

# ACTUATOR SERIES ARD100

ESBE Actuator Series ARD100 is a spring return rotary actuator with 10Nm torque and an operating range of 90° suitable for the ESBE mixing valves up to DN80. The ARD100 can also be used as damper actuator for dampers up to 2 m<sup>2</sup>. The actuators is available in 24V AC/DC or 230V AC/DC versions with 2-point or proportional control signal.

## APPLICATION

The ESBE series ARD100 is a spring return actuator suitable for both rotary mixing valves as well as damper applications.

The ARD100 is suitable to work with ESBE valves up to DN80 and with damper sizes up to 2m<sup>2</sup>. The actuator comes with 2 sets of adapters, one set for assembly on ESBE valves 3F/4F and one set with clamp coupling for damper spindle assembly.

## VERSIONS

The series consist of 3 different versions:

- ARD155 with 2-point control signal, 230V AC/DC power supply and 1m preassembled cable.
- ARD157 with 2-point control signal, 24V AC/DC power supply and 1m preassembled cable.
- ARD169 with proportional control signal (0-10V, 2-10V, 0-20mA, 4-20mA), 24V AC/DC power supply and 1m preassembled cable. The version has a 0(2)-10V feedback signal based on the real position.

All versions have a spring return function that moves the actuator to closed position in case of power failure. The direction of rotation is selected by the mounting side of the actuator, see further information in chapter Settings. All versions can be manually operated when the power supply is switched off. A lever, to be used when manually opening and locking the actuator in the manual position, is attached to the cable. The manual position is kept until manually release or power supply is switched on.

Standard operating range is 90° but can be limited in the open position by easily adjusting the end-stop on the front of the cover. Proportional control signal and feedback signal will be adjusted to the new operating range when calibration/adaptation process is performed.



ARD100

## SUITABLE MIXING VALVES AND DAMPERS

Together with the valve assembly kit the ARD100 is easily mounted on the ESBE valve series 3F and 4F from size DN32 to DN80.

Together with damper assembly kit the ARD100 is easily mounted on square spindle with dimension 9...18 mm and round spindle with dimension 9...26 mm. ARD100 can be used on dampers up to 2m<sup>2</sup> but specifications supplied by the damper manufacturers (cross section, design, installation site) and the air flow conditions must be observed.

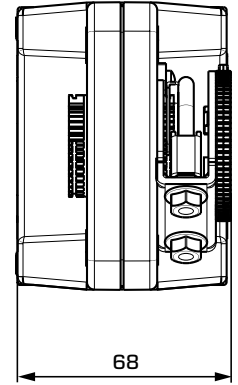
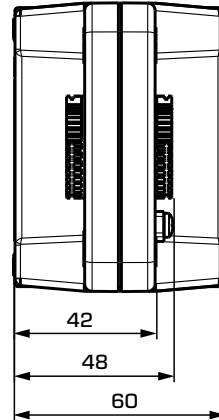
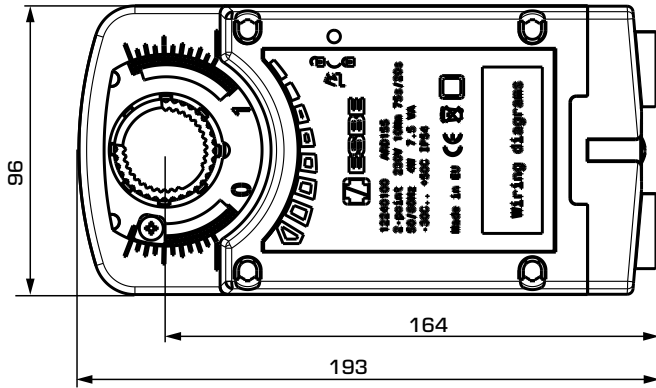
### TECHNICAL DATA

|                                  |                         |                               |
|----------------------------------|-------------------------|-------------------------------|
| Ambient temperature:             | _____                   | max. +50°C                    |
|                                  | _____                   | min. -30°C                    |
| Ambient humidity:                | _____                   | 5...95% r.H. non-condensating |
| Power supply:                    | _____                   | 24V AC (50/60 Hz), 24V DC     |
|                                  | _____                   | 230V AC (50/60 Hz), 230V DC   |
| Nominal voltage range:           | _____                   | 19...29V AC/DC,               |
|                                  | _____                   | 85...265V AC/DC               |
| Power consumption, running:      | 24V _____               | 5 W                           |
|                                  | 230V _____              | 5.5 W                         |
| Power consumption, standby:      | 24V _____               | 2 W                           |
|                                  | 230V _____              | 1.5 W                         |
| Wiring sizing:                   | 24V _____               | 8.0 VA                        |
|                                  | 230V _____              | 11.5 VA                       |
| Enclosure rating:                | _____                   | IP54                          |
| Protection class:                | 24V _____               | III                           |
|                                  | 230V _____              | II                            |
| Torque:                          | _____                   | 10Nm                          |
| Running time, opening (2-point): | _____                   | 75s/90°                       |
|                                  | opening (proportional): | _____ 150s/90°                |
|                                  | closing:                | _____ 20s/90°                 |
| Cable length:                    | _____                   | 1m                            |
| Weight:                          | _____                   | 1.8 kg                        |



