

# Fire and Smoke Spring Return Actuator BFL24(-T)(-ST)



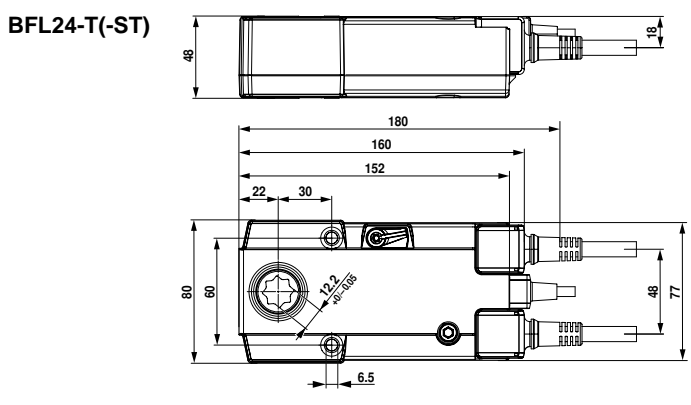
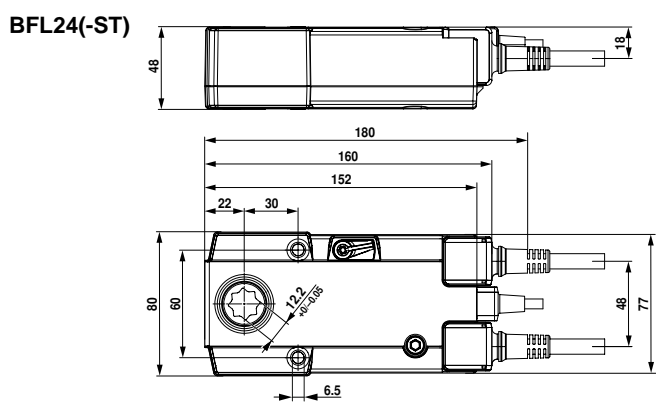
- For control of Fire and Smoke Dampers in HVAC systems
- Nominal torque: 4Nm/3Nm
- Nominal voltage: AC/DC 24V
- Control: Open/Close
- Manual override function
- Spindle driver Form fit 12x12mm, continuous hollow shaft



