

AOX-R Electric Actuator Series

OPTION SPECIFICATION

No.	Option scheme	Remark
1	Heater	AOX-R series
2	Water-proof actuator (IP68,10M,250HR)	AOX-R series
3	Potentiometer unit (1K-10K)	Except AOX-R-003
4	Proportion control unit (control signal 4-20mA DC/1-5V/1-10V)	AOX-R series
5	Local control units (local control open/stop/close optional switch, local/remote switch)	Except AOX-R-003
6	Travel 120°, 180°,270°	AOX-R series
7	Direct current motor (24VDC)	AOX-R series
8	Electric current position sensor (output 4-20mA DC)	Except AOX-R-003
9	Self-reset when power failure	AOX-R series
10	Quick opening (2.8S, 5S, 10S, 15S)	AOX-R series



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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.

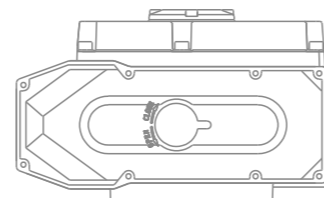
Of course, it is an endless challenge to create more and better industrial process control products.

AOX is brave and strong enough to face this challenge.

We are sure to achieve this aim. OK! AOX

AOX-R Electric Actuator

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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.



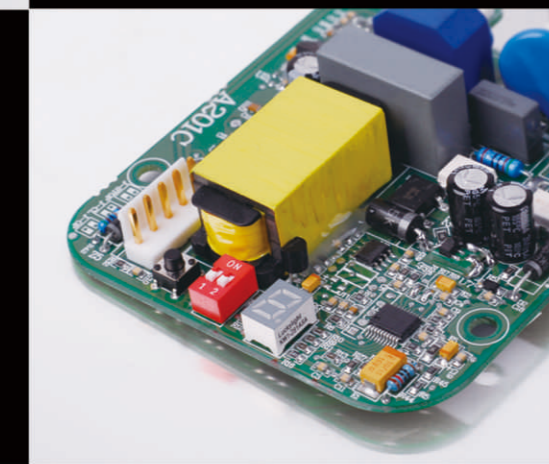


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ELECTRIC INTELLIGENT ACTUATOR
ELECTRIC VALVES

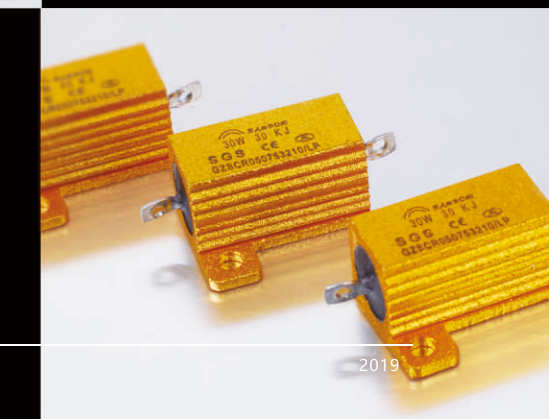
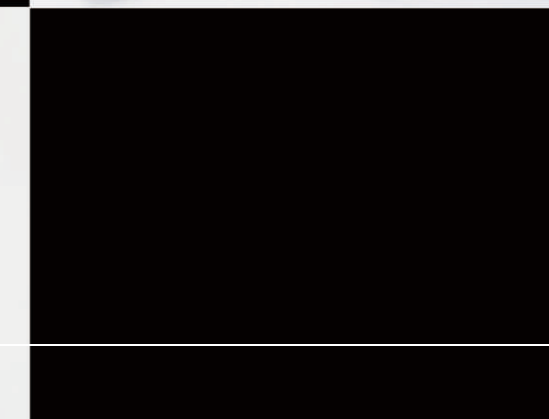
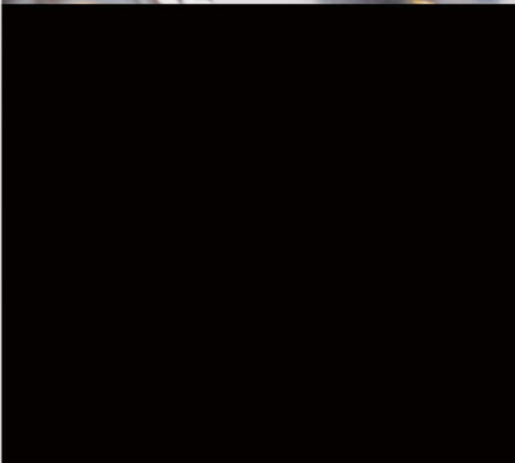
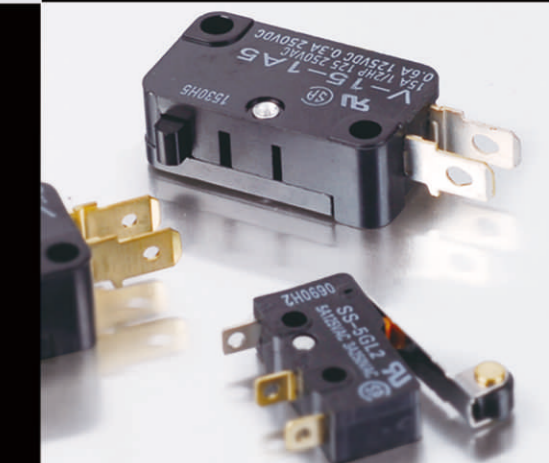


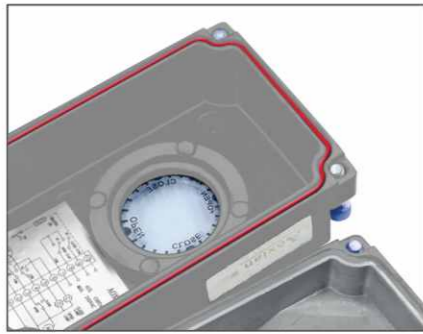
Applications

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





Protection level up to IP67

By improving the concave and convex structure of the upper and lower cap binding surface of the product, the sealing is more reliable.



