

Electrical Rotary Actuator - On/Off or programmable analog signal input



- 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.

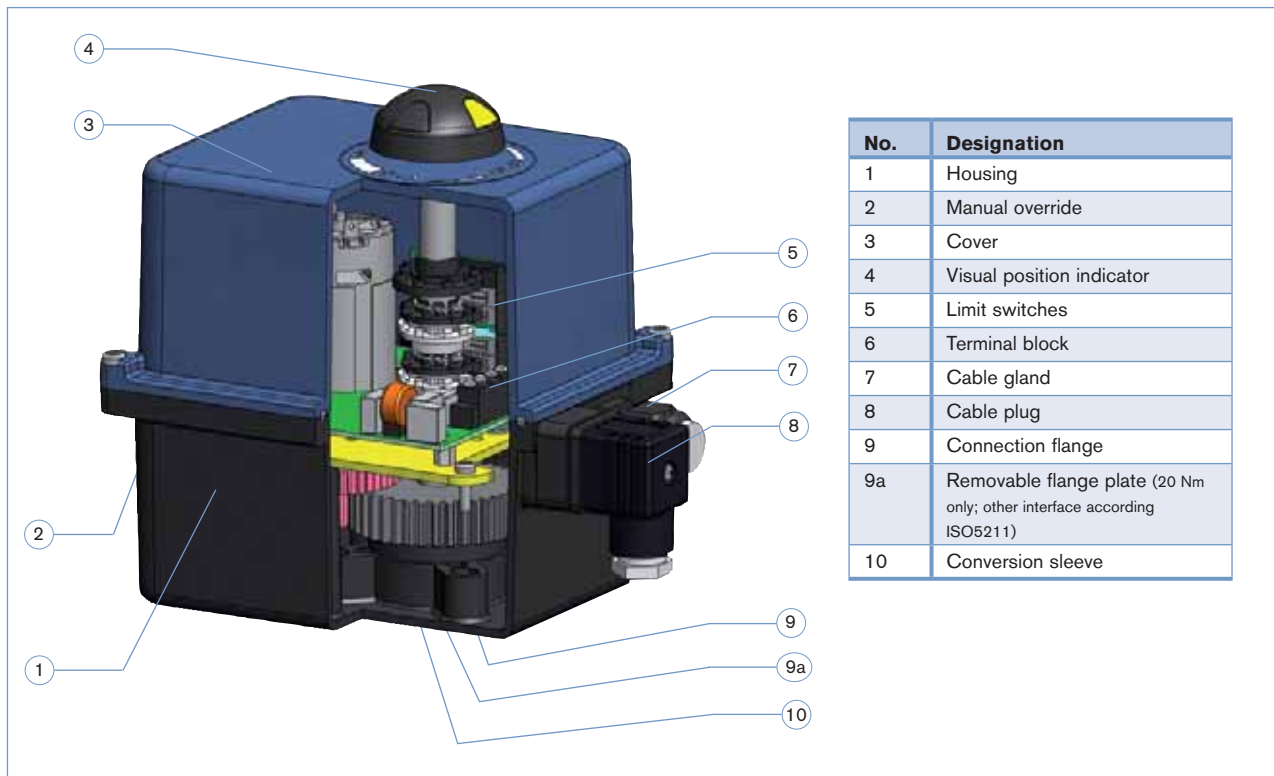
Heating resistor and torque limiter are in standard, the housing is made of flame resistant material classified according to UL 94 V0

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

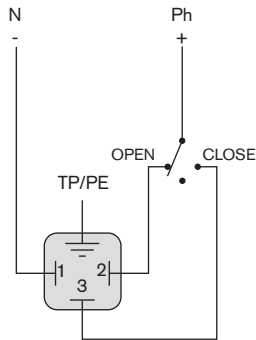
Sectional view



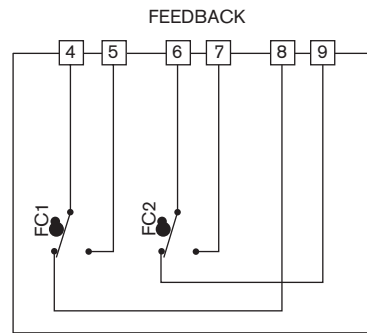
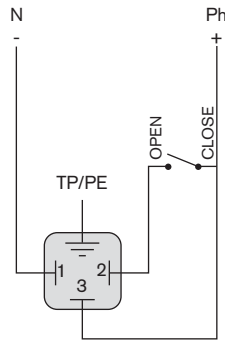
Electrical connections

