

Electrical Rotary Actuator - On/Off and control



- Direct mounting on quarter-turn valves
- Manual override standard
- Adjustable limit switches
- Multi-voltage

Type 3003 can be combined with...



Type 2651

2-piece st.st.
ball valve



Type 2654

3-piece st.st.
ball valve



Type 2657

Plastic
ball valve



Type 2671

Metal
butterfly valve



Type 2674

Plastic
butterfly valve

The electrical rotary actuator type 3003 is a compact and powerful actuator system which provides a long service life.

Materials and components have been chosen for maintenance-free operation even in aggressive environments and ensure low thermal loading on the actuator. The modular design offers many additional features to be added to the basic device such as extra limit switches, potentiometers and emergency power.

With the control actuator version the input signals (eg. 4-20 mA, 0-20 mA, 0-10 V) as well as the output signals can be programmed.

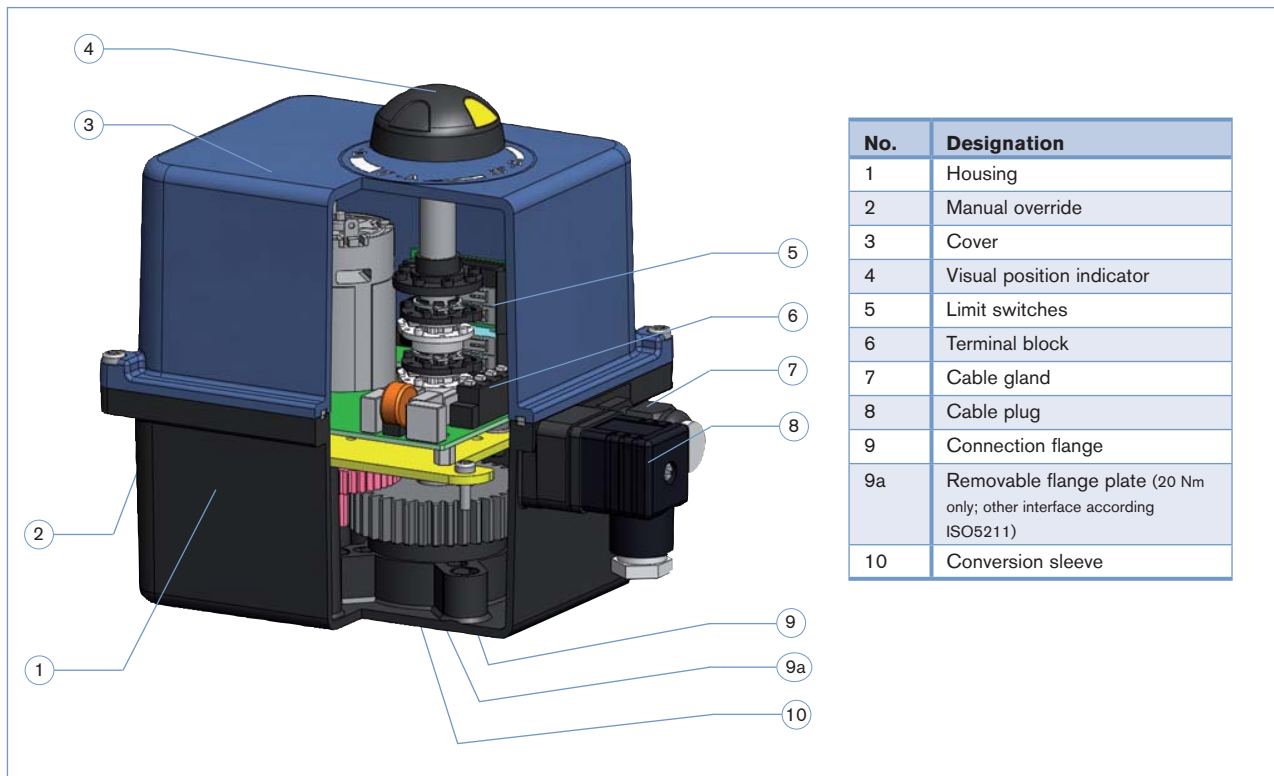
Heating resistor and torque limiter are in standard, the housing is made of flame resistant material classified according to UL 94 V0

