

Electric Rotary Actuator - On/Off or programmable regulating actuator for Quarter-Turn Valves



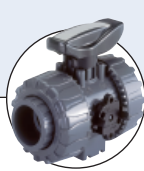
Type 3003 can be combined with...



Type 2651
2-piece st.st.
Ball valve



Type 2654
3-piece st.st.
Ball valve



Type 2657
Plastic
Ball valve



Type 2672
Metal
Butterfly valve



Type 2675
Plastic
Butterfly valve

- Direct mounting for quarter-turn valves
- Manual override standard
- Corrosion resistant
- Adjustable limit switches
- Multi-voltage version

The 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 options such as extra limit switches, potentiometers, emergency power to be added to the basic unit.

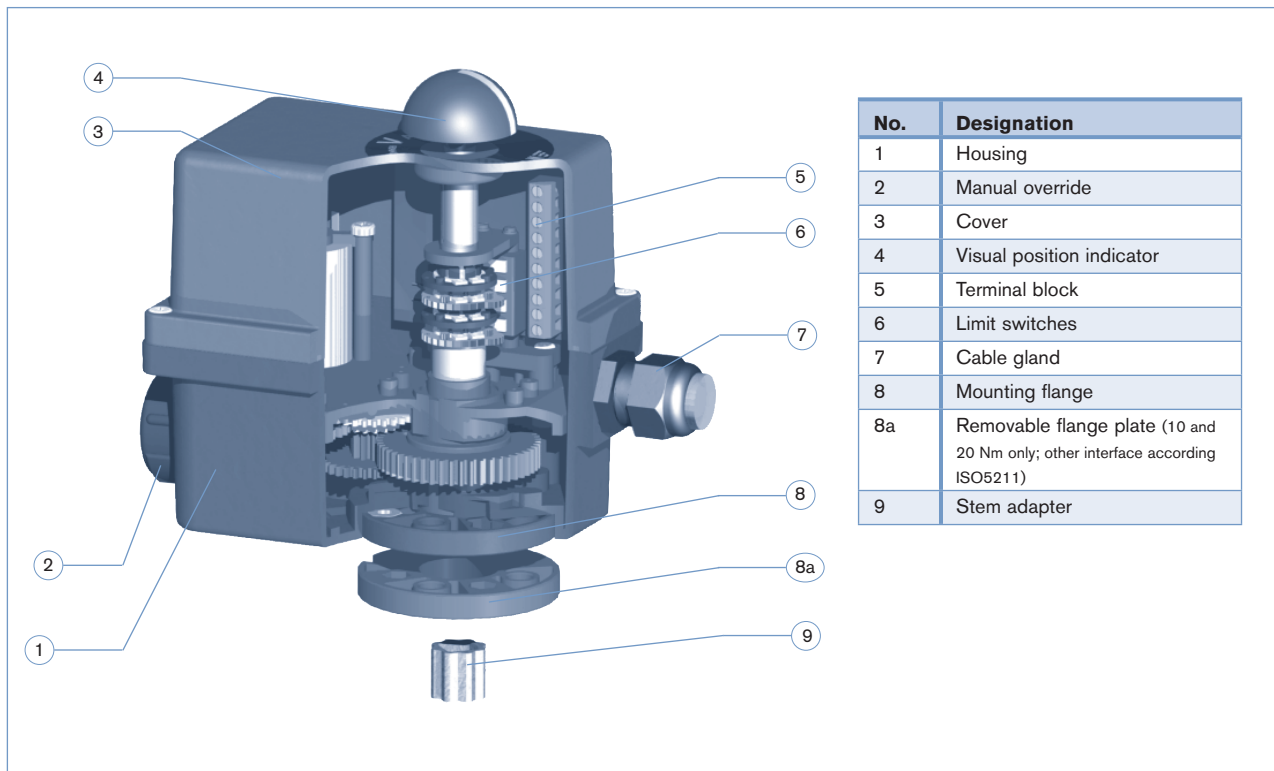
The input signals (eg. 4-20 mA, 0-20 mA, 0-10 V) as well as the output signals can be programmed with the regulating actuators.

