

ELECTRIC LINEAR TYPE ACTUATOR (ON/OFF)



● General

Very excellent to generate various thrust by accelerating gear and power supply equipment which using the turning power of synchronous motor. It is usually used with 2-WAY and 3-WAY globe valves for Heating, Ventilating, Air Conditioning, plant.

- A. Robust Design
- B. Enclosure
- C. Reliable Operating

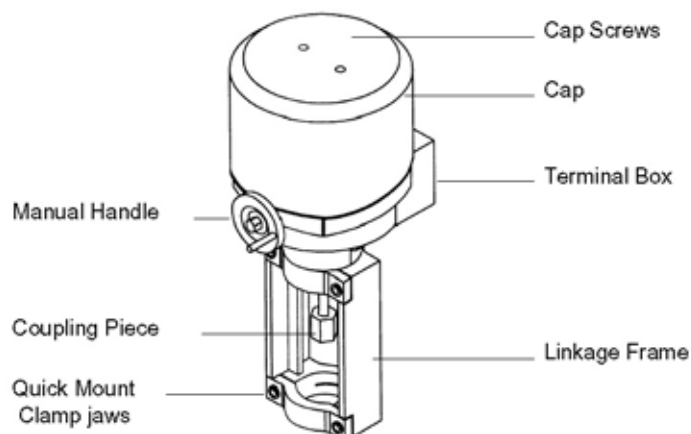
● Specification

Model	AGE-10	AGE-20	AGE-35	AGE-55	AGE-100	AGE-250
Stroke (mm)	20		40	70		80
Output Torque (N)	1000	2000	3500	5500	10000	25000
Operating Time (Sec)	50	50	100	94	94	210
Power Supply	24V (220V) AC. ±10%					220V (110V)
Rated Load (A)	0.5 (0.075)			2.1 (0.25)	3, (0.35)	(1)
Condenser (μF)	34 (0.474)			150, (5)	210, (5)	(6)
Rated Current (VA)	12 (16.5)			51, (55)	72,(77)	(220)
Control Signal	CW / CCW					
Control Output	-	Option (2*Open/Close 3A)			(2*Open/Close 10A)	
Motor effic.	S4 - 30% ED - 600c/hr					
Ambient Temp.	-15°C ~ 60°C					
Housing protection	IP54 (EN60529)			IP65 (EN60529)		
Conduit Entries	PF 1/2 × 2EA					
Weight (Kg)	2.4	3.2	3.3	10.4	11.6	21.3

※ () Option

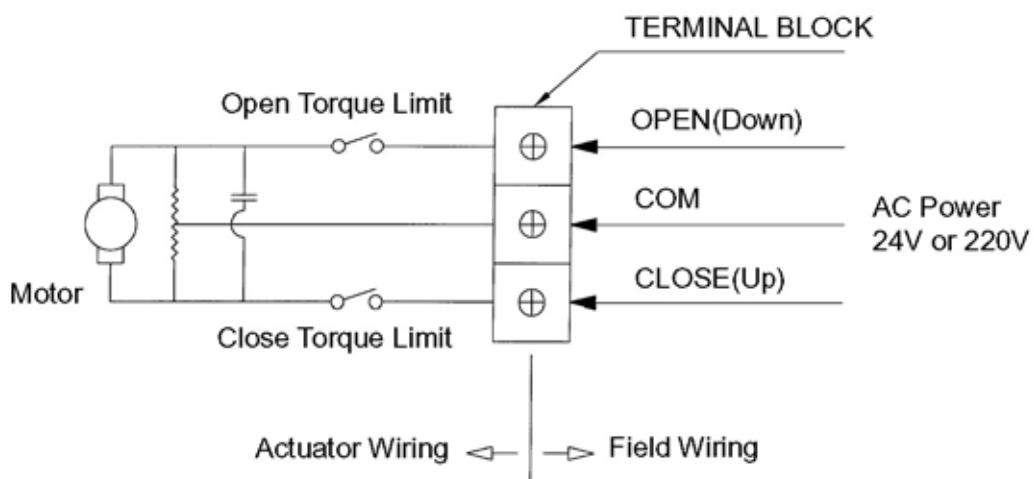
● Design Feature

- Assembling actuator and valve requires neither special tools nor adjustments
- Blocking proof geartrain with self-lubricating bearings
- Manual operation with automatic resetting to control operation
(When motor operate, Manual handle returns to its own position for electric operation)