Technical data

| | |
|------------------------------|---|
| Torque | 20, 35, 60 and 100 Nm (see ordering chart) |
| Angle of rotation | 90° (+/- 5°) (extra angle on request) |
| 90° rotation time | See ordering chart |
| Duty rating | According to IEC34 S4 = 50% |
| Power supply | 15 - 30 V AC 50/60 Hz / 12 - 48 V DC 100 - 240 V AC 50/60 Hz / 100 - 350 V DC |
| Power consumption | 15 W to 45 W (see ordering chart) |
| Motor protection | Torque limiter |
| Electrical connection | Cable plug acc. to EN175301-803 (supply voltage) Cable glands ISO M20 |
| Mounting | acc. ISO 5211 Motor 20 Nm Motor 35, 60, 100 Nm |
| Drive | Motor 20 Nm Female star 14 mm; conversion sleeve 14/11 mm and 14/9 mm enclosed Motor 35, 60 Nm Female star 22 mm; conversion sleeve star 22/14 mm enclosed Motor 100 Nm Female star 22 mm; conversion sleeve star 22/17 mm enclosed |
| Installation | Do not mount the actuator upside down! |
| Installation site | up to 2000 m high |

| Technical data | |
|---------------------------------------|--|
| Limit switches | 4 adjustable (2 for motor and 2 additional for feedback) max. 250 V AC/5 A |
| Standard signal (programmable) | |
| Input | - 0-10 V - 4-20 mA |
| Output | - 0-20 mA - 0-10 V - 4-20 mA - 0-20 mA |
| Manual override | Standard (at 20 Nm with the included hand lever) |
| Mechanical limit stops | Standard |
| Optical position indicator | Standard |
| Material | |
| Cover / Body | Nylon / PA 6.6 |
| Axis, screw | Stainless steel |
| Gear unit | Stainless steel and PC |
| Type of protection | IP66 with cable plug installed |
| Ambient temperature range | -10 °C to + 55 °C (emergency power version -10 up to 40°C) |
| Weight | 1 Kg (20Nm), 2.1 Kg (35-100 Nm) |
| Options | Varied rotation time Third position (for 180°) Feedback on/off actuators: - Potentiometer 1K, 5K or 10K - Analogue signal 4-20 mA Emergency power version |
| Heating resistor | Standard |

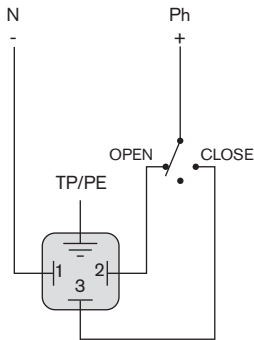
Sectional view



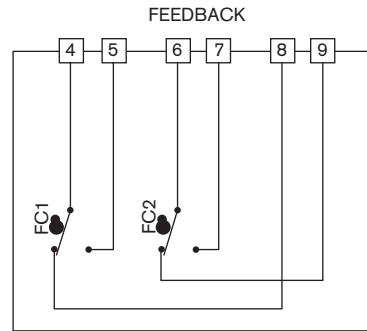
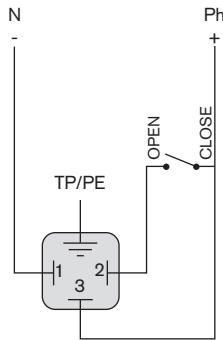
Electrical connections

Open/Close version

3 points Mode

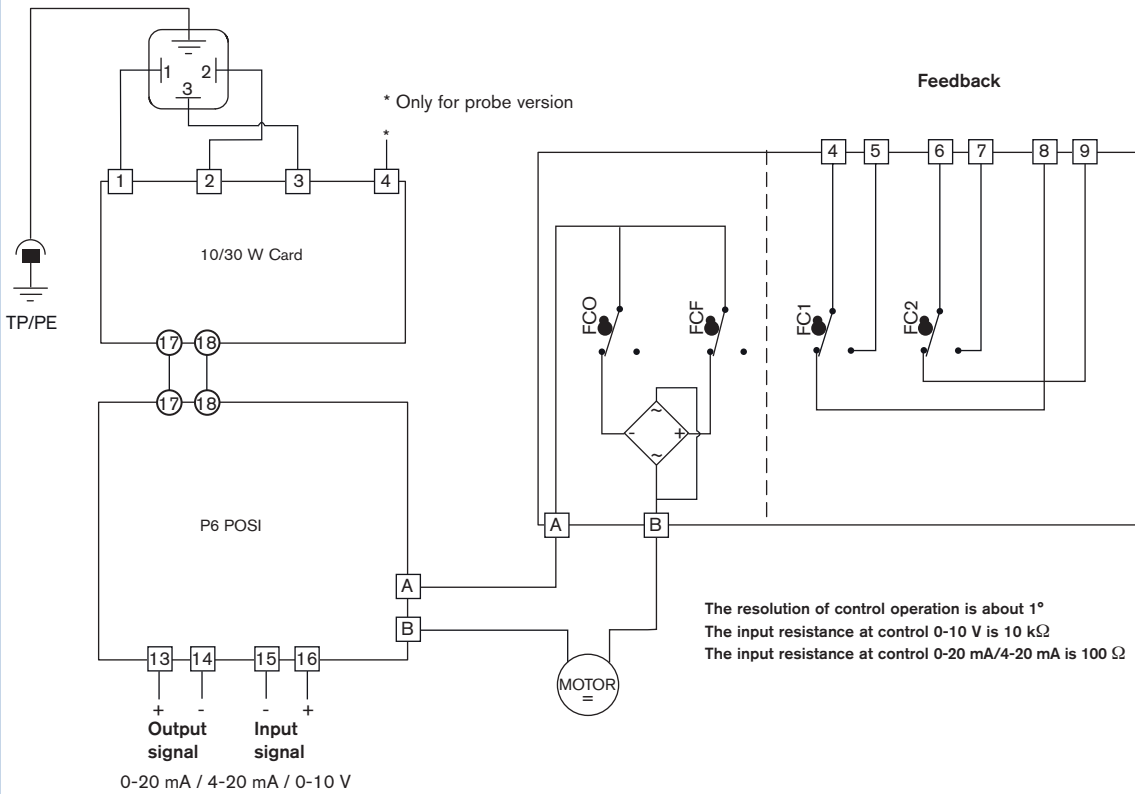
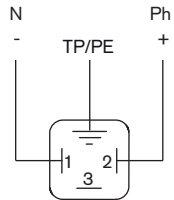


