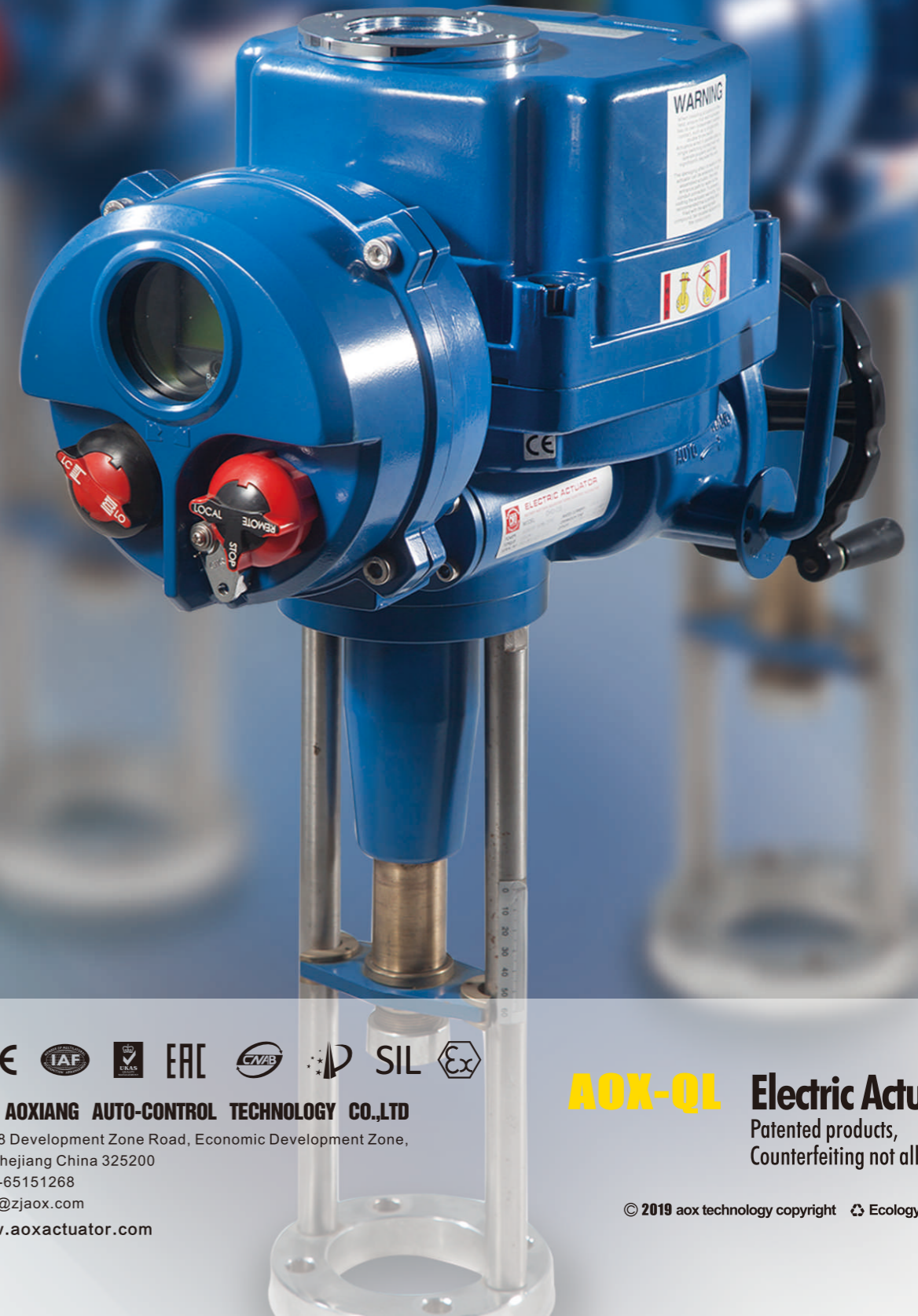


# AOX-QL Electric Actuator Series

## EXPLOSION-PROOF SERIES

### OPTION SPECIFICATION

No.	Option scheme	Remark
1	Explosion-proof actuator ( Exd □CT5 )	AOX-QL series
2	Potentiometer unit ( 1K-10K )	AOX-QL series
3	Proportion control unit (control signal 4-20mA )	AOX-QL series
4	Local control units (local control open/stop/close optional switch)	AOX-QL series
5	Water-proof actuator (IP68,10M,250HR)	AOX-QL series
6	Direct current motor (24VDC)	AOX-QL series
7	Torque switch (SPDT×2 250VAC 10A)	Except AOX-QL20/30/50/80
8	Electric current position sensor (output 4-20mA DC)	AOX-QL series
9	Reverse electromagnetic control and transmission integration electrical machinery starter	AOX-QL series
10	High temperature resistance actuator (-10℃ ~ +100℃)	AOX-QL series
11	Low temperature resistance actuator (-60℃ ~ +30℃)	AOX-QL series
12	Low speed actuator	AOX-QL series
13	Bus Control Unit	AOX-QL series





AOX has been dedicated to the research, design and manufacturing of actuators for more than 20 years. Adhere to strict and reliable principle, rely on rich field application experience, we provide the optimum auto-control products and solution in fluid-control application area such as pressure, flow rate and liquid level.

