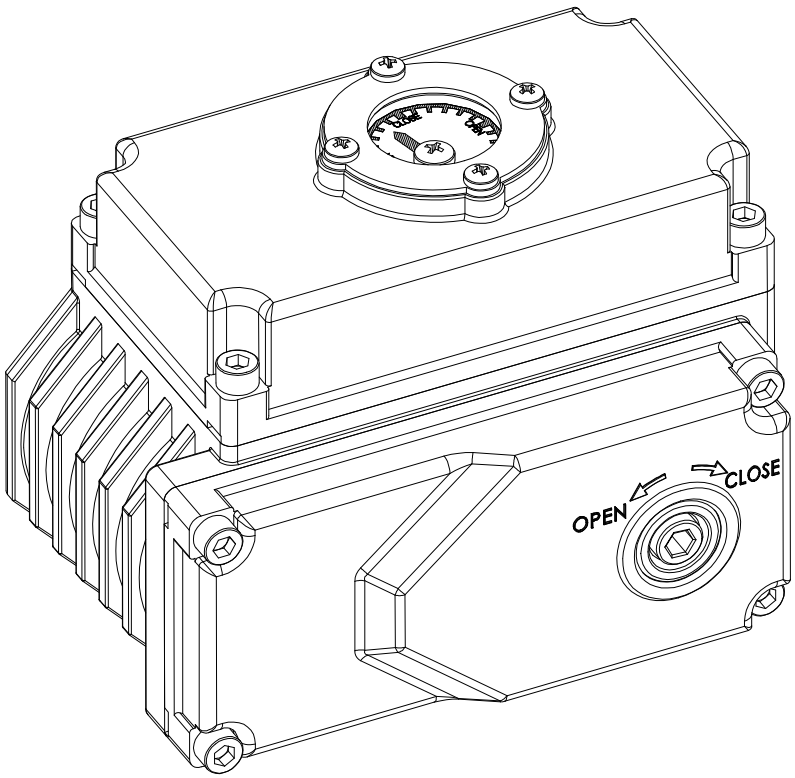
EW-700 Installation,

Maintenance and Operation

Manual



EW-700

EW 700 actuator Instruction and maintenance manual

Thank you for purchasing our EW series electric actuator!

For safe and proper operation, please carefully read this manual before using and save it for reference

Important note: the content in this manual is subject to change without individual notice .

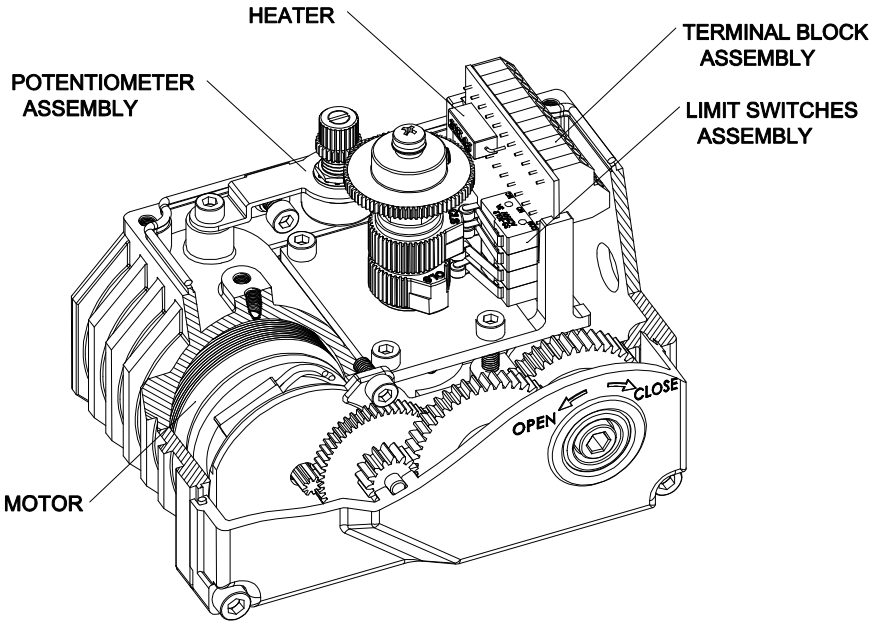
After receiving actuator, please check the followings.

