

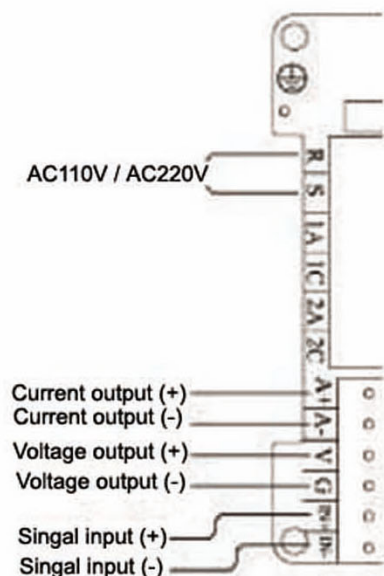
Features:

- 200 to 2000 kgf-cm torque output, 6 models.
- Available in IEC IP67 compliant.
- Certificates : CE.
- Duty cycle : 100%
- ISO Mounting patterns and female drive output shafts.
- The cover is a Polycarbonate and Aluminum base is Irridited.
- Standard position indicators.
- Standard manual Over-Rides.
- 110VAC, 220VAC, models available.
- Input / output signal : 4 - 20A, 1 - 5VDC, 0 - 10VDC
- Temperature : -10°C ~ 60°C.
The humidity : 30% ~ 95%.



Specification and Performance Data – Modulation Control

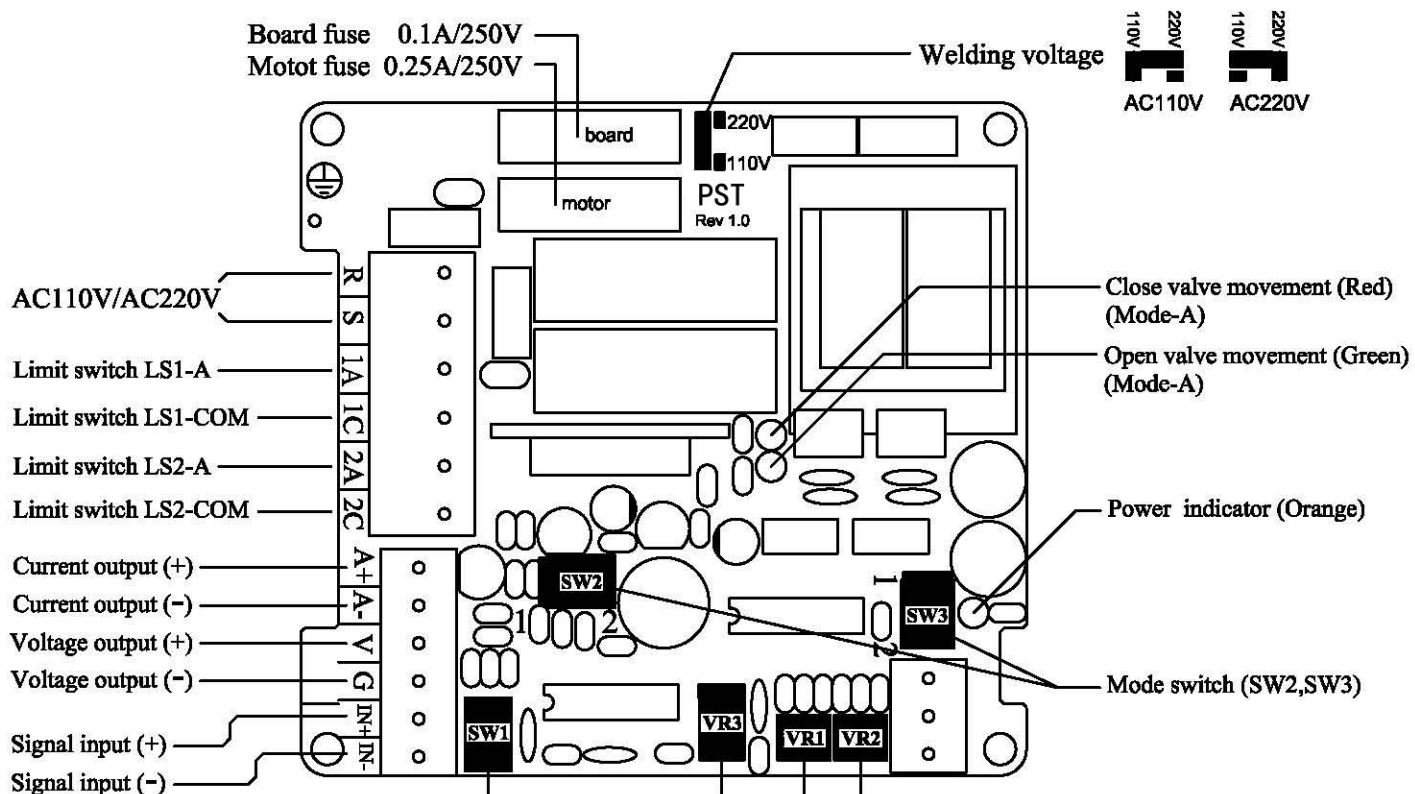
Actuator Model	Torque Kgf-cm	Time For 90° Travel 50/60Hz	110 VAC 1 Phase 50/60Hz	220 VAC 1 Phase 50/60Hz	Manual Override	Weight (Kg)	Mounting Flange ISO 5211
UM-01-UMD200	200	58 / 48sec	50mA	50mA	Lever	1.7	F03,F04,F05,F07
UM-01-UMD360	360	19 / 16sec	300mA	150mA	Lever	1.8	F03,F04,F05,F07
UM-02-UMD450	450	19 / 16sec	300mA	150mA	Lever	1.8	F03,F04,F05,F07
UM-02-UMD600	600	38 / 32sec	300mA	150mA	Lever	1.9	F03,F04,F05,F07
UM-03-UMD750	750	55 / 46sec	120mA	80mA	Lever	4	F05,F07
UM-03-UMD1400	1400	65 / 54sec	300mA	150mA	Lever	4	F05,F07
UM-03H-UMD2000	2000	78 / 65sec	300mA	150mA	Hand-wheel	8.4	F07,F10,F12



