burkert
FLUID CONTROL SYSTEMS

Electric Rotary Actuator – On/Off or programmable control actuator



- Direct mounting on quarter-turn valves
- Manual override standard
- Corrosion resistant
- Adjustable limit switches
- Multi-voltage version
- Protection class IP68

Type 3005 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 rotary actuator type 3005 is a compact and powerful actuator system which provides a long service life.
Materials and components have been chosen for maintenance-free operation and ensure low thermal loading on the actuator. The modular design offers many options such as extra limit switches or potentiometers to be added to the basic unit.

Technical data	
Torque	25 and 300 Nm (see ordering chart) (600 and 1000 Nm on request)
Angle of rotation	90° (+/- 5°)
90° rotation time	7 up to 60 s (see ordering chart)
Duty rating	At max. torque: 50% of the time Control actuator: 50% of max. torque
Power supply Tolerance	15-30 V AC 50/60 Hz / 12-48 V DC 100-240 V AC 50/60 Hz / 100-350 V DC +/- 10%
Power consumption	45 W
Motor protection	Electronic torque limitation
Electrical connection	2 cable glands ISO 20 (Cable plug acc. EN 175301-803 on request)
Mounting	acc. ISO 5211 F05/F07 F07/F10v
Drive	Motor 25 Nm Female star 17 mm; conversion sleeve star 17/11 mm enclosed Motor 45, 75 Nm Female star 17 mm; conversion sleeve star 17/14 mm enclosed Motor 100, 150, 300 Nm Female star 22 mm; conversion sleeve star 22/17 mm enclosed
Installation	Do not mount the actuator upside down!

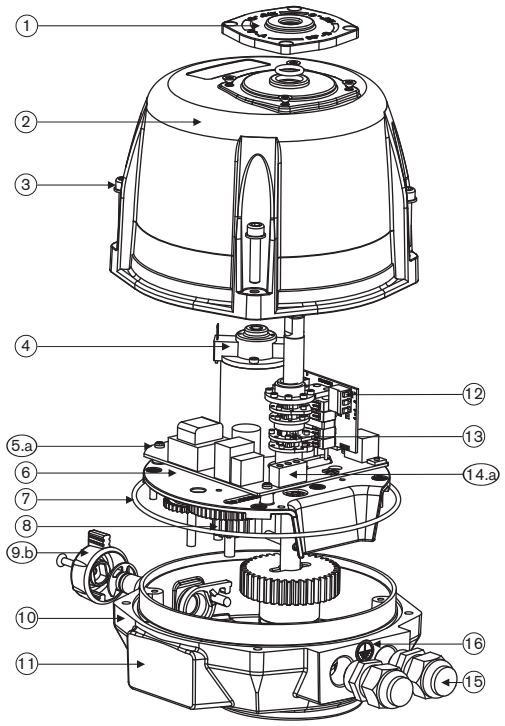
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Technical data	
Limit switches	4 adjustable (2 for motor and 2 additional for feedback) max. 250 V AC/5 A
Analogue signals **control version (programmable)** Input Output	 – 0-10 V – 4-20 mA – 0-20 mA – 0-10 V – 4-20 mA – 0-20 mA
Manual override	By hand wheel (from 100 Nm)
Mechanical limit stops	Standard
Optical position indicator	Standard
Material Cover, Housing Axis, screw Gear	 Nylon / Epoxy coated aluminium Stainless steel Zinc-plated Steel
Type of class	IP68
Ambient temperature	-20 °C up to + 70 °C -20 °C up to + 40 °C (emergency reset)
Weight	5.6 kg
Heating resistor	10 W
Options	Three position actuator (180°) Rotation 180° or 270° Feedback On/Off actuators: – Potentiometer 0.1K, 1K, 5K or 10K – Analogue signal 4-20 mA Fail safe option 2 extra limit switches