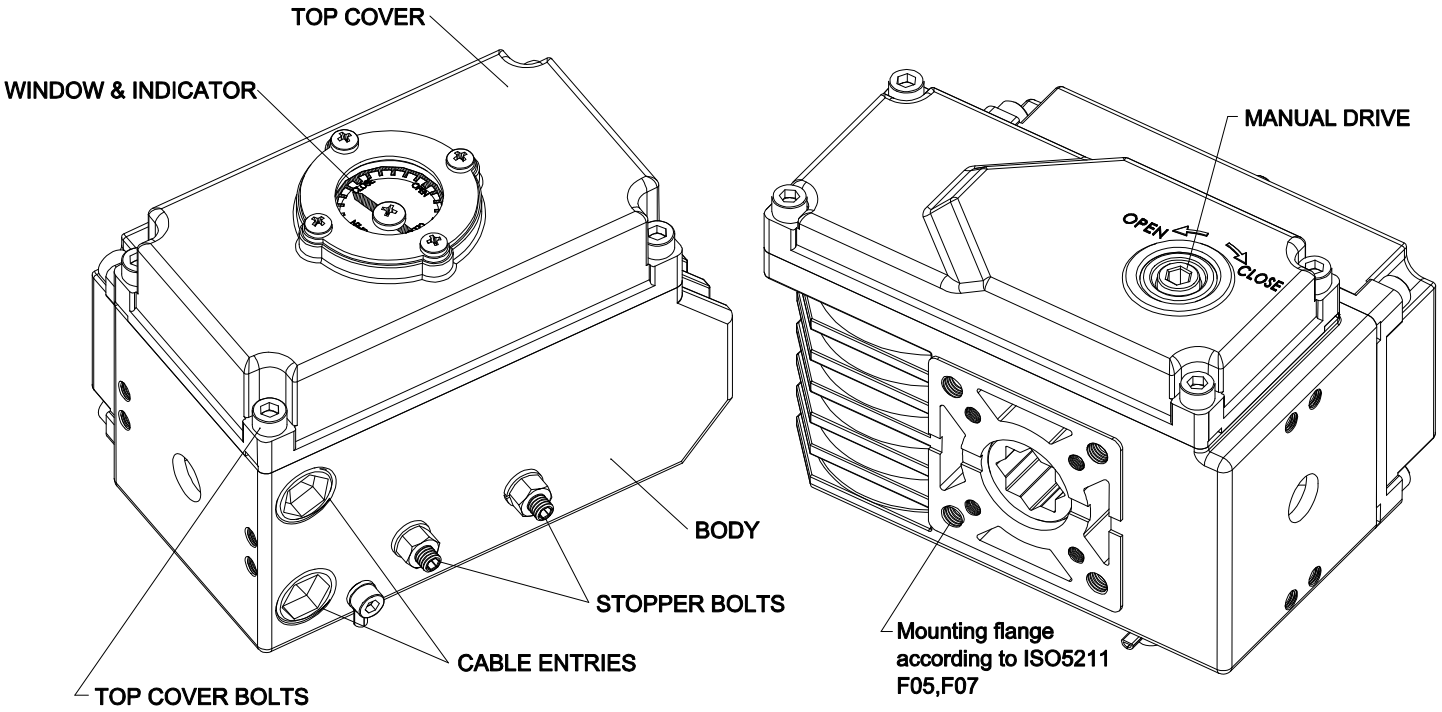
1) Individual test report, electrical wiring (inside of actuator) is provided with actuator.
2) Visual check : Painting, indicator & etc
3) Specification: Check with test report and name plate to your required specification.
4) Optional items: check if all optional items are correct or not.

1. Pre-caution

1) Selection of valve and actuator: Review all specification of valve and actuator carefully before making selection and reserve about 30% torque of actuator for safety purpose.
2) Check the proper limit switch setting prior to putting the actuator in to use.
3) Make sure to secure the sealing of cable entries.
4) Please be careful at especially temperature, humidity, vibration, voltage drop.
5) Storage: Keep actuator dry, clean and cool.
6) Trouble: Please refer to enclosed trouble shooting, but please don’t dismantle the actuator without consulting with factory.
7) If repair or maintenance is required, please check the model, electrical condition, serial Number and current situation to inform factory.

2. Part Name


HEATER
TERMINAL BLOCK ASSEMBLY
POTENTIOMETER ASSEMBLY
LIMIT SWITCHES ASSEMBLY
OPEN
CLOSE
MOTOR


TOP COVER
WINDOW & INDICATOR
MANUAL DRIVE
OPEN
CLOSE
BODY
STOPPER BOLTS
CABLE ENTRIES
Mounting flange according to ISO5211 F05,F07
TOP COVER BOLTS

3. Sizing and mounting

EW actuators are suitable to direct mount on ISO standard flanged valve and damper, and with proper mounting bracket and adaptor, EW can not mounted on any type of quarter-turn equipment.

