

## 227C-230-08E Rotary Actuator

### Description

Rotary actuator for adjusting dampers in HVAC installations.

- Running time 20 s / 90°
- Torque 8 Nm
- Nominal voltage 230 VAC/DC
- Control continuous control (0)2...10 VDC
- Damper size up to approx. 1.6 m<sup>2</sup>
- Damper coupling clamp  
∅ 8-15 mm / Ø 8-20 mm



### Technical data

#### Electrical data

|   |  |
|---|--|
| <b>Nominal voltage</b>                          | 230 VAC/DC, 50/60Hz  |
| <b>Nominal voltage range</b>                    | 85...265 VAC/DC  |
| <b>Power consumption motor (motion)</b>         | 5.0 W  |
| <b>Power consumption standby (end position)</b> | 1.5 W  |
| <b>Wire sizing</b>                              | 8.0 VA   |
| <b>Control</b>                                  | continuous control (0)2...10 VDC   |
| <b>Connection motor</b>                         | cable L= 2 x 1000 mm, 4 x 0.75 mm <sup>2</sup> & 2 x 0.75 mm <sup>2</sup> (halogen free) |
| <b>Connection feedback potentiometer</b>        | -  |
| <b>Connection GUAC</b>                          | -  |
| <b>Feedback signal</b>                          | 0)2...10 VDC, max. 5 mA  |

### Functional data

|                              |  |
|------------------------------|--|
| <b>Torque</b>                | 8 Nm   |
| <b>Damper size</b>           | up to approx. 1.6 m <sup>2</sup>   |
| <b>Synchronized speed</b>    | +/-5%  |
| <b>Direction of rotation</b> | selected by switch   |
| <b>Manual override</b>       | gearing latch disengaged with pushbutton, self-resetting                     |
| <b>Angle of rotation</b>     | 0°...max. 95° can be limited with adjustable mechanical end stops            |
| <b>Running Time</b>          | 20 s / 90°   |
| <b>Sound power level</b>     | < 45 dB(A)   |
| <b>Shaft coupling</b>        | clamp $\diamond$ 8-15 mm / $\varnothing$ 8-20 mm                             |
| <b>Position indication</b>   | mechanical with pointer  |
| <b>Service life</b>          | 100,000 cycles (0°...95°...0°)<br>> 1,500,000 partial cycles (max. $\pm$ 5°) |

### Safety

|   |  |
|---|--|
| <b>Protection class</b>                       | II (double insulation)                       |
| <b>Degree of protection</b>                   | IP 54 (cable downwards)                      |
| <b>EMC</b>                                    | CE (2014/30/EU)                              |
| <b>LVD</b>                                    | CE (2014/35/EU)                              |
| <b>RoHS</b>                                   | CE (2011/65/EU - 2015/863/EU - 2017/2102/EU) |
| <b>Mode of operation</b>                      | Typ 1 (EN 60730-1)                           |
| <b>Rated impulse voltage supply / control</b> | 4 kV (EN 60730-1)                            |
| <b>Control pollution degree</b>               | 3 (EN 60730-1)                               |
| <b>Ambient temperature normal operation</b>   | -30°C...+50°C                                |
| <b>Storage temperature</b>                    | -30°C...+80°C                                |
| <b>Ambient humidity</b>                       | 5...95% r.H., non-condensing (EN 60730-1)    |
| <b>Maintenance</b>                            | Maintenance free                             |

### Dimensions/Weight

|                   |                  |
|-------------------|------------------|
| <b>Dimensions</b> | 117 x 67 x 61 mm |
| <b>Weight</b>     | 350 g            |

## Functionality / Properties

### Operating mode

Connect power supply to wire 1+2 and a reference signal Y to wire 3 in range of (0)2...10 VDC, actuator drives to its specified position. The actual damper position (0...100%) is a feedback signal U on wire 4 for example to share with other actuators. The actuator is overload-proof, requires no limit switches and automatically stops, when the end stop is reached.

### Direct mounting

Simple direct mounting on the damper shaft with a clamp, protection against rotating with enclosed anti-rotation lock or rather at intended attachment points.

### Manual override

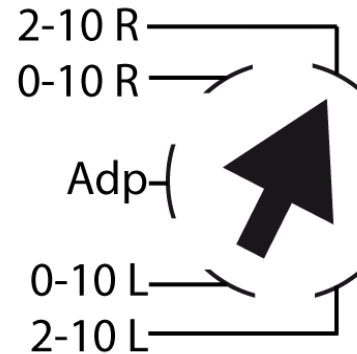
Manual override with self resetting push button possible (the gear is disengaged as long as the button is pressed).

