

# Coreline

## Electric actuator

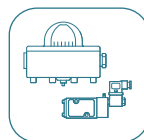
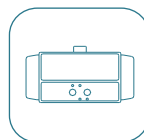
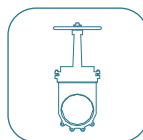
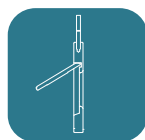
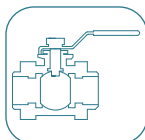
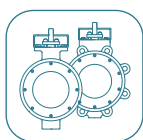
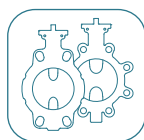


English

Fig. 555



[www.coreline.dk](http://www.coreline.dk)



## Specifications

Coreline Fig.555 Electric actuators, have been designed and tested to obtain the highest cycling life and the most reliable performance with minimum maintenance and service. Specifications of Coreline electric actuators follows international standards convenient for faster mounting. CE approval and ATEX certification provide guarantee for safety and reliability. Waterproof IP 68, 10M, 250hr. A wide product range, ensures a more economical sizing.



Operating media: Electricity 24V-230V

Operating temperature:  $-25^{\circ}\text{C}\sim+70^{\circ}\text{C}$

Travel adjustment: Adjustable  $+5^{\circ}/-5^{\circ}$  by  $0^{\circ}$  and  $90^{\circ}$  position

Lubrication: Pre-lubricated for life of actuator on assembly under normal operating conditions

CE certification for all Coreline electric actuators.



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## SUMMARY

Coreline Fig.555 electric actuator is used for controlling 0~270° rotation of the valves and other similar products, such as butterfly valve, ball valve, damper, flapper valve, cock valve etc. It widely applies to petroleum, chemical, water treatment, shipping, paper making, power plant, heating, light industry and other industries. Operated by 380V/220V/110V AC power or 24V/110V DC power, inputs 4-20mA or 0-10V DC control signal, moves valve to the right position, and achieves to automatic control, maximum output torque is 6000 Nm.

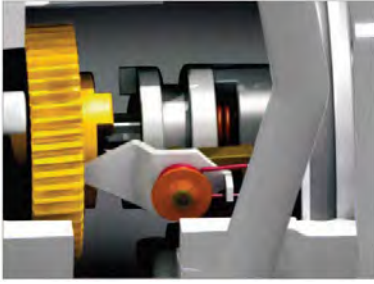
## PERFORMANCE FEATURES

- 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.
- Asynchronous motor, small, large torque, and small inertia force, F-class insulation rating, with thermal protection to avoid damaging.
- 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.
- Indicator. Installs indicator in the center axis and adopts convex mirror design, no cumulate water, more convenient to observe.
- Space heater. Is used for controlling temperature to avoid condensing internal of housing and keep dry.
- 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 handling
- Torque Switch. (Except 555-005/008/010) Providing overload protection to avoid the damage of valve and electric actuator when jammed by cutting power automatically.
- 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, stable and reliable transmission parts.
- Captive bolts are used to attach the bolts to the cover, so that bolts don't fall off when removing the cover.
- The installation size meets international standard ISO5211 / DIN3337.
- 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.
- 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.
- Adjust the phase sequence automatically-Intelligent actuator check and test the phase sequence for 3 phase power supply automatically, users no need to consider the phase sequence.

## Options for Fig.555

No.	Option scheme	Remark
1	Explosion-proof actuator(Exd II CT5)	555 Series
2	Water-proof actuator (IP68, 10M,250HR)	555 Series
3	Potentiometer unit (1 K-10 K)	555 Series
4	Proportion control unit (control signal 4-20mA DC/1-5V/1-10V)	555 Series
5	Local control units (local control open/stop/close optional switch, local/remote switch)	555 Series
6	Travel 120°, 180°, 270°	555 Series
7	Direct current motor (24VDC)	555 Series
8	Torque switch (SPDT x 2 250VAC 10A)	Except 555-005/008/010
9	Electric current position transfer (output 4-20mA DC)	555 Series
10	Self-reset when power failure	555 Series
11	High temperature resistance actuator (-10°C ~ +100°C)	555 Series
12	Low temperature resistance actuator (-40°C ~ +70°C)	555 Series
13	Low speed actuator	555 Series

## Design features



### Manual override

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



### Limit switches

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



### Terminal

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



### Space heater

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



### Captive cover bolts

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

### Shell

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

### Worm gear

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

### Self locking

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

### Sealing

By O-ring in all interfaces IP66(standard), and double o-ring for IP68 (option).