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Exploded view

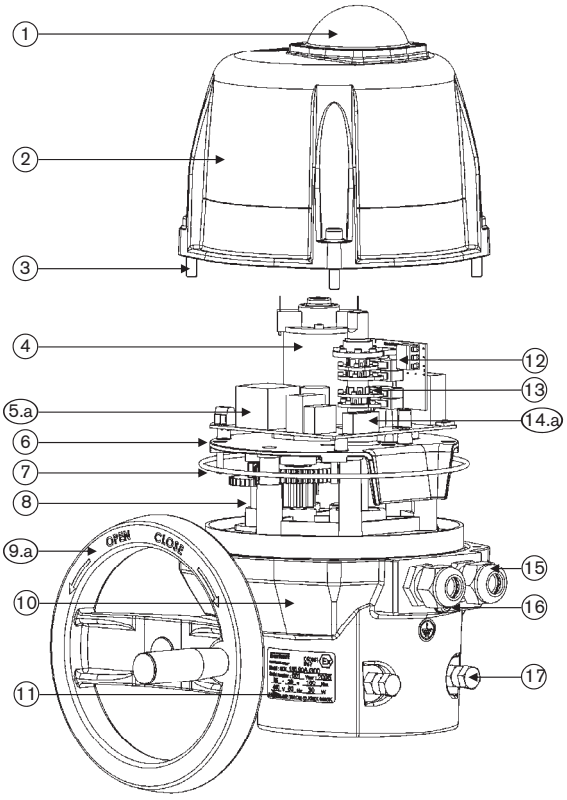
Motor 25 - 45 - 75 Nm



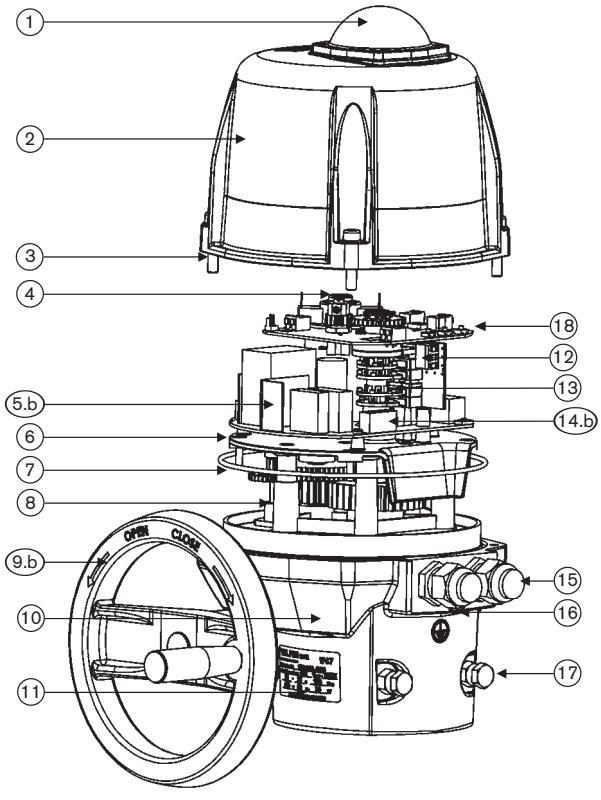
No.	Designation
1	Optical position indicator
2	Cover
3	Stainless steel screws
4	Motor
5.a*	Pilot and power supply card
5.b*	power supply card
6	Gear box
7	O-ring
8	Gear
9.a	Hand wheel
9.b	Clutch knob
10	Housing
11	Identification label
12	Auxiliary limit switch terminal
13	Cams
14.a*	Pilot and power supply card
14.b*	Power supply terminal
15	Cable gland ISO M20
16	Earth screw
17	Mechanical limit stops
18	Positioning card (only for actuator with position control)