We have a group of passionate, continuously innovative, high-quality R & D staff to forge ahead. From initial design to the selection of material, the determination of craft, exquisite manufacturing process and rigorous test procedure ensure each product from AOX meets the most severe hazard working condition.

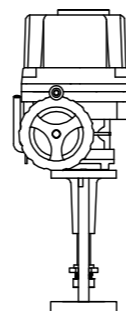
Of course, it is an endless challenge to create more and better industrial process control products.

AOX is brave and strong enough to face this challenge.

We are sure to achieve this aim. OK! AOX

# AOX-QL Electric Actuator

Patented products, Counterfeiting not allowed.



## Production Strength

The basis of market competition is inseparable from the production strength, solid financial strength and advanced, perfect hardware. Knowing the importance of hardware, AOX firstly introduced the advanced equipment from abroad in the same industry. We invested tens of millions to renew the hardware, manufacture international standard superior electric actuators and electric valves with international product facilities.



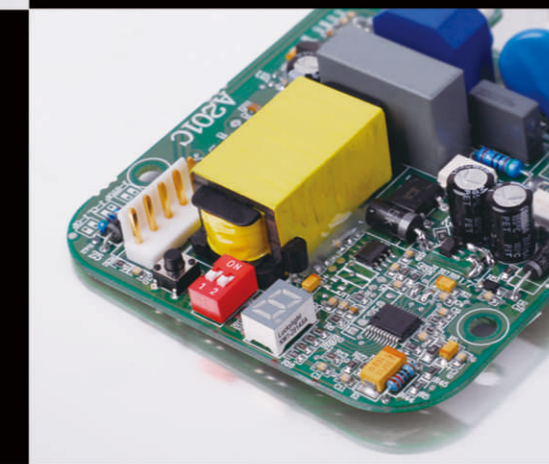


AOXIANG  
ELECTRIC INTELLIGENT ACTUATOR  
ELECTRIC VALVES

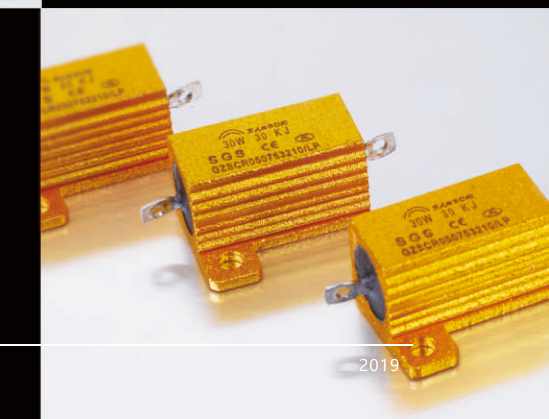
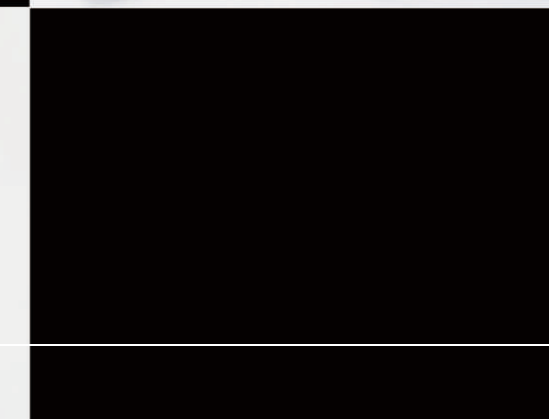
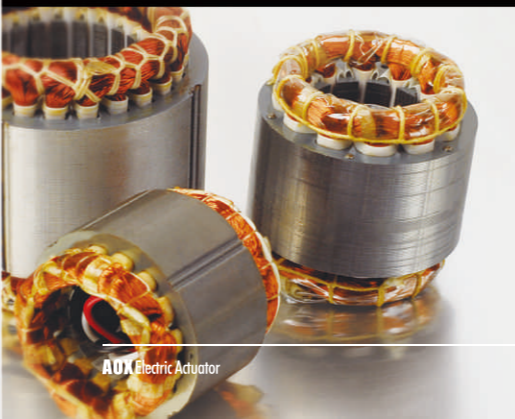
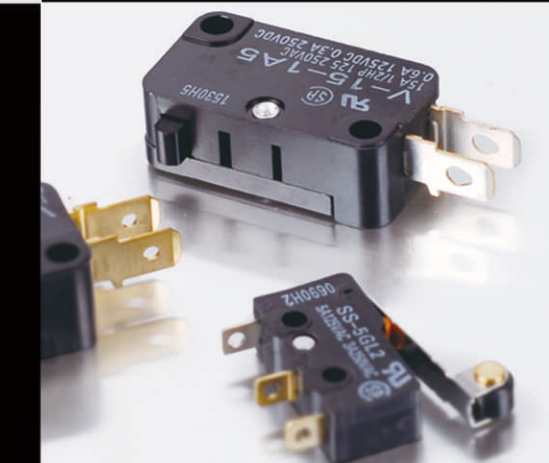


