



# ELECTRIC ACTUATOR

Quarter turn type ATM series

**ATM-0100 ~ 3000**



# ELECTRIC ACTUATOR QUARTER TURN TYPE

## DESCRIPTION

ATM series electric actuator is specially.

Designed for quarter turn operating.

Applications such as Ball, Butterfly, Plug Valves, Dampers and similar usages.

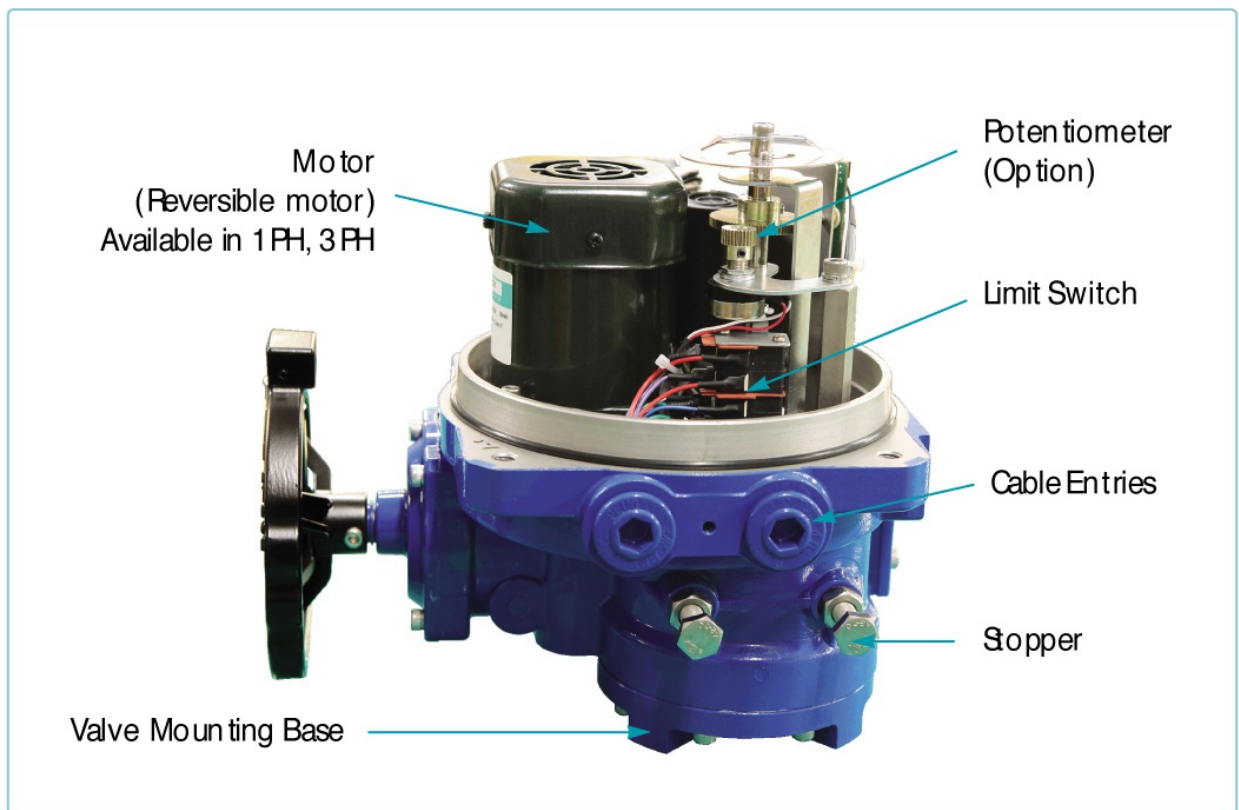
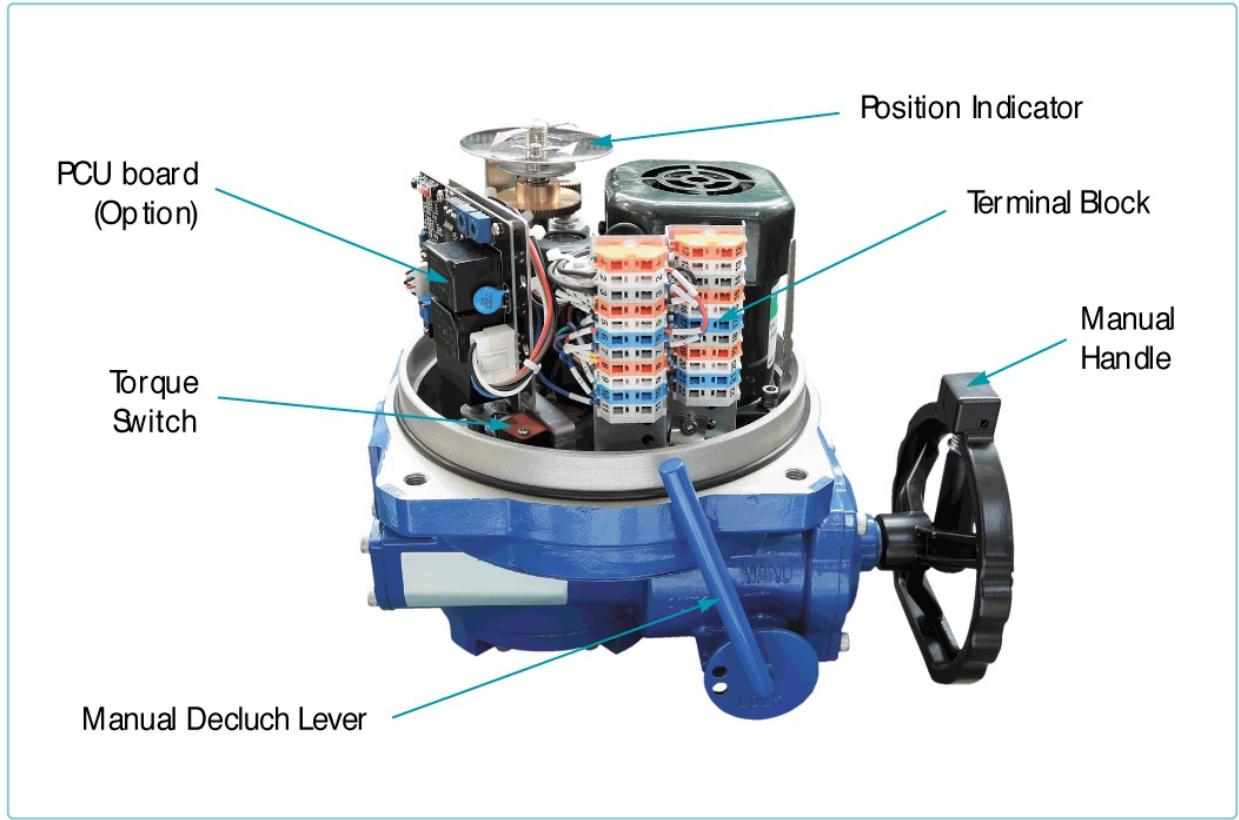
## FEATURES