* Only for multi-voltage version

Motor 100 - 150 - 300 Nm

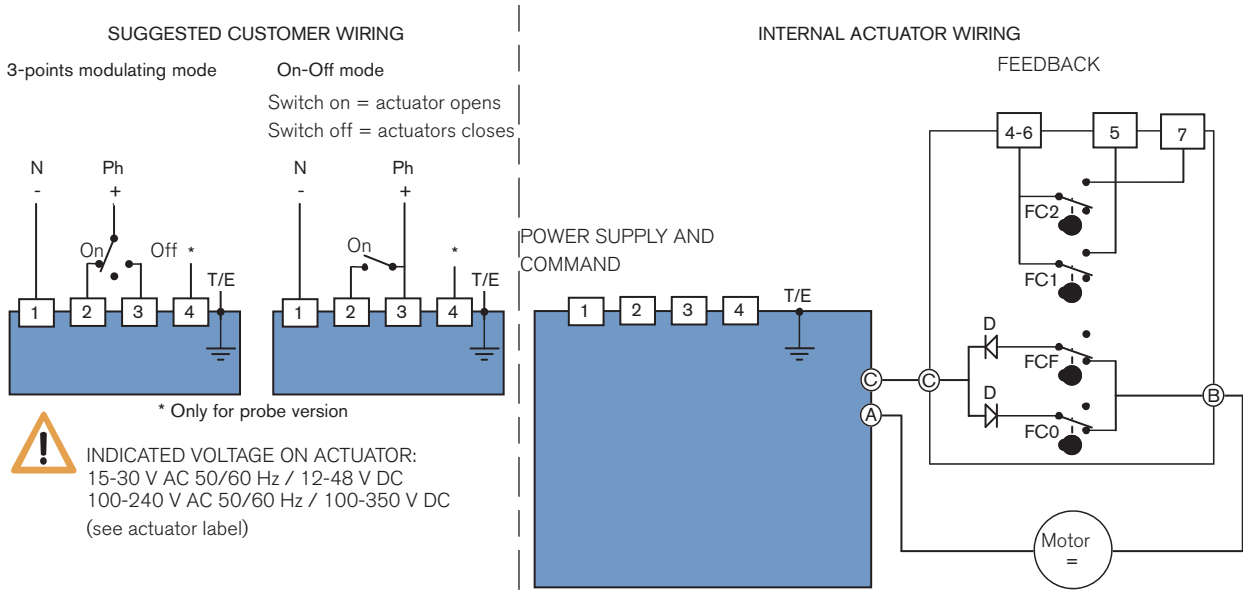


Motor 100 - 150 - 300 Nm with positioning card

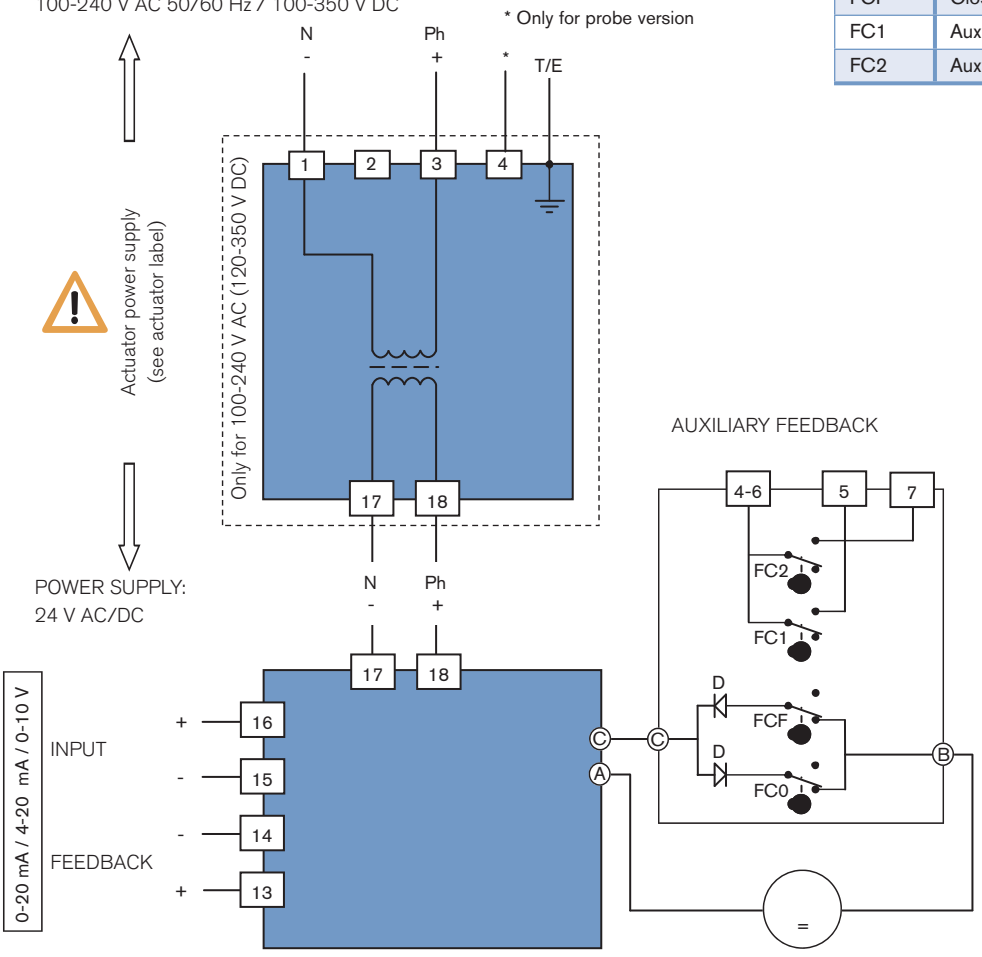


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Electrical connections



Version with analog input signal

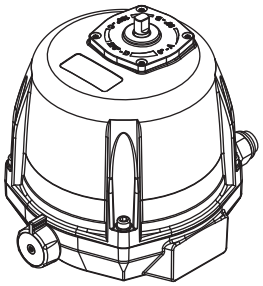


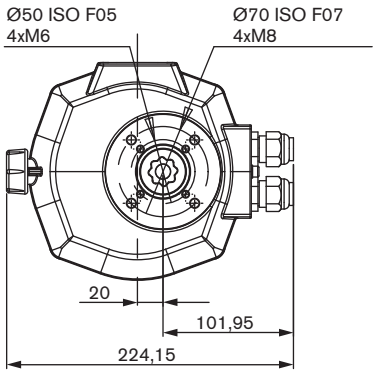
Symbol	Designation
FCO	Open limit switch
FCF	Close limit switch
FC1	Auxiliary 1 limit switch
FC2	Auxiliary 2 limit switch