Open/Close version

3 points Mode

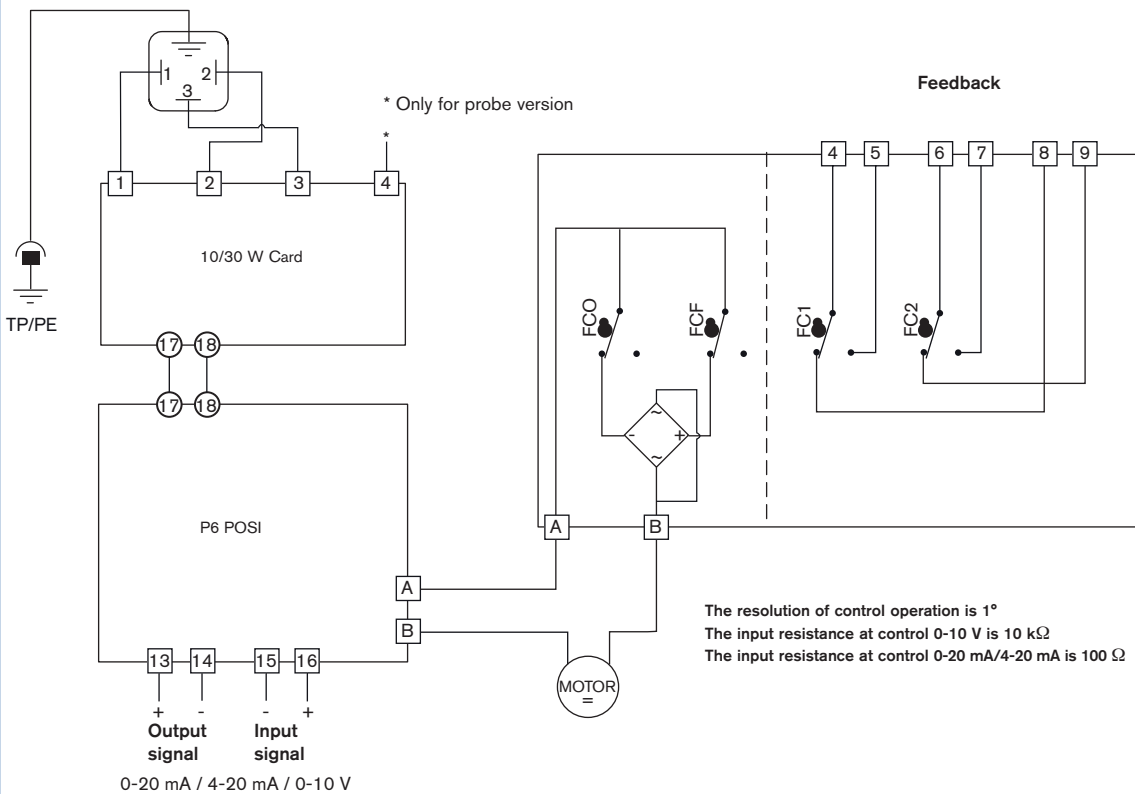
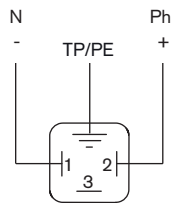