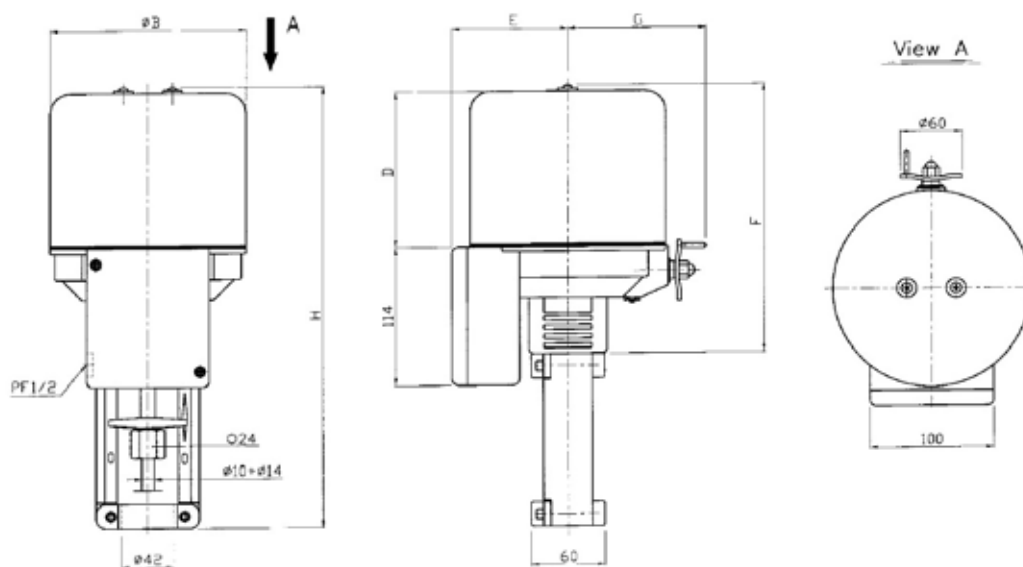


ELECTRIC LINEAR TYPE ACTUATOR

● Wiring Diagram



● Dimension



(mm)

Model	ϕB	H	E	G	D	F
AGE-10	168	208	62	62	81	111
AGE-20	140	295	90	125	106	185
AGE-35	140	330	90	125	130	185
AGE-55	160	355	100	135	125	215
AGE-100	180	585	100	170	195	330
AGE-250	270	665	120	200	250	445

ELECTRIC LINEAR TYPE ACTUATOR (CONTROL)



● General

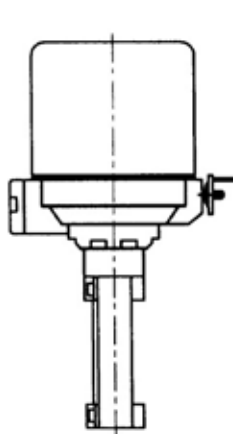
Very excellent to generate various thrust by accelerating gear and power supply equipment which using the turning power of synchronous motor.
It is usually used with 2-PORT and 3-PORT globe valves for Heating, Ventilating, Air Conditioning, plant.

- A. Manual Handle for Hand/Auto Switch System.
- B. Torque Switch for Protection from overload
- C. Signal Output for Remote Control.
- D. Easy Transition for Normal Open/Normal Close.
- E. It is operated 24V AC voltage (0~10V DC / 4~20mA) or 220V AC (4~20mA or 0~10V DC)