Lens structure

The mechanical seal structure, avoid the use of chemical adhesives for site conditions due to the aging water. The improved products in full compliance outdoor use conditions, even can be used for short time immersion in water.



The new appearance, more upscale

Avoiding the monotony of appearance, more attractive.



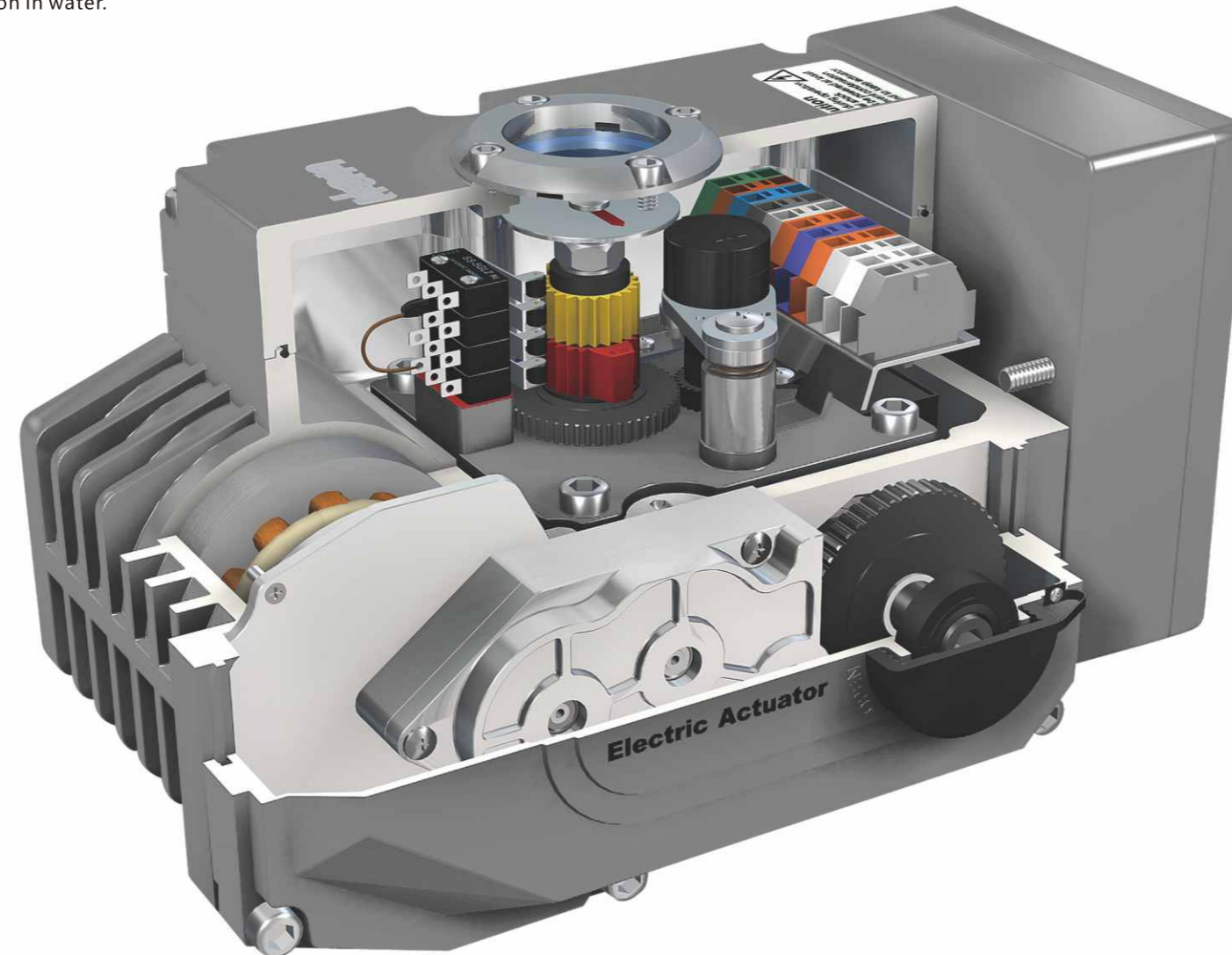
Modulating type is more stable and reliable

1. Increase the size of the module, larger component selection, higher power.
2. Using of weak control power supply, field voltage instability will not affect the quality of the module;
3. Using the bare board for better heat dissipation;
4. Smart setting, one key location, avoiding debugging disorder because of too many keys;
5. Using outboard installation of smart module to solve the contradiction of actuator maximum temperature is 120 °C, electronic components and modules use temperature is only 65 °C.



Transmission part is more reasonable and reliable

1. The gear box is made of aluminum alloy to avoid the cracking problem of gear box.
2. Gear with 40 chromium steel treated by finishing the two heat, It is more solid and reliable, wear resistance and fatigue resistance is stronger.



Lower motor temperature

By increasing the size of the motor, under the same power, reducing the capacitance and starting current, thereby reducing the degree of fever.



