










Electric Rotary Actuator - On/Off and Control

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



Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

	Type 2654 2/2-way ball valve 3-piece	▶
	Type 2651 2/2 or 3/2-way Ball Valve, 2-Piece	▶
	Type 2657 Ball Valve, manually-operated	▶
	Type 2671 Butterfly valve	▶
	Type 2674 Plastic butterfly valve	▶
	Type TKU001 2/2-way compact flange ball valve	▶
	Type 8804 Ball valve / butterfly valve with electrical rotary actuator	▶

Type description

The electrical 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.

Table of contents

1. General Technical Data	3
2. Materials	4
2.1. Chemical Resistance Chart – Bürkert resistApp.....	4
3. Dimensions	4
3.1. Motor 25 - 45 - 75 Nm	4
3.2. Motor 100 - 150 - 300 Nm	5
4. Device/Process connections	6
4.1. Electrical connections.....	6
Standard actuators for use in open/close & 3-point mode.....	6
Actuators with analogue input signal and output signal.....	7
5. Product design and assembly	8
5.1. Product assembly	8
6. Ordering information	9
6.1. Bürkert eShop – Easy ordering and quick delivery	9
6.2. Bürkert product filter	9
6.3. Ordering chart.....	9
On/off version	9
Control version with analog input and output signal	10
On/off version with emergency reset via integrated battery: Fail-to-Close/Open adjustable	10
6.4. Ordering chart accessories.....	11
Conversion sleeves.....	11
Spare battery for actuators with electronic emergency reset.....	11
Other accessories	11

1. General Technical Data

Product properties	
Dimensions	Detailed information can be found in chapter "3. Dimensions" on page 4.
Material	
Cover / Body	Nylon / epoxy coated aluminium
Axis, Screws	Stainless steel
Gear unit	Zinc-plated Steel
ISO Mounting	
	acc. ISO 5211
Motor 25, 45, 75 Nm	F05/F07
Motor 100, 150, 300 Nm	F07/F10
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
Weight	
Motor 25, 45, 75 Nm	3.5 kg
Motor 100, 150, 300 Nm	5.5 kg
Mechanical limit stops	Standard
Manual override	By hand wheel (from 100 Nm)
Optical position indicator	Standard
Performance data	
Torque	25...300 Nm, (600, 1000, 1500 and 2400 Nm on request) Detailed information can be found in chapter "6.3. Ordering chart" on page 9.
Position angle	90° (±5°) (Special angle on request)
Actuating time (90 %)	7...60 sec. Detailed information can be found in chapter "6.3. Ordering chart" on page 9.
Options	<ul style="list-style-type: none"> • Three-position actuator (180°) • Rotation angle 180° or 270° • Position feedback of the open/close actuator versions optionally via: <ul style="list-style-type: none"> – Potentiometer 0.1K, 1K, 5K, 10K – Analogue signal 4...20 mA • Fail safe option • Additional limit switches
Electrical data	
Operating voltage	15...30 V AC / 50...60 Hz / 12...48 V DC 100...240 V AC / 50...60 Hz / 100...350 V DC
Limit switches	4 adjustable (2 for the motor and 2 additional for feedback), max. 250 V AC/5 A
Power consumption	45 W
Voltage tolerance	± 10 %
Linear actuator with analog input and output signal	
Input	-0...10 V / -4...20 mA / -0...20 mA
Output	-0...10 V / -4...20 mA / -0...20 mA
Motor protection	Electronic torque limitation
Duty cycle	At max. torque: 50 % of the time Control actuator: 50 % of max. torque
Heating resistor	10 W
Process/Port connection & communication	
Electrical connection	2 cable glands ISO M20
Approvals and Certificates	
Certifications / Conformities	CE, CSA/UL (for actuators with a torque of up to 300Nm)
Environment and installation	
Installation	Do not install the actuator upside-down, max. installation angle: 90°.
Place	Up to max. 2000 m altitude

Ambient temperature

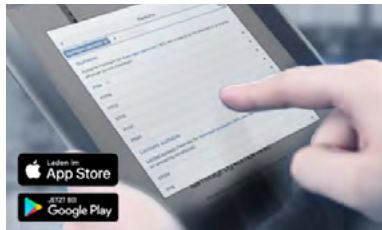
For actuator Type 3005 Standard -20 °C...+70 °C