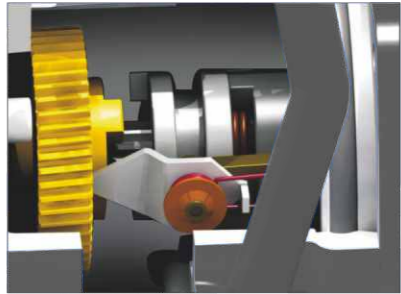
# Applications

Our products are used in many fields, petroleum, chemicals, machinery, metallurgy, water treatment, pharmaceutical, marine, HVAC, machinery, etc.



>>> the internationally first-class parts are used to ensure the highly efficient and reliable operation under the most severe working conditions





### 1.Shell

-Hard anodized Aluminum casting and external epoxy powder coated against severe industrial environment.

### 2.Worm gear

-Precisely machined double worm gear c/w minimum back-lash, low noise, high output torque.

### 3.Self locking

-Provided by double worm gearing to keep position of valve unchanged against reverse torque from valve.

### 4.Sealing

-By O-ring in all interfaces IP67(standard), and double o-ring for IP68 (option).

### 5.Handwheel

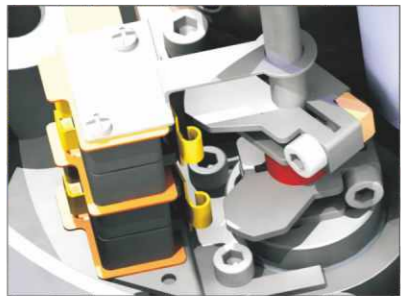
-Different sizes depending on actuator torque, and knob on handwheel for easy operation.

### 6.Motor

-Specially designed induction motor to generate high starting torque and high efficiency equipped with thermal protector to prevent damage from over heating.  
- Insulation class F

### Manual override

- Auto / Manual switchable lever and handwheel engagement for emergency manual operation.  
- Drive force automatically resorted by motor start, unless lever padlocked to prevent this occurring.



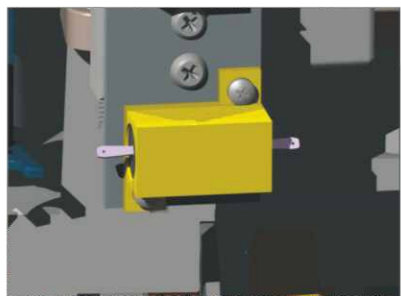
### Limit switches

-It is fastened by the two screws above, the setting is simple, each cam can be set separately.  
-Once the setup is complete, each cam will always remain in this position.



### Terminal

-Spring loaded push type terminal for tight wiring connection under severe vibration.  
-The number of terminals are 22 for users.  
-Terminal length: 8-9mm  
-Terminal size: 10×22×32



### Space heater

-Metal casing, fast heat, long life, with the built-in temperature switch to prevent overheating.  
-Core ceramic sealing member, there is no risk of leakage.



### Captive cover bolts

- Designed to prevent losing it during maintenance or installation.  
-All external bolts are stainless steel for rust prevention.



### Tapered interface between cover and lower housing

- For easy lifting cover up from lower housing for wiring or maintenance.



### Window

- Polycarbonate window, built-in O-rings, fixed metal gland, the gland comes with two drainage channels to prevent water, easy to observe.