### Handwheel

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

### 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



Patented products, Counterfeiting not allowed.

## Design features



### Tapered interface between cover and lower housing

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

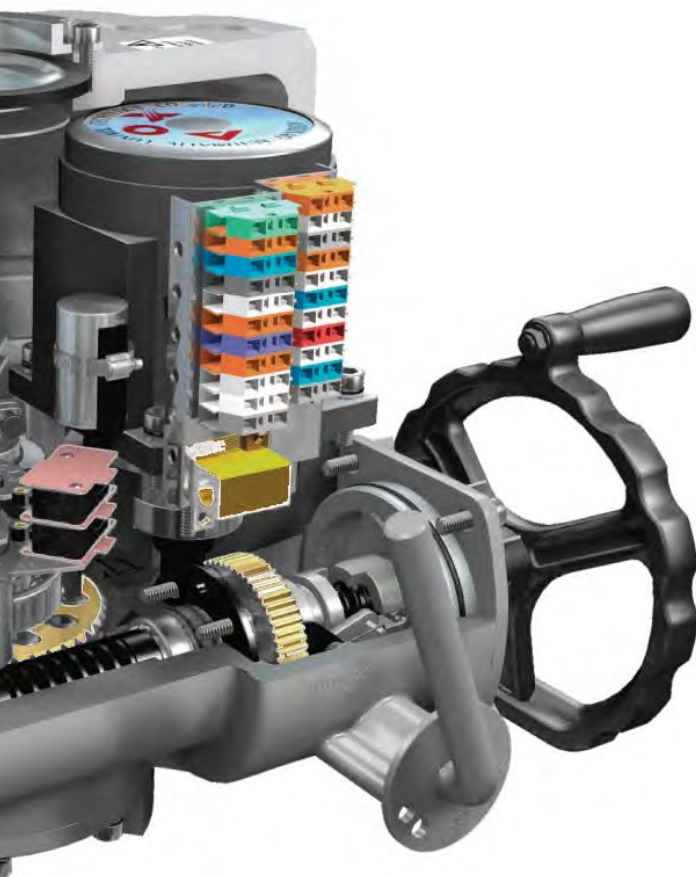
### Window

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 loosen screw and tighten again at all