For actuator Type 3005 with electronic emergency reset -20 °C...+40 °C

Degree of protection IP68

2. Materials

2.1. Chemical Resistance Chart – Bürkert resistApp



Bürkert resistApp – Chemical Resistance Chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

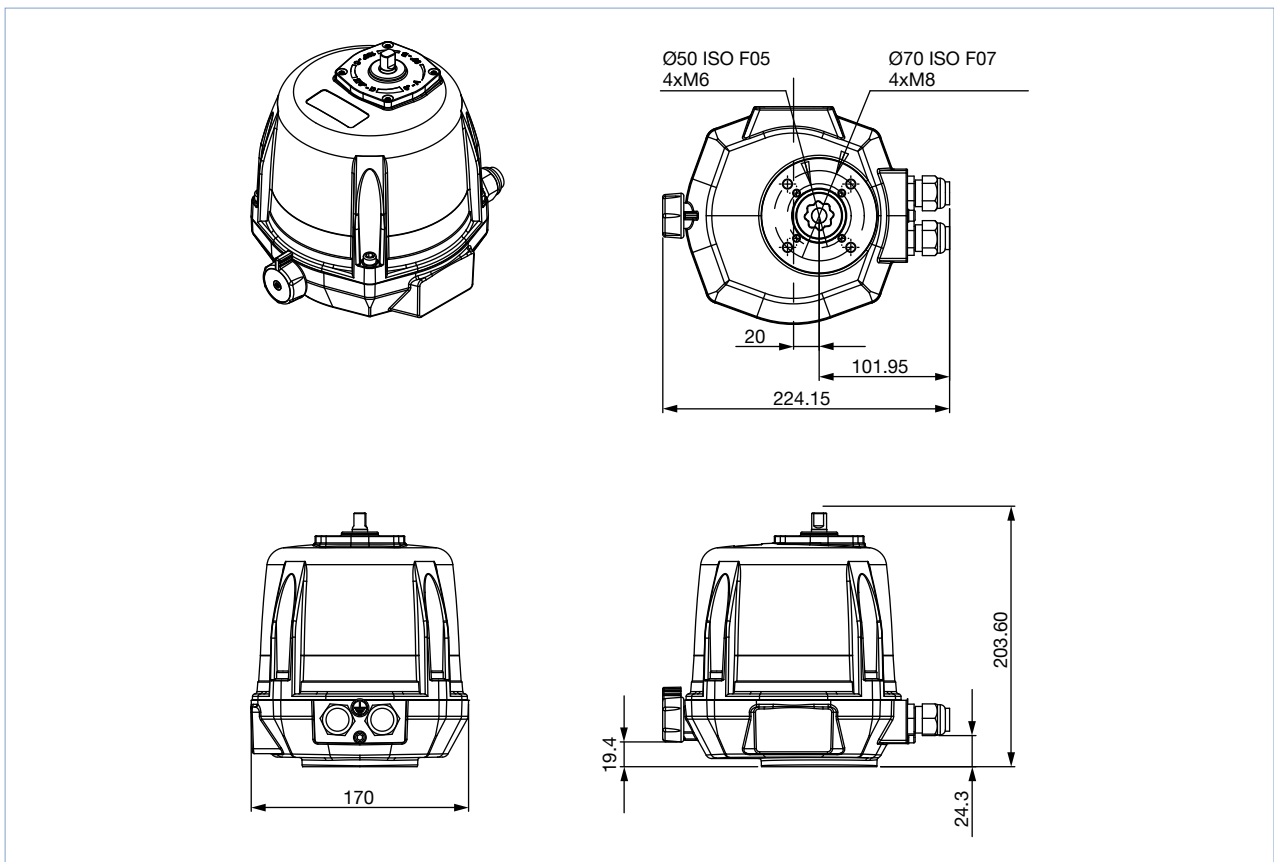
[Start Chemical Resistance Check](#)

3. Dimensions

3.1. Motor 25-45-75 Nm

Note:

Dimensions in mm

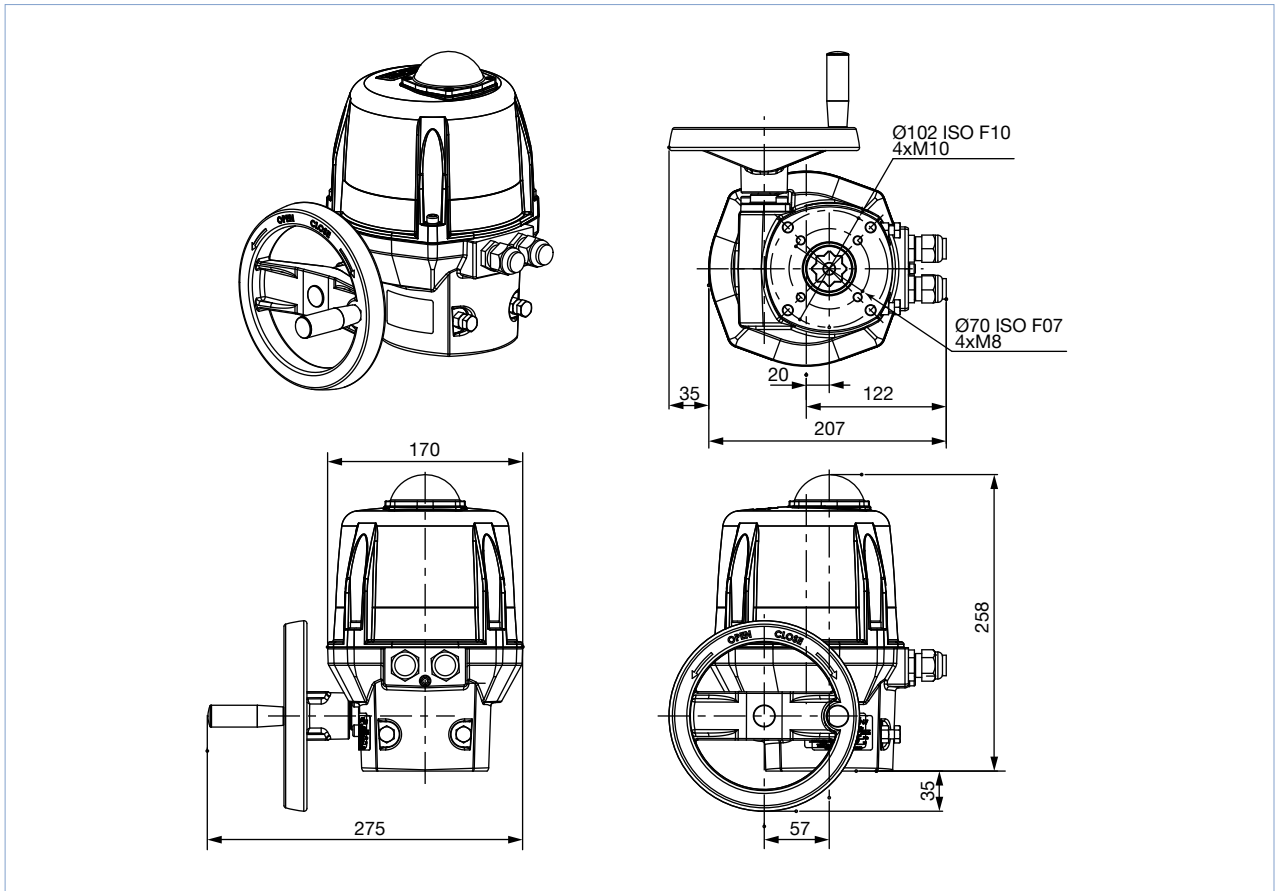


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3.2. Motor 100-150-300 Nm

Note:

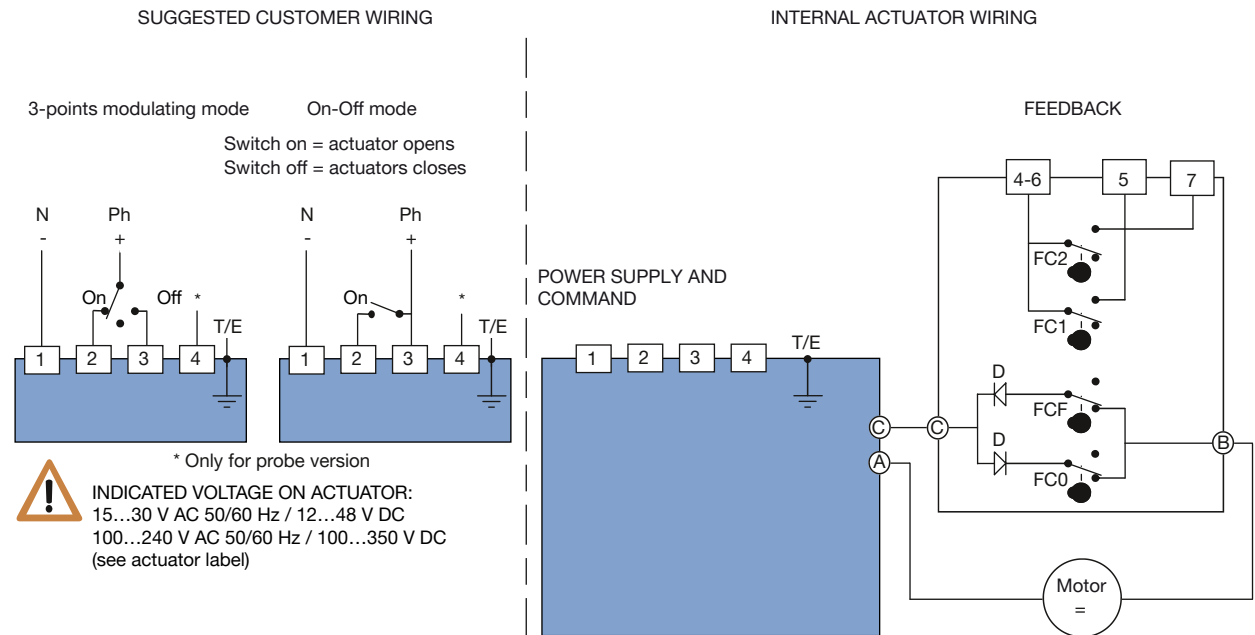
Dimensions in mm



4. Device/Process connections

4.1. Electrical connections

Standard actuators for use in open/close & 3-point mode



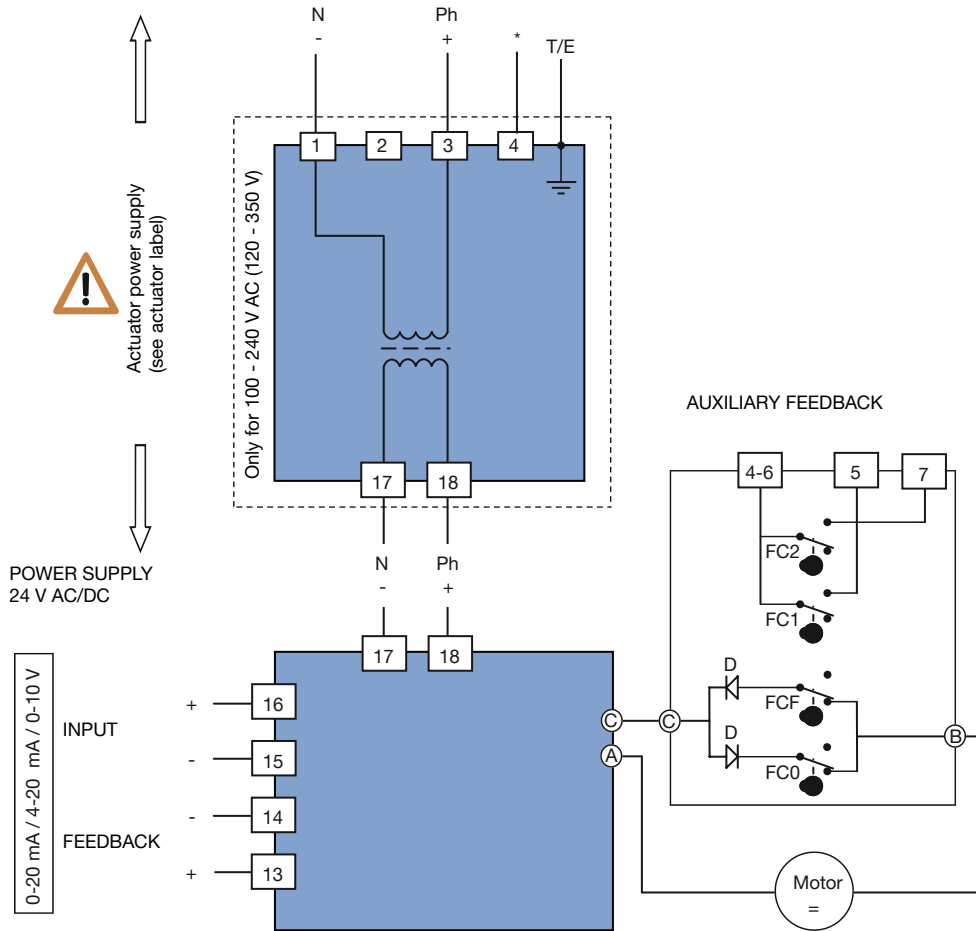
Symbol	Description
FCO	Open limit switch
FCF	Close limit switch
FC1	Auxiliary limit switch 1
FC2	Auxiliary limit switch 2