On/Off Mode



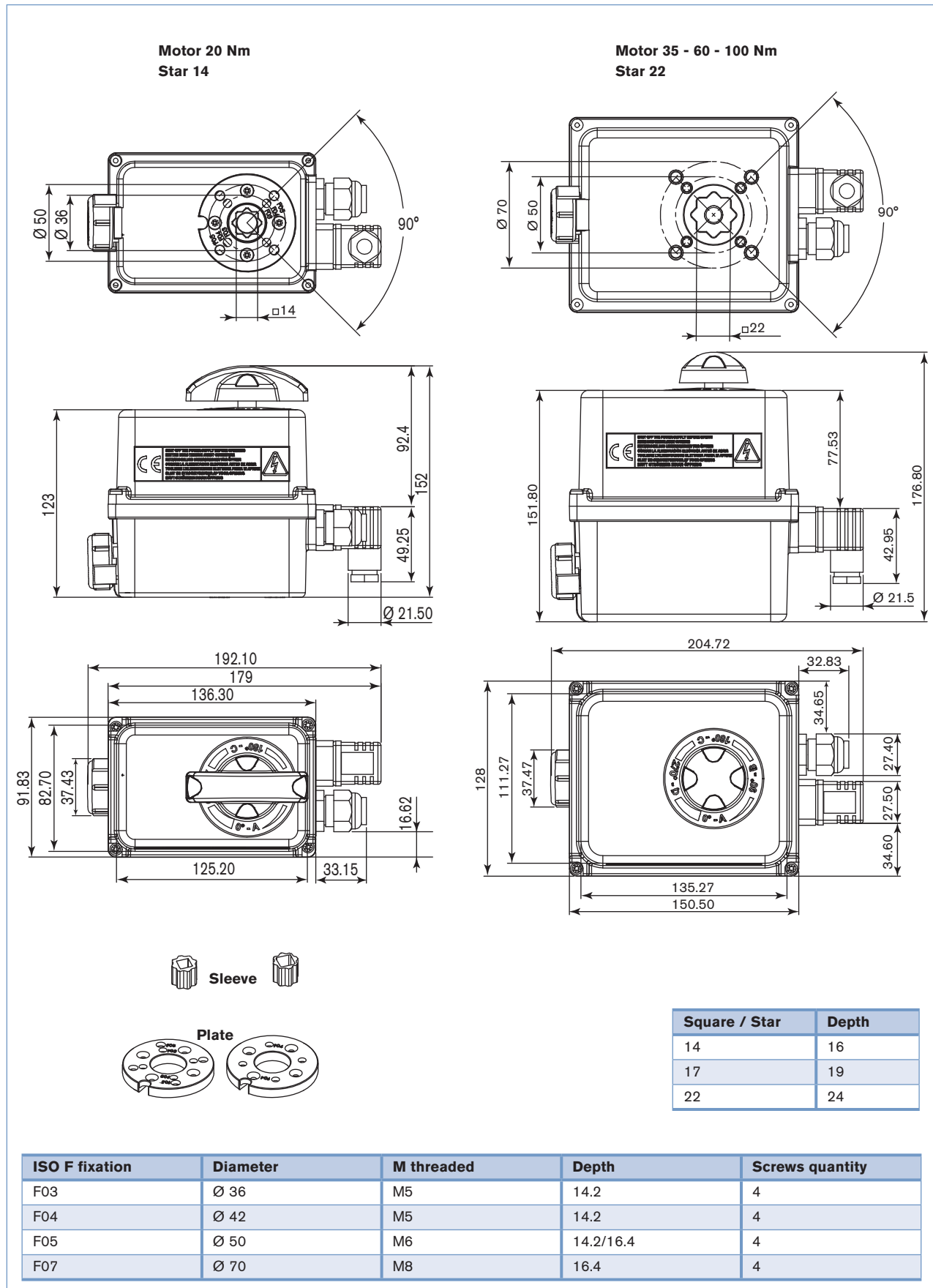
Symbol	Designation
FCO	Open limit switch
FCF	Close limit switch
FC1	Auxiliary 1 limit switch
FC2	Auxiliary 2 limit switch

Version with analogue signal input



The resolution of control operation is 1°
 The input resistance at control 0-10 V is 10 kΩ
 The input resistance at control 0-20 mA/4-20 mA is 100 Ω

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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