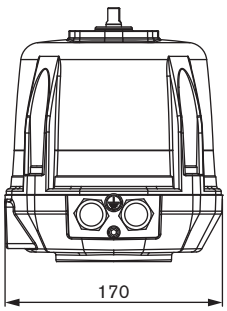
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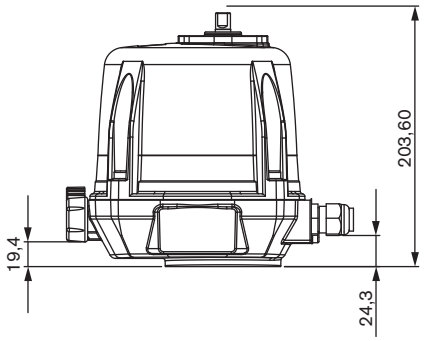
Dimensions [mm]

Motor 25 - 45 - 75 Nm

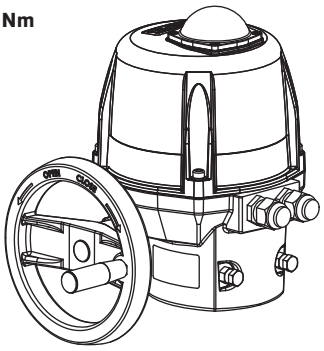


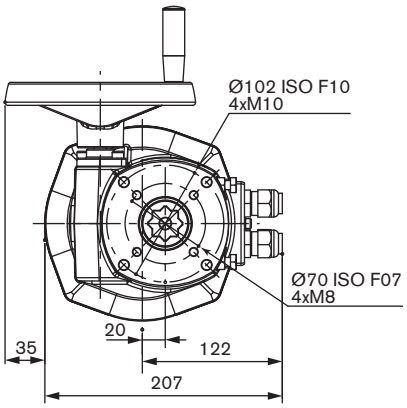


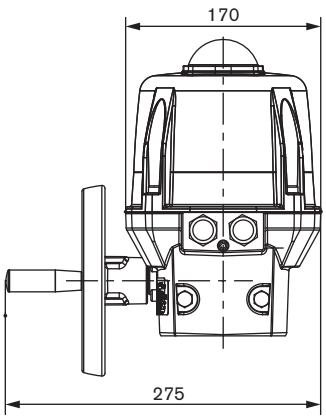


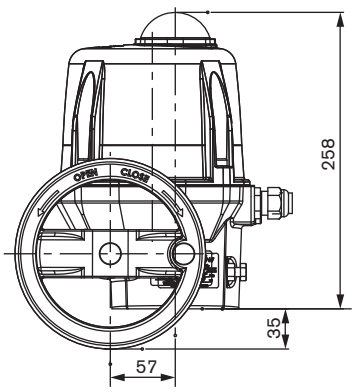


Motor 100 - 150 - 300 Nm









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Ordering chart (other versions on request)

Standard 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 (2 times for the control version).

Drive stars [mm]	Conversion sleeve star [mm]	Connection flange	Torque [Nm]	90° travel [s]	Power consumption [W]	Voltage / Frequency [V / Hz]	Item no.
17	17/11	F05/F07	25	7	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	207 170
						15-30 V AC, 50/60 Hz / 12-48 V DC	180 864
	17/14	F05/F07	45	15	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	189 194
						15-30 V AC, 50/60 Hz / 12-48 V DC	189 199
			75	20	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	203 454
						15-30 V AC, 50/60 Hz / 12-48 V DC	216 012
22	22/17	F07/F10	100	15	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	205 547
						15-30 V AC, 50/60 Hz / 12-48 V DC	224 608
			150	30	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	181 303
						15-30 V AC, 50/60 Hz / 12-48 V DC**	181 304
			300	60	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	181 305
						15-30 V AC, 50/60 Hz / 12-48 V DC**	181 306

*Other regulating times and delay angles on request
**The operating voltage mustn't to fall below 11.5 V

Control version with 4-20 mA, 0-20 mA or 0-10 V, analogue signal input or output

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

Drive stars [mm]	Conversion sleeve star [mm]	Connection flange	Torque [Nm]	90° travel [s]	Power consumption [W]	Voltage / Frequency [V / Hz]	Item no.
22	22/17	F07-F10	150	30	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	181 293
						15-30 V AC, 50/60 Hz / 12-48 V DC**	228 177
			300	60	45	100-240 V AC, / 50/60 Hz / 100-350 V DC	181 307
						15-30 V AC, 50/60 Hz / 12-48 V DC**	179 726

*Other regulating times and delay angles on request
**The operating voltage mustn't to fall below 11.5 V

Further versions on request

Voltage
other voltages

Additional
Torque 600, 1000 Nm

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Ordering chart accessories

Description	Item no.
Key to adjust 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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