1) Sizing

VALVE / ACTUATOR	Rated torque (in.lb.)	BUTTERFLY (ANSI 150#)	2-WAY BALL (ANSI 150#)
EW=700	700	4”	2”

Note: 1 > The above table is a general guide for the proper selection of actuator

2> Sizing should be done after careful reviewing the valve type, temperature/ pressure, characteristics of fluid, etc

3> Applications under abnormal condition such as high and low temperature, seawater, severe corrosion and high vibration, consult with our technical dept before selecting actuator.

2) Mounting

Basically there is no limitation in orientation of mounting of actuator on valve, but in the vertical pipeline, cable conduit of actuator is recommended to be oriented toward the ground in order to avoid water flow in through cable entry. When actuator is mounted on valve, following procedure is recommended.

1> Watching the indicator, put actuator at fully closed position (Clockwise).

2> Valve stem must be properly machined to match with female drive shaft of actuator (.67” double square).

3> Close the valve and mount actuator on valve (Some amount of lubrication oil can be used for easier adaption)

4> Both mounting hole of actuator and valve flange must be properly aligned each other.

5> If both are not properly aligned, adjust actuator manually in order to align holes.

4. Setting

1) Required tools for setting

- Long nose, L-Wrench 1 set (M6, Metric)

2) Manual operation

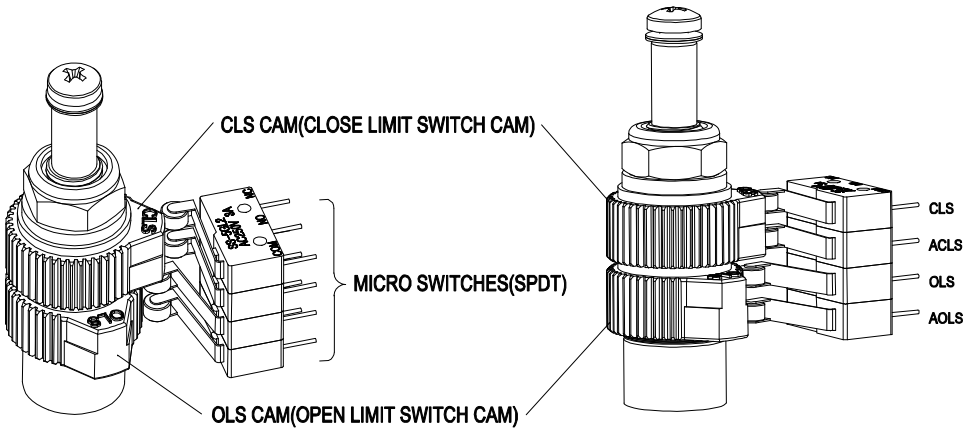
- Manual drive shaft located at side of actuator housing (M6 Wrench).
- Clock wise direction is close, counter clockwise is open.
- From fully close position to fully open position requires about 7 turns.
- Be careful not to operate the actuator past the limit switch settings.

3.) Limit switch setting

1> Position actuator at fully close position while watching indicator.

2> Turn the Close cam until cam activate the lever of limit switch and makes a “click” sound.

3> Do the same way for open position



5. Electrical wiring

1) Before wring

- Cable entries are machined with 2-PF1/2” TAP and sealed by Plug before delivery.
- Please retain the plug to seal any unused entry.
- If suitable cable connection is not used for wiring factory warranty is void.

2) Electrical wiring

2> Check if electrical specification such as power, wiring & etc are correct.

3> Wiring diagram is supplied with actuator (In vinyl pack or inside of top cover).

4> Wire actuator as per the given wiring diagram, such as power, control power, internal wiring and ground.

5> Make sure to supply electric power to heater to keep actuator clean and dry for anti-condensation.

6> Make sure to check wiring to the terminal is secure.

7> Make sure that one relay operates one actuator only (Can not operate two or more actuators).

8> Make sure to clean inside of actuator of any foreign material.

6. Simple trouble shooting

1) 110/220VAC 1Ph

Trouble	Cause	Counter plan
Actuator doesn't work at all	Check if power is on	Power on
	Check if voltage is too low	Check power
	Motor and supplied power is different	Check motor power and supplied power
	Wiring is not correct and tight or loosen	Do wiring again tightly
	Coil of motor is damaged	Change the motor
	Capacitor is damaged	Change the capacitor
	Setting of limit and torque switch is not correct	Do setting switches again

7. Maintenance

1) Lubrication :

Lubrication is already done by factory and generally no lubrication is required.

But in the places such as very dry condition below R.H 15% or high temperature higher than 90˚F, it is required to do lubrication once every two years

2) Regular operation :

Electrical power always should be supplied to actuator and operating actuator once a week is recommended.

3) Maintenance :

Long service life can be achieved if a yearly inspection of the actuator is performed.

Pleas check operating condition, corrosion, painting & etc.

4) Others : Should you have any further questions , please contact us through Phone, fax and E-mail