



SPRING RETURN

ELECTRIC ACTUATOR



FM 522775



EMS 595200



OHS 595201

Application area

The spring return electric actuator can apply to situation such as safe position returning in the case of power failure. It is particularly suitable for 90° rotation butterfly valves, ball valves and plug valves. It is the best choice for emergency operation after power failure.



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Spring return angle travel electric actuator belongs to the mechanical storage class of actuators, under normal power supply, the actuator is driven by the motor to open the device at the same time the spring energy storage, the system emergency power failure, the spring releases the energy to drive the actuator, so that the equipment and devices to return to the safe position (fully open or fully closed).

The internal mechanical part of the spring-return electric actuator consists of a drive unit, an energy storage unit and an energy locking unit. The three units are driven by gears to form a complete transmission chain.

In addition, the optional manual operation device allows the user to manually operate the equipment or device to the appropriate position, press the lock button to lock. No manual unlocking is required when the unit is operated electronically.

Product Advantages

Product Structure

Compact structure and small footprint.

Safe maintenance

No need for periodic maintenance, can be long-term trouble-free operation, the

Spring efficiently drive 90° full stroke, emergency close (open)

The valve is quick when closing (opening) in an emergency, meeting the needs of emergency fire prevention and smoke evacuation.

Position Detection

Simple and reliable setting of travel limit switches.

3D indication of the switch position can be observed from multiple viewpoints.

Operational Safety

When opening or closing valves safely in emergency situations, the product offers the highest level of reliability with a mechanical solution. If required, the spring return electric actuator generates the required torque by means of an energy storage mechanism and automatically returns to position without any intervention during the entire spring return operation.

Safety Integrity Rating

Spring return electric actuators are maintenance-free in accordance with the safety-related SIL2/3 standard.

Replaceable connecting parts

The actuator flanges and drive bushings are designed in accordance with ISO5211 and can be replaced in a variety of designs for convenience and flexibility.

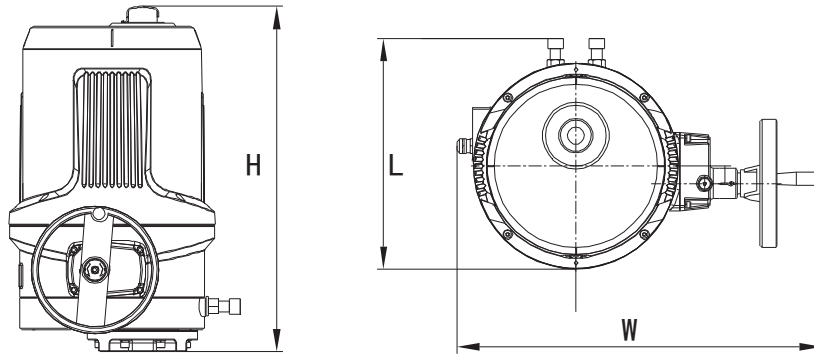
Fireproof heat shield (customizable)

An additional fire shield is available to meet the requirements of fire and smoke exhaust valves for 1.5h at 150°C or 1h at 280°C.

Explosion-proof applications

Product explosion-proof certification mark Ex db IIB/IIC T4/T6 grade, can be applied to the corresponding dangerous areas.

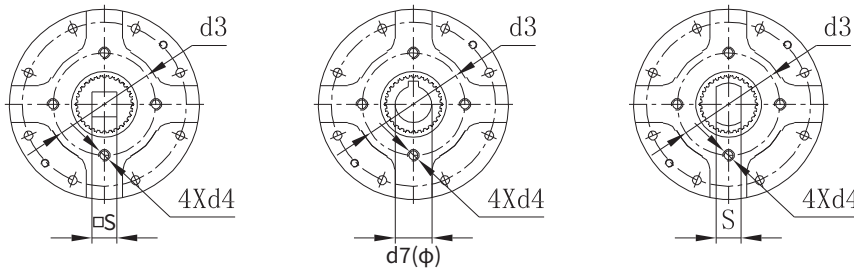
Dimension



Mode	Torque N.m	H mm	L mm	W mm	Weight* Kg
ETM050	50	485	309	587	35
ETM150	150	485	309	587	38
ETM300	300	532	332	607	55
ETM600	600	564	410	652	80

Note: The above "*" is the weight of the model with handwheel, the weight of the model without handwheel is 2.5kg less.

Mounting Interface



Mode	ISO5211 Flange	d3	d4	□S	d7(φ)	S	Axial Extension 5
ETM050	F07	70	M8	11/14/	14/18/	11/14/	38
	F10	102	M10	17/22	22	17/22	
ETM150	F07	70	M8	17/19/	18/22	17/19/	38
	F10	102	M10	22		22	
ETM300	F10	102	M10	19/22	22/25*	19/22	38
	F14	140	M16				
ETM600	F12	125	M12	22/27	28/36	22/27	55
	F14	140	M16				

Note: "*" is non-standard size.

Technical Parameters

Mode	ETM050	ETM150	ETM300	ETM600
Torque	50	150	300	600
Power (W)	30/15	40/30	90/70	180/120
Voltage	AC220 V; Optional:AC24V; AC110V			
Frequency (Hz)	50/60			
Work system	S2-15min			
Starting Time (S)	27*/54	27*/54	28*/56	26*/51
Spring Return Time(S)	≤10	≤10	≤10	≤10
Spring Retract Life(Times)	20000	20000	10000	10000
Output Flange (ISO5211)	F07/F10	F07/F10	F10/F14	F12/F14
Environmental Temperature	No Manual Effort: -25~65℃ Manually Operated: 0-65℃			
Environmental Humidity (25℃)	≤95%			
Protection Class	IP67			
Manual Device	Optional			
Manual Mode	Power-off operation with locking device			
Lost Power Reversion Direction	Default clockwise (CW); optional counterclockwise (CCW), to be specified in the order.			
Stop In Midstream	Electromagnetic brake control			
Cable Connector	2* NPT3/4			
Oily	oils			
Limit Switch	2 sets for each switching direction, one of which is used as a feedback signal in place			
Switch Type Signal	2-bit floating point/3-bit floating point			
Mechanical Limit	Mechanical limits in each direction of switching			
Color	Default white top cover black body			

“*”is the default switching time, the rest should be specified when ordering.

Order Code

ETM 300 - O - dM2 - E00- M - K2 - CW - F07

- Flange Connector--F07,F10,F12,F14
- Reset direction - CW: clockwise, CCW: counterclockwise
- Signal Code - K2: Active Feedback + Passive Feedback
- Control unit - M: Integral type
- Explosion protection class - E00: None
- Color - M2: Top cover RAL7032 (flat) / Body black (flat)
- Voltage-- d:220VAC; q:110VAC
- Control mode - O: Switching type
- Output torque--050(50Nm),150(150Nm),300(300Nm),600(600Nm)
- Spring Return Electric Actuator Models

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