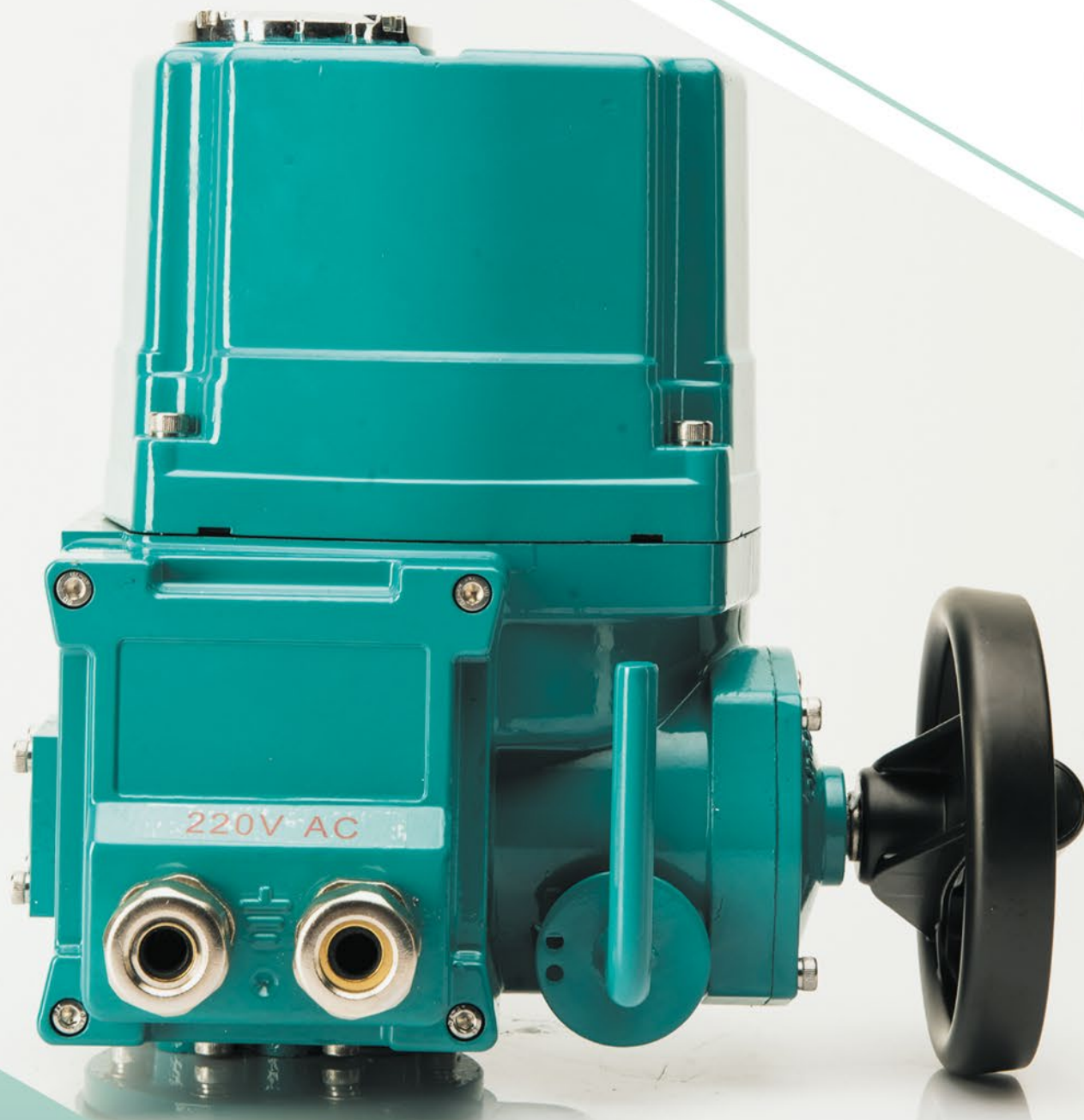




CONVALVE
SPECIALIST IN VALVE AUTOMATION



EAC 2 ELECTRIC ACTUATOR



- ISO 9001 QUALITY 
- ISO 14001 ENVIRONMENT 
- ISO 45001 HEALTH & SAFETY 



ELECTRIC ACTUATOR EAC 2 ELECTRIC ACTUATOR

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DESCRIPTION

EAC2 Electric Actuators are designed for precision operation and control of quarter turn valves such as butterfly, ball and plug valves commonly found in industries such as oil, chemical, power generation and water treatment. They offer flexibility with both remote and local control options. They are designed to operate reliably in hazardous environments with IP67 protection and ExdIICT4 explosion protection. The actuators have a maximum output torque of 3000Nm and ensuring non-explosive performance.

