

Electrical Rotary Actuator - On/Off and control

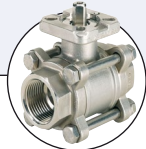


- Direct mounting on quarter-turn valves
- Manual override standard
- Adjustable limit switches
- Multi-voltage

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.

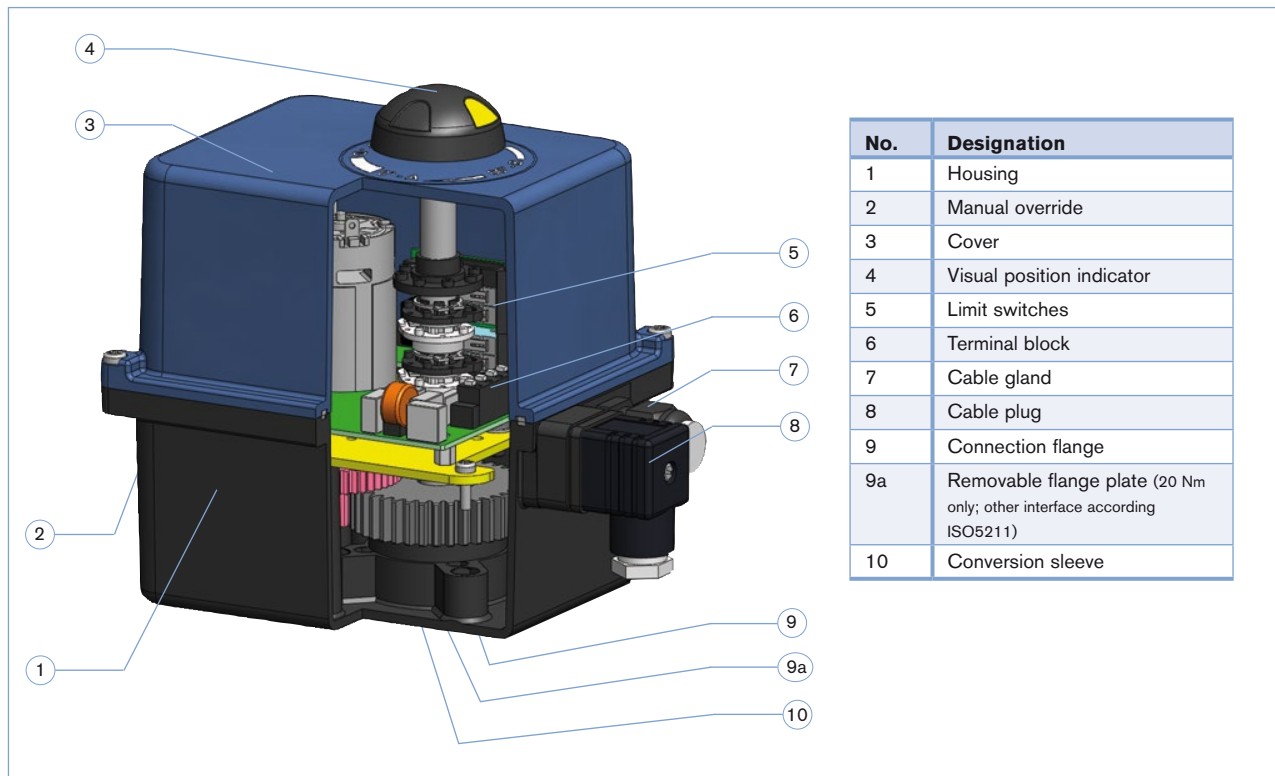
Heating resistor and torque limiter are in standard, the housing is made of flame resistant material classified according to UL 94 V0

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 - 0 - 20 mA
Output	- 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

