

## Electrical Rotary Actuator - On/Off and control

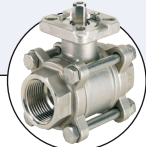


- Direct mounting on quarter-turn valves
- Manual override standard
- Adjustable limit switches
- Multi-voltage

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.

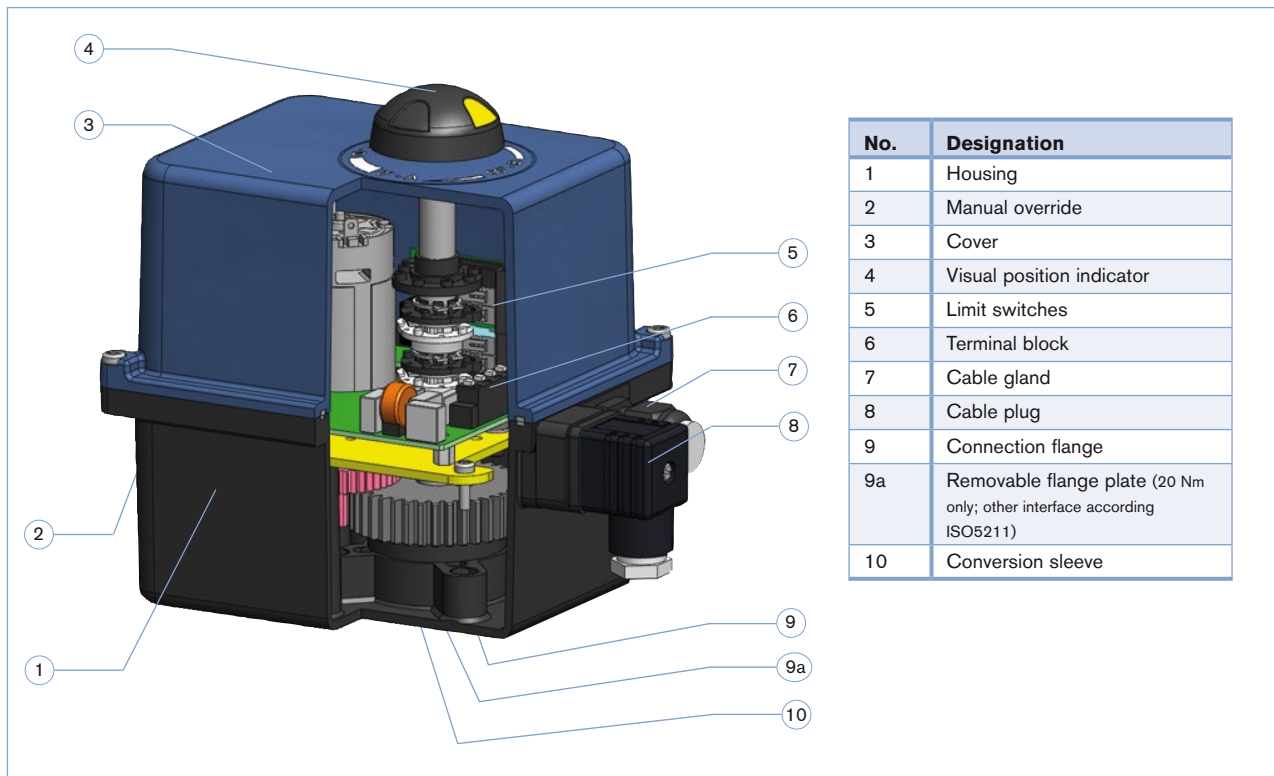
Heating resistor and torque limiter are in standard, the housing is made of flame resistant material classified according to UL 94 V0

### Technical data

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

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

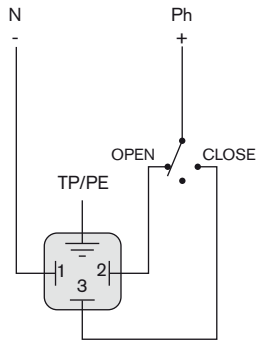
## Sectional view



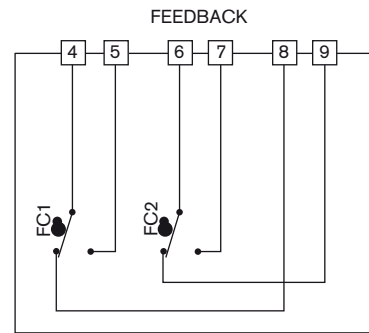
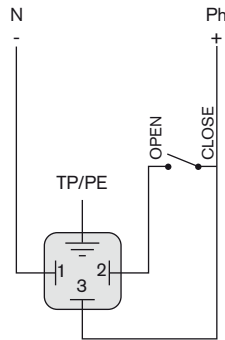
Electrical connections