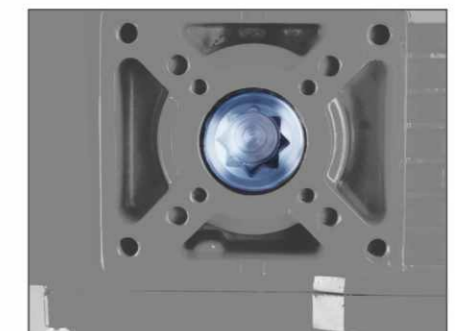
Quicker and easier adjustment

By improving the electrical cam structure, integrate the four cam into two, isolated with butterfly spring, pressed with locking nut above. Limit can remain stable at ultra high and low temperature.



Easy to keep manual handle

Position the handle clamp above the mechanical limit screw, so that the wrench is not easy to be lost in the site.



More reliable and easy to assemble with valve

Easy mounting base standard to ISO5211. The stem is directly connected to the worm inside of the actuator, the arm of valve and output shaft is shorter, output is more stable.

AOX-R Electric Actuator

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ELECTRIC VALVES



AOX-R Series Electric Actuator



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ELECTRIC VALVES



SUMMARY

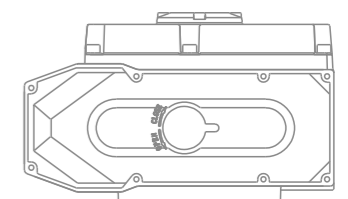
"AOX-R" series electric actuator is used for controlling 0°~ 270° rotation valves and other similar products, such as butterfly valve, ball valve, damper, flapper valve, cock valve etc. It widely applies to petroleum, chemical, watertreatment, shipping, paper making, power plant, heating, light industry and other industries. Drived by 380V/220V/110VAC or 24V/110VDC power, input 4- 20mA or 0-10VDC control signal, moves valve to the right position, and achieves to automatic control, the maximum output torque is 5000N·M.

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 is optional.
2. Motor--Fully enclosed squirrel-cage 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 handle is safe, reliable, labor-saving, small. If without power, operated by handle.
4. Indicator-- Installs indicator in the center shaft 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. Sealing--Well sealing performance and enclosure IP67, IP68 is optional.
7. Limit switch--Mechanical, electronic double limit. Mechanical limit stopper are adjustable, safe and reliable; electronic limit switch is controlled by cam. Set position accurately and conveniently, and not affected by excessive handle.
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. Installation--The installation size meets international standard ISO5211 / DIN3337.
11. 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.

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AOX-R Electric Actuator Series

PERFORMANCE PARAMETER

Model	Max output torque(N·M)	Operating time 90°(S)	Drive shaft(mm)		Power (W)	Rated current(A) 220VAC/1ph	Weight (kg)
			Square	Deep			
AOX-R-003	30	20	11x11	15.5	8	0.25	2.1
AOX-R-005	50	30	14x14	18	10	0.23	3.6
AOX-R-008	80	30	14x14	18	10	0.25	3.6
AOX-R-010	100	30	17x17	22.5	15	0.40	4.6
AOX-R-015	150	40	17x17	22.5	15	0.40	4.6
AOX-R-020	200	30	22x22	26	60	0.35	13
AOX-R-030	300	30	22x22	26	60	0.38	13.4
AOX-R-040	400	30	22x22	26	60	0.40	13.8
AOX-R-060	600	40	27x27	32.5	60	0.40	14
AOX-R-080	800	40	27x27	32.5	90	0.60	14.3
AOX-R-100	1000	40	27x27	65	90	0.64	14.5
AOX-R-160	1600	60	MaxΦ40	65	90	0.60	68
AOX-R-200	2000	60	MaxΦ40	65	90	0.64	68
AOX-R-300	3000	120	MaxΦ40	65	90	0.64	68
AOX-R-400	4000	200	MaxΦ40	65	90	0.60	68
AOX-R-500	5000	200	MaxΦ40	65	90	0.64	68