Optional accessories :

- (1) SOLID STATE RELAY (S.S.R.)
- (2) MODE SELECT :
MODE-A : 4mA → close ~ 20mA → open
MODE-B : 4mA → open ~ 20mA → close

MANUAL OF INTERNAL MODULATING BOARD



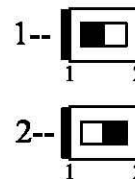
Position adjustment (VR1, VR2)

1. Opening of VR1 0% & the device positioning is not enough, please adjust it by turning clockwise
2. Opening of VR2 100% & the device positioning is not enough, please adjust it by turning clockwise

Sensitivity Adjustment (VR3)

1. Adjust clockwise sensitivity increase
2. Adjust counter clockwise sensitivity decrease

Mode select	SW2	SW3
Mode-A (4mA/close)	1	1
Mode-B (4mA/open)	2	2



Trouble shooting for the controller:

1. Power is on, but the orange power indicator is off.
 - (a) Check if the voltage input is correct.
 - (b) Check if the fuse is broken.
2. Signal input is connected, but the movement is not.
 - (a) Check if the setting of SW1 is correct.
 - (b) Check if the positive / negative pole of the signal input cable is correct.
 - (c) Check if the mode setting is correct.
3. Relay is active, but the actuator is not.
 - (a) Check if the fuse of the motor is burn out.
 - (b) Check if the contact of the relay is broken.
4. The value of voltage output or current output is negative.
 - (a) Check if the positive/negative pole of the output cable is correct.

Note:

1. Main board and motor should have the same voltage. Please do not modify the voltage of a main board freely.
2. Please confirm if the voltage in use is the same as the welding voltage of the board.
3. Please do not wield two kinds of voltage at the same time.
4. Please do not modify any layout or components on the main board. Any modification will be treated as human damage, and will cause the warranty to be voided.
5. The input signal should be continuous to avoid the frequent switching of the relay, which will cause the damage of the contact.
6. Fuse of the control board (Ø5x20mm 250V 0.1A)
7. Fuse of the motor (Ø5x20mm 250V 0.25A)