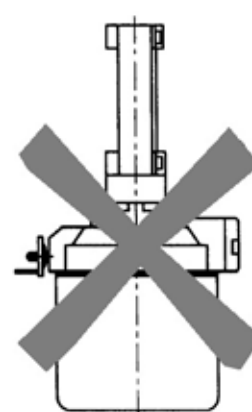
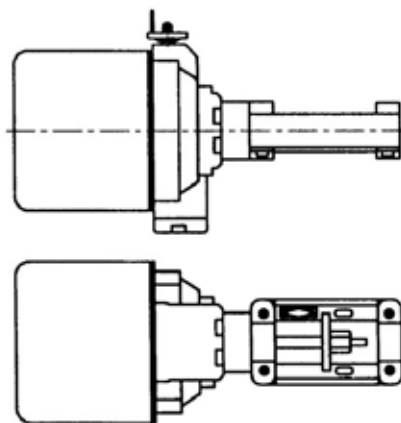
● Specification

Model	AGE-10P	AGE-20P	AGE-35P	AGE-55P	AGE-100P	AGE-250P
Stroke (mm)	20		40	70		80
Output Torque (N)	1000	2000	3500	5500	10000	25000
Operating Time (Sec)	50	50	100	94	94	210
Power Supply	24V (220V) AC. $\pm 10\%$					220V AC $\pm 10\%$
Rated Torque (A)	0.5, (0.075)			2.1, (0.25)	3, (0.35)	1
Condenser (μF)	34 (0.474)			150, (5)	210, (5)	6
Rated Current (VA)	12 (16.5)			51, (55)	72, (77)	(220)
Control Signal	(AC 24V : 0 ~ 10V / 4 ~ 20mA D.C.) (AC220V : 0 ~ 10V or 4 ~ 20mA D.C)					
Output Signal	0 ~ 10V or 4 ~ 20mA D.C					
Motor effic.	S4 - 30% ED - 600c/hr					
Ambient Temp.	-15°C ~ 60°C					
Housing protection	IP 54 (EN60529)					
Conduit Entries	PF 1/2 \times 2EA					
Weight (Kg)	2.4	3.2	3.3	10.4	11.6	21.3

● Mounting and Installation Guide



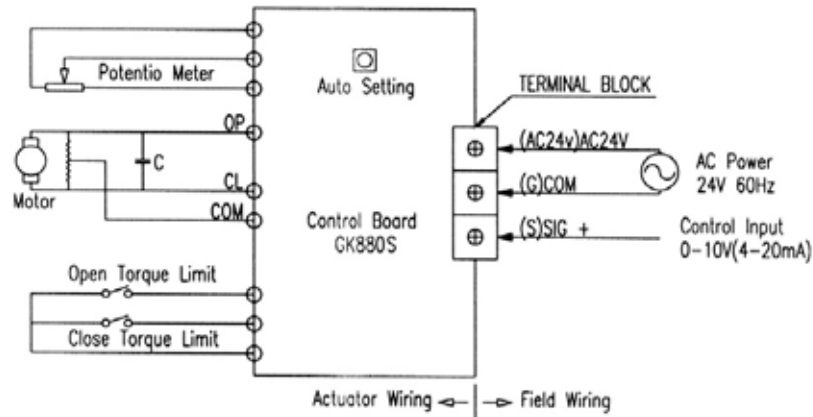
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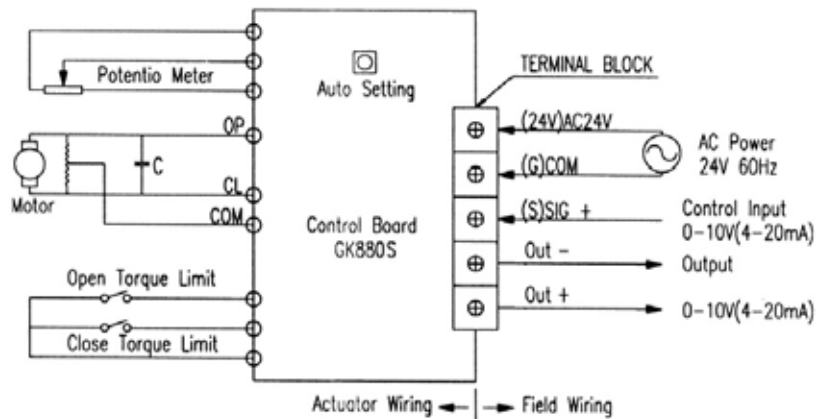
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ELECTRIC LINEAR TYPE ACTUATOR