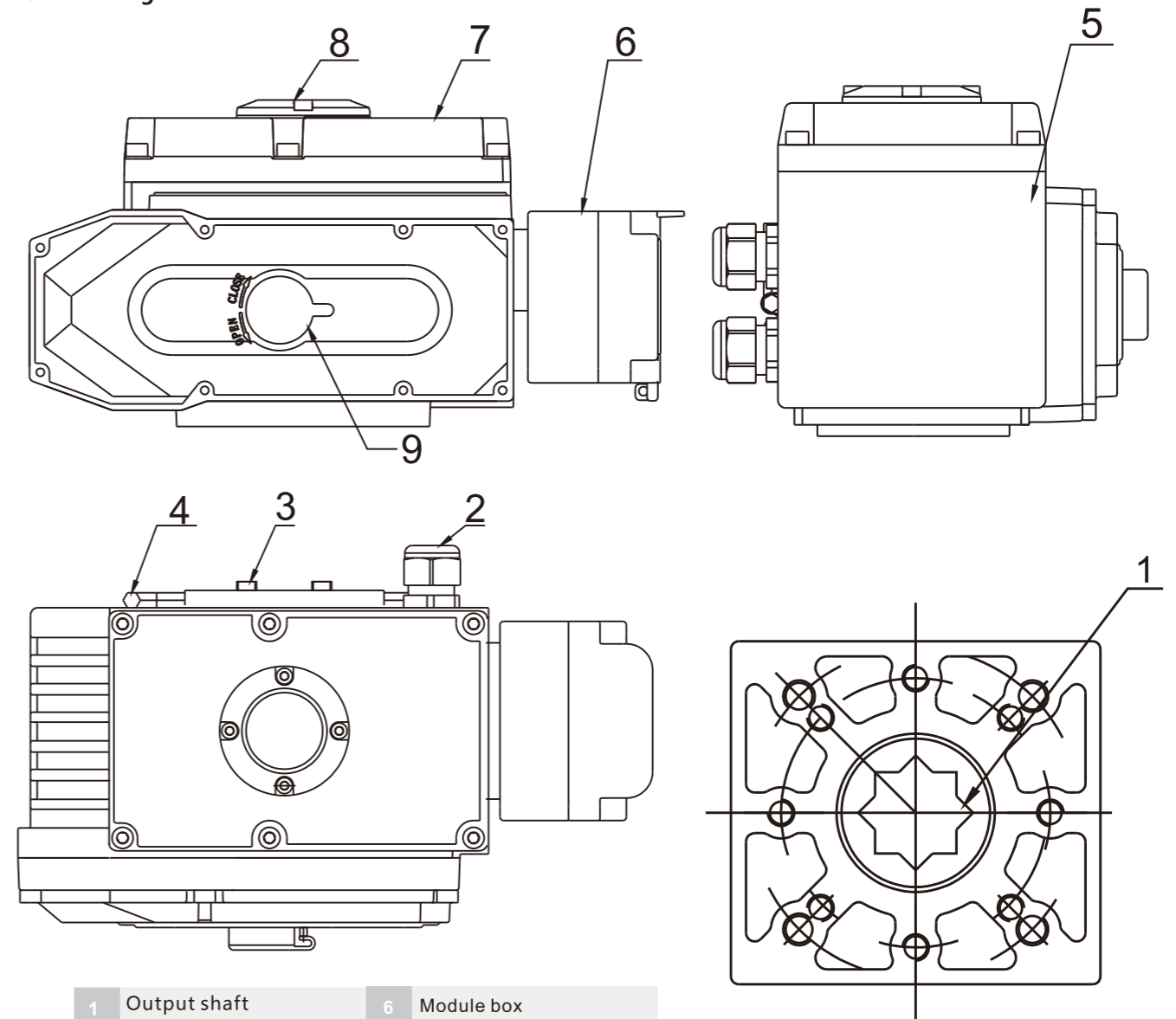
STANDARD TECHNICAL PARAMETER

Shell	Enclosure:IP67,IP68 is optional,NEMA4 and 6	
Power	Standard:220VAC/1ph Optional:110VAC/1ph, 380V/440V/3ph,50/60Hz, ±10%, 24VDC/110VDC/220VDC	
Controlling power	110/220VAC/1ph, 50/60 Hz, ±10%	
Motor	Squirrel-cage asynchronous motor	
Limit switch	2×Open/ Close, SPDT,250VAC 10A	
Auxiliary limit switch	2×Open/ Close, SPDT,250VAC 10A	
Travel	90° ~ 270° ± 10°(Please specify in advance if over 90°)	0°~270°
Fail safe/ Operating temperature	Internal-placed thermal protection, Open 120°C ± 5°C/Close 97°C ± 5°C	
Indicator	Continuous situation indication	
Manul operation	Mechanical handle (Handwheel is optional)	
Self-locking device	Self-locking by worm and worm gear	
Mechanical Limit	2 x external adjustable stopper	
Space heater	30W (110/220VAC) Anti-condensation	
Conduit entries	2 Pieces M18*1.5 (AOX-R-003 except)	
Ambient temperature	-25°C ~ +70°C (-30°C, -40°C, -60°C optional)	
Lubrication	Grease moly (EP type)	
Material	Steel, Aluminum alloy, Aluminum bronze, Polycarbonate	
Ambient humidity	Max 90% RH	Non-Condensing
Anti-vibration	X Y Z 10g,0.2 ~ 34 Hz,30 minutes	
External coating	Dry powder, Epoxy polyester	

AOX-R Electric Actuator Series

OUTLINE DRAWING

AOX-R Configuration

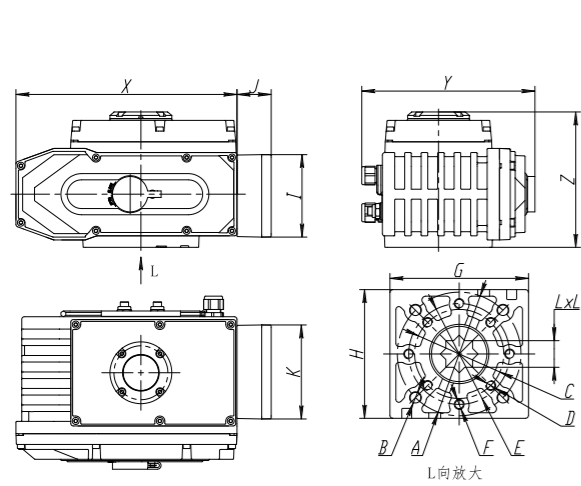


1	Output shaft	6	Module box
2	Waterproof wire lock	7	Cover
3	Mechanical limit	8	Window
4	Manual spanner	9	Anti-dust cover
5	Shell		