## Technical data

|                                      |   |                              |  |                                |
|--------------------------------------|---|------------------------------|--|--------------------------------|
| <b>Electrical data</b>               | Nominal voltage                             |                              | AC/DC 24V  |                                |
|                                      | Nominal voltage frequency                   |                              | 50/60Hz  |                                |
|                                      | Nominal voltage range                       |                              | AC 19.2V...28.8V / DC 21.6V...28.8V                                |                                |
|                                      | Power consumption                           | BFL24(-T)                    | 2.5W @ running / 0.7W @ holding                                    |                                |
|                                      |   | BFL24(-ST)                   | 2.5W @ running / 0.8W @ holding                                    |                                |
|                                      | Power consumption for wire sizing           |                              | 4VA (Imax 8.3A @ 5ms)  |                                |
|                                      | Auxiliary switch                            |                              | 2 x SPDT   |                                |
|                                      | Switching capacity auxiliary switch         |                              | 1mA...3 (0.5) A, AC 250V (II Protective insulated)                 |                                |
|                                      | Switching points auxiliary switch           |                              | 5° / 80°   |                                |
|                                      | Connection supply                           |                              | Cable 1m, 2 x 0.34mm <sup>2</sup> (halogen-free)                   |                                |
|                                      | Connection auxiliary switch                 |                              | Cable 1m, 6 x 0.75mm <sup>2</sup> (halogen-free)                   |                                |
|                                      | Cable length thermoelectric tripping device | BFL24-T                      | 0.5m   |                                |
|                                      |   | BFL24-T-ST                   |  |                                |
|                                      | <b>Functional data</b>                      | Torque motor                 |  | Min. 4Nm                       |
|                                      |   | Torque spring return         |  | Min. 3Nm                       |
| Direction of rotation motor          |   |                              | Can be selected by mounting L/R                                    |                                |
| Manual override                      |   |                              | With position stop   |                                |
| Angle of rotation                    |   |                              | Max. 95° (incl. 5° initial spring tension)                         |                                |
| Angle of rotation note               |   |                              | (incl. 5° initial spring tension)                                  |                                |
| Running time motor                   |   |                              | <60s / 90°   |                                |
| Running time spring return           |   |                              | 20s @ -10...55°C / <60s @ -30...-10°C                              |                                |
| Sound power level motor max.         |   |                              | 45dB(A)  |                                |
| Sound power level spring return max. |   |                              | 63dB(A)  |                                |
| Damper rotation                      |   |                              | Form fit 12x12mm, continuous hollow shaft                          |                                |
| Position indication                  |   |                              | Mechanically, with pointer   |                                |
| Service life                         |   | >60,000 safety positions     |  |                                |
| <b>Safety</b>                        | Response temperature thermal fuse           | BFL24-T(-ST):<br>BAT         | Duct outside temperature 72°C<br>Duct inside temperature 72°C      |                                |
|                                      | Protection class IEC/EN                     |                              | III Safety extra-low voltage                                       |                                |
|                                      | Degree of protection IEC/EN                 |                              | IP54 in all mounting positions                                     |                                |
|                                      | EMC   |                              | CE according to 2004/108/EC  |                                |
|                                      | Low-voltage directive                       |                              | CE according to 2006/95/EC   |                                |
|                                      | Certification IEC/EN                        |                              | IEC/EN 60730-1 and IEC/EN 60730-2-14                               |                                |
|                                      | Mode of operation                           |                              | Type 1.AA.B  |                                |
|                                      | Rated impulse voltage supply/control        |                              | 0.8kV  |                                |
|                                      | Control pollution degree                    |                              | 3  |                                |
|                                      | Ambient temperature                         | -Normal Duty<br>-Safety Duty | -30...55°C<br>The safety position will be attained up to max. 75°C |                                |
|                                      | Non-operating temperature                   |                              | -40...55°C (-40...80°C without thermal trip)                       |                                |
|                                      | Ambient humidity                            |                              | 95% r.h., non-condensing   |                                |
|                                      | Maintenance                                 |                              | Maintenance-free   |                                |
|                                      | <b>Weight</b>                               | Weight                       | BFL24(-ST)<br>BFL24-T(-ST)   | Approx. 1.1kg<br>Approx. 1.2kg |

## Dimensions [mm]



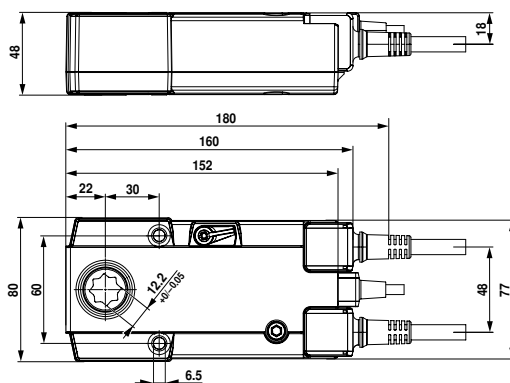
- For control of Fire and Smoke Dampers in HVAC systems
- Nominal torque: 4Nm/3Nm
- Nominal voltage: AC 230V
- Control: Open/Close
- Manual override function
- Spindle driver Form fit 12x12mm, continuous hollow shaft



