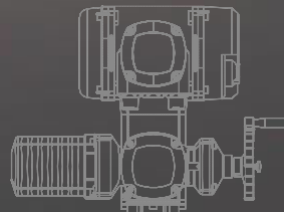




AUM

ELECTRIC ACTUATOR

Intelligent Process Control
Build A Quality



SUMMARY

AUM series intelligent multi-turn actuator is applied in controlling various valves and other similar products, include butterfly valve, ball valve, gate valve, control valve and etc. It is widely applied in petroleum, chemical, water treatment, shipping, paper making, power plants, heating, building automation and other industries. AUM series mutil-turn actuator combine the characteristic of intelligent and reliable, and expand richer application based on basic modular product, it can meet various kinds of working condition. There are different "AUM" valve gear boxes can be configured which greatly expanded the torque range or turn the multi-turn actuator into quarter-turn actuator, linear actuator to meet the different requirements.

PERFORMANCE FEATURES

- 1.Shell-The main shell is made of cast iron, the output is more stable, and the rest is aluminum alloy, lighter weight. The surface coating of epoxy resin, and go through the 12 step of coating protective treatment, with high corrosion resistance, the protection grade is IP67, NEMA4 and 6.
- 2.Motor-Fully enclosed squirrel-cage motor, small size, large torque, and small inertia force, insulation class F, built-in thermal protection switch to avoid damaging the motor.
- 3.Lubrication-Using oil-immersed type, it can provide excellent lubrication and cooling in case of high strength, large temperature difference and high torque, the oil is more stable.
- 4.Terminal box-Terminal box, which is double sealing and separate enclosure protection, assure the sealing integrity of the electronic component if open the box cover to make the on-site wiring. The motor and the controls are connected by 29 contacts.
- 5.Valve control-Traditional potentiometer is eliminated, and adopt magnetic induction absolute encoder to provide position accuracy. It can record the precise valve position without battery if actuator power off.
- 6.Infrared setting-The setting and diagnostic of the actuator can be processed via sealing display screen, without opening the housing. The valid distance between the setting tools and display screen is about 1-1.5m.
- 7.Local control-Local control switches and locking type selector switch local/stop/remote are magnetic switches, controlled by magnetic reed, thus assure the damp proof sealing inside of the actuator.
- 8.Manual structure-The handle is designed to ensures safe, reliable, labor-saving and small. When the power outage, press the red button in the middle of handwheel to make motor and actuator disconnected, and start manual operation. Because of the automatic clutch between the motor and the operating shaft , it is easy to turn to manual operation even if the actuator at the maximum torque . After starting the motor, automatically breaks away from manual operation. When performing motor operation handwheel does not work .(Note: In the situation of no electricity, the electric actuator will remain permanently manual mode).
- 9.Space heater-It is used to control temperature and remain the internal electrical components dry, it can avoid the moisture condensation inside the actuator because of the change of the temperature and weather.
- 10.Torque switch-Providing overload protection, it can shut down the power automatically when jamming to avoid damaging valves and actuators, torque is adjustable within a certain range.
11. Self-locking-Precision worm mechanism can efficiently transfer large torque, high efficiency, low noise (max 50 dB), long life, and have self-locking function to prevent the inversion, transmission part is stable and reliable.
- 12.Anti-off bolt-The bolts will attached to the case and not fall off when removing the shell, external screws are made of 304 stainless steel.
- 13.Installation-The bottom mounting dimensions conform to international standard ISO5210 , the drive sleeve can be removed for processing as needed. It can be installed vertically and horizontally.
- 14.Circuit-The control circuit in line with single-phase or three-phase power supply standard, circuit layout is compact and reasonable, (It can be designed according to customer requirements).

Terminal box

Terminal box, which is double sealing and separate enclosure protection, assure the sealing integrity of the electronic component if open the box cover to make the on-site wiring.

- **Double seal structure**
- **Latest non-invasive design**
- **Precise torque measurement**
- **Infrared setting technology**
- **Reliable electronic system**
- **Precise valve position measurement**
- **Phase sequence self-correction**
- **Instantaneous reversal protection**
- **Over torque protection**
- **Intelligent block protection**
- **Motor overheat protection**

Motor
Specially designed high starting torque motor, can frequent open the valve from fully closed position. In addition to the three-phase AC motors, single-phase AC and DC motors are also suitable for AU M series actuators.