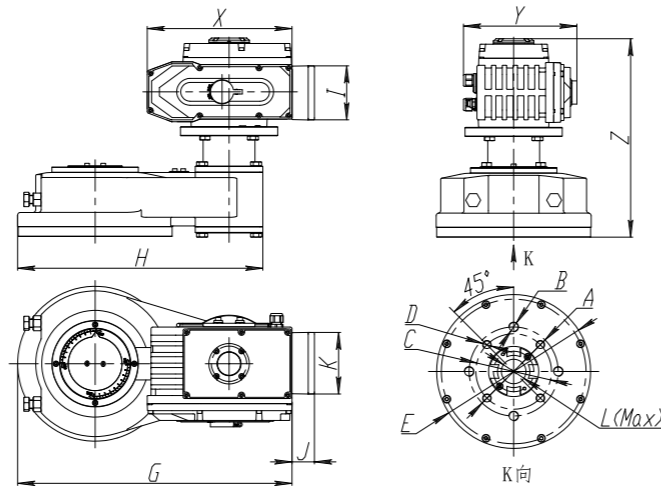
AOX-R Electric Actuator Series

GENERAL DRAWING

AOX-R-003~100



AOX-R-160~500



Unit:mm

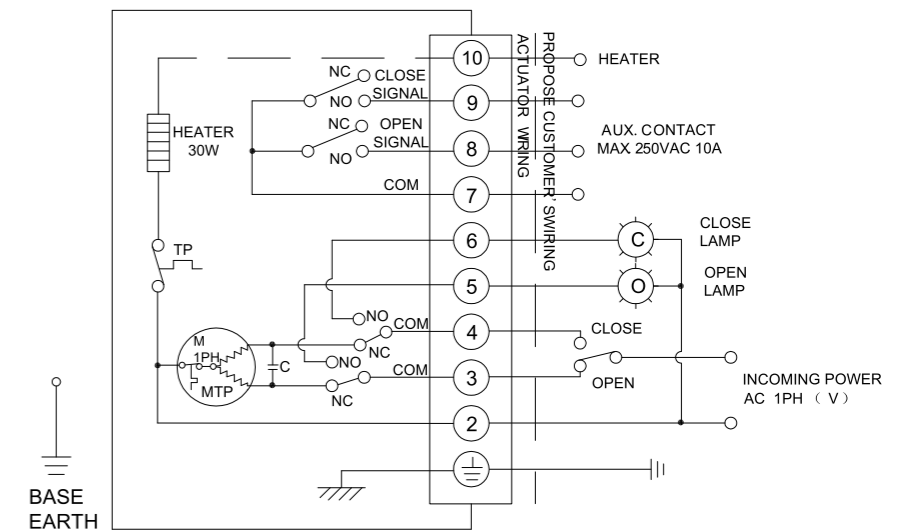
Model	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L
AOX-R-003	123	121	112	Φ50	4-M6	Φ36	4-M5	Φ42	4-M5	50	50	73	40	74	11x11
AOX-R-005	162	147	122	Φ70	4-M8	Φ50	4-M6	///	///	66	66	114	42	100	14x14
AOX-R-008	162	147	122	Φ70	4-M8	Φ50	4-M6	///	///	66	66	114	42	100	14x14
AOX-R-010	189	163	128	Φ70	4-M8	Φ50	4-M6	///	///	100	88	144	42	100	17x17
AOX-R-015	189	163	128	Φ70	4-M8	Φ50	4-M6	///	///	100	88	144	42	100	17x17
AOX-R-020	268	210	164	Φ125	4-M12	Φ102	4-M10	Φ102	4-M10	140	130	144	42	100	22x22
AOX-R-030	268	210	164	Φ125	4-M12	Φ102	4-M10	Φ102	4-M10	140	130	144	42	100	22x22
AOX-R-040	268	210	164	Φ125	4-M12	Φ102	4-M10	Φ102	4-M10	140	130	144	42	100	22x22
AOX-R-060	268	210	164	Φ125	4-M12	Φ102	4-M10	Φ102	4-M10	140	130	144	42	100	27x27
AOX-R-080	268	210	164	Φ125	4-M12	Φ102	4-M10	Φ102	4-M10	140	130	144	42	100	27x27
AOX-R-100	268	210	164	Φ125	4-M12	Φ102	4-M10	Φ102	4-M10	140	130	144	42	100	27x27
AOX-R-160	268	210	368	Φ165	4-M18	Φ140	4-M16	///	///	508	454	144	42	100	Φ40 (Max)
AOX-R-200	268	210	368	Φ165	4-M18	Φ140	4-M16	///	///	508	454	144	42	100	Φ40 (Max)
AOX-R-300	268	210	368	Φ165	4-M18	Φ140	4-M16	///	///	508	454	144	42	100	Φ40 (Max)
AOX-R-400	268	210	368	Φ165	4-M18	Φ140	4-M16	///	///	508	454	144	42	100	Φ40 (Max)
AOX-R-500	268	210	368	Φ165	4-M18	Φ140	4-M16	///	///	508	454	144	42	100	Φ40 (Max)