On/Off Mode

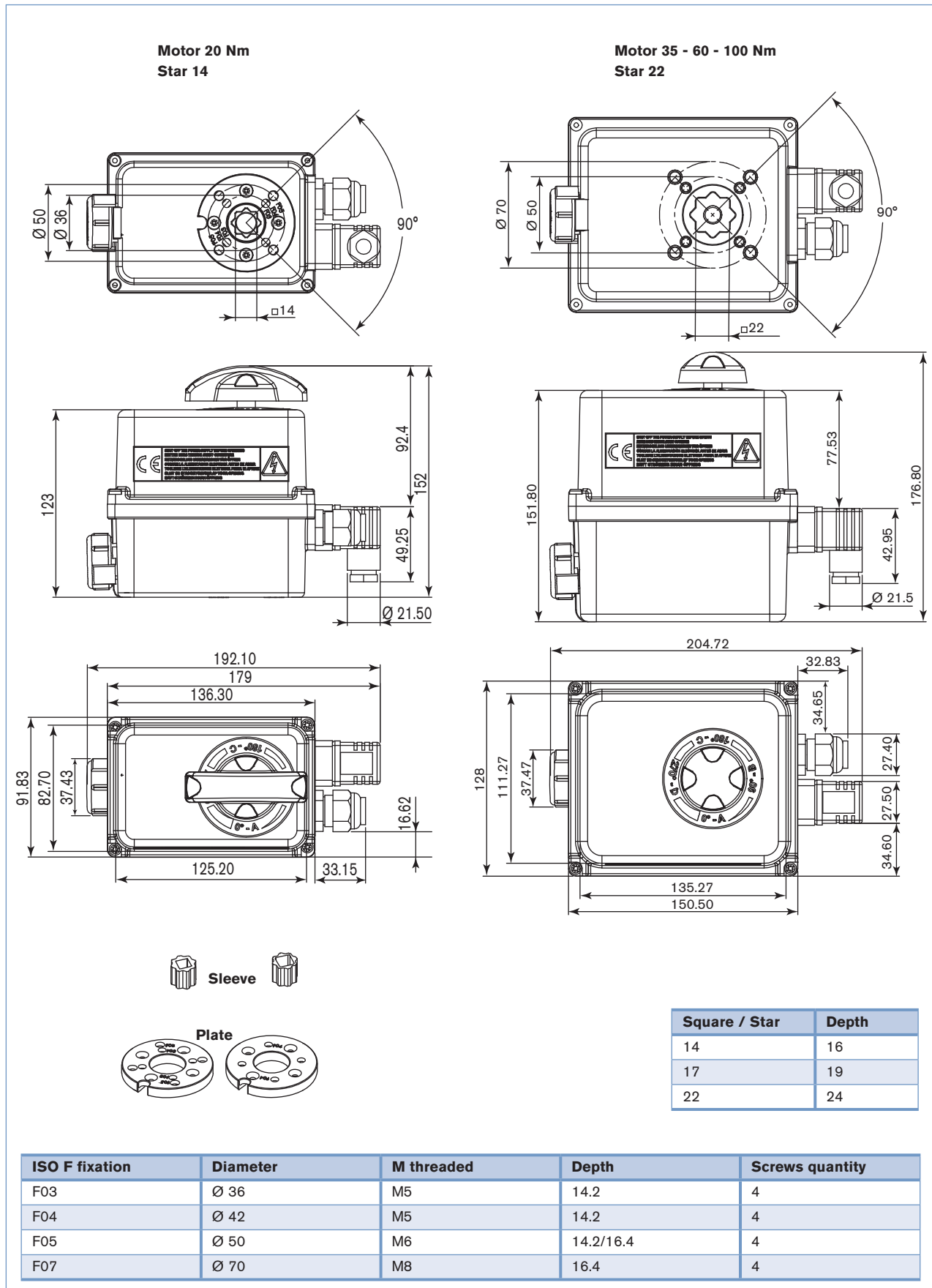


| Symbol | Designation |
|--------|--------------------------|
| FCO | Open limit switch |
| FCF | Close limit switch |
| FC1 | Auxiliary 1 limit switch |
| FC2 | Auxiliary 2 limit switch |

Version with analogue signal input



Dimensions [mm]



Ordering chart (other versions on request)

Multi-voltage version without analogue signal input

Remark : For the actuator choice, we recommend a safety torque equal to 1.5 times of the valve maximal torque (standard).

| Drive stars [mm] | Conversion sleeve star [mm] | Connection flange | Torque | 90° rotation time* +/- 1s (Information on load) | Power consumption | Voltage / frequency | Item no. |
|------------------|-----------------------------|-------------------|---|---|-------------------|---|---|
| 14 | 14/11 and 14/9 | F05 (F03-F04) | 20 Nm | 12 s | 15 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 192 |
| | | | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 193 |
| 22 | 22/14 | F05-F07 | 35 Nm | 7 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 194 |
| | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | | 225 195 | |
| | | | 60 Nm | 12 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 196 |
| | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 197 | | | |
| | 22/17 | F05-F07 | 100 Nm | 23 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 198 |
| | | | | 23 s | | 45 W | 100-240 V AC, / 50/60 Hz / 100-350 V DC |

* other rotation time and rotation angle on request

** The operating voltage must not fall below 11.5 V

Multi-voltage version with analogue signal input

Remark : For the actuator choice, we recommend a safety torque equal to 2 times of the valve maximal torque.

| Drive stars [mm] | Conversion sleeve star [mm] | Connection flange | Torque | 90° rotation time* +/- 1s (Information on load) | Power consumption | Voltage / frequency | Item no. |
|------------------|-----------------------------|-------------------|--------|---|-------------------|---|---|
| 14 | 14/11 and 14/9 | F05 (F03-F04) | 20 Nm | 25 s | 15 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 199 |
| | | | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 200 |
| 22 | 22/14 | F05-F07 | 35 Nm | 40 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 201 |
| | | | | 40 s | | 45 W | 100-240 V AC, / 50/60 Hz / 100-350 V DC |