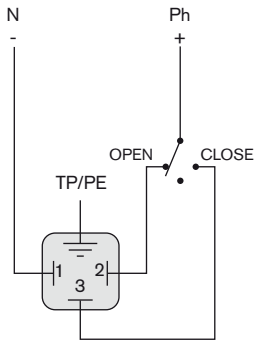
Sectional view



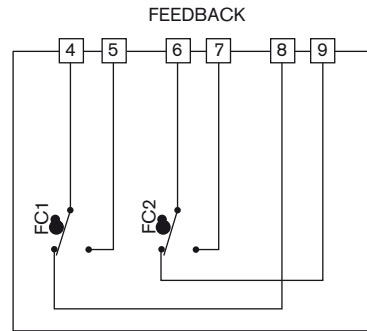
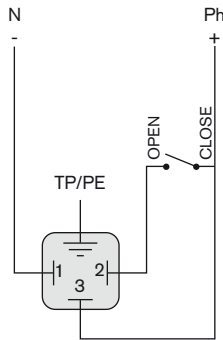
Electrical connections

Open/Close version

3 points Mode

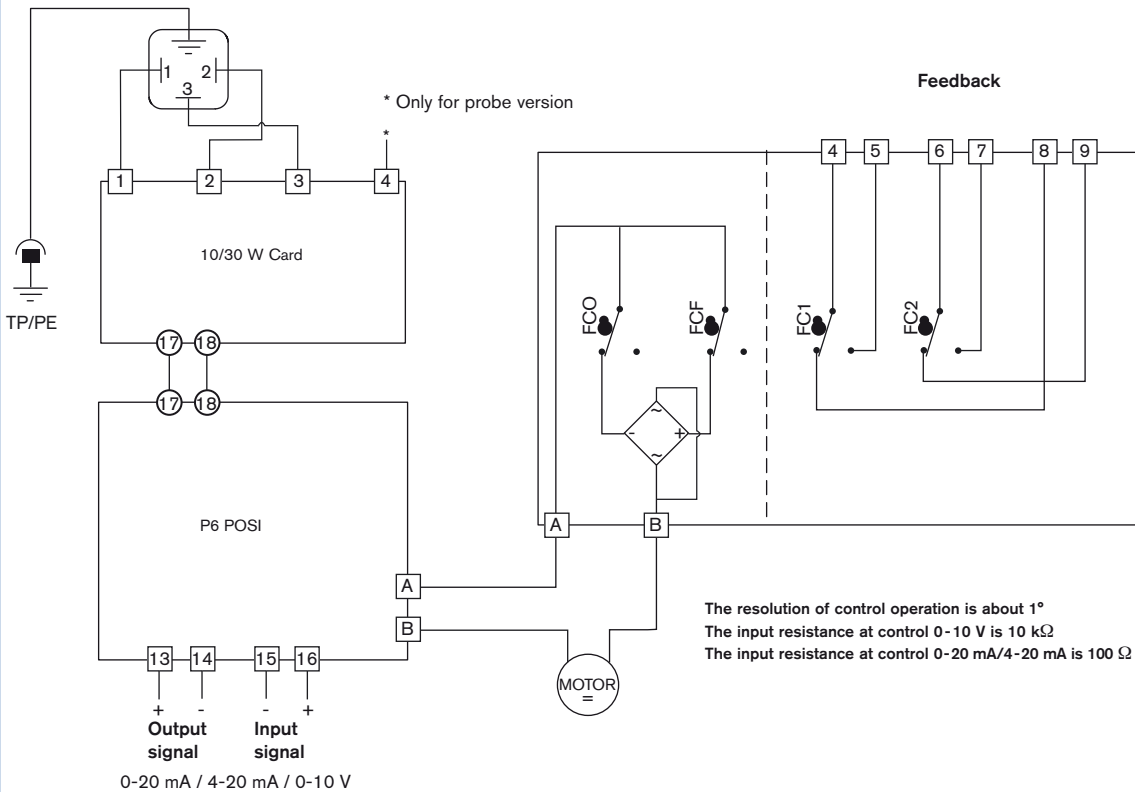
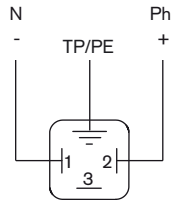