Open/Close version

3 points Mode

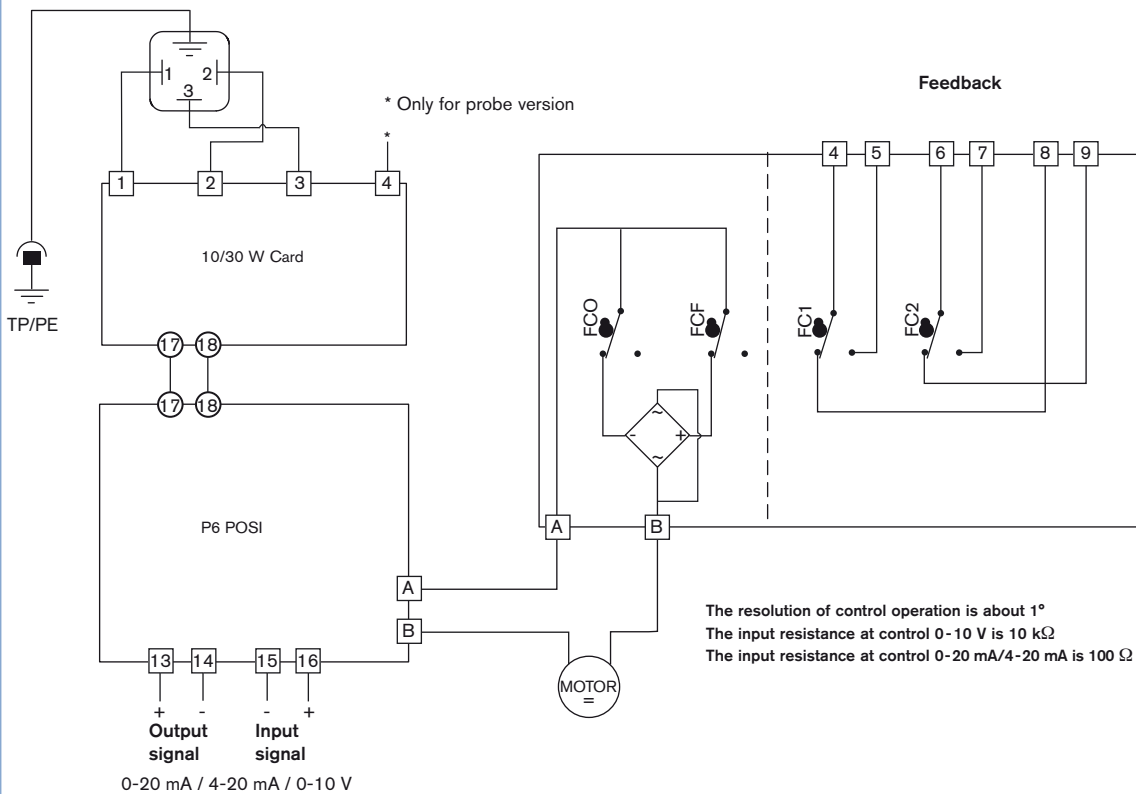
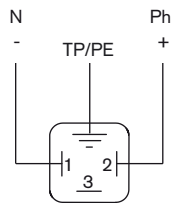