- Compact and not heavy due to high grade Aluminum alloyed housing.
- Hard anodizing for High corrosion resistance on inside & outside.
- Various output torque from 100Nm to 3000Nm.
- Wide range of Voltage.
- Self locking function in the transmission.
- Manual operation Hand-Wheel engaged by Manual / Auto lever arranged for power drive folding Handle. (Space-Saving & Protection from Impact)
- Standard Mounting. (ISO 5211)
- Standard 4 limit switches. (2 for operation, 2 for extra (Dry contacts))
- Torque switches. (ATM-0160~3000)
- Space heater with thermostat for preventing overheat.
- Removable drive bushing with under hung for easy machining and tight connection.



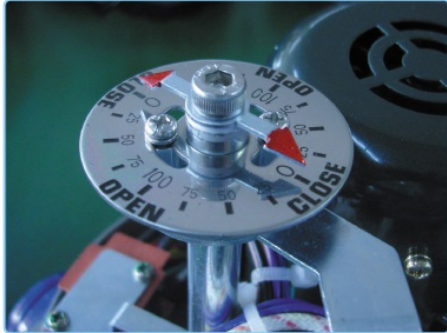


o CONSTRUCTION



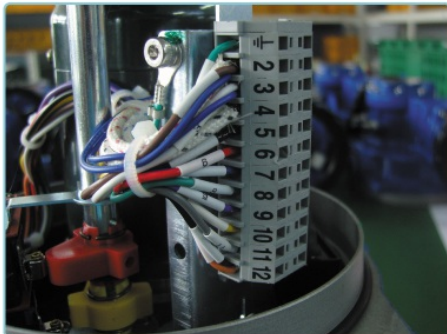
# ELECTRIC ACTUATOR QUARTER TURN TYPE

## ○ STANDARD CONFIGURATION



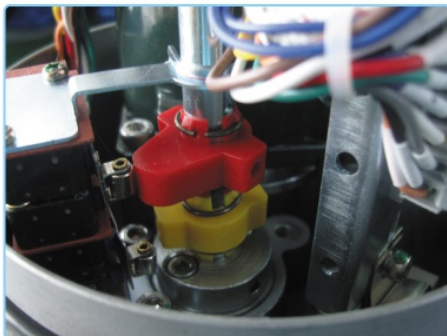
### Indicator

- Easy indicator correction by adjustment of bolt on the top
- Indicate plate :  $\pm 45^{\circ}\text{C}$



### Terminal Block

- Spring loaded push type terminal for tight wiring
- Rated voltage / current : 300V / 10A
- Solid and stranded wire : 16~28 AWG
- Wire strip length : 8~10mm
- Insulating with stand voltage : 6KV



### Limit Switch

- 4 SPDT switch
- Easy "Setting" by "L-Wrench" & Small screw-driver
- 8-SPDT Switch (ATM-0160~3000)
- Hand Setting



### Manual Handle

- Folding Handle
- Space-Saving & Protection from Impact



## ○ STANDARD SELECTION GUIDE OF AVAILABLE VALVES

Actuator	Valve	Butterfly valve 10K, ANSI 150 #	2-Way ball valve 10K, ANSI 150 #	3-Way ball valve 10K, ANSI 150 #
ATM-0080		40A ~ 65A (2½")	40A (1½")	25A (1")
ATM-0080		80A (3")	40A (1½"), 50A	32A (1¼")
ATM-0100		100A (4")	50A (2")	40A (1½")
ATM-0160		125A, 150A (6")	50A, 65A (2½")	50A (2")
ATM-0240		200A (8")	80A (3")	65A (2½")
ATM-0350		250A (10")	100A (4")	80A (3")
ATM-0500		300A (12")	125A (5")	100A (4")
ATM-0800		350A (14")	150A (6")	125A (5")
ATM-1100		400A (16")	200A (8")	150A (6")
ATM-2000		450A (18"), 500A	250A (10")	200A (8")
ATM-300		600A (24")	300A (12")	250A, 300A (12")

참조) 밸브 제작사마다 토크크가 차이가 있으므로 위의 선정표가 다를 수도 있습니다.

The above specification can be changed as difference torque per each valve manufacturer.