Designed for optimum performance, these actuators are lightweight with significant output torque. They have a hard oxygen treated interior and exterior, with an additional epoxy and powder coating for superior corrosion resistance. The product exceeds IP67 standards.

The output connection conforms to ISO5211 national standards and the adaptable output shaft sleeve ensures easy machining and installation. The double worm wheel structure is self-locking and provides an externally adjustable mechanical limit. Seamless switching between power and manual operation is achieved by means of a hand crank, which automatically reverts to electronic control when power is restored.

field control settings to suit user requirements. An optional intelligent controller is available for enThe actuators are fitted with integral torque switches for overload protection and an integral thermal overload protector for additional motor safety. Valve positions are easily monitored through a large viewing window and the unit offers multiple hanced functionality.

FEATURES

- Quarter turn (90°) operation with mechanical travel stops
- Rugged type NEMA 4X weatherproof aluminum alloy enclosure
- Highly visual valve position indicator
- Manual override
- ISO5211 multi-flange valve mounting
- Heavy-duty motors with overload protection
- Thermostatically controlled anti-condensation heater
- Two auxiliary limit switches included on base units
- Self-locking all metal gear trains, no additional brake required
- Electronic Positioner models available for modulating type

APPLICATION

Industrial quality electric actuators typically used to automate quarter turn (90°) ball valves, butterfly valves and dampers. The EAC2 series actuator is quick and easy to install with standard ISO5211 multi-flange mounting and a double square drive.

OPERATION

Electric actuator uses power-to-open and power-to-close, stays in the last known position with loss of power. On receipt of a continuous voltage signal, the motor runs and via a rugged all metal gear system rotates 90°. The motor is automatically stopped by internal cams striking limit switches. On receipt of a reversing continuous signal, the motor turns in the opposite direction reversing the output drive position. Modulating actuators with electronic positioner use an analog input signal to control the drive output position. Rugged self-locking all metal gear train eliminates the need for additional braking.

CONSTRUCTION

HOUSING	Aluminum alloy, epoxy powder coated
GEAR	Steel / Aluminum bronze
SCREWS	Stainless Steel
INDICATOR COVER	Polycarbonate
SHAFT / ADAPTOR	Alloy steel
SEAL	NBR
LUBRICATION	Aluminum based grease

TECHNICAL DATA AND SPECIFICATIONS

MODEL	MAX OUTPUT TORQUE (NM)	OPERATING TIME 90° (S)	MAX BORE SIZE (MM)	F-CLASS MOTOR (W)	RATED CURRENT(A)60/50HZ				HANDWHEEL ROTATION (N)	WEIGHT (KG)	FLANGE
					SINGLE-PHASE		THREE-PHASE				
					110V	220V	380V	440V			
EAC2-010	100	18/22	∅20	20	1.10/0.95	0.55/0.54	0.3/0.3	N/A	10	13	F07
EAC2-015	150	21/25	∅22	40	1.65/1.67	0.88/0.84	0.31/0.31	0.30/0.31	10	15	F07/F10
EAC2-020	200	21/25	∅22	40	1.67/1.67	0.89/0.85	0.35/0.31	0.31/0.31	11	15	F07/F10
EAC2-030	300	26/31	∅35	60	1.85/1.86	0.92/0.92	0.35/0.35	0.34/0.34	13.5	22	F07/F10
EAC2-050	500	26/31	∅35	90	3.60/3.62	1.55/1.58	0.59/0.59	0.58/0.58	13.5	23	F10/F12
EAC2-080	800	31/37	∅45	120	4.10/4.10	2.15/2.20	0.85/0.85	0.79/0.79	16.5	30	F10/F14
EAC2-100	1000	31/37	∅45	180	4.20/4.10	2.35/2.30	0.87/0.87	0.81/0.81	16.5	30	F10/F14
EAC2-160	1600	93/112	∅60	180	4.10/4.10	2.15/2.20	0.85/0.85	0.79/0.79	49.5	75	F10/F16
EAC2-200	2000	93/112	∅65	180	4.10/4.10	2.15/2.20	0.85/0.85	0.79/0.79	49.5	75	F10/F16