Technical data

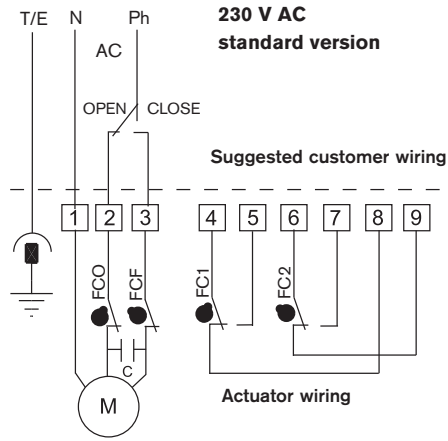
Torque	10, 20, 35, 60 and 100 Nm (see ordering chart)
Angle of rotation	90° (+/- 5°)
90° rotation time	9 to 100 s (see ordering chart)
Duty rating	At max. torque: 50% of the time Regulating actuator: 50% of max. torque
Power supply	Motor 10, 20 Nm Motor 35, 60, 100 Nm Multi-voltage version Tolerance
	230 V AC / 50 Hz or 24 V AC/DC (12 VDC on request) 230 V AC / 50-60 Hz or 24 V AC/DC (12 VDC on request) 100-240 V AC / 50-60 Hz +/- 10% AC; +/- 20% DC
Power consumption	11 W to 32 W (see ordering chart)
Motor protection	Thermic for version 24 V AC/DC - Torque limited
Electrical connection	On/Off (standard) Regulating actuator and On/Off Multivoltage
	2 cable glands ISO M20 (Connector EN175301-803, on request) Connector EN175301-803 (power supply) cable gland ISO M20 (analog signal)
Mounting	acc. ISO 5211 F05 (removable fixation plate F03/F05) F05/F07
Drive	Motor 10, 20 Nm Motor 35, 60 Nm Motor 100 Nm
	Female star 14 mm ; conversion sleeves star 14/11 mm and 14/9 mm enclosed Female star 22 mm; conversion sleeve star 22/14 mm enclosed Female star 22 mm; conversion sleeve star 22/17 mm enclosed
Installation	Do not mount the actuator with the cover down (head over).

Technical data	
Limit switches	4 adjustables (2 for motor and 2 additional for feedback) max. 250 V AC/1.5 A
Manual override	By outgoing axis with return spring
Actuator standard signal (programmable)	
Input	- 0-10 V - 4-20 mA
Output	- 0-20 mA - 0-10 V - 4-20 mA - 0-20 mA
Mechanical limit stops	Standard
Visual position indicator	Standard
Material	
Cover / Housing	ABS / PA
Axis, screw	Stainless steel
Gear	Steel and PC
Protection class	IP65 with connectors installed
Ambient temperature	-10 °C to + 55 °C (at < +15 °C heating resistor is recommended)
Weight	1,5 Kg (10-20 Nm), 3 Kg (35-100 Nm)
Options	Heating resistor 10 W Slow version Third position (for 180°) Feedback On/Off actuators: - Potentiometer 1K, 5K, or 10K - Analog signal 4-20 mA Emergency power option (on request)

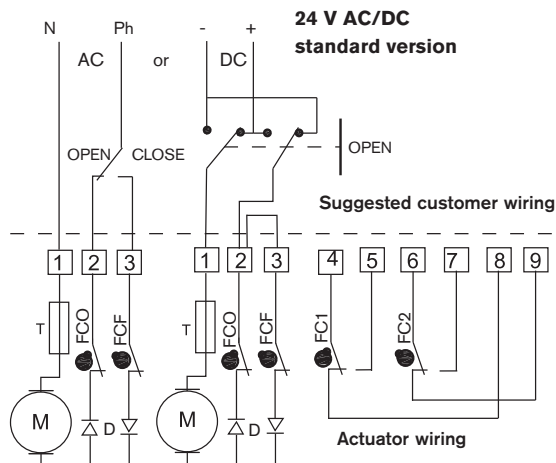
Exploded view



Electrical connections

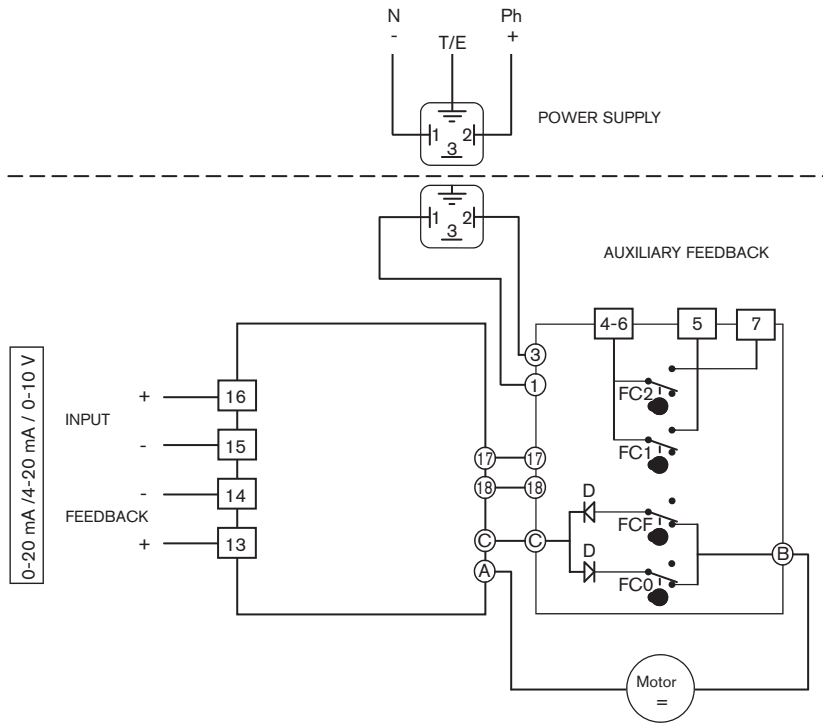


Symbol	Designation
FCO	Open limit switch
FCF	Close limit switch
FC1	Auxiliary 1 limit switch
FC2	Auxiliary 2 limit switch
M	Motor
T	Thermal Fuse
D	Diode
C	Capacitor
P	Potentiometer