Valve control
Using magnetic induction absolute encoder, eliminating the traditional potentiometer, improved location accuracy and does not require battery can be accurately recorded valve position when the actuator power outage.

Infrared setting

The setting and diagnostic of the actuator can be processed via sealing display screen, without opening the housing. The valid distance between the setting tools and display screen is about 1-1.5m.

Local control

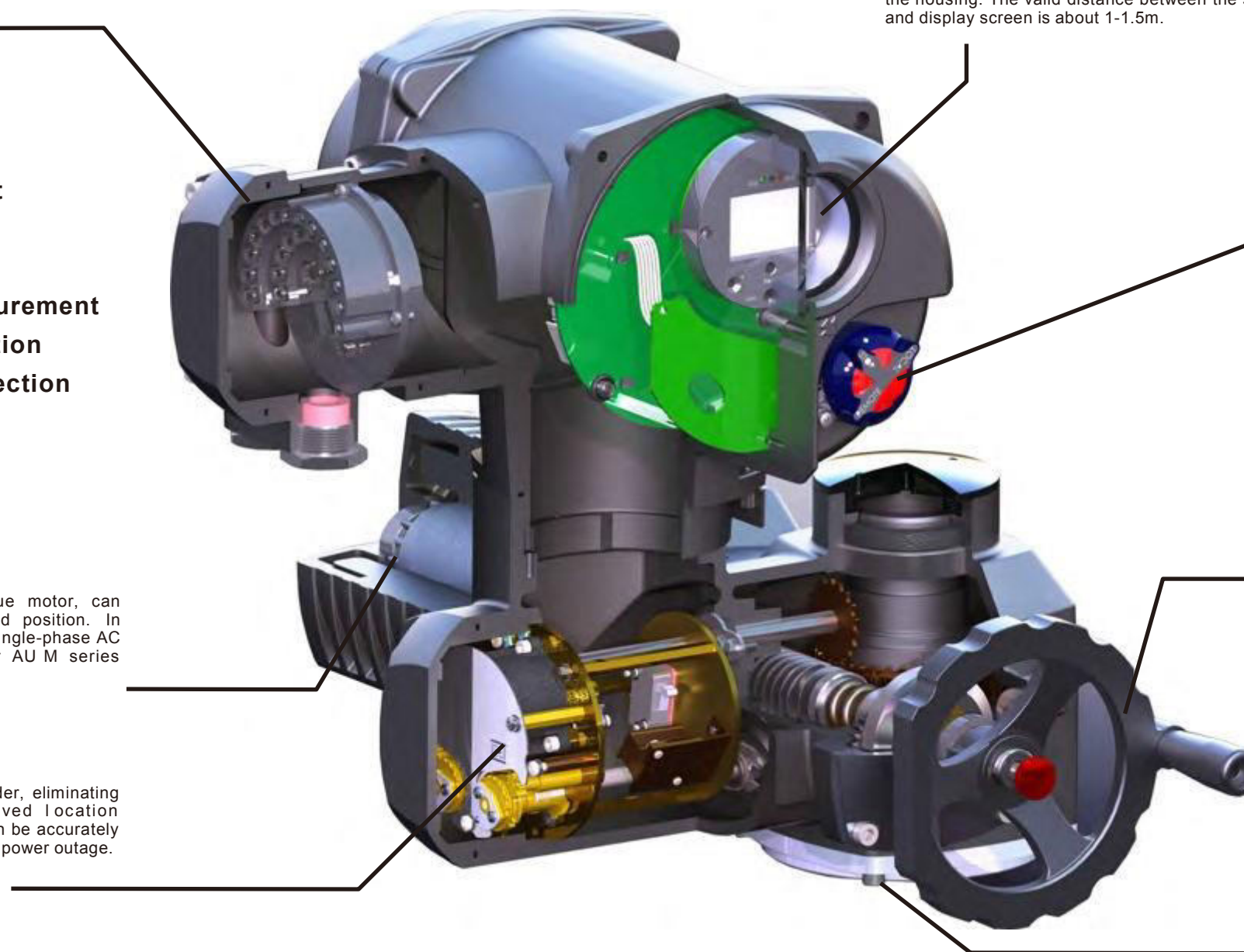
Local control switches and locking type selector switch local/stop/remote are magnetic switches, controlled by magnetic reed, thus assure the damp proof sealing inside of the actuator.

