

ALE SERIES

ELECTRIC ACTUATOR

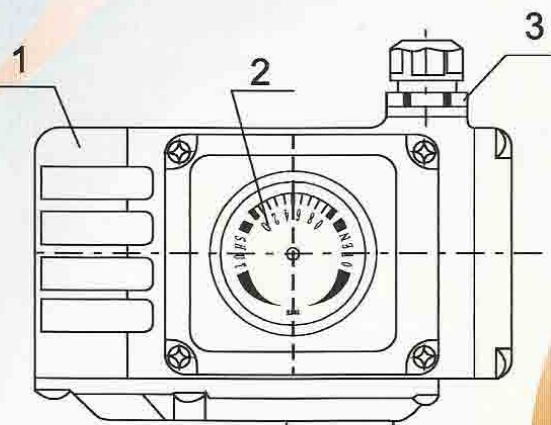
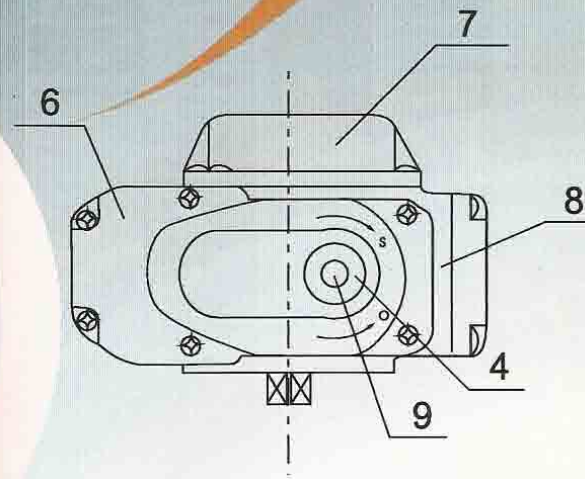
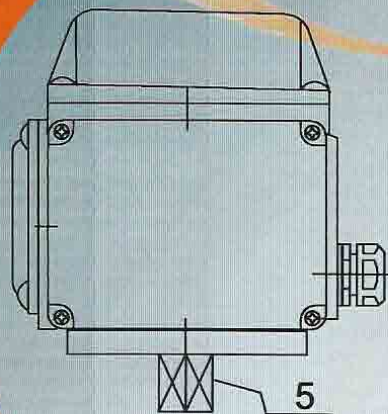


Design and features

ALE series electric actuator are designed for on-off service or intermediate position control by switching power source or by external contact signals and /or by input signals of 4-20mA from a controller or computer. ALE series electric actuator offer compact and light weight but high output and durable valve/damper operation for various industrial applications. This actuator is rotary type with following features.