LVD 2014/35/EU  
EMC 2014/30/EU  
RoHS 2011/65/EU

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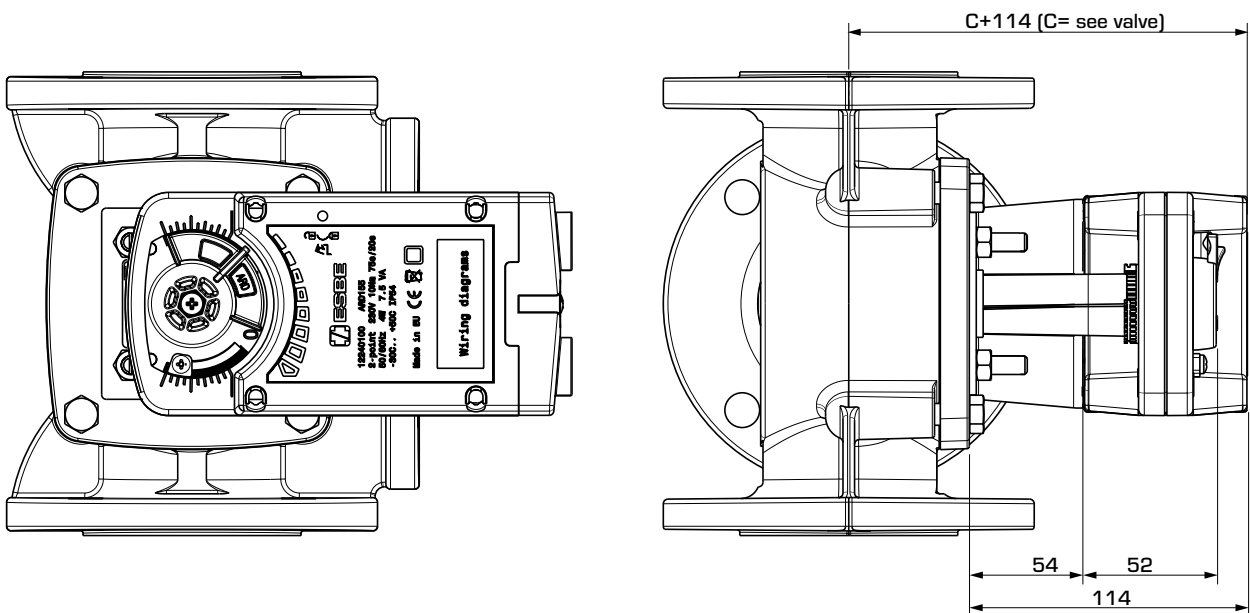
Actuator Series ARD100

Damper assembly kit

## SERIES ARD100

| Art. No. | Reference | Voltage [V AC/DC] | Running time    |                 | Control signal | Torque [Nm] | Note |
|----------|-----------|-------------------|-----------------|-----------------|----------------|-------------|------|
|          |           |                   | opening 90° [s] | closing 90° [s] |                |             |      |
| 12240100 | ARD155    | 230               | 75              | 20              | 2-point        | 10          |      |
| 12241100 | ARD157    | 24                | 75              | 20              | 2-point        | 10          |      |
| 12260100 | ARD169    | 24                | 150             | 20              | Proportional*  | 10          |      |

\* Proportional = 0-10 V, 2-10 V, 0-20 mA, 4-20 mA

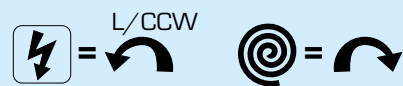
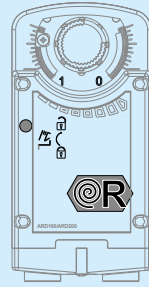
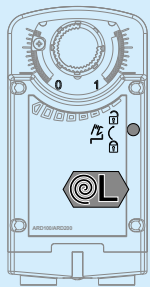


Installation dimensions for Actuator Series ARD100, with valve assembly kit

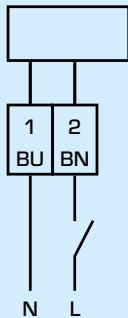
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## SETTINGS

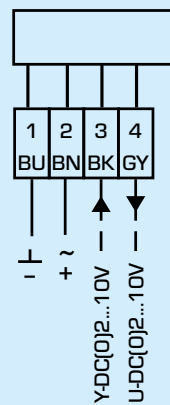
Direction of rotation



## WIRING



ARD155/ARD157 (2-point)



ARD169 (Proportional)