Electrical connections (continued)

100-240 V AC or 24 V AC/DC
Regulating actuator with programmable analog signal input or output

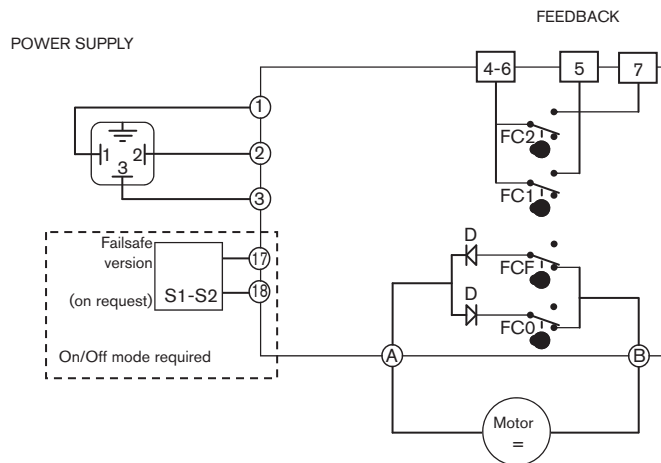
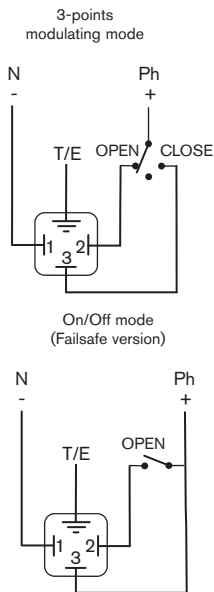


0-20 mA / 4-20 mA / 0-10 V

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

Multi-voltage version - 100 to 240 V AC

Suggested customer wiring



Ordering chart (other versions on request)

Standard version without control function

Drive stars [mm]	Conversion adapter star [mm]	Mounting flange	Torque [Nm]	90° rotation time [s]	Power [W]	Power supply* [V / Hz]	Item no.
14	14/11 and 14/9	F05 (F03-F04)	10	25	11	230 / 50	179 208
				10	11	24 AC / DC	179 211
			20	20	15	230 / 50	166 323
				20	11	24 AC / DC	166 325
22	22/14	F05-F07	35	9	24	230 / 50-60	166 326
				9	32	24 AC / DC	166 328
			60	17	24	230 / 50-60	166 329
				17	32	24 AC / DC	166 331
	22/17	F05-F07	100	28	24	230 / 50-60	166 332
					28	32	24 AC / DC

* other power supply on request

Multi-voltage version without control function

Drive stars [mm]	Conversion adapter star [mm]	Mounting flange	Torque [Nm]	90° rotation time [s]	Power [W]	Power supply* [V / Hz]	Item no.
14	14/11 and 14/9	F05 (F03-F04)	10	10	15	100-240 / 50-60	179 000
			20	20	15	100-240 / 50-60	179 001
22	22/14	F05-F07	35	35	15	100-240 / 50-60	179 002
			60	60	15	100-240 / 50-60	179 003
	22/17	F05-F07	100	100	15	100-240 / 50-60	179 004

* other power supply on request

Regulating version with 4-20 mA, 0-20 mA or 0-10 V control input or output function

Drive stars [mm]	Conversion adapter star [mm]	Mounting flange	Torque [Nm]	90° rotation time [s]	Power [W]	Power supply* [V / Hz]	Item no.
14	14/11 and 14/9	F05 (F03-F04)	20	20	15	100-240 / 50-60	178 233
						24 AC / DC	169 164
22	22/14	F05-F07	35	35	15	100-240 / 50-60	179 005
						24 AC / DC	169 167
			60	60	15	100-240 / 50-60	179 006
						24 AC / DC	169 171
	22/17	F05-F07	100	100	15	100-240 / 50-60	179 007
						24 AC / DC	169 175

* other power supply on request

Remark :

For the actuator choice, we recommend a safety torque equal to 1.5 times of the valve maximal torque (2 times for the regulating version).

Ordering chart accessories

Specifications	Item no.
Removable plate F04 for actuator with torque 10 and 20 Nm	665 293
Key to adjust limit switches	665 296
Conversion adapter star/square 14/9 mm	665 288
Conversion adapter star/square 14/11 mm	665 289
Conversion adapter star/star 22/14 mm	666 684
Conversion adapter star/star 22/17 mm	666 685
Conversion adapter square/square 17/14 mm	665 290
Conversion adapter external square 14/10 mm	668 234

To find your nearest Bürkert facility, click on the orange box →

www.burkert.com