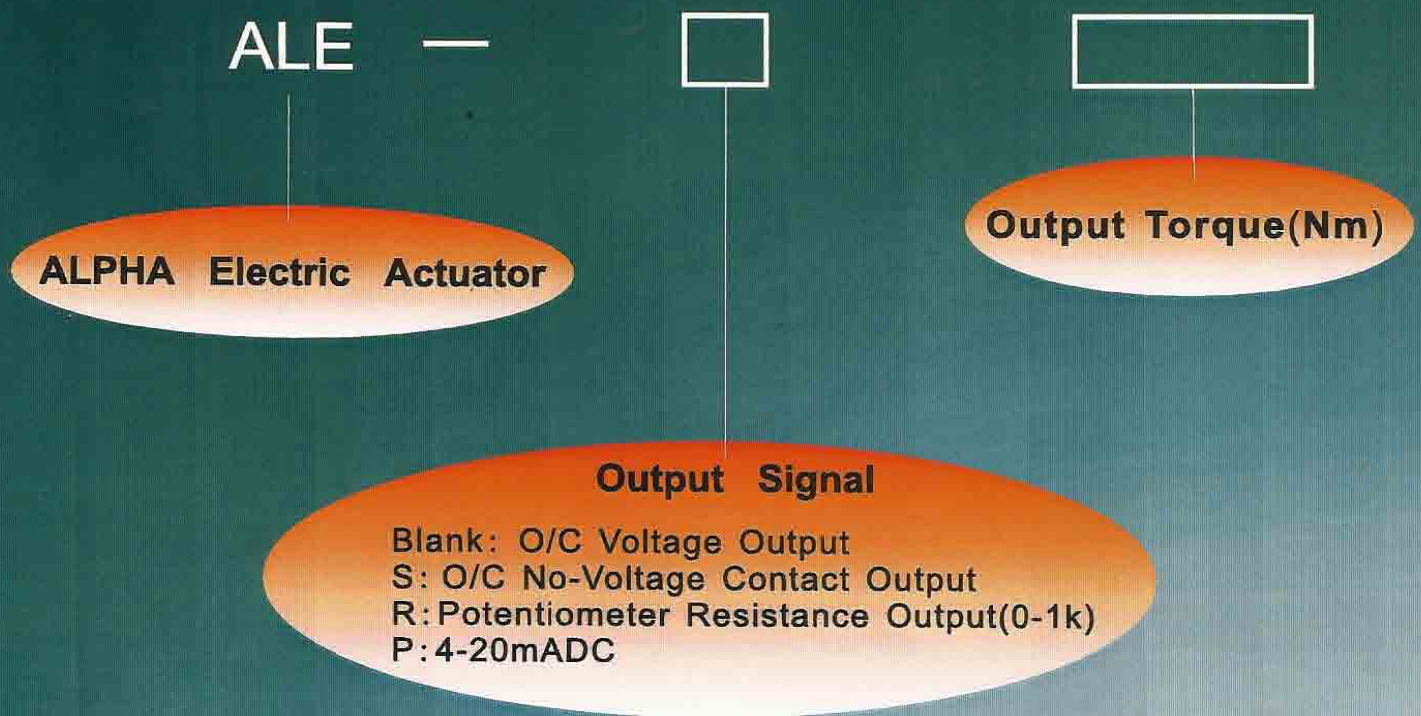
- 1, Compact, low-profile, and light weight-applicable in narrower / tight spaces.
- 2, Side entry terminal block compartment / conduit for easy installation.
- 3, Simple design / rugged structure for high durability.
- 4, Motor thermal protector and optional torque limiter protect motor from burnout in the event of valve / damper overload.
- 5, Position indicator & manual override (detachable crank handle).
- 6, Final reduction worm gear-self-locking/no back driven from valve, no motor brake required, holding braking torque without power supply, suitable for any kind of rotary valves including butterfly valves.
- 7, Water tight housing: IP-65.
- 8, Third party certification:
 - CQC issued by China Quality Certification Center
 - MA TEST REPORT issued by Shanghai Inspection and Testing Institute of Instruments and Automatic Systems
 - CE issued by SGS-CSTC

Main parts and material



No.	Name	Material
1	Case body	Aluminum alloy 102
2	Opening gauge	Aluminum plate
3	Wire-in-wire lock	PVC
4	Handle axle' rubber stopper	NBR
5	Output axle	Brass alloy
6	Deceleration cover	Aluminum alloy 102
7	Electric cover	Aluminum alloy 102
8	Wiring cover	Aluminum alloy 102
9	Handle-axle hole	#45

Model and specification



Example:

ALEP-2000 means Alpha electric actuator with 4-20mA input and output DA signals. The output torque is 2000Nm.