Manual operation

- In the commissioning or in an emergency the actuator can be operated by handwheel.
- By operating the red button to disconnected the actuator and motor and start manual operation. Because the self-locking worm gear between the motor and the operating shaft are separated, it's very easy to turn to manual operation even if the actuator is running at maximum torque.
- After starting the motor, automatically breaks away from manual operation, when the motor is operating the hand wheel does not work.

Valve mounting standard

Installation flange is according to EN ISO5210 or DIN 3210 standard. Various types of output drive types to choose, suitable for different types of valves.



PERFORMANCE PARAMETER

Model	Output Torque	Speed	Max Shaft Diameter	Power	Rated current(A)50Hz	Flange Model	Weight
					Three phases		
AUM-007	N M	RPM	mm	W	380V	ISO5210	Kg
	70	45	Φ28	400	2.25	F10	32
AUM-010	70	90		400	1.67		
	120	35	Φ28	600	4.18	F10	38
	120	70		600	3.12		
AUM-020	120	105	Φ40	800	5.15	F14	68
	200	34		1100	3.85		
	200	67	Φ40	1100	5.65	F14	70
AUM-050	500	34		1100	9.58		
	500	67		1500	14.8		

TECHNICAL PARAMETER

Shell	Enclosure:IP67 (IP68 optional) ,NEMA4 and 6	
Power	Standard: 380V AC/3ph Optional: 110/220V AC/1ph,440V AC/3ph, 50/60Hz, ± 10%	
Motor	Asynchronous motor	
Limit switch	1 × Open/ Close, SPDT,250V AC 10A (on/off model)	
Auxiliary limit switch	1 × Open/ Close, SPDT,250V AC 10A (on/off model)	
Torque switch	1 × Open/ Close, SPDT,250V AC 10A	
Operating temperature	Internal-placed thermal protection, Open 120℃ ±5℃ /Close 120℃ ±5℃	
Manual operation	Decutching mechanism,with handwheel operation	
Self-locking device	Self-locking by worm and worm gear	
Space heater	30W (110/220V AC) Condensation preventing (according to conditions, can be adjusted)	
Conduit entry	Double seal 3 × NPT3/4 "	
Ambient temperature	-30℃--+70℃	
Lubrication	Special oil for actuators	
Material	Ductile iron, high-strength aluminum alloys, steel, 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,high anti-corrosion	
Overload protection	Torque peak overload protection	
Display screen	LED display (smart regulation type)	
Setting mode	Non-intrusive setting (without opening the cover set type)	
Electrically	Integrated control unit with a non-invasive rotary switch	