On/Off Mode

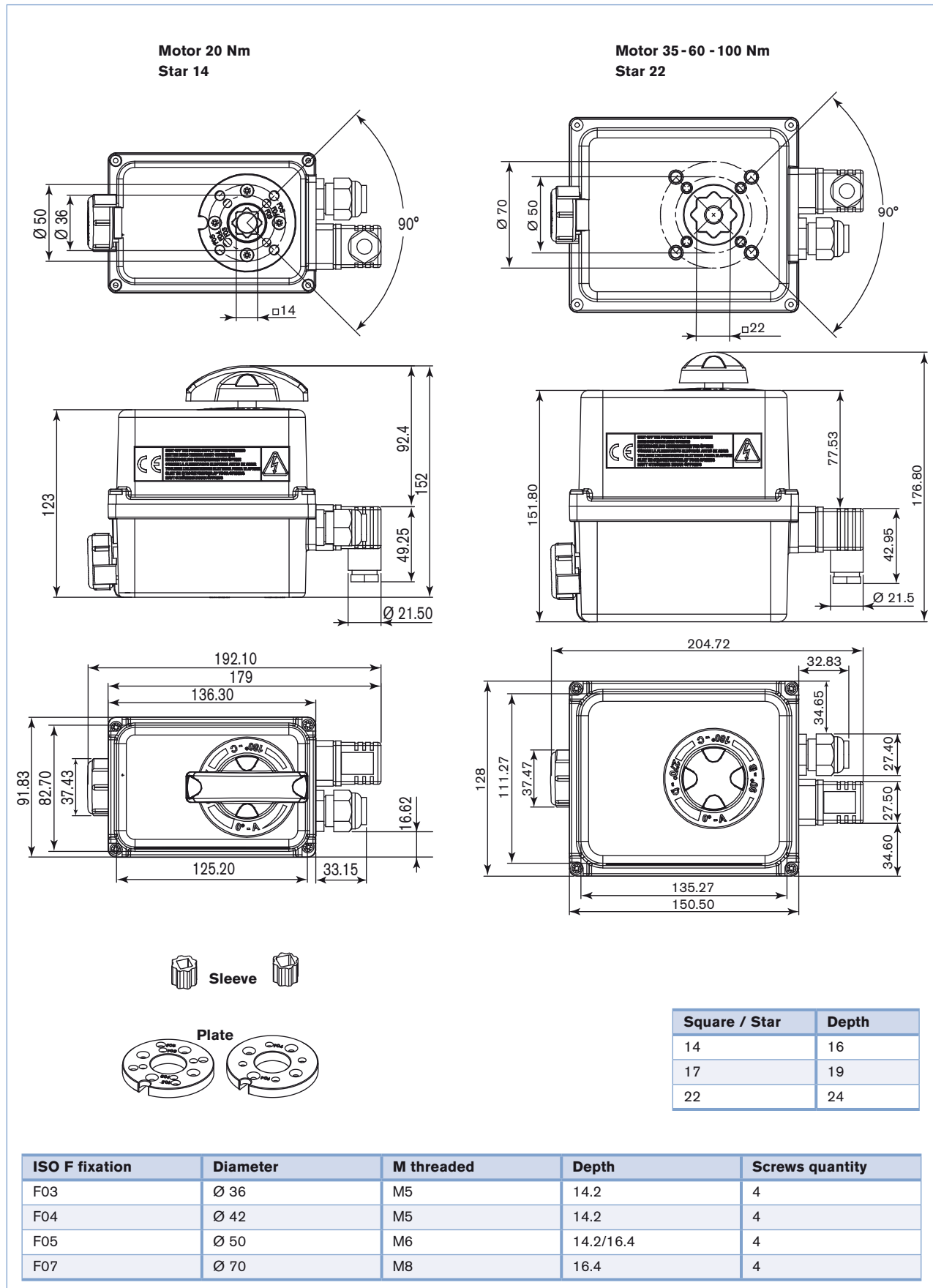


Symbol	Designation
FCO	Open limit switch
FCF	Close limit switch
FC1	Auxiliary 1 limit switch
FC2	Auxiliary 2 limit switch

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* ± 1 sec. (Information on load)	Power consumption	Voltage / frequency	Article no.
14	14/11 and 14/9	F05 (F03-F04)	20 Nm	12 sec.	15 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225192
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225193
22	22/14	F05-F07	35 Nm	7 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225194
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225195
			60 Nm	12 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225196
					100-240 V AC, / 50/60 Hz / 100-350 V DC	225197	
	22/17	F05-F07	100 Nm	23 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225198
				23 sec.	45 W	100-240 V AC, / 50/60 Hz / 100-350 V DC	225225

\* 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* ± 1 sec. (Information on load)	Power consumption	Voltage / frequency	Article no.
14	14/11 and 14/9	F05 (F03-F04)	20 Nm	25 sec.	15 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225199
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225200
22	22/14	F05-F07	35 Nm	40 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225201
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225202
			60 Nm	79 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225203
					100-240 V AC, / 50/60 Hz / 100-350 V DC	225204	
	22/17	F05-F07	100 Nm	119 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225205
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225206









\* 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* ± 1 sec. (information on load)	Power consumption	Voltage / frequency	Article no.
14	14/11 and 14/9	F05 (F03-F04)	20 Nm	12 sec.	15 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225207 
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225208 
22	22/14	F05-F07	35 Nm	7 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225209 
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225210 
			60 Nm	12 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225211 
						100-240 V AC, / 50/60 Hz / 100-350 V DC	225212 
	100 Nm	23 sec.	45 W	15-30 V AC, 50/60 Hz / 12-48 V DC**	225213 		
				100-240 V AC, / 50/60 Hz / 100-350 V DC	225214 		

\* 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	Article no.
Removable flange plate F04 for actuators with torque 20 Nm	665293 
Key to adjust the limit switches	679946 
Conversion sleeve star/square 14/9 mm	665288 
Conversion sleeve star/square 14/11 mm	665289 
Conversion sleeve star/star 22/14 mm	666684 
Conversion sleeve star/square 22/17 mm	684858 
Conversion sleeve square/square 17/14 mm	665290 

To find your nearest Bürkert facility, click on the orange box → [www.burkert.com](http://www.burkert.com)

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

Subject to alteration.  
 © Christian Bürkert GmbH & Co. KG

1803/17\_EU-en\_00891917