AOX-R Electric Actuator Series

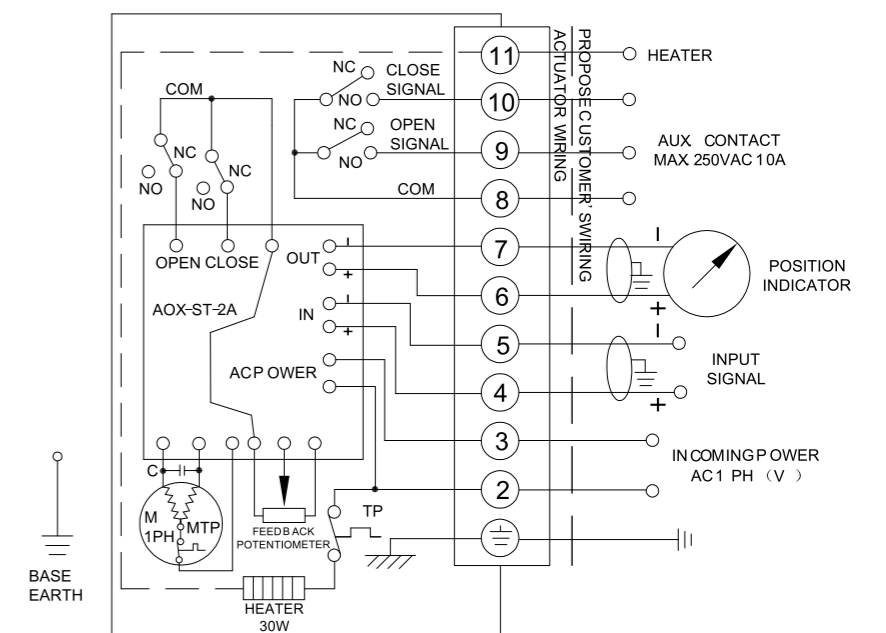
Wiring Diagram



1.AOX-R-003~500 110/220VAC/50/60Hz, 1pH (On/off type) R-110



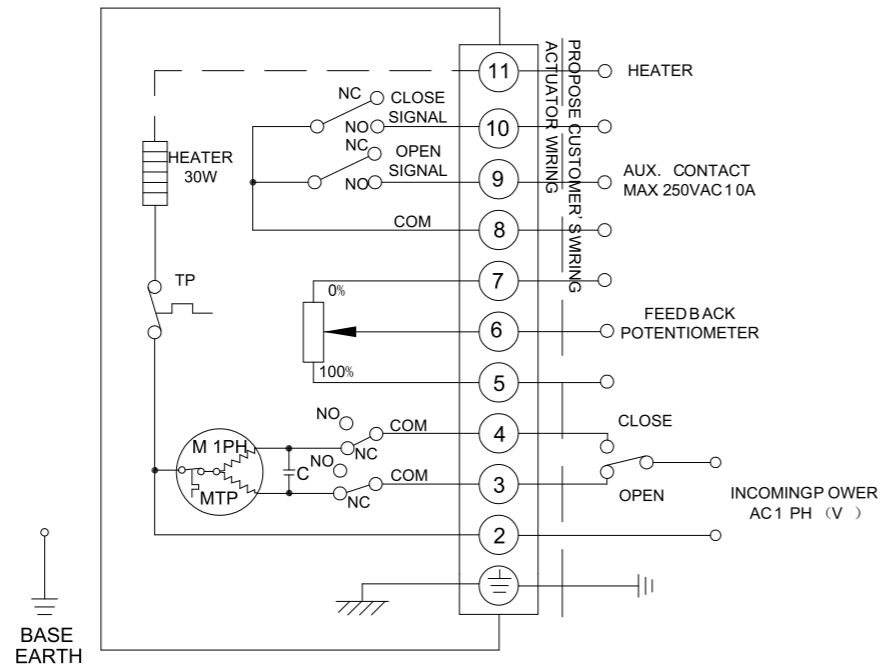
2.AOX-R-005~500 110/220VAC/50/60Hz, 1pH (Modulating type) R-120



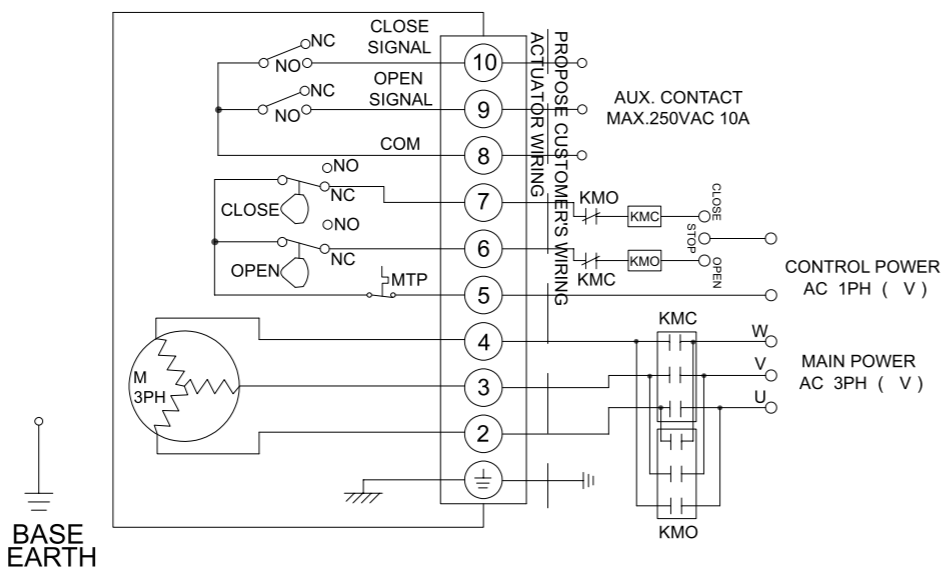
AOX-R Electric Actuator Series

Wiring Diagram

3.AOX-R-005~500 110/220VAC/50/60Hz, 1pH (Potentioeter output type) R-160



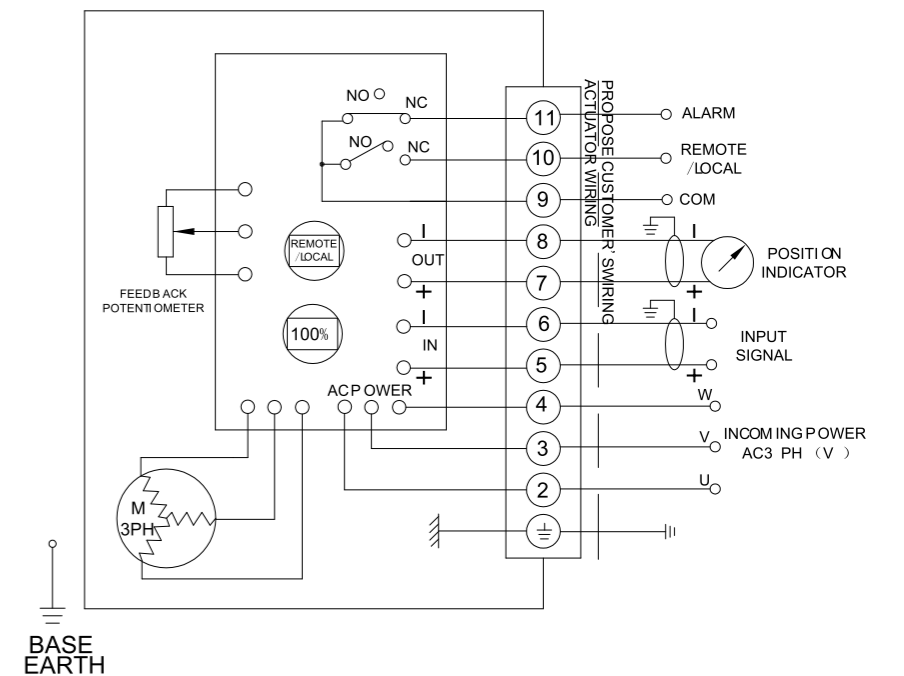
4.AOX-R-005~500 380/4440VAC/50/60Hz, 3pH (Outer control on/off type) R-210