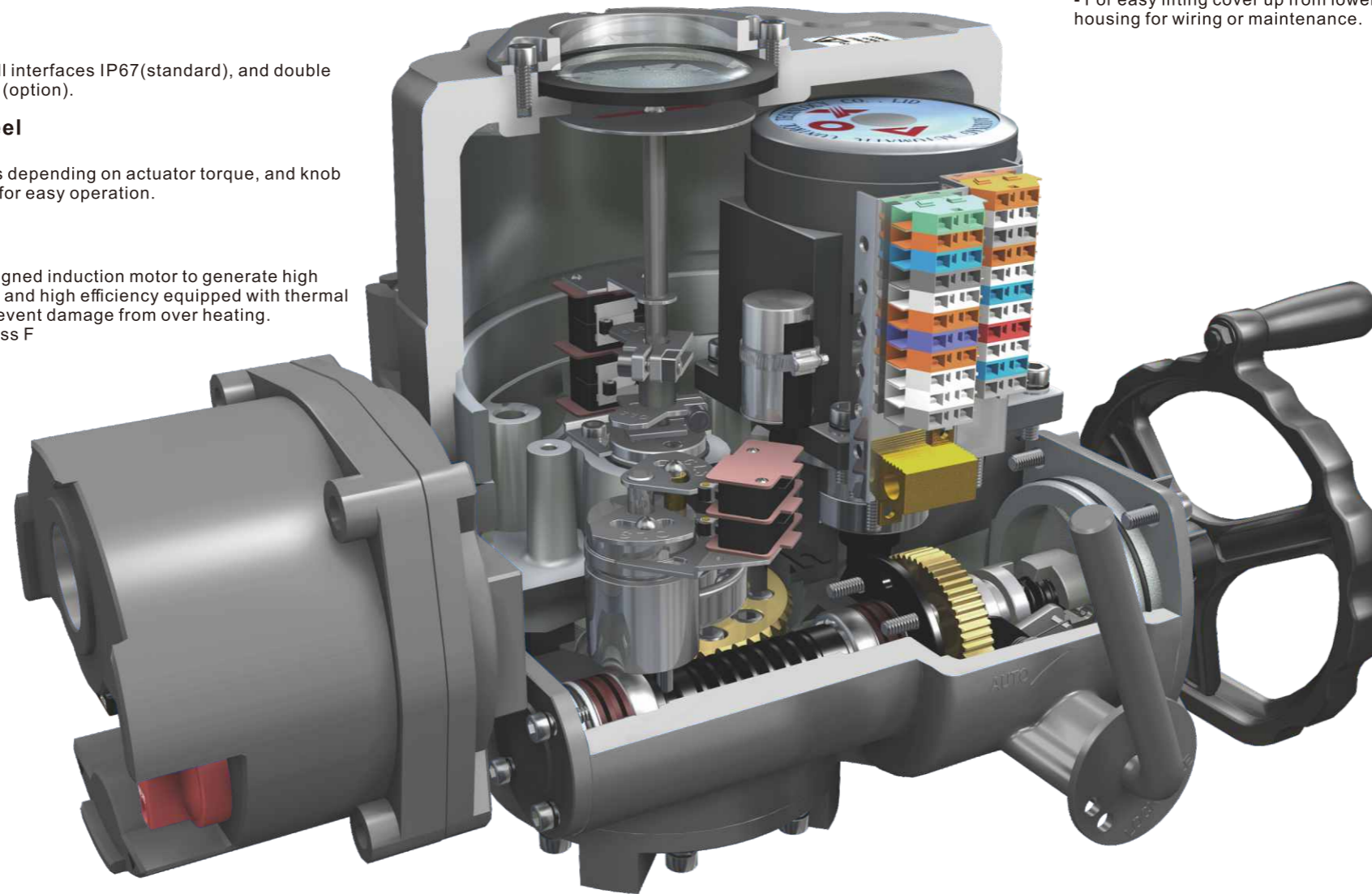
### Torque switches

- Protect actuator from damage caused by overload from the driven valve over the whole travel.  
- Once the torque switching acts, the actuator will be stopped immediately.



### Removable drive bushing

- Easy mounting base standard to ISO5211.  
- Bushings can be processed according to different requirements, four hanging ears made a close fit with shaft and sleeve.



### Indicator sustained by spring

- Direction of visual indicator is set by factory.  
- In case of changing its direction, just grip the indicator plate and change the position.  
- Spring beneath indicator plate sustains the set position unchanged.  
- No need to loose screw and tight it again at all!



# AOX-QL Electric Actuator

Patented products, Counterfeiting not allowed.

## SUMMARY

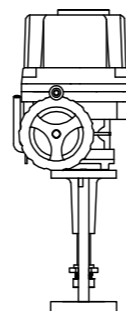
“AOX-QL” series linear electric actuator has the characteristics of small size, light weight, powerful function, intelligent setting and easy to operate. The max stroke length is 1m, the max thrust up to 30000N, it can be widely applied to linear movement of the valve switch and adjustment control. (AOX-QL series product have got CE and explosion-proof certificate)