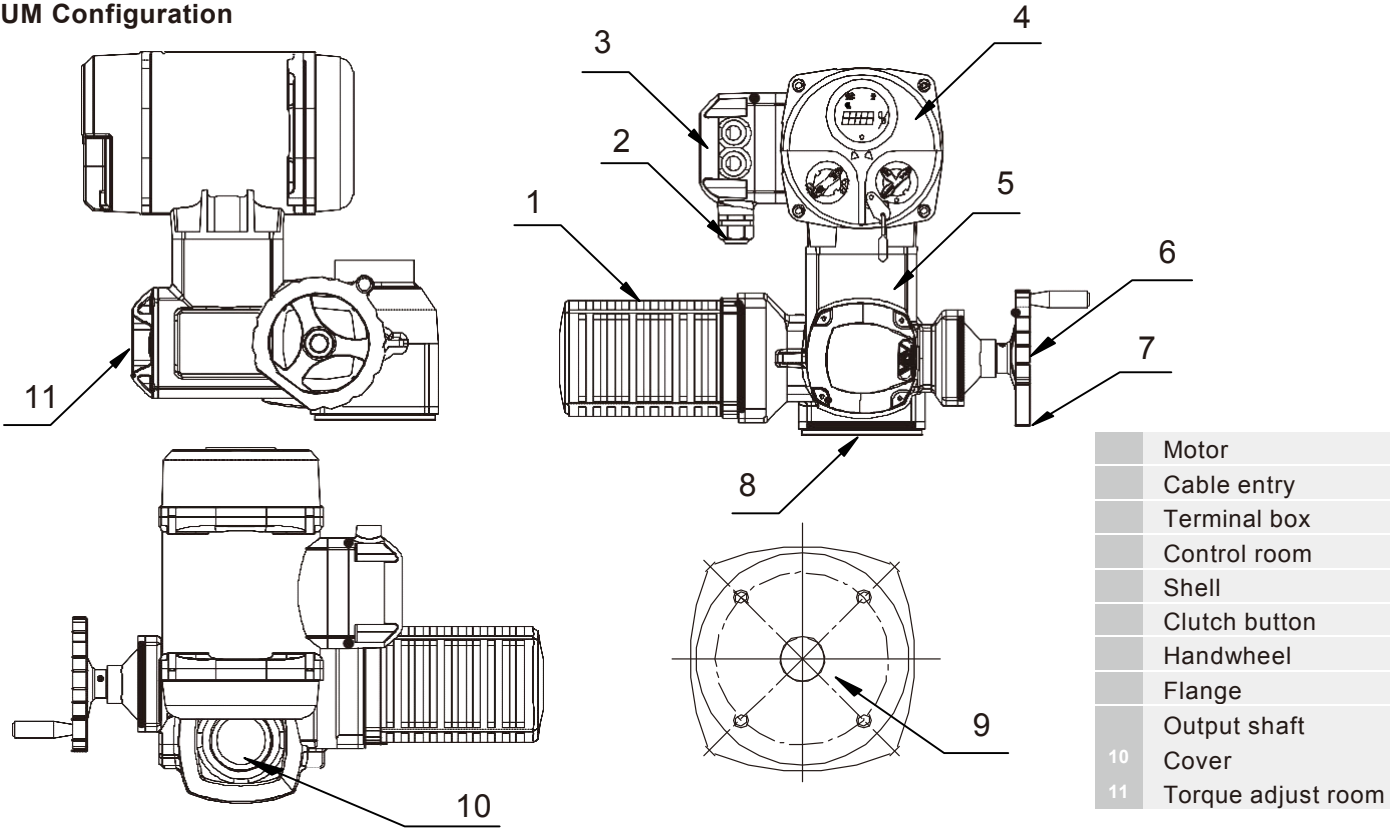
Mutil-turn Electric Actuator

OPTION SPECIFICATION

No.	Option scheme	Remark
1	Water-proof actuator (IP68,10M,250HR)	
2	Local control units (local control open/stop/close optional switch, local/remote switch)	AUM Serie
3	High temperature resistance actuator (-10℃~+100℃)	AUM Serie
4	Low temperature resistance actuator (-40℃~+70℃)	AUM Serie
5	Anticorrosion protection	AUM Serie
6	Special output drive	AUM Serie