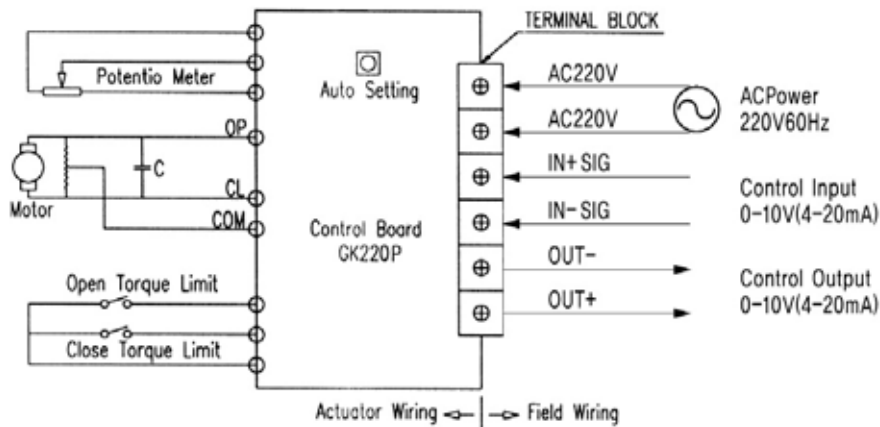
● Wiring Diagram



STANDARD (AGE-10P, 20P, 35P, 55P AC24V)



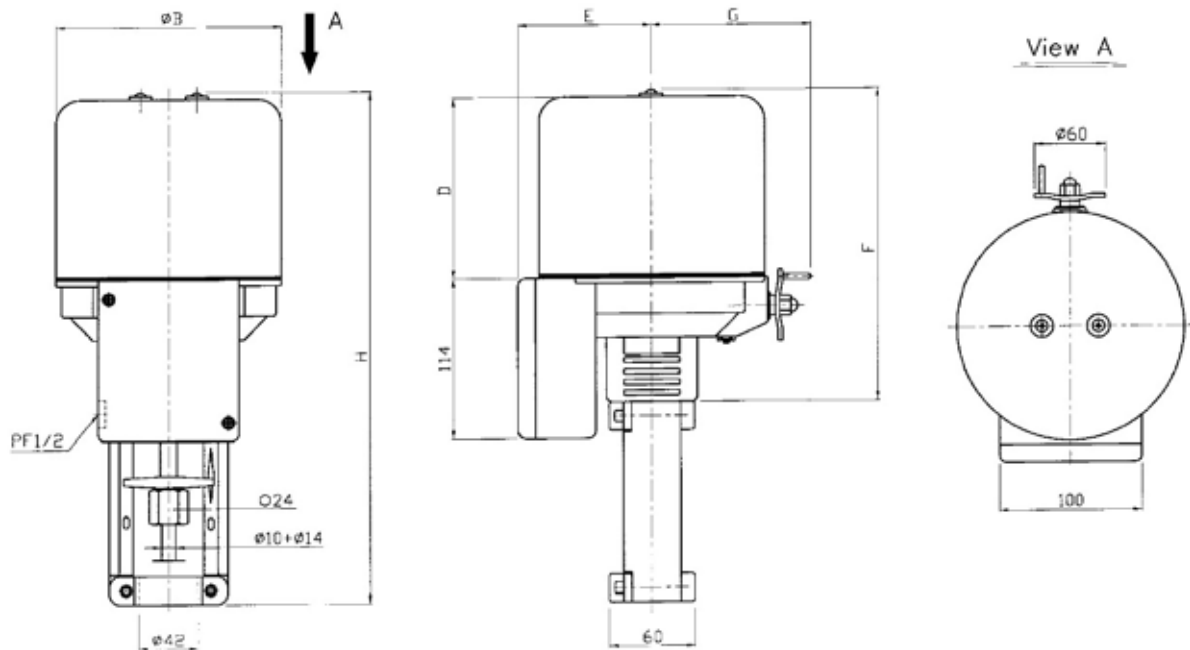
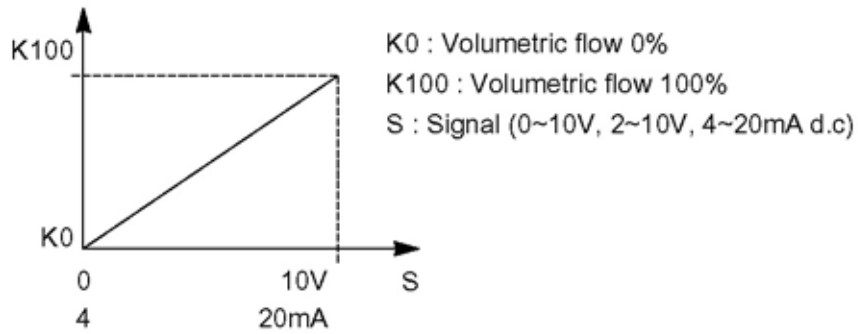
OPTION (AGE-20P, 35P, 55P AC24V)