## PERFORMANCE FEATURES

1. Shell--The shell is made of aluminum alloy, with anodic oxidation treatment and polyester powder coating. It is strong corrosion-resistant and enclosure IP67, NEMA 4 and 6, IP68 and explosion-proof is optional.
2. Motor--Asynchronous motor, small, large torque, and small inertia force, F-class insulation rating, with thermal protection to avoid damaging.
3. Manual Structure--The design of handwheel is safe, reliable, labor-saving, small. Declutch to operate by handwheel if without power, and reset automatically when power on.
4. Indicator-- Installs indicator in the center axis and adopts convex mirror design, no cumulate water, more convenient to observe.
5. Space heater-- It is used for controlling temperature to avoid condensing internal of housing and keep dry.
6. Limit switch-- Mechanical, electronic double limit. Mechanical limit stopper is adjustable, safe and reliable; electronic limit switch is controlled by cam. Set position accurately and conveniently, and not affected by excessive handle.
7. Torque Switch-- (Except AOX-QL20/30/50/80) Providing overload protection to avoid the damage of valve and electric actuator when jammed by cutting power automatically.
8. Self-locking--Accurate worm and worm gear transfer large torque efficiently, high efficiency, low noise (max. 50 dB), long life, with self-locking, prevent inversion, as stable and reliable transmission parts, no need to refuel.
9. Anti-off bolt—The bolt attaches to the shell and be not off when remove the shell.
10. Circuit--Controlling circuit meets the single-phase or three-phase power supply standard, circuit layout is reasonable and compact, terminals meet various of additional functional requirements effectively.
11. The display of valve position—During the opening or closing movement of actuator, the change of valve position on LCD is displayed with large numbers.
12. Intelligent module-- Using highly integrated, low-power microcontroller and analog circuit mixed control panel, using allmetal plug-in installation, it can effectively isolate the actuator motor heat and control board, greatly improve the software and hardware anti-jamming performance and temperature resistance.

# AOX-QL Electric Actuator

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# AOX-QL Electric Actuator Series

## PERFORMANCE PARAMETER

Model	Foece	Speed	Max Stroke Length	Power	Rated Current ( A )				Weight
					Single phase		Three phases		
					110v	220v	380v	440v	
AOX-QL20	2000	0.66	60	20	1.10/0.95	0.55/0.54	0.30/0.30	N/A	18
AOX-QL30	3000	0.66	60	20	1.10/0.95	0.55/0.54	0.30/0.30	N/A	18
AOX-QL50	5000	0.66	60	20	1.10/0.95	0.55/0.54	0.30/0.30	N/A	18
AOX-QL80	8000	0.33	60	20	1.10/0.95	0.55/0.54	0.30/0.30	N/A	18
AOX-QL100	10000	0.50	60	40	1.65/1.67	0.88/0.84	0.31/0.31	0.30/0.31	30
AOX-QL160	16000	0.50	100	40	1.67/1.67	0.89/0.85	0.31/0.31	0.30/0.31	32
AOX-QL200	20000	0.44	100	90	1.85/1.86	0.92/0.92	0.35/0.35	0.34/0.34	33
AOX-QL250	25000	0.44	100	90	3.60/3.62	1.55/1.58	0.59/0.59	0.58/0.58	34
AOX-QL300	30000	0.44	100	90	3.65/3.62	1.60/2.20	0.60/0.59	0.59/0.59	35