## Performance and Technical data

### Performance parameter

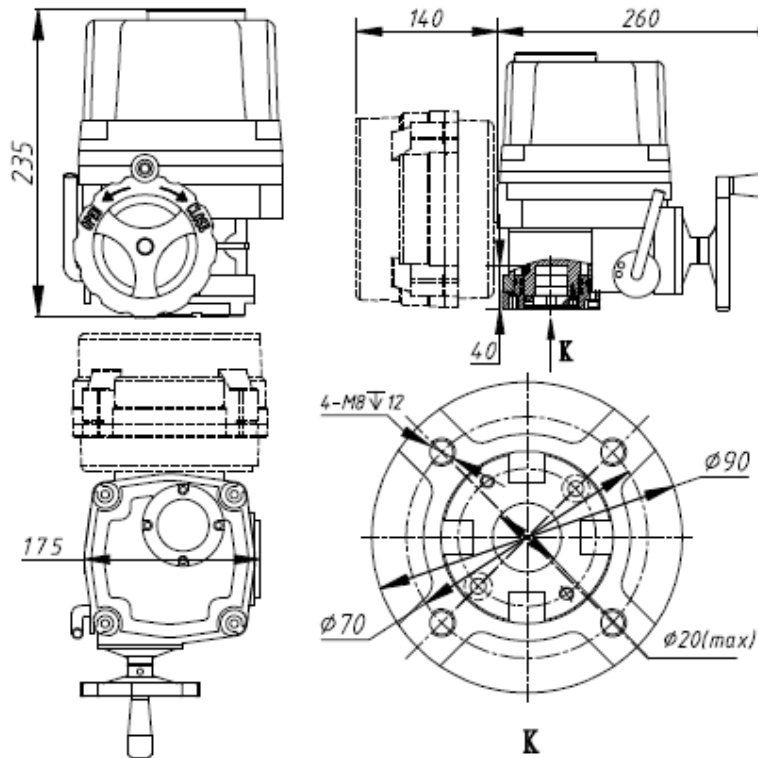
Model	Max output torque Nm	Operating time 60/50Hz/24V 90°(S)	Max Drive shaft size mm	Power 230V / 24V W	Rated current (A)					No off handle turn N	Flange ISO5211	Weight Kg.
					24V DC	Single phase 110V 220V		Three phases 380V 400V				
555-005	50	18/22/22	φ20	20/40	3,3	1,10/0,95	0,55/0,54	0,30/0,30	N/A	10	F07	7,5
555-008	80	18/22/22	φ20	20/40	4,8	1,10/0,95	0,55/0,54	0,30/0,30	N/A	10	F07	7,5
555-010	100	18/22/22	φ20	20/40	5,3	1,10/0,95	0,55/0,54	0,30/0,30	N/A	10	F07	7,5
555-015	150	21/25/25	φ20	40/60	4,9	1,65/1,67	0,88/0,84	0,31/0,31	0,30/0,31	11	F07/F10	17,3
555-020	200	21/25/25	φ20	40/60	5,6	1,65/1,67	0,89/0,85	0,31/0,31	0,30/0,31	11	F07/F10	17,3
555-030	300	26/31/31	φ32	90/90	7,2	1,85/1,86	0,92/0,95	0,35/0,35	0,34/0,34	13,50	F10/F12	22
555-050	500	26/31/31	φ32	90/120	12,3	3,60/3,62	1,55/1,58	0,59/0,59	0,58/0,58	13,5	F10/F12	23
555-060	600	26/31/31	φ32	120/120	14,5	3,65/3,62	1,60/2,20	0,60/0,59	0,59/0,58	13,5	F10/F12	23
555-080	800	31/37/37	φ40	180/120	17,5	4,10/4,10	2,15/2,20	0,85/0,85	0,79/0,79	16,5	F12/F14	29
555-120	1200	31/37	φ40	180	180	4,20/4,10	2,35/2,30	0,87/0,87	0,81/0,81	16,5	F12/F14	29
555-150	1500	78/93/93	φ40	120/60	17,5	3,65/3,62	1,60/2,20	0,60/0,59	0,59/0,58	40,5	F14/F16	77
555-200	2000	93/112/112	φ40	180/120	17,5	4,10/4,10	2,15/2,20	0,85/0,85	0,79/0,79	49,5	F14/F16	83
555-300	3000	93/112/112	φ40	180/120	17,5	4,20/4,10	2,35/2,30	0,87/0,87	0,81/0,81	49,5	F07/F16	83
555-400	4000	155/185/185	φ40	180/120	17,5	4,20/4,10	2,35/2,30	0,87/0,87	0,81/0,81	82,5	F14/F16	83
555-500	5000	155/185	φ40	180	180	4,20/4,10	2,35/2,30	0,87/0,87	0,81/0,81	82,5	F14/F16	83
555-600	6000	155/185	φ40	180	180	4,20/4,10	2,35/2,30	0,87/0,87	0,81/0,81	82,5	F14/F16	83

### Technical parameter

Shell	Enclosure IP67. NEMA 4 and 6	
Power	Standard 220 VAC/1 ph Optional: 110 VAC/1 ph, 380V/440V 3 ph, 50/60Hz, ± 10% 24V DC/110V - DC/220V DC	
Motor	Asynchronous motor	
Limit switch	2 x open / close, SPDT, 250V AC 10A	
Auxillary limit switch	2 x open / close, SPDT, 250V AC 10A	
Torque switch	Close/open, each 1, SPDT, 250VAC 10A	Except 555-005/008/010
Travel	90° ± 10°	0° - 270°
Fail safe / operating temperature	Internal-placed thermal protection, on 120°C ± 5°C/ close 97° ± 5°C	
Indicator	Continuous position indicator	
Manual operation	Declutching mechanism, operate by handwheel	
Self-locking device	Self-locking by worm and worm gear	
Mechanical limit	2 x external adjustable stopper	
Space heater	30 W (110/220V AC)	
Conduit entries	2 x PT3/4"	
Ambient temperature	-30°C - + 70°C	
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	
External coating	Dry powder, Epoxy polyester, high anti-corrosion	

