F07             |                   | 17                | 33           | Double square | 98     | IP67                           | Open-close         | 12951166 |
| ELA100Ex  | 230V AC            | F07             |                   | 17                | 33           | Double square | 98     | IP68                           | Open-close         | 14073929 |
| ELA150Ex  | 24V DC             | F07             | F10               | 17                | 45           | Double square | 147    | IP67                           | Open-close         | 13468469 |
| ELA150Ex  | 230V AC            | F07             | F10               | 17                | 45           | Double square | 147    | IP67                           | Open-close         | 13468470 |
| ELA150Ex  | 230V AC            | F07             | F10               | 17                | 45           | Double square | 147    | IP68                           | Open-close         | 14073930 |
| ELA200Ex  | 24V DC             | F07             | F10               | 17                | 45           | Double square | 196    | IP67                           | Open-close         | 13274213 |
| ELA200Ex  | 230V AC            | F07             | F10               | 17                | 45           | Double square | 196    | IP67                           | Open-close         | 12991675 |
| ELA200Ex  | 230V AC            | F07             | F10               | 17                | 45           | Double square | 196    | IP68                           | Open-close         | 14073931 |
| ELA300Ex  | 24V DC             | F10             | F12               | 22                | 52           | Double square | 294    | IP67                           | Open-close         | 13468471 |
| ELA300Ex  | 230V AC            | F10             | F12               | 22                | 52           | Double square | 294    | IP67                           | Open-close         | 13468472 |
| ELA500Ex  | 230V AC            | F10             | F12               | 27                | 52           | Double square | 490    | IP67                           | Open-close         | 13274214 |
| ELA600Ex  | 230V AC            | F10             | F12               | 27                | 52           | Double square | 588    | IP67                           | Open-close         | 13468473 |
| ELA800Ex  | 230V AC            | F12             | F14               | 27                | 60           | Double square | 785    | IP67                           | Open-close         | 13468474 |
| ELA1200Ex | 230V AC            | F12             | F14               | 27                | 60           | Double square | 1177   | IP67                           | Open-close         | 13468475 |
| ELA2000Ex | 230V AC            | F16             |                   | 36                | 95           | Double square | 1961   | IP67                           | Open-close         | 13468476 |
| ELA3000Ex | 230V AC            | F16             |                   | 46                | 95           | Double square | 2942   | IP67                           | Open-close         | 13468477 |

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