## ○ ORDER CODING SYSTEM

**ATM - X X X X - X X X X**

(Torque)

0100 : 10kg.m  
0160 : 16kg.m  
0240 : 24kg.m  
0350 : 35kg.m  
0500 : 50kg.m  
0800 : 80kg.m  
1100 : 110kg.m  
2000 : 200kg.m  
3000 : 300kg.m

1 : 90°  
2 : 120°  
3 : 135°  
4 : 180°  
5 : 270°

1 : Standard (on-off)  
2 : PU (Potentiometer Unit)  
3 : PTM (Position Transmitter)  
4 : PCU (Proportional Control Unit)  
5 : ALS (Additional Limit Switches)  
6 : ATS (Additional Torque Switches)  
ATM-0100은 제외  
7 : LCU (Local Control Unit, LED + On/Off)  
8 : LCU (Local Control Unit, LED + PCU)  
9 : LCU (Local Control Unit, LED + PTM)

1 : 110V AC / 1Ph  
2 : 220V AC / 1Ph  
3 : 220V AC / 3Ph  
4 : 380V AC / 3Ph  
5 : 440V AC / 3Ph  
6 : 460V AC / 3Ph  
7 : 24V AC / 1Ph (ATM- 0100 Only)

} Magnetic Type  
ATM-0100은 제외

1 : Weather proof, IP 67  
2 : Watertight, IP 68

# ELECTRIC ACTUATOR QUARTER TURN TYPE

## TECHNICAL DATA

Model	Maximum output torque kg-m	Operating time (sec.) 60 / 50 Hz 90°	Maximum bore size mm	Rated current (A) 60/50Hz				Duty cycle IEC 34-1 S4 (%)	Number of handle turn N	Weight kg
				1 Phase		3 Phase				
				110V	220V	380V	440V			
ATM-0100	10	18 / 21	∅20	1.10 / 0.98	0.58 / 0.52	-	-	70	10	7
ATM-0160	16	21 / 25	∅25	1.70 / 1.60	0.90 / 0.85	0.30 / 0.35	0.32 / 0.50	70	12	15
ATM-0240	24	21 / 25	∅25	1.72 / 1.62	0.90 / 0.87	0.32 / 0.37	0.35 / 0.57	70	12	15
ATM-0350	35	26 / 31	∅40	1.80 / 1.72	0.95 / 0.92	0.32 / 0.37	0.32 / 0.50	70	14	20
ATM-0500	50	26 / 31	∅40	3.90 / 3.60	1.60 / 1.50	0.56 / 0.52	0.58 / 0.55	70	14	20
ATM-0800	80	32 / 39	∅48	4.20 / 3.90	2.20 / 2.05	0.88 / 0.82	0.88 / 0.82	70	17	25
ATM-1100	110	32 / 39	∅48	4.30 / 3.90	2.30 / 2.15	0.90 / 0.84	0.88 / 0.84	70	17	25
ATM-2000	200	50 / 59	∅75	-	3.15 / 2.95	1.80 / 1.50	2.20 / 2.30	70	23	70
ATM-3000	300	50 / 59	∅75	-	3.85 / 3.75	2.00 / 1.60	2.40 / 2.50	70	23	70

※ ATM-0100 모델은 24VAC 제작 가능함.  
ATM-0100 is available for 24VAC.

## STANDARD SPECIFICATION

Enclosure	Weatherproof enclosure IP67 (IP68 OPTIONAL)
Power supply	110/220V AC 1 Phase 50/60Hz, 380/440V AC 3 Phase 50/60Hz, ±10%
Control power supply	110/220V AC 1 Phase 50/60Hz, ±10%
Duty cycle (on-off)	S2, 100% Max 30Min
Duty cycle (modulating)	S4, 70% Max 300~1,600 start / hour
Motor	Induction motor (Reversible motor)
Limit switches	Open / close, SPDT, 250V AC 16A rating
Additional limit switches	Open / close, SPDT, 250V AC 16A rating (Except for ATM-0100)
Torque switches	Open / close, SPDT, 250V AC 16A rating (Except for ATM-0100)
Stall protection/operating temp.	Built-on thermal protection, open 150°C ± 5°C / close 97°C ± 15°C
Travel angle	90° ± 5° (0 ~ 100°)
Indicator	Continuous mechanical indicator with arrow
Manual override	Declutching mechanism
Self locking	Provided by double worm gearing
Mechanical stopper	2 each external adjustable screws
Space heater	10W (110/220V AC) anti-condensation
Cable entries	Three PF 3/4" tap
Lubrication	Grease Moly (EP type)
Terminal block	Spring loaded lever push type
Materials	Aluminum alloy, Steel, Al bronze, Polycarbonate
Ambient temperature	-20°C ~ +70°C (except option electronic board)
Ambient humidity	90% RH Max. (non-condensing)
Anti vibration	X, Y, Z 9g, 0.2~34Hz, 30min.