### Mode switch

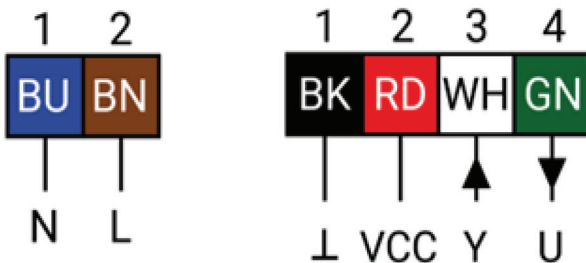
Mode switch with five positions at the housing:  
 2-10 R: rotary direction right 2-10 VDC  
 0-10 R: rotary direction right 0-10 VDC  
 Adp: adaption  
 0-10 L: rotary direction left 0-10 VDC  
 2-10 L: rotary direction left 2-10 VDC

### Adaption drive

- Actuator power off
- Setting the mechanical end stops
- Actuator power on
- Adaption enable
- Actuator drive to position 0
- Actuator drive to position 1
- Adaption disable, if desired angular range reached or rather if actuator reached endstop
- "Y" refers to the measured angular range



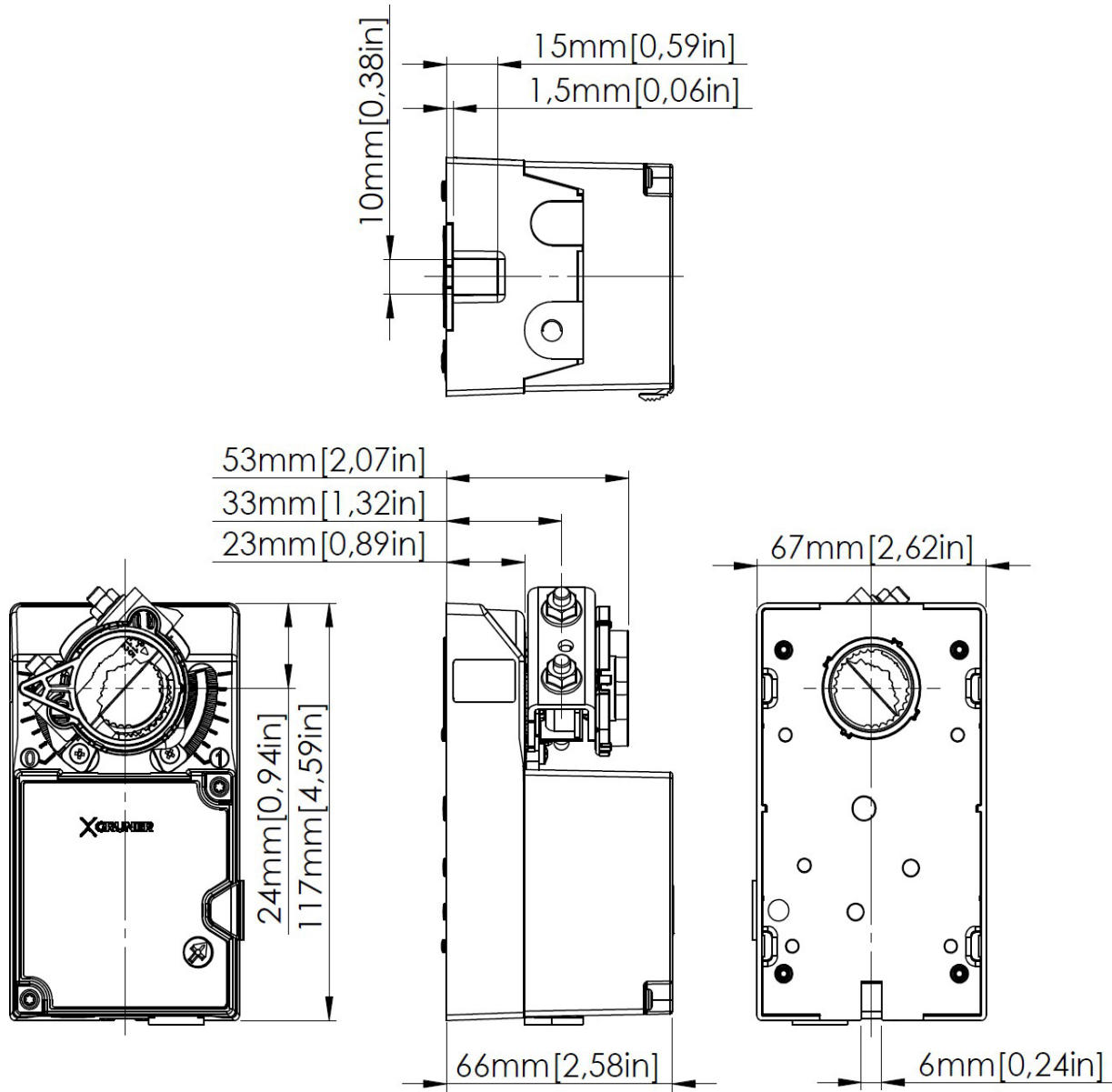
## Connector / Security Note



### Safety remarks

- Connect via safety isolation transformer.
- The device is not allowed to be used outside the specified field of application, especially in airplanes.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The device may only be opened at the manufacturer's site.
- The device is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- When calculating the required torque, the specifications supplied by the damper manufacturer's (cross section, design, installation site), and the air flow conditions must be observed.

Technical Drawing



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