(AGE-20P, 35P, 55P, 100P, 250P AC220V)

ELECTRIC LINEAR TYPE ACTUATOR

● Technical Features



● Dimension

Model	ϕB	H	E	G	D	F
AGE-10	168	208	62	62	81	111
AGE-20	140	295	90	125	106	185
AGE-35	140	330	90	125	130	185
AGE-55	160	355	100	135	125	215
AGE-100	180	585	100	170	195	330
AGE-250	270	665	120	200	250	445

ELECTRIC LINEAR TYPE VALVE (FLANGED)



● General

The valve which controls two positions or proportion of cold/hot water, steam and air. The body and the seat are manufactured in cast iron and the valve stem, seat, valve plug are in stainless steel. The stuffing box prevents leakage via O-ring and teflon.

■ Technical Data

Operating Pressure : JIS 10 Kgf/cm²
 Operating Temp : -25 ~ 120°C
 Valve curve : Equal percentage or linear
 Leakage rate : ≤ 0.01% of Kvs value Class IV

■ Application

Hot water : max 120°C
 Chilled water : -25°C max. in closed circuit only water with following additives
 - Hydrazine, Phosphate, for frost protection.
 - Glycol, max 50%, for frost protection.
 - Saturated steam, superheated steam.

● Specification

Model	DN		FLOW		Stroke mm	Sv	ΔPv Pvmax	Actuator ΔPs(Kgf/cm ²)	
	mm	inch	Kv	Cv				AGE-20	AGE-35
AGE-15F	15	1/2"	3	3.5	20	50	10	10	-
AGE-20F	20	3/4"	5	5.8	20	50	10	10	-
AGE-25F	25	1"	10	11.7	20	50	10	10	-
AGE-32F	32	1-1/4"	16	18.7	20	50	10	10	-
AGE-40F	40	1-1/2"	25	29	20	50	10	10	-
AGE-50F	50	2"	39	45	20	50	10	8	-
AGE-65F	65	1-1/2"	65	75.8	20	50	10	5	-
AGE-80F	80	3"	91	106	20	50	8	3	-
AGE-100F	100	4"	130	152	40	50	4	-	3.5
AGE-125F	125	5"	188	219	40	50	4	-	2
AGE-150F	150	6"	283	330	40	50	4	-	1.5

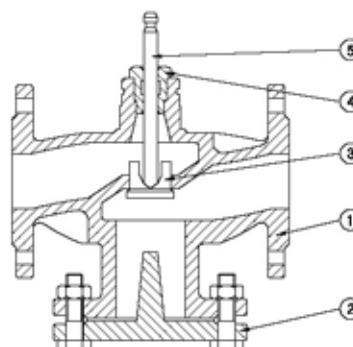
(KV=Cv/1.167)

ΔPvmax in kgf/cm²=Max. permissible pressure difference across the valve at which the drive can still safely open and close the valve

ΔPsmax in kgf/cm²=Max. permissible pressure difference across the valve during malfunction at which the drive can close the valve