UM - Series Actuator To Valve Selection Chart

Model No.	Valve Type	Valve Size(inch)	Valve Material
UM -01	Screwed Ends Ball Valve	1/2"~1-1/2"	SUS316/PVC/PP
UM -02	Screwed Ends Ball Valve	2"	SUS316/PVC/PP
UM -03	Screwed Ends Ball Valve	1-1/2"~ 3"	SUS316/PVC/PP
UM -03H	Screwed Ends Ball Valve	1-1/2"~3"	SUS316/PVC/PP
UM -01	Socket Welded Ends Ball Valve	1/2"~1-1/2"	PVC/PP
UM -02	Socket Welded Ends Ball Valve	2"	PVC/PP
UM -03	Socket Welded Ends Ball Valve	2"~ 3"	PVC/PP
UM -03H	Socket Welded Ends Ball Valve	2"~3"	PVC/PP
UM -04H	Socket Welded Ends Ball Valve	4"	PVC/PP
UM -01	Flanged Ends Ball Valve	1/2"~1"	Cast Iron/SUS304/SUS316
UM -02	Flanged Ends Ball Valve	1-1/4"~2"	Cast Iron/SUS304/SUS316
UM -03	Flanged Ends Ball Valve	2"~3"	Cast Iron/SUS304/SUS316
UM -03H	Flanged Ends Ball Valve	2"~3"	Cast Iron/SUS304/SUS316
UM -04H	Flanged Ends Ball Valve	4"	Cast Iron/SUS304/SUS316
UM -05H	Flanged Ends Ball Valve	5"	Cast Iron/SUS304/SUS316
UM -06H	Flanged Ends Ball Valve	6"	Cast Iron/SUS304/SUS316
UM -01	3-Way Screwed Ends Ball Valve	1/2"~1"	SUS316
UM -02	3-Way Screwed Ends Ball Valve	1-1/4"~1-1/2"	SUS316
UM -03	3-Way Screwed Ends Ball Valve	2"	SUS316
UM -02	3-Way Flanged Ends Ball Valve	1"	Cast Iron/SUS304/SUS316
UM -03	3-Way Flanged Ends Ball Valve	1-1/2"~2-1/2"	Cast Iron/SUS304/SUS316
UM -03H	3-Way Flanged Ends Ball Valve	1-1/2"~2-1/2"	Cast Iron/SUS304/SUS316
UM -04H	3-Way Flanged Ends Ball Valve	3"	Cast Iron/SUS304/SUS316
UM -05H	3-Way Flanged Ends Ball Valve	4"	Cast Iron/SUS304/SUS316
UM -06H	3-Way Flanged Ends Ball Valve	5"	Cast Iron/SUS304/SUS316
UM -02	Butterfly Valve	2"~3"	Cast Iron/SUS304/SUS316
UM -03	Butterfly Valve	2"~5"	Cast Iron/SUS304/SUS316
UM -03H	Butterfly Valve	2"~6"	Cast Iron/SUS304/SUS316
UM -04H	Butterfly Valve	8"	Cast Iron/SUS304/SUS316
UM -05H	Butterfly Valve	10"	Cast Iron/SUS304/SUS316
UM -06H	Butterfly Valve	12"	Cast Iron/SUS304/SUS316

Notes:

1. Please check valve torque before mounting.
2. Please check working pressure, service fluid, and temperature.

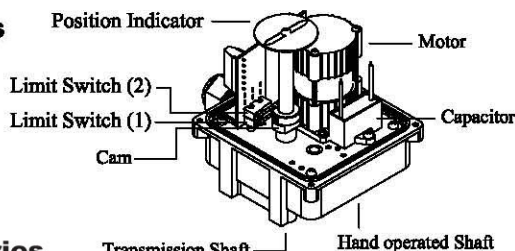
The Using Instruction Of The Product

※ Installation

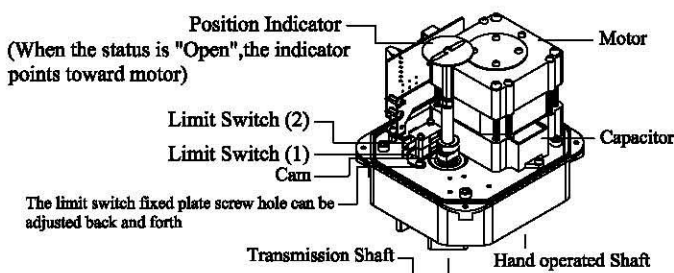
1. Please confirm the input voltage before power up.
2. Please follow the instruction manual to connect the wire. Do not alter the circuit to avoid electric shock.
3. This product should be operated as a single unit. Do not connect multiple units in parallel or serial.
4. If two sets or more are used at the same time, please install relay for each unit to ensure the safety of the operation.
5. Do not use this product in presence of explosive gas or any other chemical active substance.
6. Before installing, make sure nothing is clogging the pipe line.
7. While in manual operation or maintenance, be sure to shut down power before. Opening the soft cover. Aftermath, the soft cover should be placed securely before power up.
8. UM-03H~UM-06H series need to shut down power to operate in manual mode. Push down the handwheel to engage the shaft. It will be dis-engage automatically when released.
9. In manual mode, if abnormal friction is felt in turning the valve, please do not exert excess force to avoid damaging the parts.
10. The indicator window shows the status of the valve(O=OPEN,S=Close).
11. After connecting the wires, make sure O-ring is in the groove before fastening the housing screws to insulate dust or rain.
12. Three minutes rest is need before restart.
(The special type does not receive this restriction)
13. In case of malfunction, please contact local dealer.
14. The AC110V/220V moter has overheat protection. When coutomers use the PCB series, all of the PCB board have a fuse.
15. DC12V, DC24V and AC/DC-24V moters do not have overheat protection. For PCB series, there is a fuse on the board.
(It is not a standart product, it may have the different device of protection, dependon situation at that time)
16. Use only fuse specification listed in the manual. Do not use the other spec for replacement.
17. UM-01A -UM-02A -UM-03 -UM-03H~UM-06H series can be used with proportion controller.
(If detailed information, please to contact seller)

※If unnecessary please do not dismount electric actuator & valve to avoid the position disorder.
If the position has moved , please adjust refer to the instruction of the drawing as follows:

UM-01 Series UM-02



UM-03 Series



Cam Acting Drawing

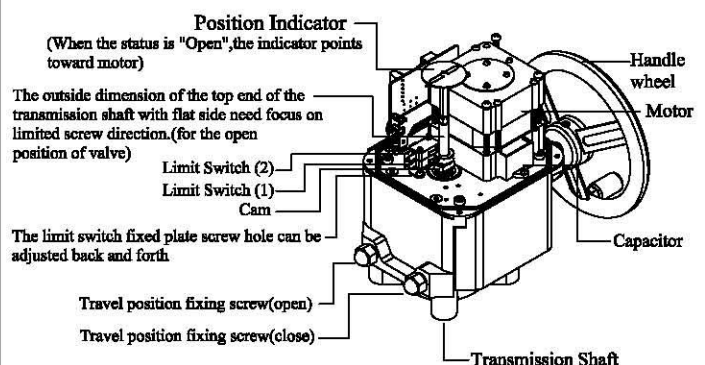
Adjustable Tools: Hexangular Wrench(2.5Hx1)



Cam Acting Instruction

1. The cam has fixed on main transmission shaft.
2. The transmission shaft counterclockwise turns make valve open, the limit switch (1) rebound, open valve acting stop.
3. The transmission shaft clockwise turns makes valve close, the limit switch (2) rebound, close valve acting stop.

UM-03H~UM-06H Series

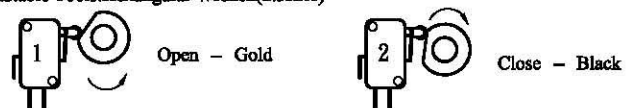


Caution

1. Before adjusting the valve open degree, please make limited screw counterclockwise withdraw about 3 cm.
2. After position fixing finish adjust and confirm energize one more time. If no problem, go on adjusting action for 3 or 4.
3. When valve full open : is limited screw (open) .clockwise lock in touching top end limited plate and make screw cap locky and tightly.
4. When valve full close : is limited screw (close) .clockwise lock in touching top end limited plate and make screw cap locky and tightly.

Cam Acting Drawing

Adjustable Tools: Hexangular Wrench(2.5Hx1)



Cam Acting Instruction

1. The cam has fixed on main transmission shaft.
2. The transmission shaft counterclockwise turns make valve open, the limit switch (1) rebound, open valve acting stop.
3. The transmission shaft clockwise turns makes valve close, the limit switch (2) rebound, close valve acting stop.