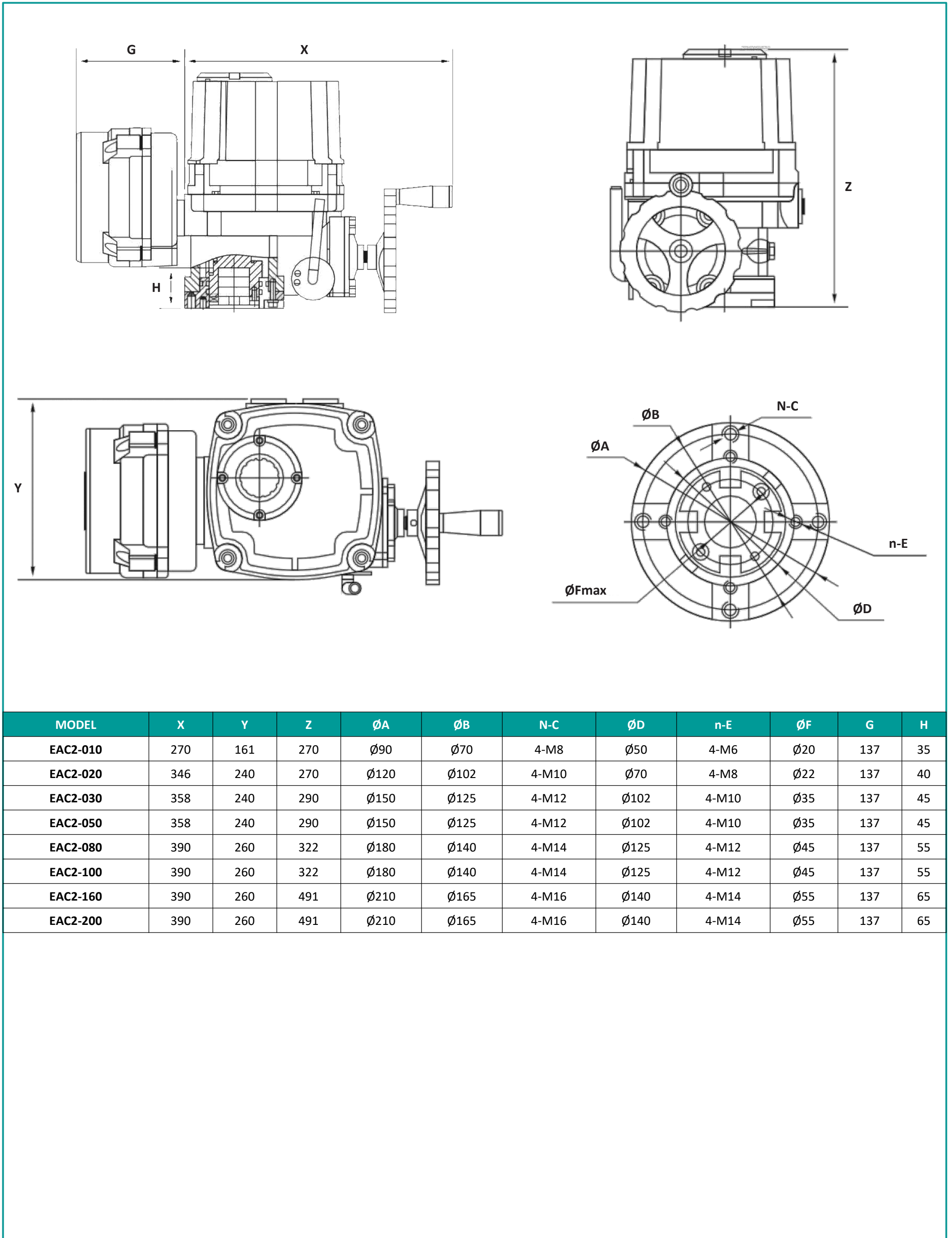
TECHNICAL DATA STANDARD SPECIFICATIONS

HOUSING	Waterproof level IP67,NEMA 4 and 6	
MOTOR POWER SUPPLE	Standard:220V AC single-phase Optional:110V AC single-phase,380/440V AC three-phase,50/60Hz,±10% 24V DC/110V DC/220V DC	
MOTOR	Squirrel-cage asynchronous motor	
LIMIT SWITCH	On/off,each of the 1 Spdt,250V AC 10A	
AUXILIARY LIMIT SWITCH	On/off,each of the 1 Spdt,250V AC 10A	
TORQUE SWITCH	On/off,each of the 1 Spdt,250V AC 10A	EAC2-010 Excluded
TRAVEL	90°±10°	0°~270° Optional
STALL PROTECTION/OPERATING TEMPERATURE	Built-in overheating protection,open 115°C±5°C/close 97°C±5°C	
INDICATOR	Continuous position Indicator scale	
MANUAL OPERATION	Mechanical clutch mechanism,with handwheel operation	
SELF-LOCKING UNIT	Worm gear,self-locking provided for the worm mechanism	
MECHANICAL LIMIT	Two external adjusting bolts	
DRYER	7-10W(110/220V AC)	
WIRING HOLE	M20*1.5 M36*2	
AMBIENT TEMPERATURE	-20°C~+70°C	
LUBRICATION	Aluminium-base grease (EP type)	
MATERIAL	Steel/aluminum alloy/aluminum bronze/polycarbonate	