On/Off Mode

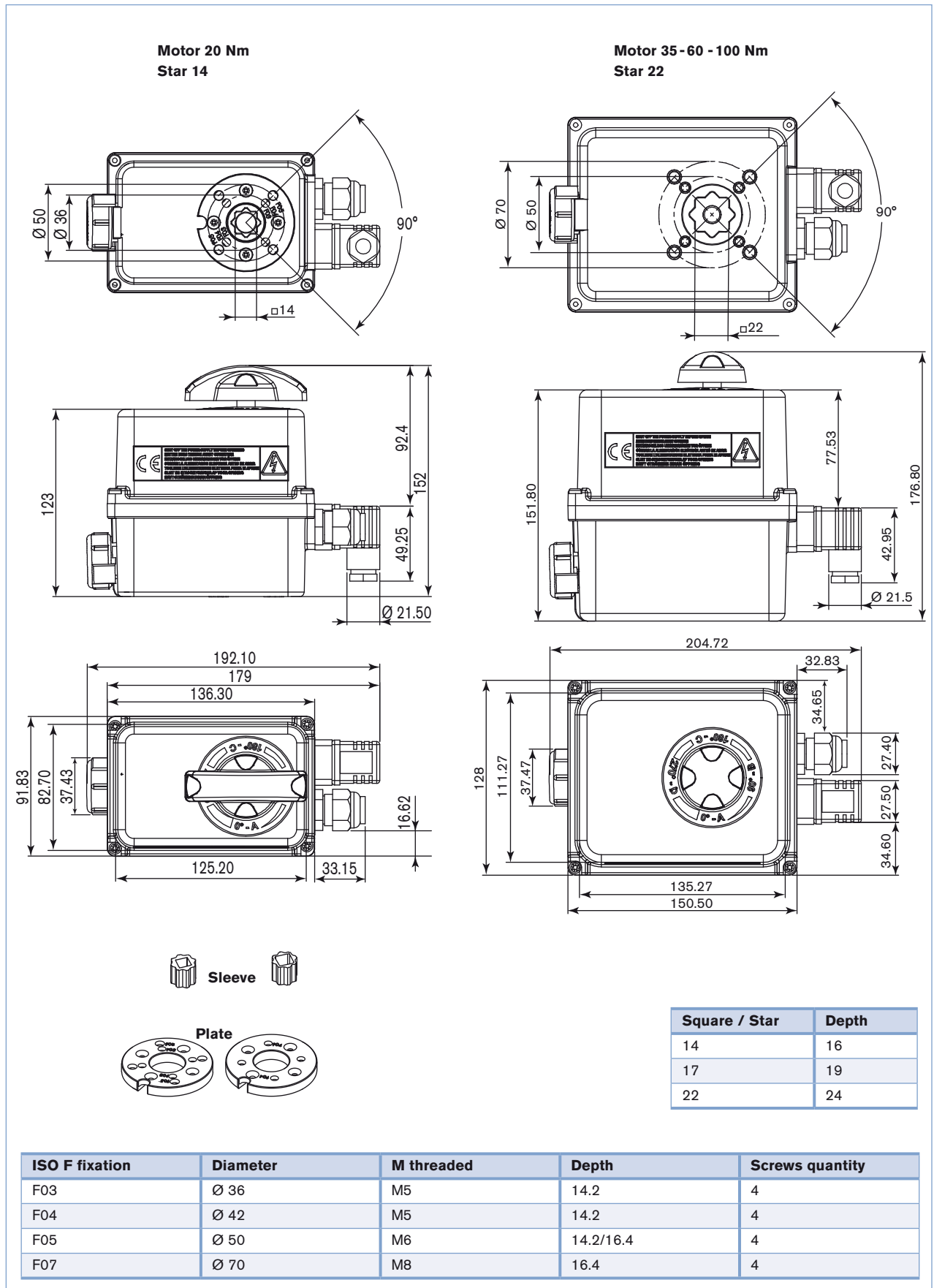


Symbol	Designation
FCO	Open limit switch
FCF	Close limit switch
FC1	Auxiliary 1 limit switch
FC2	Auxiliary 2 limit switch

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* ± 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 
						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
	22/17	F05-F07	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

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

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