OUTLINE DRAWING

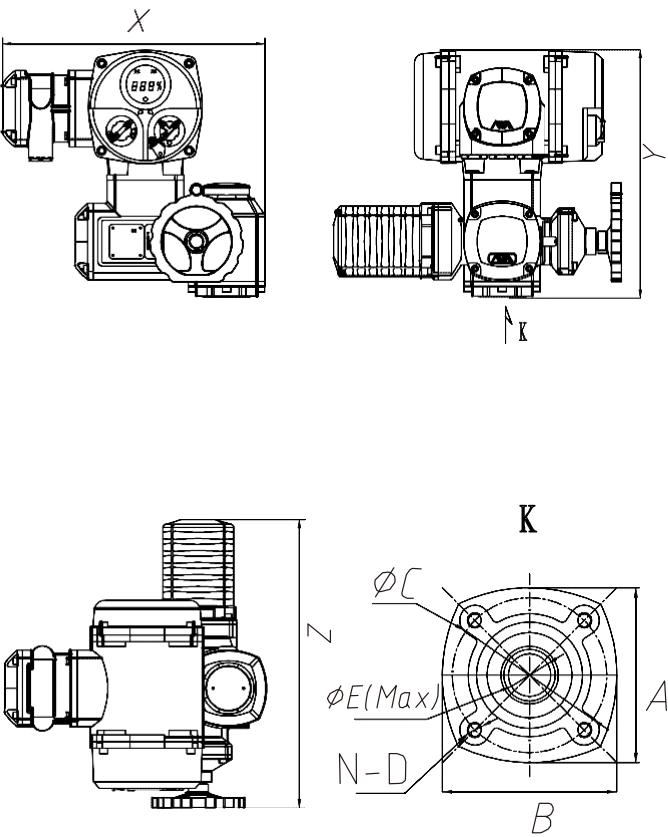
AUM Configuration



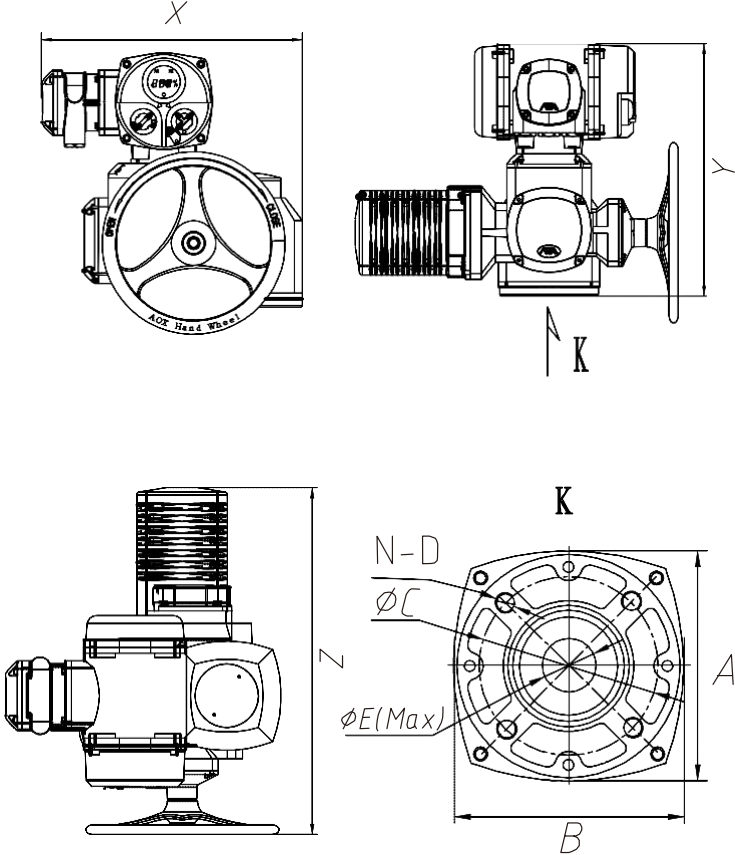
Mutil-turn Electric Actuator

GENERAL DRAWING

AUM-007-AUM-010



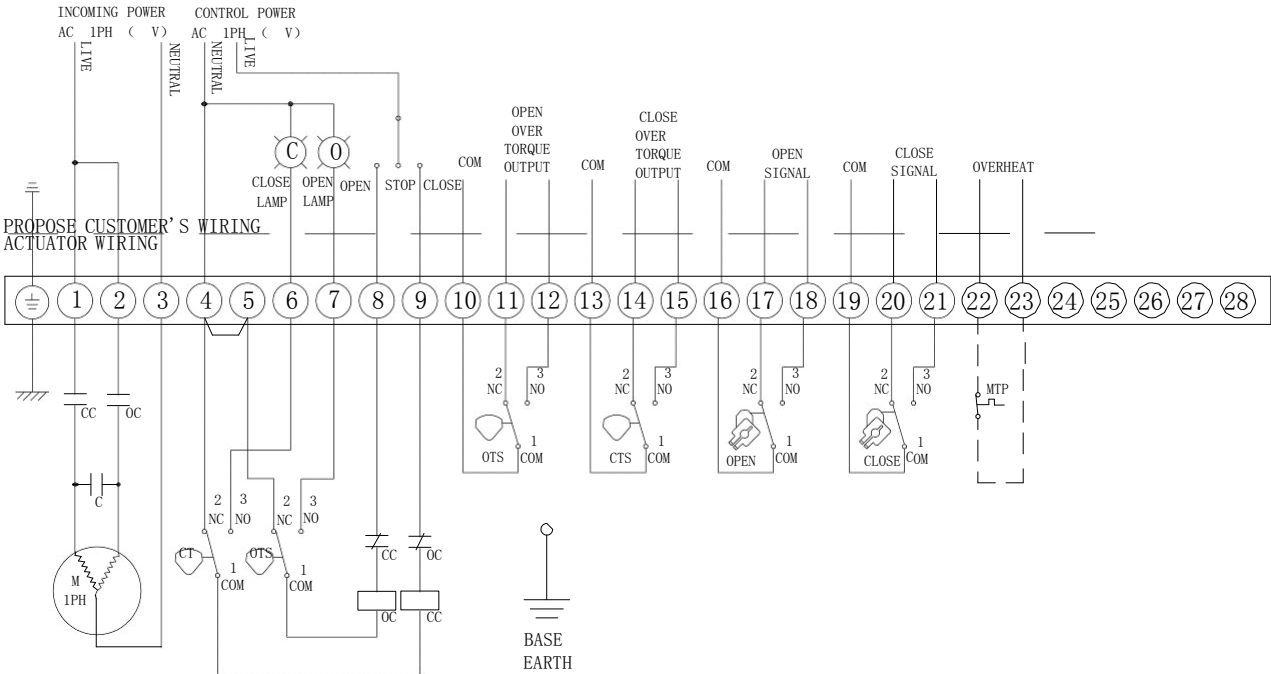
AUM-020-AUM-050