AMBIENT HUMIDITY	Maximum 90% RH non-condensing	
SEISMIC PERFORMANCE	X Y Z 10g,0.2~34Hz,Minutes	
OUTER COATING	Dry powder/epoxy polyester, with a superior anti-corrosion function	

TECHNICAL DATA OPTIONAL SPECIFICATIONS

NO	OPTIONAL COFIGURATION	REMARKS
1	Explosion-proof actuator (Exd II CT4)	EAC2 Series
2	Waterproof actuator (IP67,10M,250HR)	EAC2 Series
3	Potentiometer(1K-10K)	EAC2 Series
4	Proportional control unit(input/output signal 4-20mA DC/1-5V/1-10V)	EAC2 Series
5	On-site control unit(local control ON/STOP/OFF selection switch,local/remote switching)	EAC2 Series
6	Travel 90°,120°,180°,270°	EAC2 Series
7	DC motor (24V DC)	EAC2 Series
8	Additional torque switch (SPDT X 2 250V AC 10A)	EAC2-010 Excluded
9	Current position sensor (Output 4-20mA DC)	EAC2 Series
10	The electric valve opens or closes the control cabinet automatically after the signal is cut off	EAC2 Series
11	High-temperature-resistant actuator(-10°C~+100°C)	EAC2 Series
12	Low-temperature-resistant actuator(-40°C~+70°C)	EAC2 Series
13	Low-speed actuator	EAC2 Series