Actuators with analogue input signal and output signal

POWER SUPPLY

15 - 30 V AC 50/60 Hz / 12 - 48 V DC
 100 - 240 V AC 50/60 Hz / 100 - 350 V DC

* Only for probe version



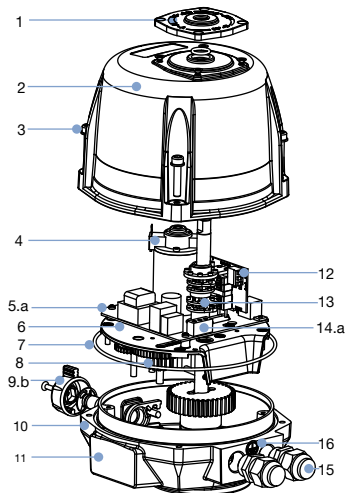
Symbol	Description
FCO	Open limit switch
FCF	Close limit switch
FC1	Auxiliary limit switch 1
FC2	Auxiliary limit switch 2

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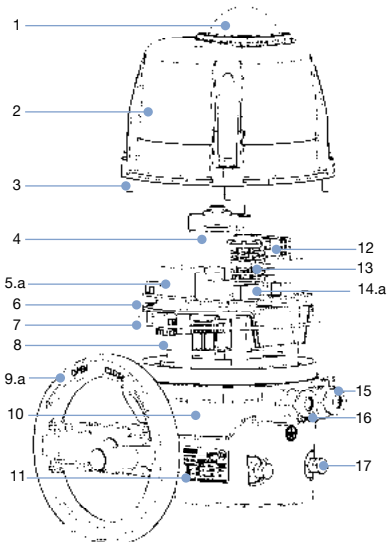
5. Product design and assembly

5.1. Product assembly

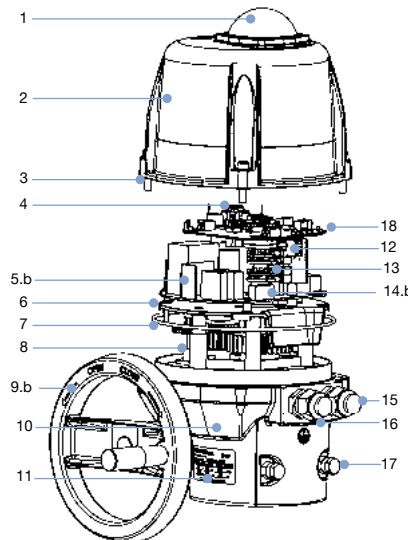
Motor 25 - 45 - 75 Nm



Motor 100 - 150 - 300 Nm



Motor 100 - 150 - 300 Nm with positioning card



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

1.) Only for multi-voltage version

6. Ordering information

6.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

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6.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

6.3. Ordering chart

On/off version

Drive stars	Conversion sleeve star	Con-nection flange	Torque ^{1.)}	90° rotation time ^{2.)}	Power consumption	Voltage / frequency	Article no.
[mm]	[mm]		[Nm]	[s]	[W]	[V / Hz]	
14	17/11	F05-F07	25	7	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	207170
						15...30 V AC, 50/60 Hz / 12...48 V DC	180864
	17/14	F05-F07	45	15	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	189194
						15...30 V AC, 50/60 Hz / 12...48 V DC	189199
22	22/17	F07-F10	100	15	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	205547
						15...30 V AC, 50/60 Hz / 12...48 V DC	224608
			150	30	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	181303
						15...30 V AC, 50/60 Hz / 12...48 V DC	181304
300	60	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	181305			
			15...30 V AC, 50/60 Hz / 12...48 V DC	181306			

1.) For the actuator choice, we recommend a safety torque equal to 1.5 times of the valve maximal torque.