Model	ALE-***	ALES-***	ALER-***	ALEP-***
Rated voltage	110VAC 120VAC 200VAC 220V 50 or 60Hz 1-ph. 380VAC 50 or 60Hz 3-ph. DC24V			
Input signal	O/C voltage input	O/C voltage input	O/C voltage input	0-10mADC,4-20mADC 1-5VDC
Control angle	0~90°			
Output signal	O/C voltage output	O/C no-voltage contact output	Potentiometer resistance output(0-1K)	4-20mADC
Protection	1. IP67 2. Motor thermal protector(125°C) 3. O/C position limit switch 4. O/C mechanical stopper			
Body material	Aluminum Die Casting			
Coating color	Electrostatic coating/Grey			
Ambient	-30°C~+60°C			
Manual operation	Detachable Crank handle			
output shaft shape	Male square, Female(optional)			
Cable entry	G1/2 water proof, 1/2NPT(Optional)			
Option function	Torque limiter, space heater, stainless support coupling			

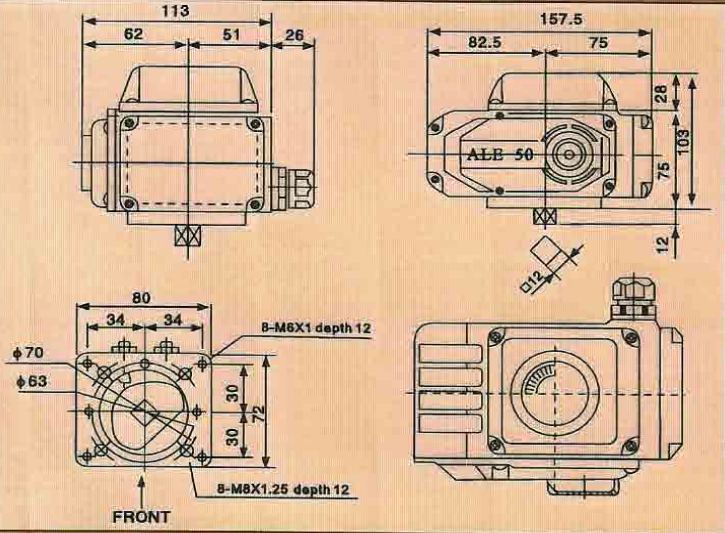
Torque and Acting time

Model	Torque	Acting time		Type	Weight
		AC	DC		
ALE-50	50Nm	20/30sec.	10sec.	switch	2.2Kg
ALE-100	100Nm	30sec.	10sec.	switch	4.3Kg
ALE-200	200Nm	30sec.	25sec.	switch	7.5Kg
ALE-400	400Nm	30sec.	25sec.	switch	7.8Kg
ALE-500	500Nm	30sec.	-	switch	7.9Kg
ALE-600	600Nm	45sec.	-	switch	8.0Kg
ALE-1000	1000Nm	50sec.	-	switch	11.0Kg
ALE-2000	2000Nm	100sec.	-	switch	11.3Kg
ALES-50	50Nm	20/30sec.	10sec.	Passive contact	2.2Kg
ALES-100	100Nm	30sec.	10sec.	Passive contact	4.3Kg
ALES-200	200Nm	30sec.	25sec.	Passive contact	7.5Kg
ALES-400	400Nm	30sec.	25sec.	Passive contact	7.8Kg
ALES-500	500Nm	30sec.	-	Passive contact	7.9Kg
ALES-600	600Nm	45sec.	-	Passive contact	8.0Kg
ALES-1000	1000Nm	50sec.	-	Passive contact	11.0Kg
ALES-2000	2000Nm	100sec.	-	Passive contact	11.3Kg
ALER-50	50Nm	20/30sec.	10sec.	Potentiometer	2.2Kg
ALER-100	100Nm	30sec.	10sec.	Potentiometer	4.3Kg
ALER-200	200Nm	30sec.	25sec.	Potentiometer	7.5Kg
ALER-400	400Nm	30sec.	25sec.	Potentiometer	7.8Kg
ALER-500	500Nm	30sec.	-	Potentiometer	7.9Kg
ALER-600	600Nm	45sec.	-	Potentiometer	8.0Kg
ALER-1000	1000Nm	50sec.	-	Potentiometer	11.0Kg
ALER-2000	2000Nm	100sec.	-	Potentiometer	11.3Kg
ALEP-50	50Nm	20/30sec.	10sec.	Intelligent	2.2Kg
ALEP-100	100Nm	30sec.	10sec.	Intelligent	4.3Kg
ALEP-200	200Nm	30sec.	25sec.	Intelligent	7.5Kg
ALEP-400	400Nm	30sec.	25sec.	Intelligent	7.8Kg
ALEP-500	500Nm	30sec.	-	Intelligent	7.9Kg
ALEP-600	600Nm	45sec.	-	Intelligent	8.0Kg
ALEP-1000	1000Nm	50sec.	-	Intelligent	11.0Kg
ALEP-2000	2000Nm	100sec.	-	Intelligent	11.3Kg