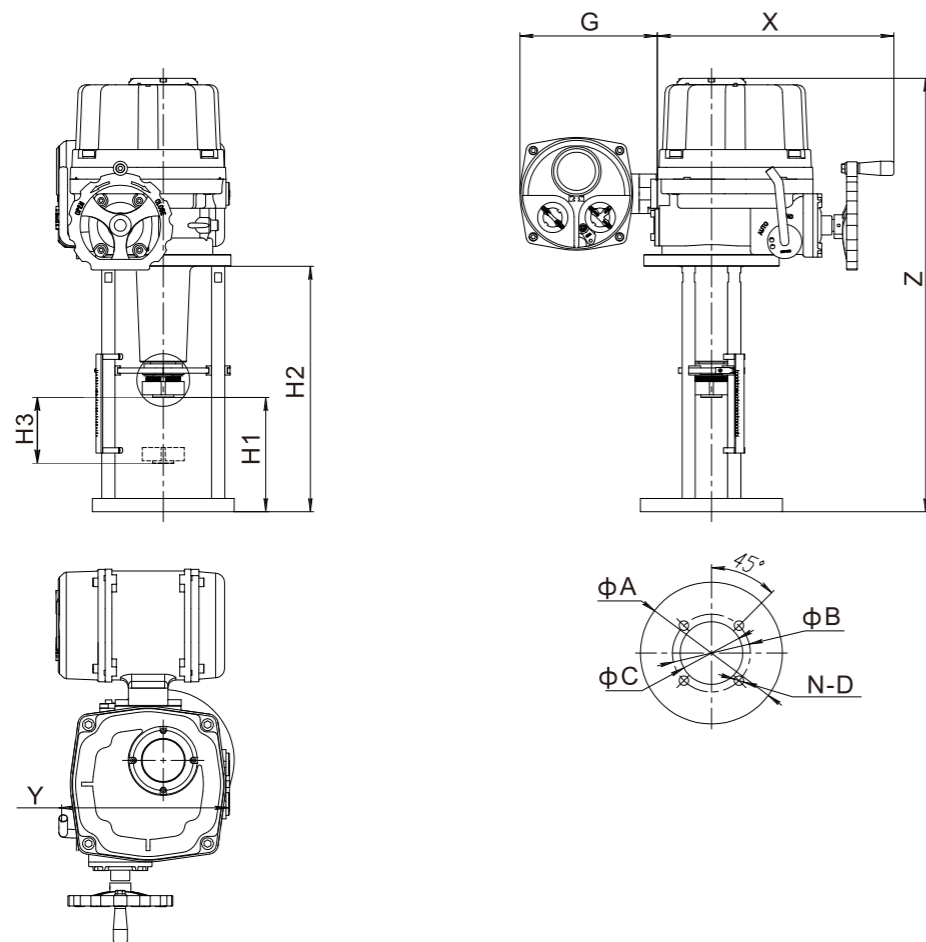
## TECHNICAL PARAMETER

Shell	Enclosure :IP67,IP68 is optional,NEMA4 and 6	
Power	Standard:220VAC/110VAC/1ph Optional:380V/440VAC/3ph	
Control Power	220V AC 1Phase, 50/60 Hz, ±10%	
Control Signal	Input and output:4-20mA/1-5VDC/0-10VDC	
Motor	Asynchronous motor	
Limit switch	2×Open/ Close, SPDT,250VAC 10A	
Auxiliary limit switch	2×Open/ Close, SPDT,250VAC 10A	
Fail safe	Internal-placed thermal protection, Open 120°C ±5°C/Close 97°C ± 5°C	
Operating temperature		
Indicator	Continuous position indicator	
Manual operate	Declutching mechanism	
Self-locking device	Self-locking by worm and worm gear	
Space heater	30W(110V/220VAC)	
Conduit entry	2 × PT3/4"	
Ambient temperature	-25°C ~ +70°C (-30°C、-40°C、-60°C optional)	
Lubrication	Grease moly ( EP type )	
Material	Steel, Aluminium alloy, Aluminium bronze, Polycarbonate	
Ambient humidity	Max 90% RH	Non-Condensing
Anti-vibration	X Y Z 10g,0.2 ~ 34 Hz,30 minutes	