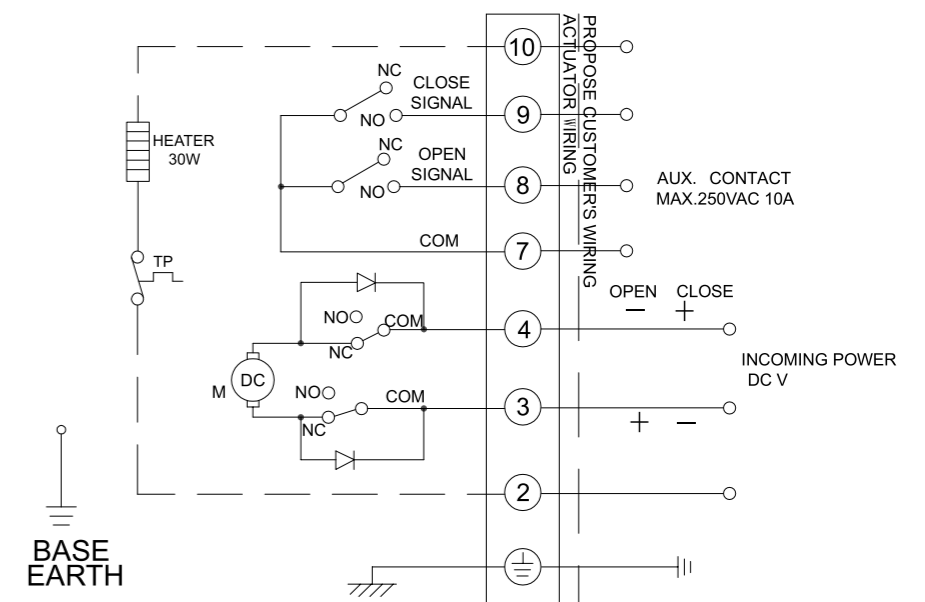
AOX-R Electric Actuator Series

Wiring Diagram

5.AOX-R-005~500 380/4440VAC/50/60Hz, 3pH (Intelligent modulating type) R-240

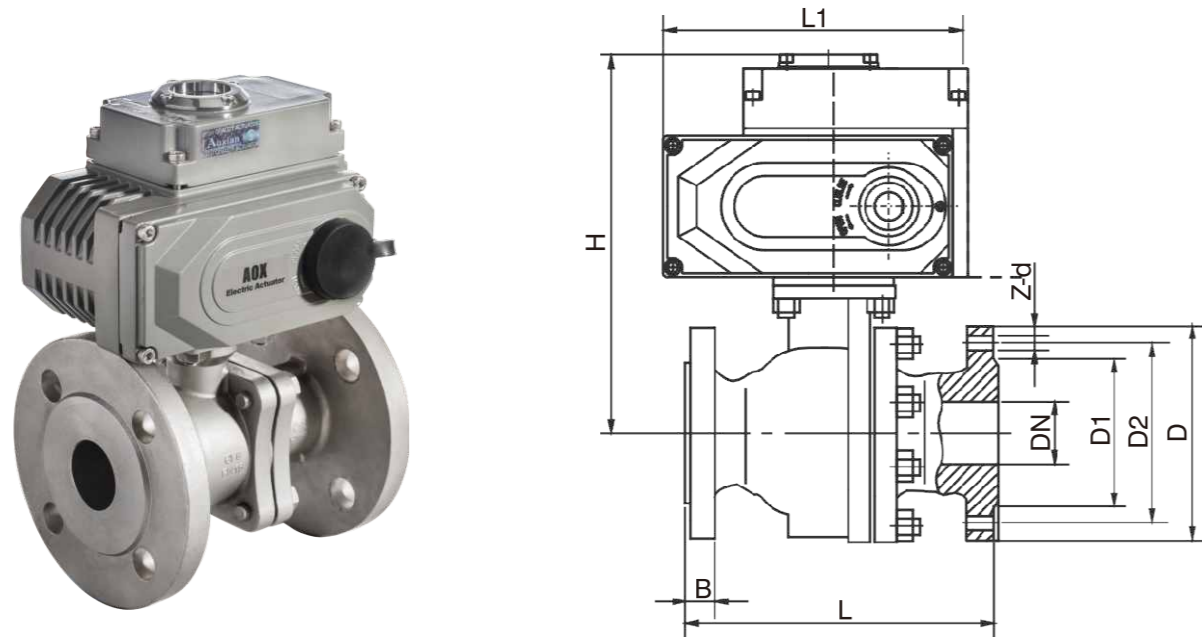


6.AOX-R-003~500 12/24VDC (On/off type) R-310



AOX-R Electric Actuator Series

Electric Actuator Standard selection guide for valves



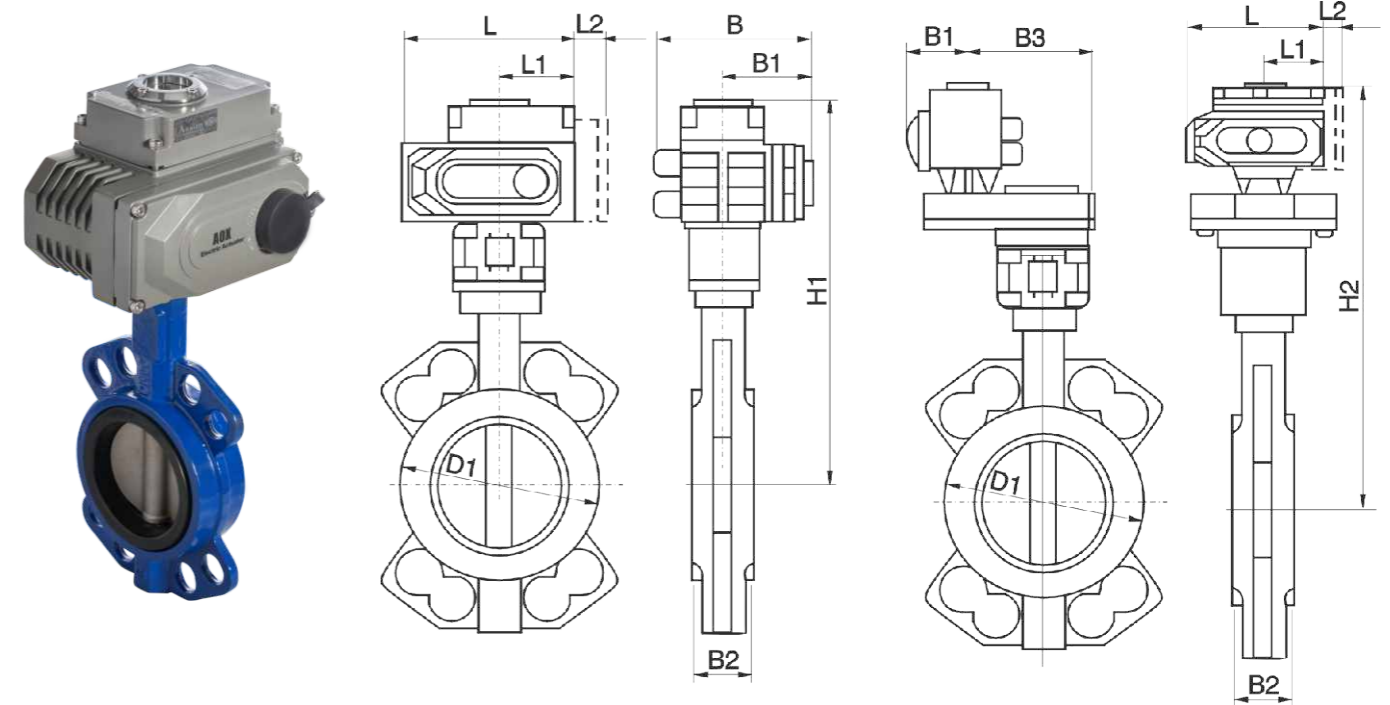
Installation Dimension (mm)

Nominal Diameter (mm)	L	D	D2	D1	B	H	L1	z-d	Optional actuator (normal temperature and pressure)
15	108	95	65	45	14	176	161	4-14	AOX-R-005
20	117	105	75	55	14	180	161	4-14	AOX-R-005
25	127	115	85	65	14	182	161	4-14	AOX-R-005
32	140	135	100	78	16	188	161	4-18	AOX-R-008
40	165	145	110	85	16	198	161	4-18	AOX-R-008
50	178	160	125	100	16	203	161	4-18	AOX-R-008
65	190	180	145	120	18	222	188	4-18	AOX-R-010
80	203	195	160	135	20	237	188	8-18	AOX-R-015
100	305	215	180	155	20	281	268	8-18	AOX-R-020
125	256	245	210	185	22	300	268	8-18	AOX-R-040
150	394	280	240	210	24	300	268	8-23	AOX-R-080
200	457	335	295	265	36	368	268	12-23	AOX-R-160