555 - 005~010

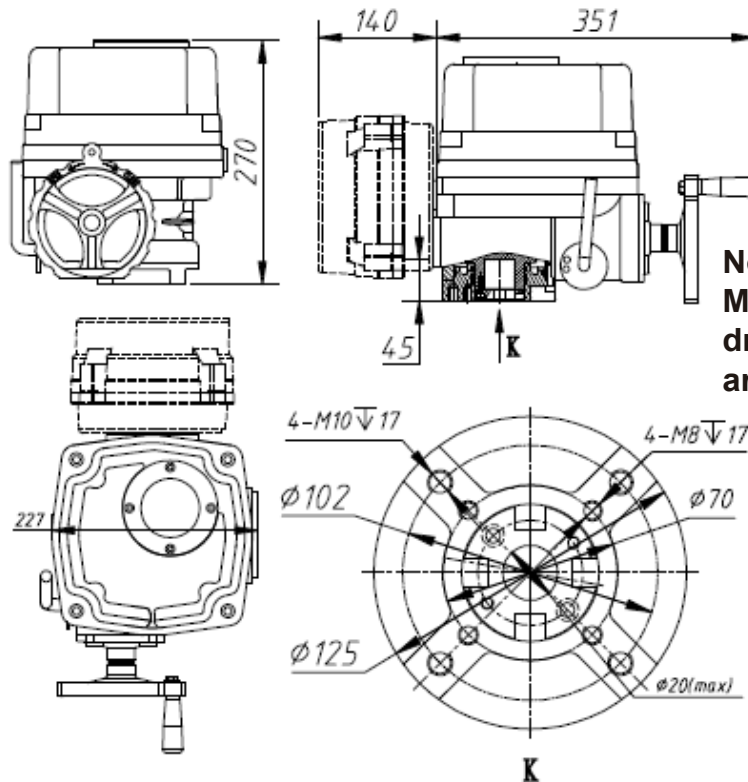
Unit:mm



**Notice:**  
Modulation module  
drawn with dotted lines  
are optional.

555 - 015~020

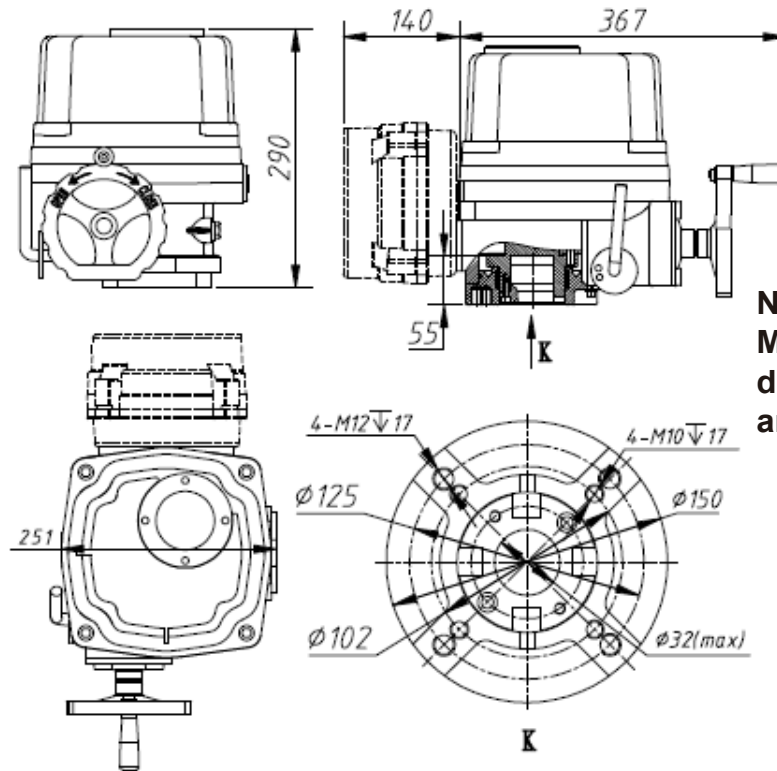
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**Notice:**  
Modulation module  
drawn with dotted lines  
are optional.