2.) Other rotation angles are available on request.

Control version with analog input and output signal

Drive stars	Conversion sleeve star	Con-nection flange	Torque ^{1.)}	90° rotation time ^{2.)}	Power consumption	Voltage / frequency	Article no.
[mm]	[mm]		[Nm]	[s]	[W]	[V / Hz]	
14	17/11	F05-F07	25	15	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	189193
						15...30 V AC, 50/60 Hz / 12...48 V DC	215669
			17/14	45	15	45	100...240 V AC, / 50/60 Hz / 100...350 V DC
	15...30 V AC, 50/60 Hz / 12...48 V DC	215670					
	75	20		45	100...240 V AC, / 50/60 Hz / 100...350 V DC	306174	
			15...30 V AC, 50/60 Hz / 12...48 V DC		226373		
22	22/17	F07-F10	100	15	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	274519
						15...30 V AC, 50/60 Hz / 12...48 V DC	274606
			150	30	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	181293
						15...30 V AC, 50/60 Hz / 12...48 V DC	228177
			300	60	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	181307
						15...30 V AC, 50/60 Hz / 12...48 V DC	179726

1.) For the actuator choice, we recommend a safety torque equal to 1.5 times of the valve maximal torque.

2.) Other rotation angels are available on request.

On/off version with emergency reset via integrated battery: Fail-to-Close/Open adjustable

Drive stars	Conversion sleeve star	Con-nection flange	Torque ^{1.)}	90° rotation time ^{2.)}	Power consumption	Voltage / frequency	Article no.
[mm]	[mm]		[Nm]	[s]	[W]	[V / Hz]	
14	17/11	F05-F07	25	7	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	377030
						15...30 V AC, 50/60 Hz / 12...48 V DC	377029
			17/14	45	15	45	100...240 V AC, / 50/60 Hz / 100...350 V DC
	15...30 V AC, 50/60 Hz / 12...48 V DC	377031					
	75	20		45	100...240 V AC, / 50/60 Hz / 100...350 V DC	377034	
			15...30 V AC, 50/60 Hz / 12...48 V DC		377033		
22	22/17	F07-F10	100	15	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	377037
						15...30 V AC, 50/60 Hz / 12...48 V DC	377036
			150	30	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	377039
						15...30 V AC, 50/60 Hz / 12...48 V DC	377038
			300	60	45	100...240 V AC, / 50/60 Hz / 100...350 V DC	377042
						15...30 V AC, 50/60 Hz / 12...48 V DC	377040

1.) For the actuator choice, we recommend a safety torque equal to 1.5 times of the valve maximal torque.

2.) Other rotation angels are available on request.

Further versions on request













Voltage

Other supply voltage

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6.4. Ordering chart accessories




Conversion sleeves

Description	Article no.
Conversion sleeve star/square 14/9 mm	665288 
Conversion sleeve star/square 14/11 mm	665289 
Conversion sleeve square/square 17/14 mm	665290 
Conversion sleeve star/square 17/14 mm	773348 
Conversion sleeve star/square 17/11 mm	773343 
Conversion sleeve square/square 22/19 mm	773836 
Conversion sleeve star/square 22/17 mm	684858 
Conversion sleeve square/square 22/14 mm	666684 
Conversion sleeve star/square 22/11 mm	773344 
Conversion sleeve star/square 27/22 mm	774594 
Conversion sleeve square/square 27/19 mm	774279 
Conversion sleeve square/square 27/17 mm	774193 

Spare battery for actuators with electronic emergency reset

Note:

- The battery must be replaced after max. 500 charging cycles or after 2 years at the latest. Depending on which condition is reached earlier.
- Additional information for Type 3004: The person who changes the battery must be trained and qualified to do modifications on ATEX products.
- Actuators that do not have an electronic emergency reset when delivered cannot be upgraded with this device at a later date.

Type	Version	Torque [Nm]	Article no.
3003	BB40	10...100	775335 
3004/5	BB40	25...300	774761 
3004/5	BB40	600...2400	775337 

Other accessories

Description	Article no.
Key for adjusting the limit switches	679946 

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