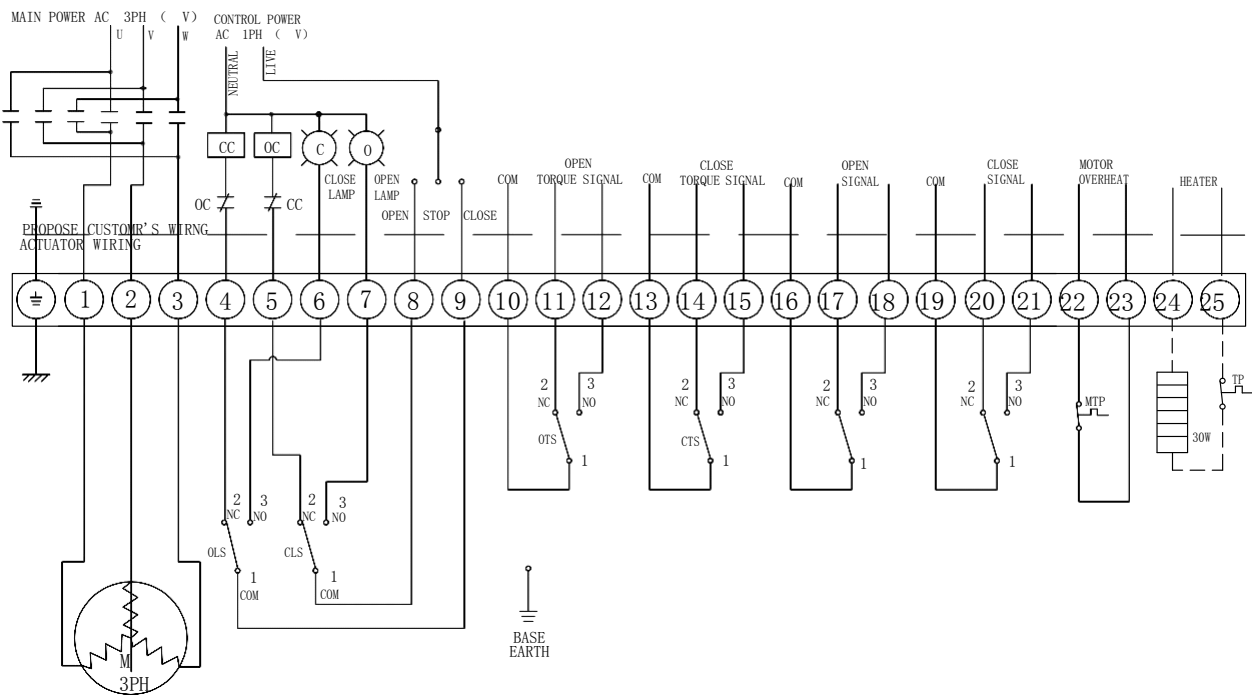
Model	X	Y	Z	A	B	ΦC	N-D	ΦE(Max)
AUM-007	400	385	440	115	115	Φ102	4-M10	Φ28
AUM-010	450	420	487.5	132	132	Φ102	4-M10	Φ28
AUM-020	510	503	580	180	180	Φ140	4-M16	Φ40
AUM-050	510	503	580	180	180	Φ140	4-M16	Φ40