250	533	405	335	320	30	418	268	12-25	AOX-R-200

Note: the above optional parameter is only for reference, pls take practical situation as standard

AOX-R Electric Actuator Series

Electric Actuator Standard selection guide for valves



Installation Dimension (mm)

DN	L	L1	L2	B	B1	B2	H2	D1	Optional actuator (normal temperature and pressure)
50	161	71.5	40	120.5	62	42.6	297	92	AOX-R-005
65	161	71.5	40	120.5	62	45.6	310	106	AOX-R-005
80	161	71.5	40	120.5	62	45.6	331	122	AOX-R-005
100	161	71.5	40	120.5	62	51.6	348	150	AOX-R-008
125	188	81	40	165	75	55.6	428	177	AOX-R-010
150	268	117	40	268	119	55.6	447	204	AOX-R-020
200	268	117	40	268	119	59.6	481	260	AOX-R-040
250	268	117	40	268	119	67.6	520	314	AOX-R-060
300	268	117	40	268	119	77.6	548	370	AOX-R-080
350	268	117	40	268	119	79	583	422	AOX-R-100
400	268	117	40	268	119	105	615	473	AOX-R-200
450	268	117	40	268	119	112	819	526	AOX-R-300
500	268	117	40	268	119	129	847	577	AOX-R-400

Note: the above optional parameter is only for reference, pls take practical situation as standard