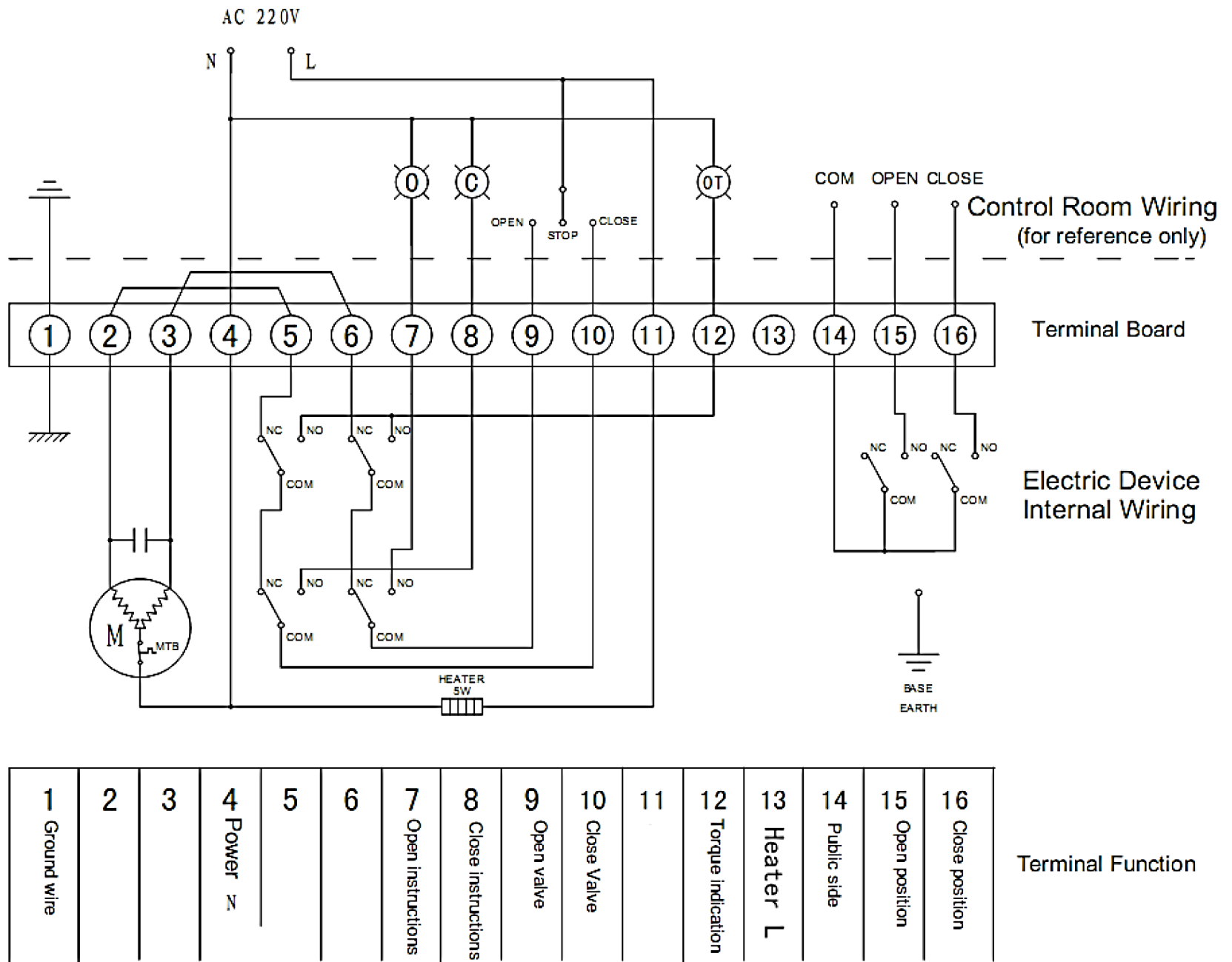
DIMENSION MM



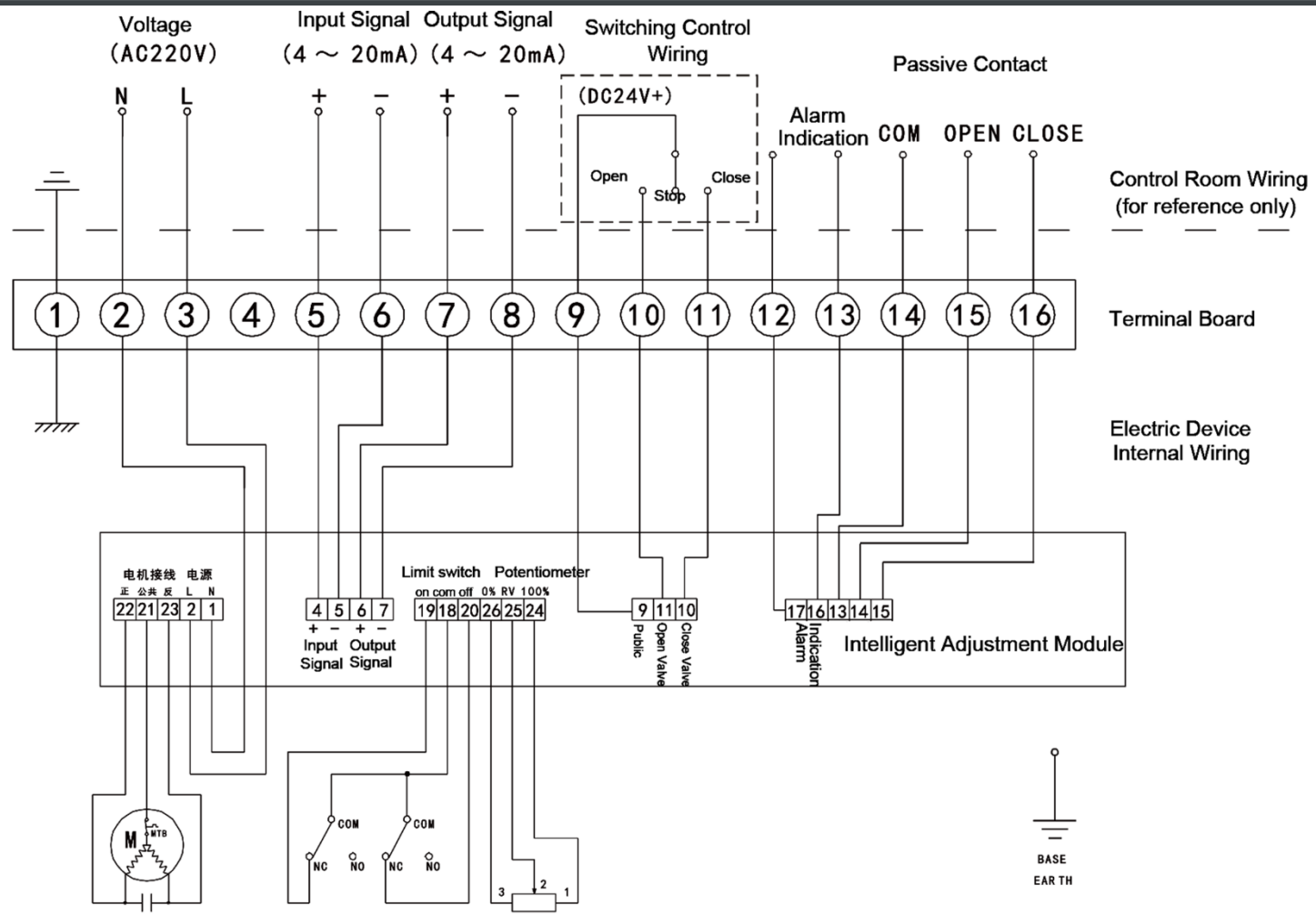
MODEL	X	Y	Z	ØA	ØB	N-C	ØD	n-E	ØF	G	H
EAC2-010	270	161	270	Ø90	Ø70	4-M8	Ø50	4-M6	Ø20	137	35
EAC2-020	346	240	270	Ø120	Ø102	4-M10	Ø70	4-M8	Ø22	137	40
EAC2-030	358	240	290	Ø150	Ø125	4-M12	Ø102	4-M10	Ø35	137	45
EAC2-050	358	240	290	Ø150	Ø125	4-M12	Ø102	4-M10	Ø35	137	45
EAC2-080	390	260	322	Ø180	Ø140	4-M14	Ø125	4-M12	Ø45	137	55
EAC2-100	390	260	322	Ø180	Ø140	4-M14	Ø125	4-M12	Ø45	137	55
EAC2-160	390	260	491	Ø210	Ø165	4-M16	Ø140	4-M14	Ø55	137	65
EAC2-200	390	260	491	Ø210	Ø165	4-M16	Ø140	4-M14	Ø55	137	65