Wiring Diagram

AUM-007~AUM-050 110/220VAC/50/60HZ,1Ph (On/off model)

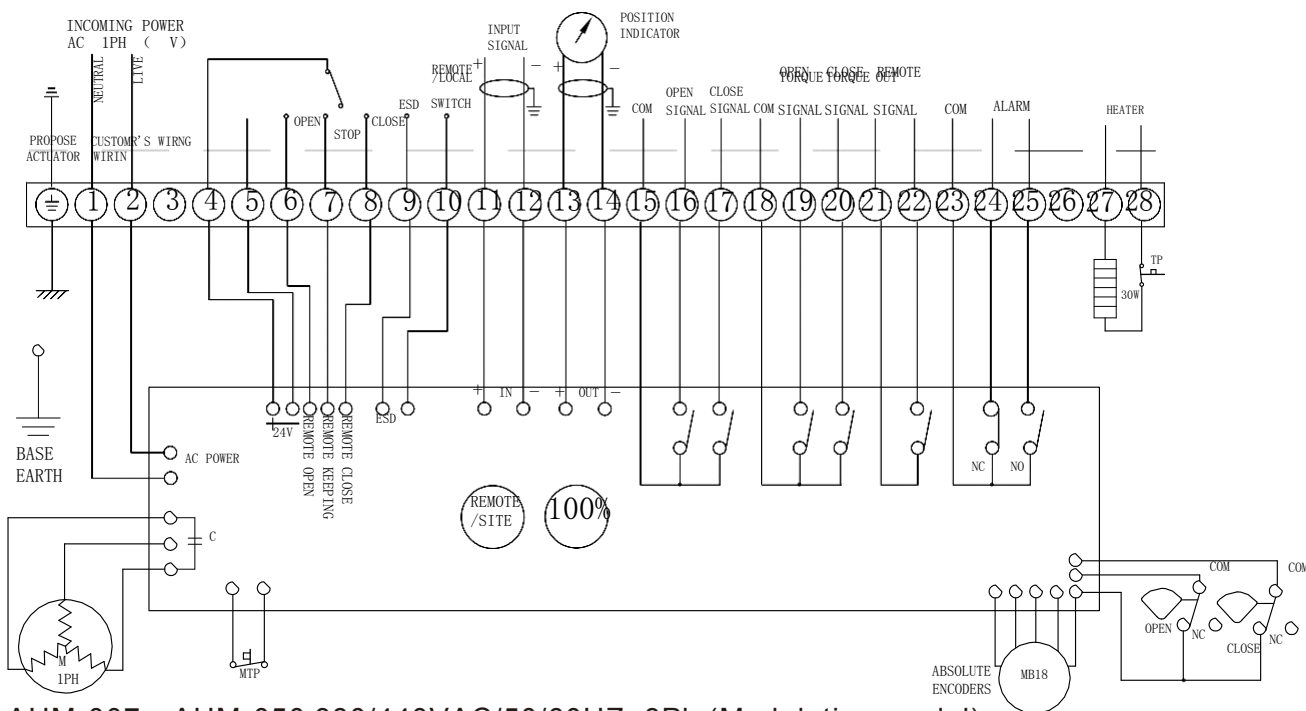


AUM-007~AUM-050 380/440VAC/50/60HZ, 3Ph (On/off model)