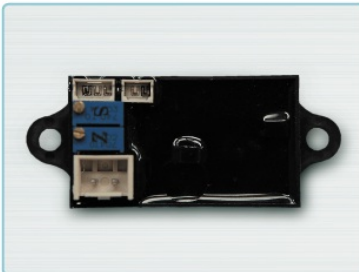
## ○ OPTION SPECIFICATION

<b>WE</b>	Watertight enclose actuator. (IP 68, 10m 100hour)
<b>PU</b>	Potentiometer unit. (1K $\Omega$ )
<b>PTM</b>	Position transmitter. (Output 4~20mA)
<b>PCU</b>	Proportional control unit. (Input / Output 4-20mA or 0-10VDC or 1-5VDC)
<b>ALS</b>	Additional limit switches. (SPDT X 2EA 250V AC 10A Rating)
<b>ATS</b>	Additional torque switches.
<b>LCU</b>	Local Control Unit. (Remote / Local, Open / Stop / Close Selector Switch with Lamps)
<b>EX</b>	Extension 120°, 135°, 180°, 270° turn.



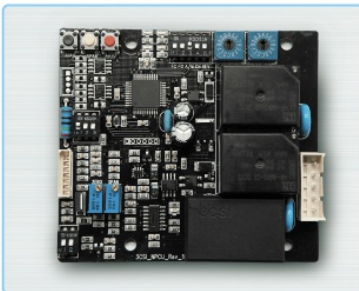
### Potentiometer Unit

- Small size
- Range : 0~1K $\Omega$
- Metal gear



### Position Transmitter

- Small and high performance
- Input : AC 24V, AC 110/220V
- Output : 4~20mA
- Zero, span setting



### Proportional Control Unit

- Power : 85 ~ 280VAC  $\pm$ 10%, 50/60Hz  $\pm$ 2%,  
4VA Max - Changeable by DIPswitch
- Input signal : 4~20mA DC, 1~5V DC, 2~10V DC, 0~5V DC, 0~10V DC
- Output signal : 4~20mA DC, 1~5V DC, 2~10V DC, 0~5V DC, 0~10V DC
- Au to setting, dead band, delay time setting etc.



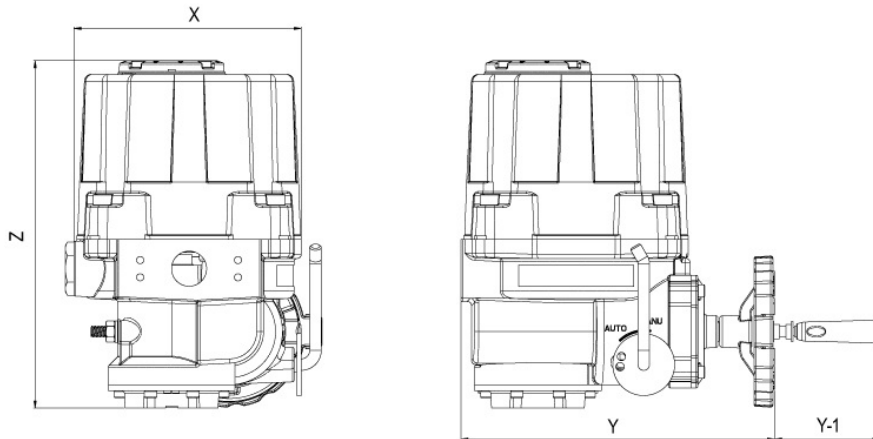
### LCU (Local Control Unit)