# AOX-QL Electric Actuator Series

## GENERAL DRAWING

AOX-QL-20~300

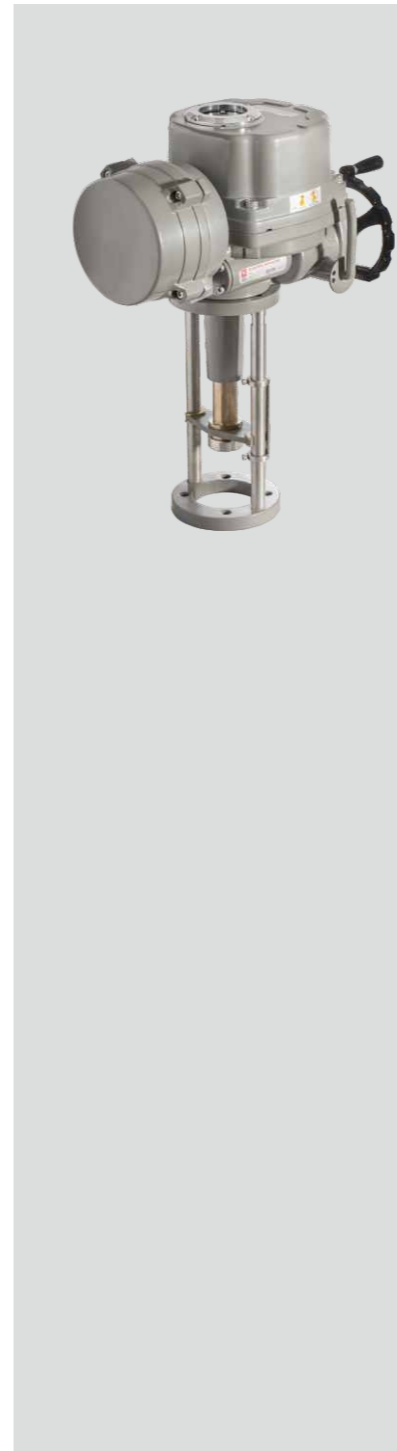


Unit: mm

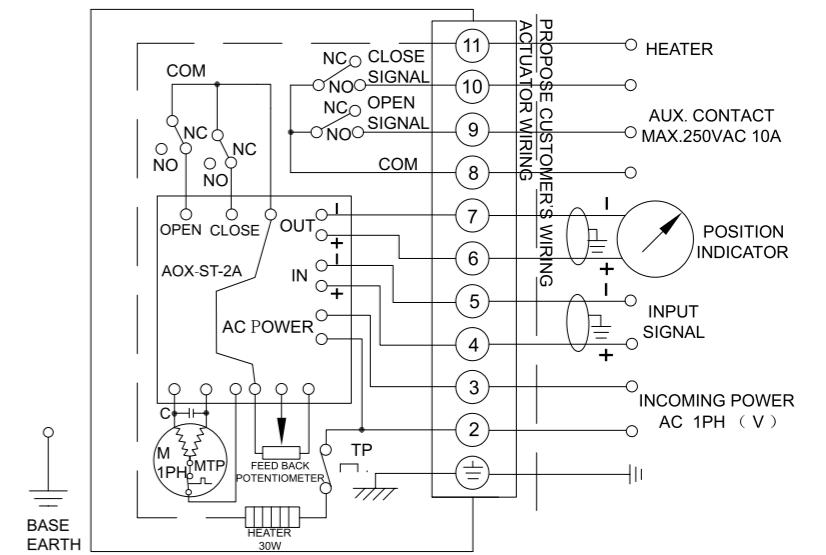
Model	X	Y	Z	G	H1	H2	H3	ϕA	ϕB	ϕC	N-D
AOX-QL-20	254	175	491	208	120	255	60	ϕ138	ϕ102	ϕ60	4-ϕ12
AOX-QL-30	254	175	491	208	120	255	60	ϕ138	ϕ102	ϕ60	4-ϕ12
AOX-QL-50	254	175	491	208	120	255	60	ϕ138	ϕ102	ϕ60	4-ϕ12
AOX-QL-80	254	175	491	208	120	255	60	ϕ138	ϕ102	ϕ60	4-ϕ14.5
AOX-QL-100	343	245	585	208	155	320	60	ϕ155	ϕ118	ϕ95	4-ϕ14.5
AOX-QL-160	343	245	625	208	175	360	100	ϕ155	ϕ118	ϕ95	4-ϕ14.5
AOX-QL-200	358	266	657	208	170	372	100	ϕ215	ϕ118	ϕ95	4-ϕ14.5
AOX-QL-250	358	266	657	208	170	372	100	ϕ215	ϕ118	ϕ95	4-ϕ14.5
AOX-QL-300	358	266	657	208	170	372	100	ϕ215	ϕ118	ϕ95	4-ϕ14.5