555 - 030~060

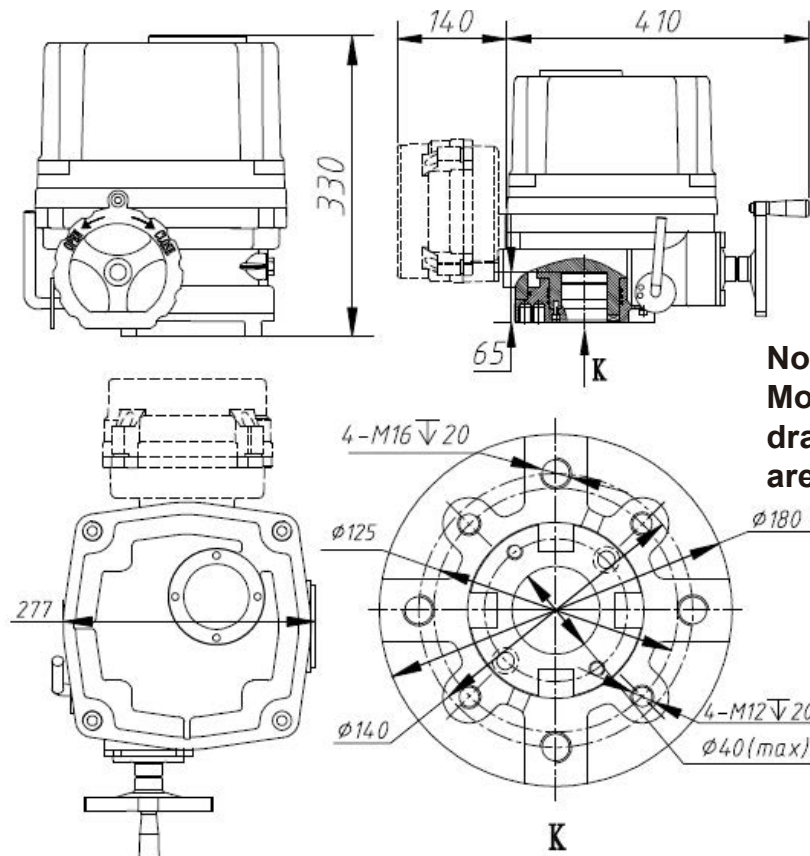
Unit:mm



**Notice:**  
Modulation module  
drawn with dotted lines  
are optional.

555-080~120

Unit:mm

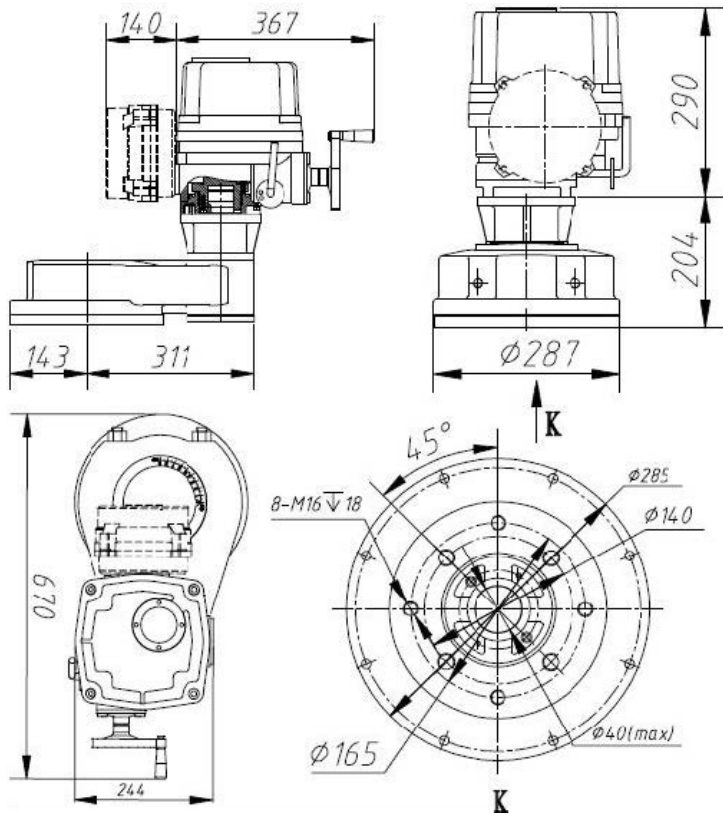


**Notice:**  
Modulation module  
drawn with dotted lines  
are optional.



555 -150

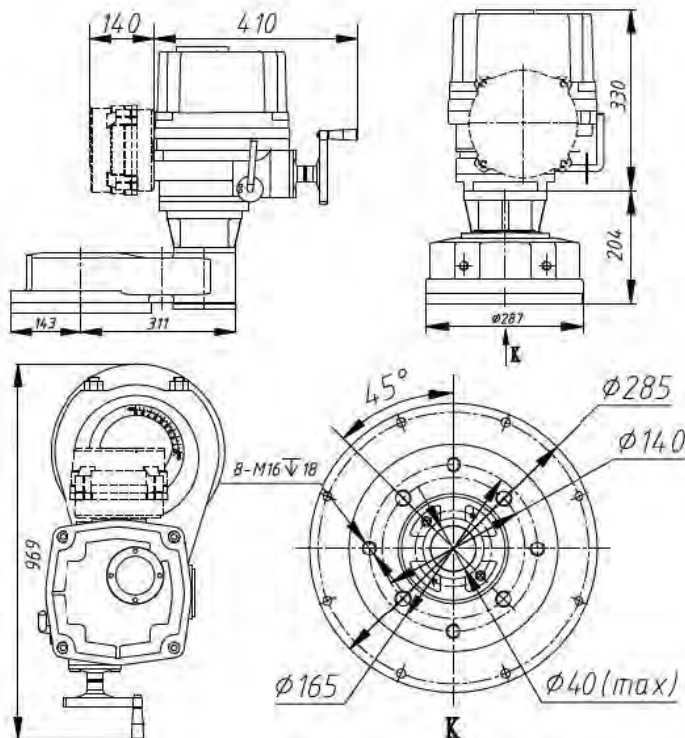
Unit:mm



Notice:  
Gear module are optional.