- A small unit that is mounted to the actuator to operate the valve's position in local.
- Local / Remote switch
- Open / Stop / Close selector switches with lamps

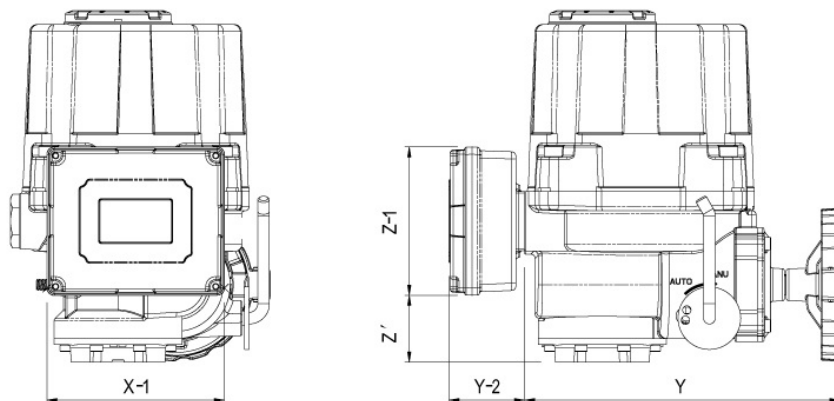
# ELECTRIC ACTUATOR QUARTER TURN TYPE

## ○ BASIC DIMENSIONS (ATM-010)

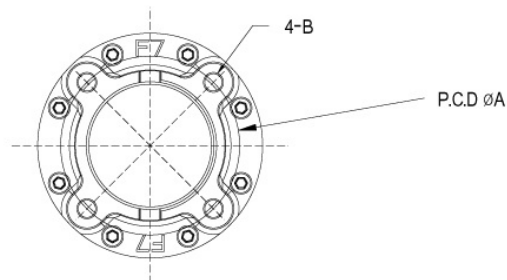
### On/Off



### Modulating (with PCU)



### Valve Mounting (Base ISO 5211)

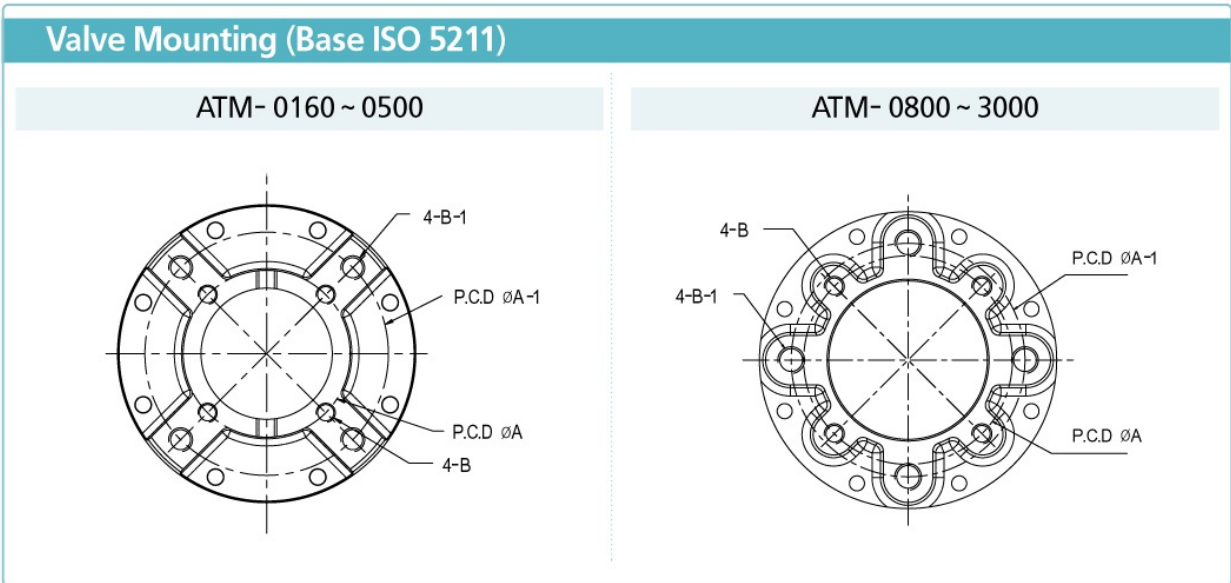
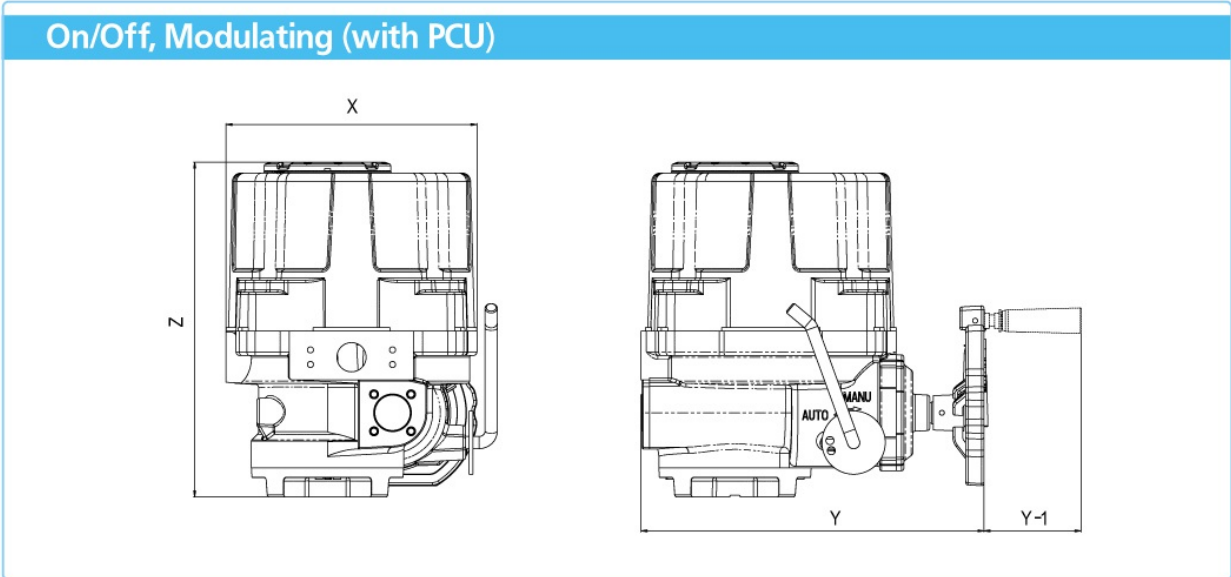


Model	ØA	B	X	X-1	Y	Y-1	Y-2	Z	Z'	Z-1
ATM-0100	70	M8 / 15	158	122	217	75	52	242	46	102





○ BASIC DIMENSIONS (ATM-0160~3000)



Model	ØA	ØA-1	B	B-1	X	Y	Y-1	Z
<b>ATM-0160</b>	70	102	M8 / 12	M10 / 15	206	282	80	276
<b>ATM-0240</b>	70	102	M8 / 12	M10 / 15	206	282	80	276
<b>ATM-0350</b>	102	125	M10 / 15	M12 / 18	222	295.5	80	294
<b>ATM-0500</b>	102	125	M10 / 15	M12 / 18	222	295.5	80	294
<b>ATM-0800</b>	125	140	M12 / 18	M16 / 24	239	310	80	326
<b>ATM-1100</b>	125	140	M12 / 18	M16 / 24	239	310	80	326
<b>ATM-2000</b>	-	165	-	M20 / 30	307	401	100	394
<b>ATM-3000</b>	-	165	-	M20 / 30	307	401	100	394