# AOX-QL Electric Actuator Series

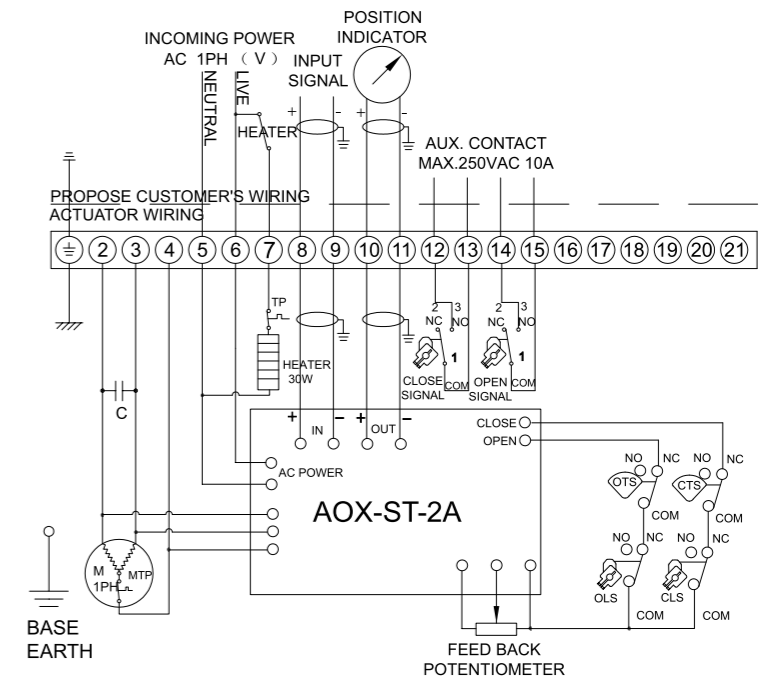
## Wiring Diagram



1、AOX-QL20~ 80 110/220VAC/50/60HZ,1Ph ( Modulating type ) Q-120-10



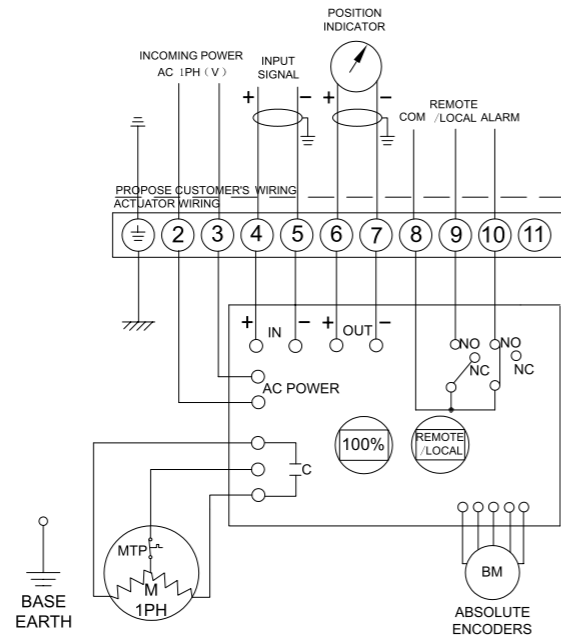
2、AOX-QL100~ 300 110/220VAC/50/60HZ,1Ph ( Modulating type ) Q-120-20



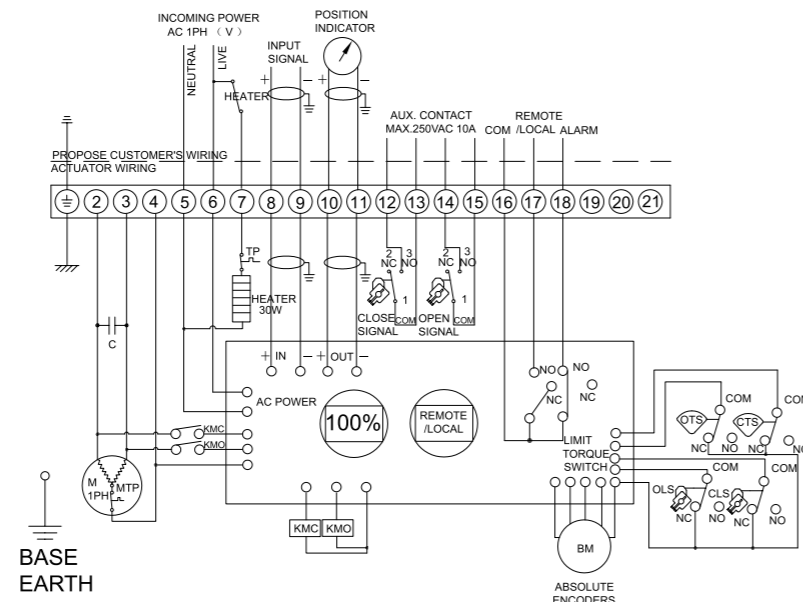
# AOX-Q-L Electric Actuator Series

## Wiring Diagram

3、AOX-QL20~ 80 110/220VAC/50/60HZ,1Ph ( Intelligent modulating type ) Q-140-10



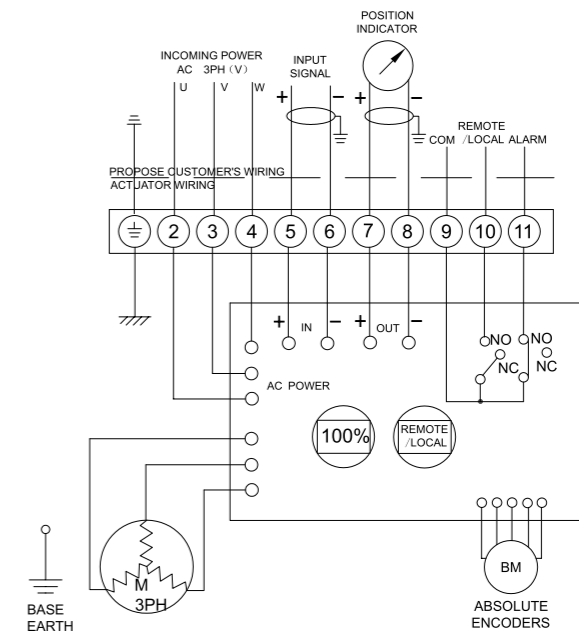
4、AOX-QL100~ 300 110/220VAC/50/60HZ,1Ph ( Intelligent modulating type ) Q-140-20



# AOX-QL Electric Actuator Series

## Wiring Diagram

5、AOX-QL20~ 80 380/440VAC/50/60HZ,3Ph ( Intelligent modulating type ) Q-240-10



6、AOX-QL100~ 300 380/440VAC/50/60HZ,3Ph ( Intelligent modulating type ) Q-240-20