● Material

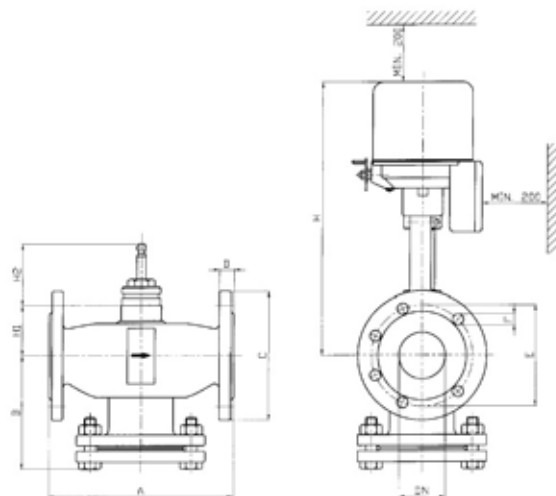
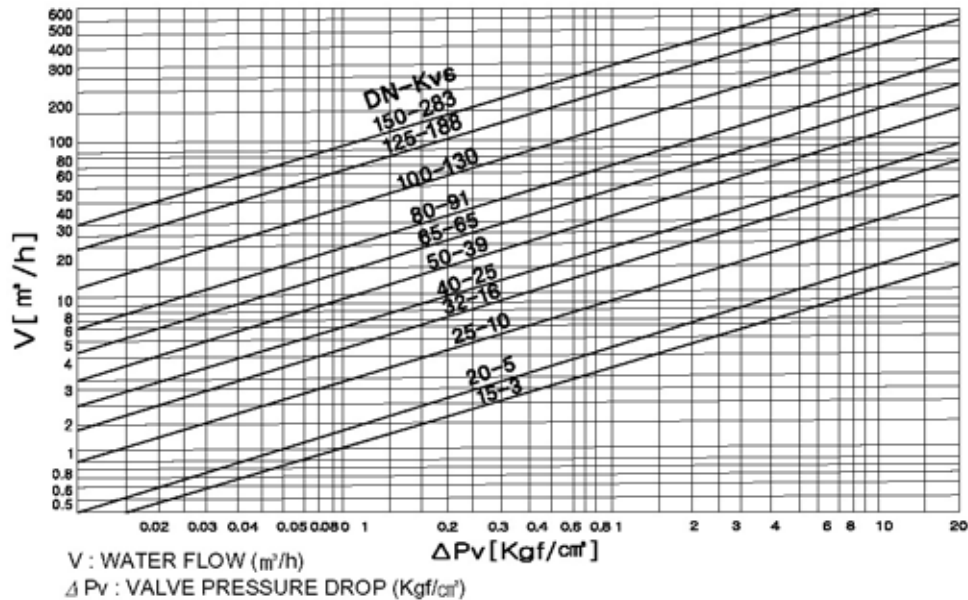
NO	1	2	3	4	5
Part Name	Body	Cover	Plug	Packing Box	Stem
Material	FC20	FC20	SCS13	VITON	SUS304



ELECTRIC LINEAR TYPE VALVE (FLANGED)

● Valve sizing chart-size 15A ~ 50A

▶ FLOW DIAGRAM



● Dimensions

(mm)

Model	DN	A	C	D	E	F	B	H2	H1	H			Weight Valve(Kg)
										AGE-20	AGE-35	AGE-55	
AGE-15F	15	130	95	16	70	15X4	69	67.5	75	330	330	-	5.5
AGE-20F	20	150	100	18	75	15X4	75	67.5	80	334	334	-	6
AGE-25F	25	160	125	18	90	19X4	75	67.5	77	334	334	-	6.9
AGE-32F	32	200	135	20	100	19X4	97	67.5	74	339	339	-	8.9
AGE-40F	40	200	140	20	105	19X4	97	67.5	74	339	339	-	10
AGE-50F	50	230	155	20	120	19X4	147	67.5	70	339	339	-	15
AGE-65F	65	290	175	22	140	19X4	180	67.5	83	360	360	-	22
AGE-80F	80	310	185	22	150	19X8	186	67.5	73	360	360	-	25
AGE-100F	100	350	210	24	175	19X8	205	92.5	129	-	421	-	42
AGE-125F	125	400	250	24	210	23X8	238	92.5	118	-	432	-	76
AGE-150F	150	480	280	26	240	23X8	279	92.5	140	-	448	478	87