| | | | 60 Nm | 79 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 203 |
| | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | | 225 204 | |
| | 22/17 | F05-F07 | 100 Nm | 119 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 205 |
| | | | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 206 |

* other rotation time and rotation angle on request

** The operating voltage must not fall below 11.5 V

Ordering chart (other versions on request)

Multi-voltage version with emergency reset switch

Remark : For the actuator choice, we recommend a safety torque equal to 1.5 times of the valve maximal torque (standard).

| Drive stars [mm] | Conversion sleeve star [mm] | Connection flange | Torque | 90° rotation time* +/- 1s (information on load) | Power consumption | Voltage / frequency | Item no. |
|------------------|-----------------------------|-------------------|--------|---|-------------------|---|----------|
| 14 | 14/11 and 14/9 | F05 (F03-F04) | 20 Nm | 12 s | 15 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 207 |
| | | | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 208 |
| 22 | 22/14 | F05-F07 | 35 Nm | 7 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 209 |
| | | | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 210 |
| | | | 60 Nm | 12 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 211 |
| | | | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 212 |
| | 22/17 | F05-F07 | 100 Nm | 23 s | 45 W | 15-30 V AC, 50/60 Hz / 12-48 V DC** | 225 213 |
| | | | | | | 100-240 V AC, / 50/60 Hz / 100-350 V DC | 225 214 |

* other rotation time and rotation angle on request
 ** The operating voltage must not fall below 11.5 V

Ordering chart for accessories (has to be ordered separately)

| Description | Item no. |
|--|----------|
| Removable flange plate F04 for actuators with torque 20 Nm | 665 293 |
| Key to adjust the limit switches | 679 946 |
| Conversion sleeve star/square 14/9 mm | 665 288 |
| Conversion sleeve star/square 14/11 mm | 665 289 |
| Conversion sleeve star/star 22/14 mm | 666 684 |
| Conversion sleeve star/square 22/17 mm | 684 858 |
| Conversion sleeve square/square 17/14 mm | 665 290 |

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In case of special application conditions, please consult for advice.

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