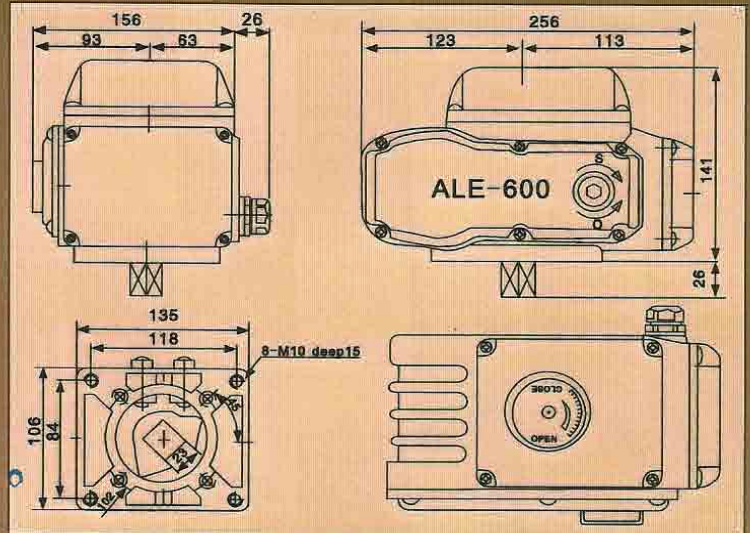


Outline dimension

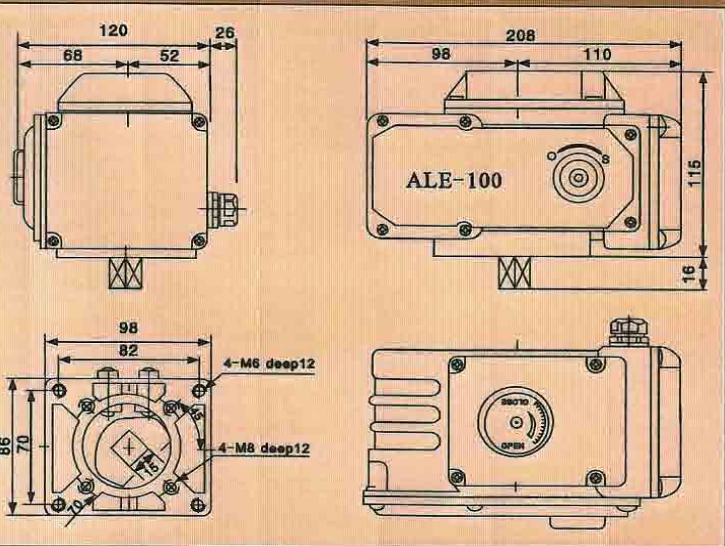
ALE-50



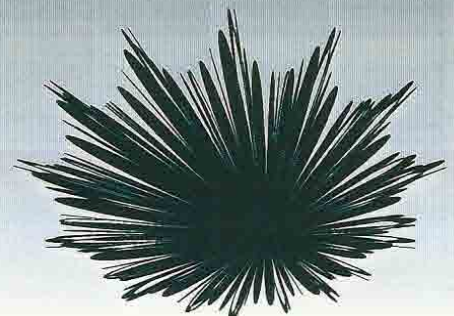
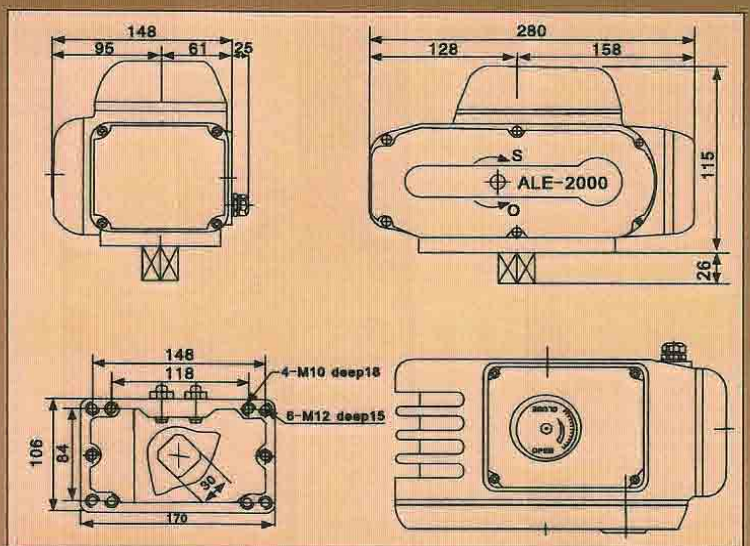
ALE-200/400/500/600