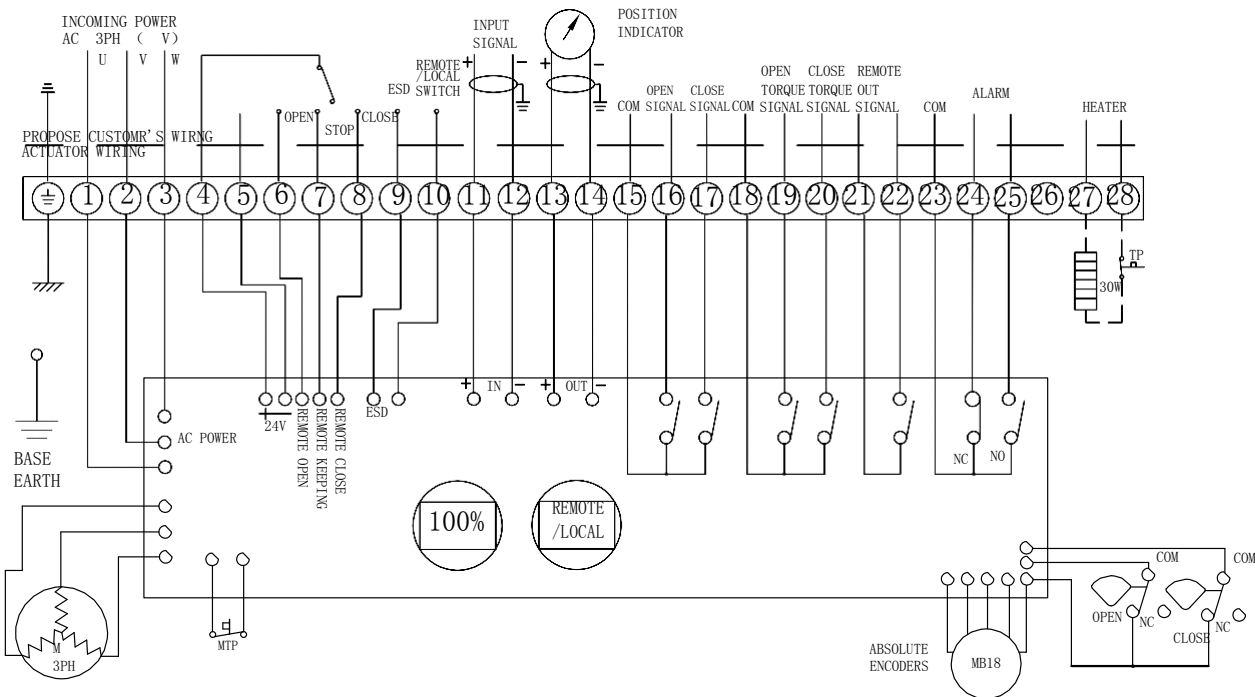


Wiring Diagram

AUM-007~AUM-050 110/220VAC/50/60HZ,1Ph (Modulating model)



AUM-007~AUM-050 380/440VAC/50/60HZ, 3Ph (Modulating model)



Application

AUM series mutil-turn actuators are suitable for valve automation of various size and pressure levels within any plant. The application is guaranteed by the following factors:

- 1.Large torque range.
- The value of torque can be 15 — 12000NM,the speed can be 40 —140 RPM.
- 2.Combination with different AUM gear box.
- 3.Many kinds of type selection: ON/OFF model、 Modulating model、 Explosion-proof model.



Combination with multi-turn gearbox

Automation of gate valve, globe valve, sluice valve.



Combination with linear thrust unit

Automation of 3-way control valve, single-seat control valve, double-seat control valve



Combination with quarter-turn gearbox

Automation of ball valve, butterfly valve



Combination with lever gearbox

Automation of butterfly valve with lever arrangement

Pneutork

PNEUTORK VALVE AUTOMATION

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