555 - 200~600

Unit:mm



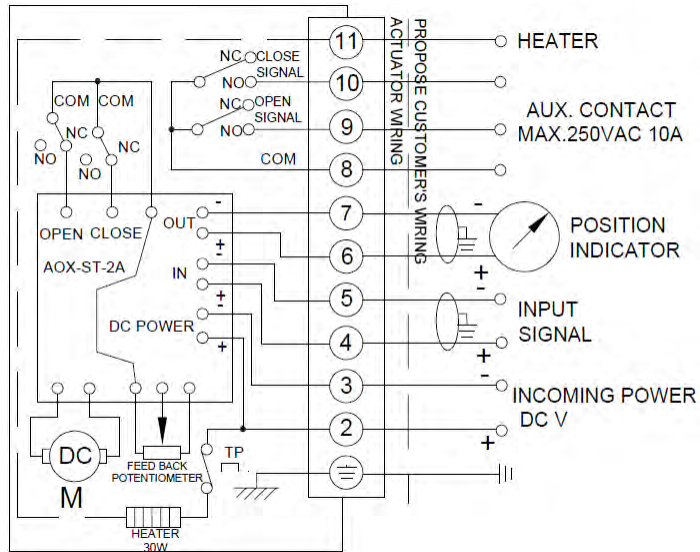
Notice:  
Gear module are optional.

# Wiring Diagram



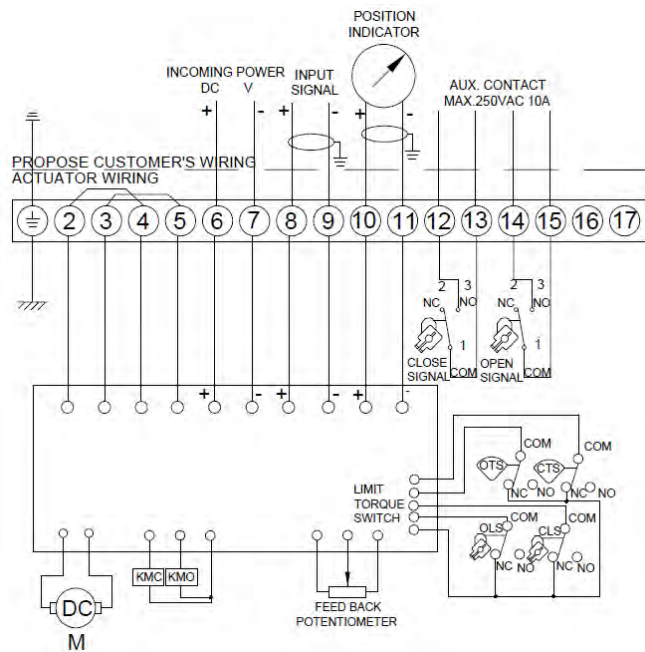
555-005~010 24VDC (Modulating type)

555-320-10



555-015~600 24VDC (Modulating type)