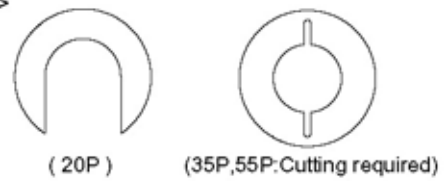
ACTUATORS INSTALLATION MANUAL-AC200V

MODEL : AGE-SERIES

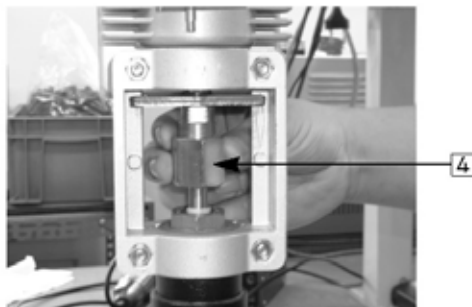
■ It is recommended that the valves be mounted upright in an easily accessible location. The actuator must be protected against dripping water, which could enter the housing and damage the mechanism or motor.

■ How to connect the valve and actuator

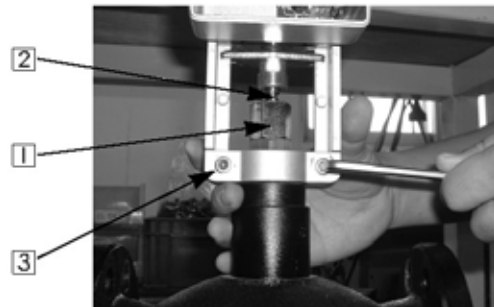
- Unfasten the coupling nut and insert in the valve shaft. <Figure 2-**1**>
- Fit the coupling washer to the groove on the shaft. <Figure 2-**2**>
- Fit the actuator to the groove on the valve body and then fasten the actuator by using the hexagonal bolt. Hexagonal wrench(6mm) needed. <Figure 2-**3**>
- Tighten the coupling nut completely. <Figure 1-**4**>



Coupling Washer



<Figure 1>

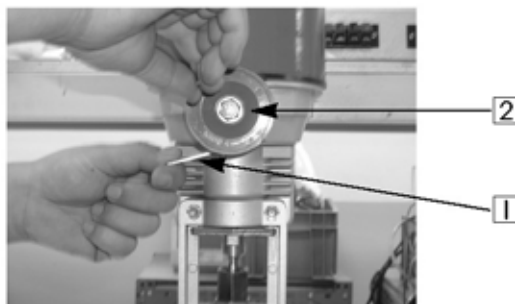


<Figure 2>

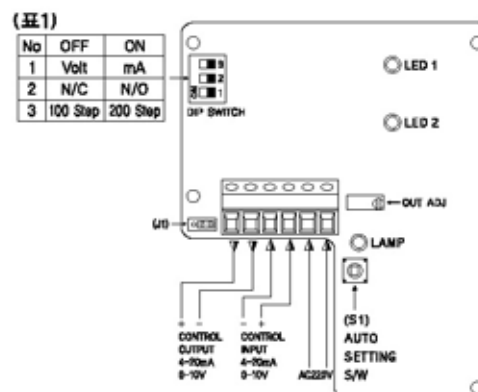
■ Manual Operating

- The actuator is delivered with factory(auto) settings. Use when manual operating or power off. <Figure 3>
- Turn right the Lever **1** to clockwise(90°) and then turn the manual override slightly.
- When turning the manual override to clockwise, the shaft of the actuator come down and in case of counterclockwise, the shaft go up. <Figure 3-**2**>
- After using it, turn the lever to clockwise(90°) and also turn the manual override slightly.

After that, use auto settings.



<Figure 3>



<Figure 4>

※ Manual Operation : Do not use when power on.