ALE-100

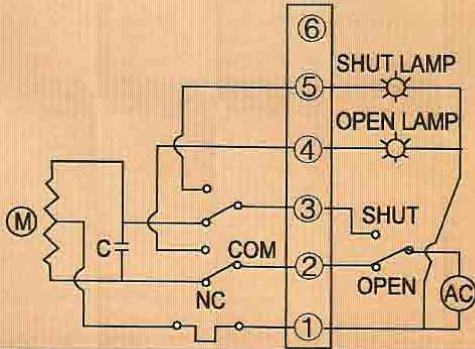


ALE-1000/2000

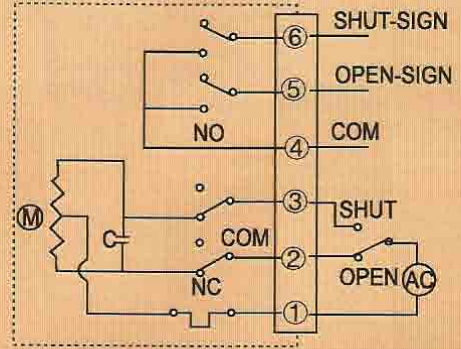


Wiring diagram

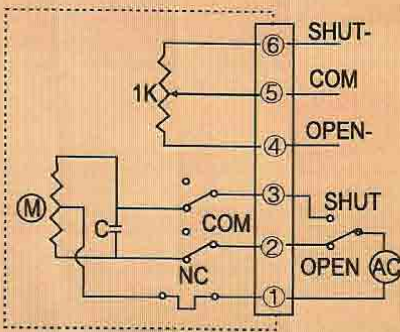
Switch type (standard) line drawing



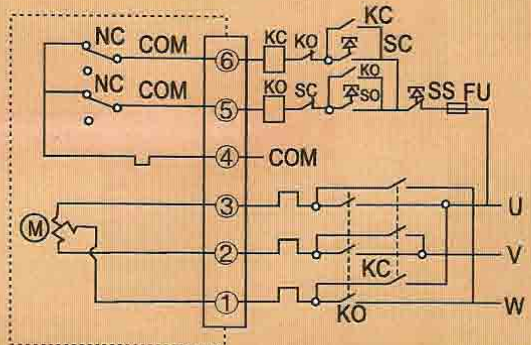
Passive contact type (S) line drawing



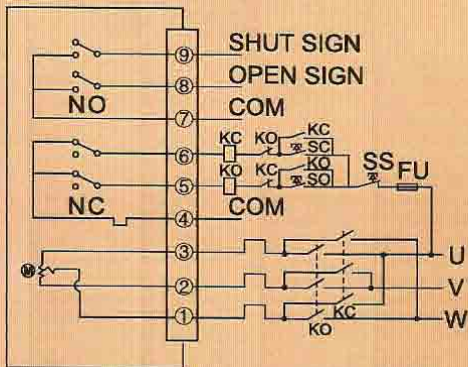
Opening signal type(R) line drawing



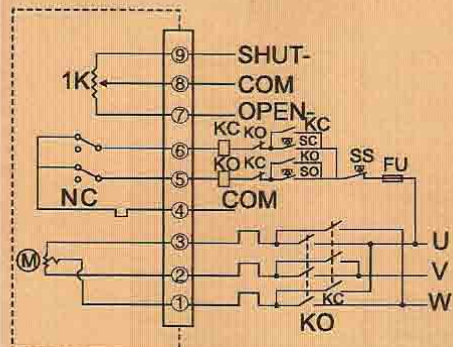
AC380V standard type line drawing



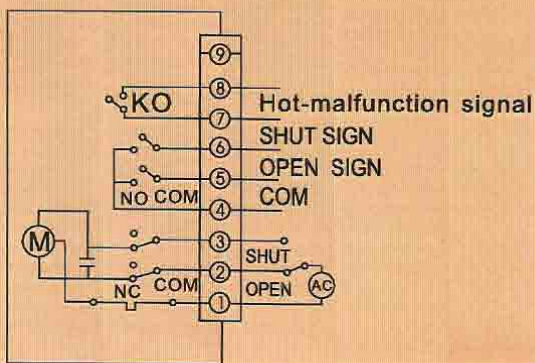
AC380V Passive contact type(S) line drawing



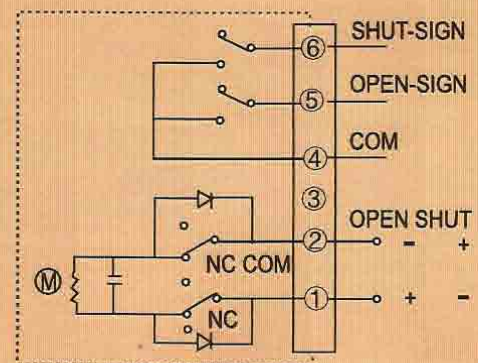
AC380V Opening signal type(R) line drawing



The wiring drawing of product with hot-malfunction signal



DC line drawing



Installation

Installation conditions

Cautions on indoor installation

- Avoid a hazardous place, as this is not an explosion-proof type.
- Cover whole the unit, when installing the unit in a place with water or material splashes.
- It is recommendable to reserve a space for manual maintenance work.(depends on installation conditions)

Cautions on outdoor installation

- To avoid rainwater or direct sunlight, it is necessary to cover or shade whole the unit. (This concerns temperature rise in the unit, and anti-climate property of seals used)
 - It is recommendable to reserve a space for manual maintenance work.(depends on installation conditions)
- Note: The shining of sunshine outdoor would lead to high-temperature which accelerates ageing of components, even losing effectiveness; The rain would accelerate aging of rubber-pad, moreover, the product will be damaged if failing in waterproof conduction.

Temperature conditions

Ambient temperature

Ambient temperature range : $-30^{\circ}\text{C}\sim+60^{\circ}\text{C}$.

Note: For use under negative temperature, space heater to prevent condensation is available.

Fluid temperature

It is occasional that if the actuator is applied to a high temperature fluid line, the unit may overheat by transmission of line heat. In such a case, use radiation type bracket and couplings are available at option.