WIRING DIAGRAM

220V AC ON-OFF PASSIVE TYPE



220V AC MODULATING TYPE

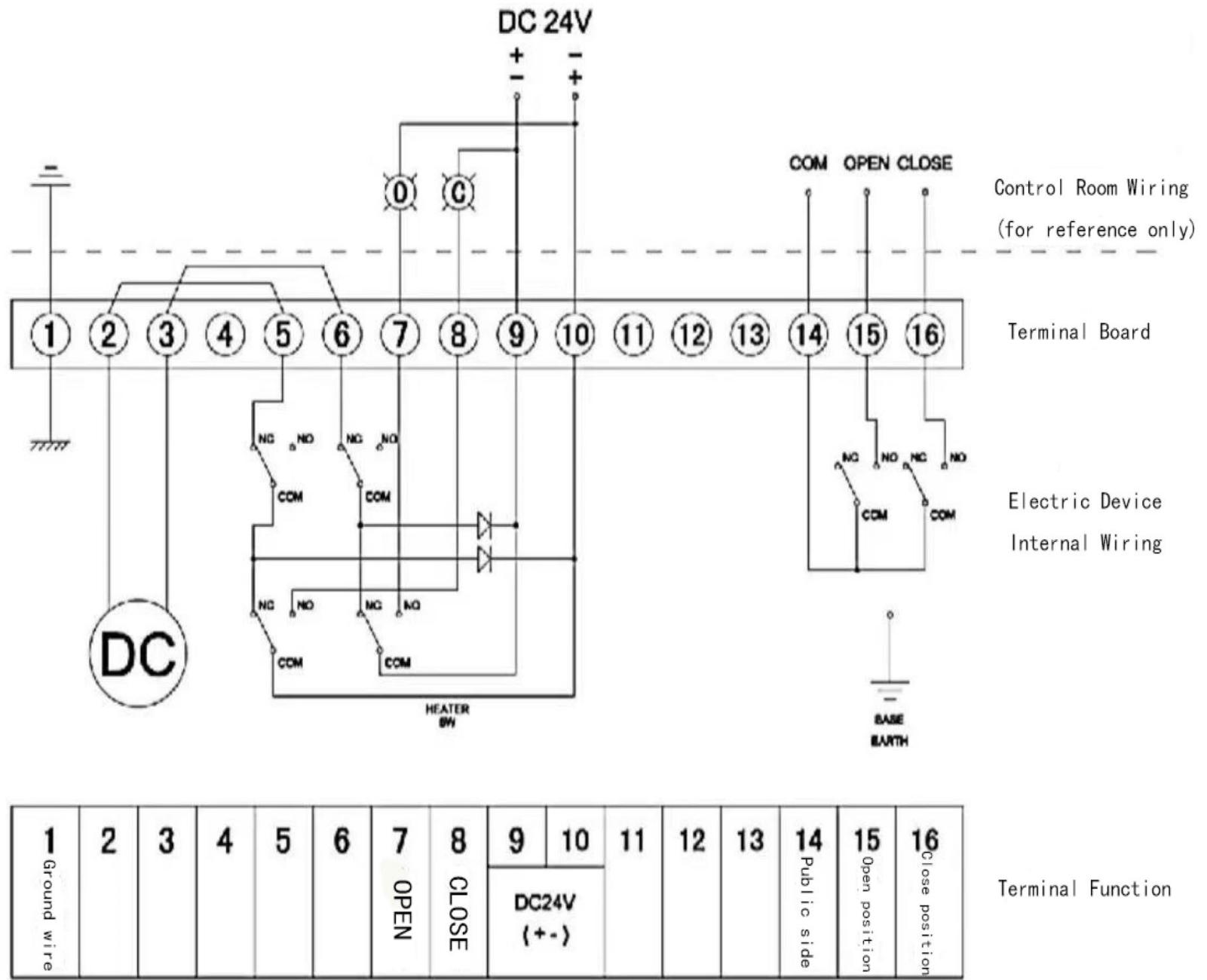


Note: The DC24V switch quantity control is provided by the intelligent adjustment module and does not need to be connected to an external power supply.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ground wire	Power			Input Signal		Output Signal		Public side	Open Valve	Close Valve	Alarm Indication	Public side	Open position	Close position	
	N	L		+	-	+	-								

WIRING DIAGRAM

24V DC ON-OFF PASSIVE TYPE



24V DC MODULATING TYPE

24VDC Overall Adjustment type wiring diagram