555-320-20

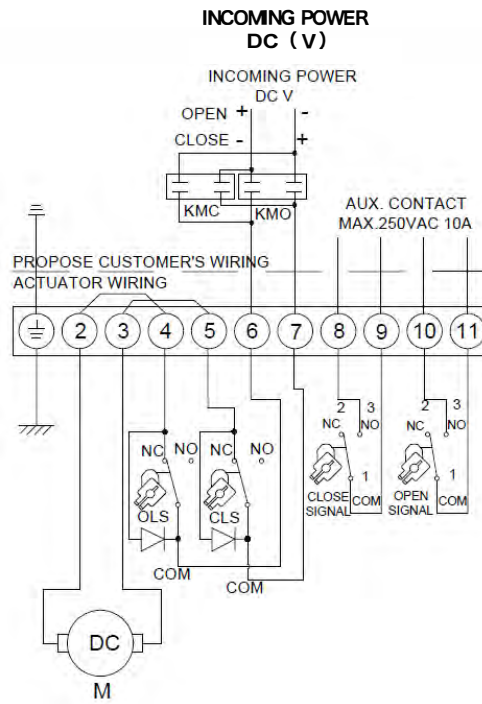


# Wiring Diagram



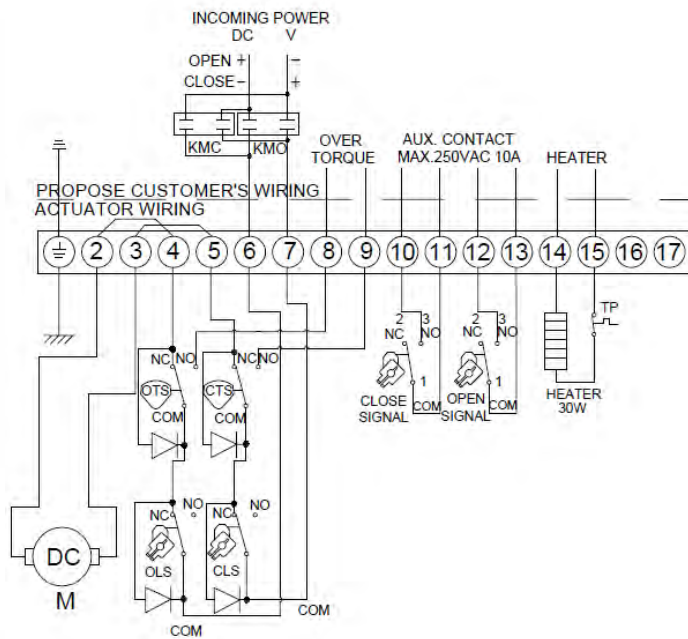
555-005~010 24VDC (On/off type )

555-310-10



555-015~600 24VDC (On/off type )

555-310-20

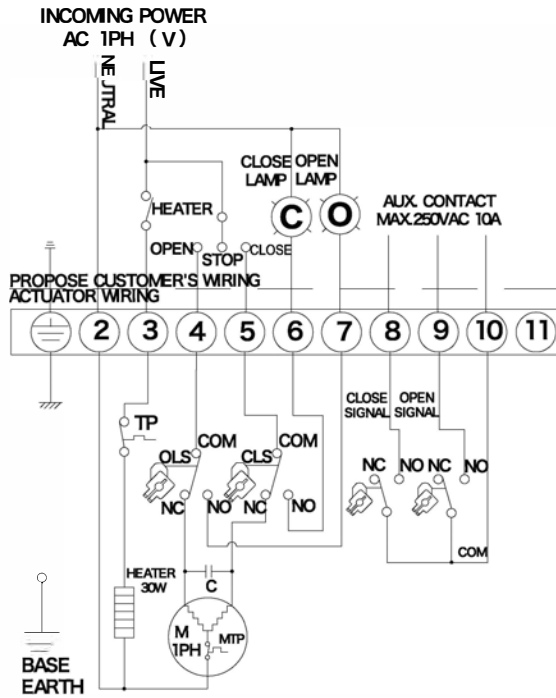


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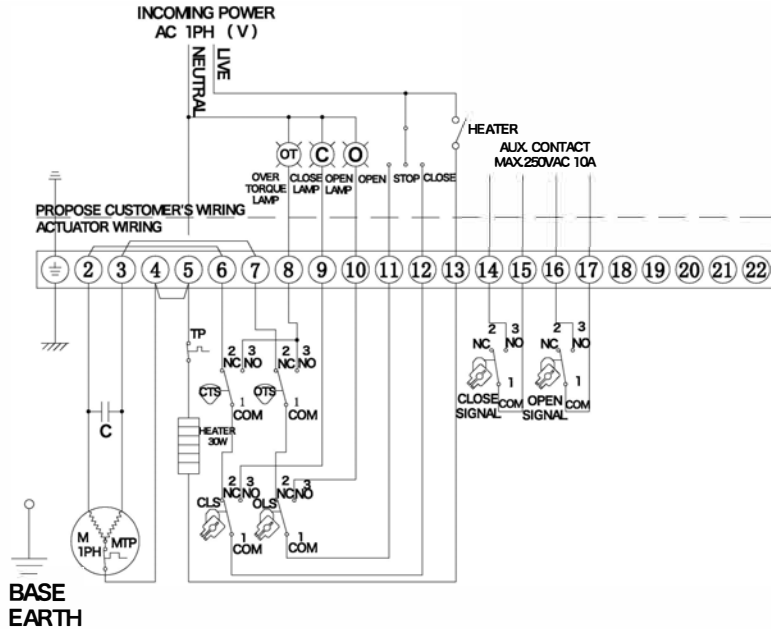
1. 555-005-010 110/220VAC/50/60Hz,1Ph(On/off type )