-Standard bracket and couplings : Fluid temperature max 65°C

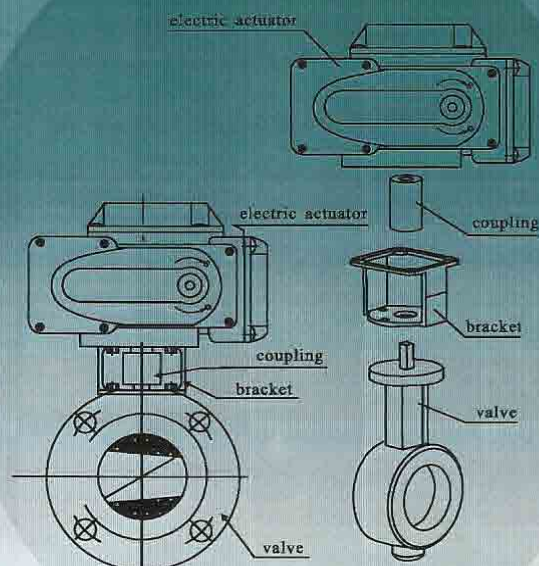
-Radiation type bracket and couplings : Fluid temperature over 65°C

Valve installation

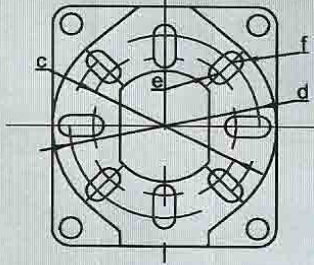
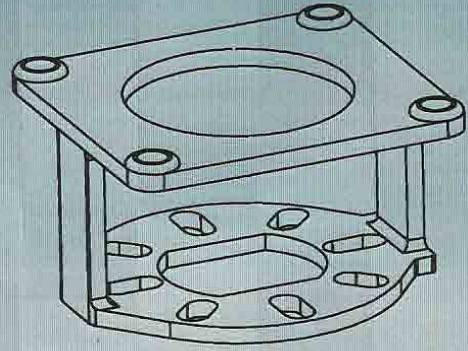
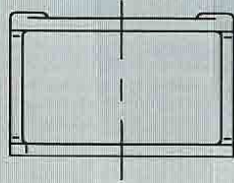
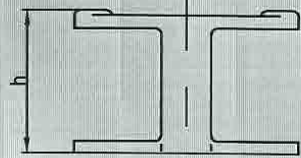
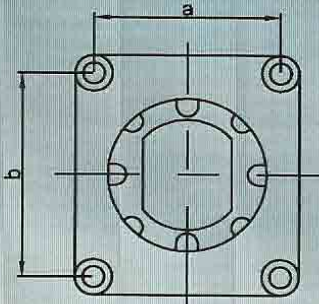
1. Manually rotate valve and ascertain that there is no abnormal phenomenon, then rotate valve to wholly-closed position.
2. Lightly fasten the bracket onto valve with screw.
3. Slip the coupling over shaft of valve.
4. Rotate electric actuator to wholly-closed position.
5. Insert output shaft of electric actuator into coupling.
6. Lightly fasten electric actuator onto bracket with screw.
7. Manually rotate electric actuator wholly-stroke to guarantee non-eccentric, no-blocked etc.

Note: Do not exceed the stroke range.

8. Tighten every screw on bracket.



Bracket



Model	axb	c	d	e	f	h
ALE-50	60×68	Φ25	Φ61	Φ7	Φ7	48
ALE-100	70.3×82	Φ50	Φ70	Φ6	Φ10.3	50.2
ALE-200	72×72 (84×118)	Φ70.2	Φ90.7	Φ9.5	Φ13.3	60.2
ALE-400						
ALE-500						
ALE-600	84×118	Φ99	Φ119	Φ14.2	Φ14.2	80
ALE-1000						
ALE-2000	84×147	Φ160	Φ214	Φ20.2	Φ22.2	96.5