## Technical data

|                                      |   |                                   |  |   |
|--------------------------------------|---|-----------------------------------|--|---|
| <b>Electrical data</b>               | Nominal voltage                             |                                   | AC 230V  |   |
|                                      | Nominal voltage frequency                   |                                   | 50/60Hz  |   |
|                                      | Nominal voltage range                       |                                   | AC 198...264V  |   |
|                                      | Power consumption                           | BFL230                            | 3.5W @ running / 1.1W @ holding                                    |   |
|                                      |   | BFL230-T                          | 4W @ running / 1.4W @ holding                                      |   |
|                                      | Power consumption for wire sizing           |                                   | 7.5VA (I <sub>max</sub> 4A @ 5ms)                                  |   |
|                                      | Auxiliary switch                            |                                   | 2 x SPDT   |   |
|                                      | Switching capacity auxiliary switch         |                                   | 1mA...3 (0.5) A, AC 250V (II Protective insulated)                 |   |
|                                      | Switching points auxiliary switch           |                                   | 5° / 80°   |   |
|                                      | Connection supply                           |                                   | Cable 1m, 2 x 0.34mm <sup>2</sup> (halogen-free)                   |   |
|                                      | Connection auxiliary switch                 |                                   | Cable 1m, 6 x 0.75mm <sup>2</sup> (halogen-free)                   |   |
|                                      | Cable length thermoelectric tripping device | BFL230-T                          | 0.5m   |   |
|                                      | <b>Functional data</b>                      | Torque motor                      |  | Min. 4Nm  |
|                                      |   | Torque spring return              |  | Min. 3Nm  |
| Direction of rotation motor          |   |                                   | Can be selected by mounting L/R                                    |   |
| Manual override                      |   |                                   | With position stop   |   |
| Angle of rotation                    |   |                                   | Max. 95° (incl. 5° initial spring tension)                         |   |
| Angle of rotation note               |   |                                   | (incl. 5° initial spring tension)                                  |   |
| Running time motor                   |   |                                   | <60s / 90°   |   |
| Running time spring return           |   |                                   | 20s @ -10...55°C / <60s @ -30...-10°C                              |   |
| Sound power level motor max.         |   |                                   | 45dB(A)  |   |
| Sound power level spring return max. |   |                                   | 63dB(A)  |   |
| Damper rotation                      |   |                                   | Form fit 12x12mm, continuous hollow shaft                          |   |
| Position indication                  |   |                                   | Mechanically, with pointer   |   |
| Service life                         |   |                                   | >60,000 safety positions   |   |
| <b>Safety</b>                        |   | Response temperature thermal fuse | BFL230-T: BAT  | Duct outside temperature 72°C<br>Duct inside temperature 72°C |
|                                      | Protection class IEC/EN                     |                                   | II Protective insulated  |   |
|                                      | Degree of protection IEC/EN                 |                                   | IP54 in all mounting positions                                     |   |
|                                      | EMC   |                                   | CE according to 2004/108/EC  |   |
|                                      | Low-voltage directive                       |                                   | CE according to 2006/95/EC   |   |
|                                      | Certification IEC/EN                        |                                   | IEC/EN 60730-1 and IEC/EN 60730-2-14                               |   |
|                                      | Mode of operation                           |                                   | Type 1.AA.B  |   |
|                                      | Rated impulse voltage supply/control        |                                   | 4kV  |   |
|                                      | Control pollution degree                    |                                   | 3  |   |
|                                      | Ambient temperature                         | -Normal Duty<br>-Safety Duty      | -30...55°C<br>The safety position will be attained up to max. 75°C |   |
|                                      | Non-operating temperature                   |                                   | -40...55°C (-40...80°C without thermal trip)                       |   |
|                                      | Ambient humidity                            |                                   | 95% r.h., non-condensing   |   |
|                                      | Maintenance                                 |                                   | Maintenance-free   |   |
|                                      | <b>Weight</b>                               | Weight                            | BFL230<br>BFL230-T   | Approx. 1.1kg<br>Approx. 1.2kg                                |

## Dimensions [mm]



**Wiring diagram: B..F.. series Fail-Safe Open/Close Actuators**

**Notes:**

- Parallel connection of several actuators is possible.
- Power consumption must be observed.