555-110-10



2. 555-015-600 110/220VAC/50/60Hz,1Ph(On/off type )

555-110-20

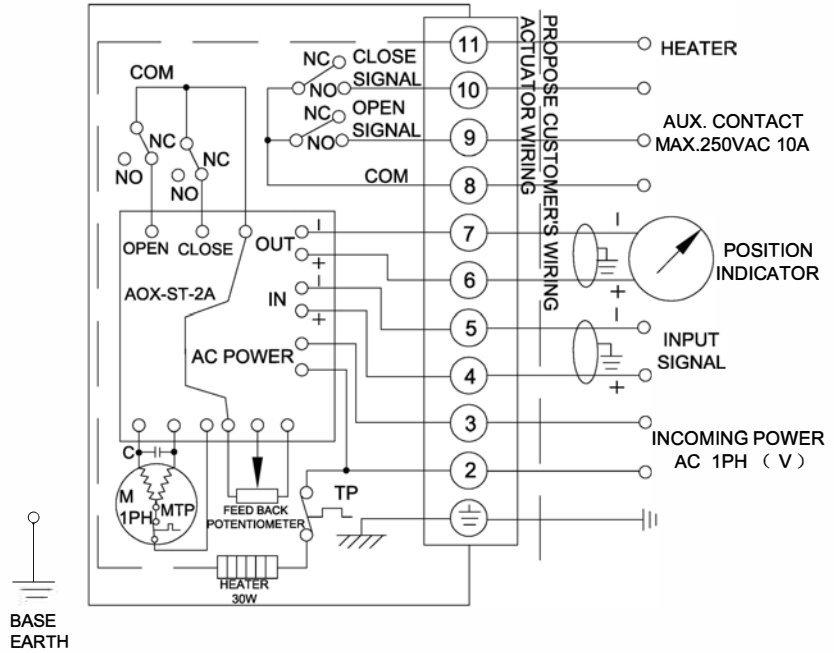


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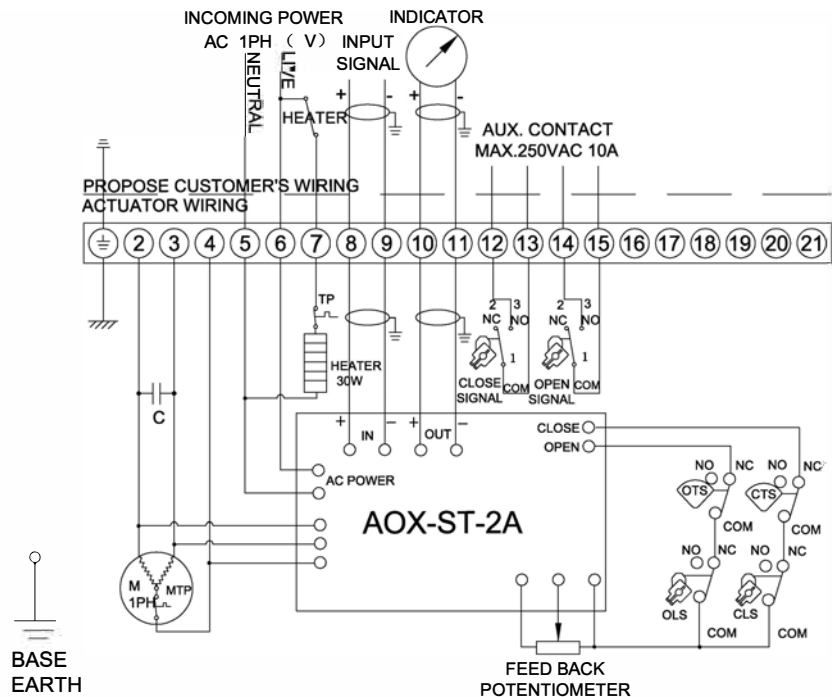
3. 555-005-010 110/220VAC/50/60Hz,1Ph(Modulating type )

555-120-10



4. 555-015-600 110/220VAC/50/60Hz,1Ph(Modulating type )

555-120-20





## Valve options



Fig.125



Fig.170



Fig.130



Fig.211



Fig.131



Fig.223/224



Fig.135



Fig.150



Fig.263



# Coreline

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