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CONVALVE
SPECIALIST IN VALVE AUTOMATION

EAC 1 ELECTRIC ACTUATOR

OUR STANDARD YOUR GUARANTEE

- ISO 9001 Quality
- ISO 14001 Environment
- OHSAS 18001 Health & Safety

ELECTRIC ACTUATOR
EAC 1 ELECTRIC ACTUATOR

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DESCRIPTION

Convalve EAC 1 Electric Actuator stands out with its aesthetically optimized design, superior performance characteristics, lightweight construction, and high output torque. The internal and external surfaces of its housing are cleaned with ozone during manufacturing and subsequently coated with an epoxy-based powder paint to enhance corrosion resistance. Convalve EAC 1 Electric Actuator complies with international standards and is rated at IP67. Its flange connection dimensions fully adhere to the ISO 5211 standard, and the connection shaft housing is designed for on-site replacement, offering significant advantages in machining and assembly.The product features an integrated self-locking mechanism and an infinite (helical) gear configuration with externally adjustable mechanical limit elements. The motor windings include an integrated thermal protection system to prevent overheating. Additionally, the position indicator is equipped with a lens-enhanced design to ensure clear and accurate valve position monitoring. The electronic control circuitry is optimized to deliver high efficiency and performance tailored to evolving and customized user requirements. Optionally, the system can be integrated with a proportional control unit (modulation unit) to provide both on/off and modulating control options.

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 are typically used to automate quarter turn (90º) ball valves, butterfly valves and dampers. The EAC 1 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 90º. 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

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REVISION NO: 02

TECHNICAL DATA AND SPECIFICATIONS

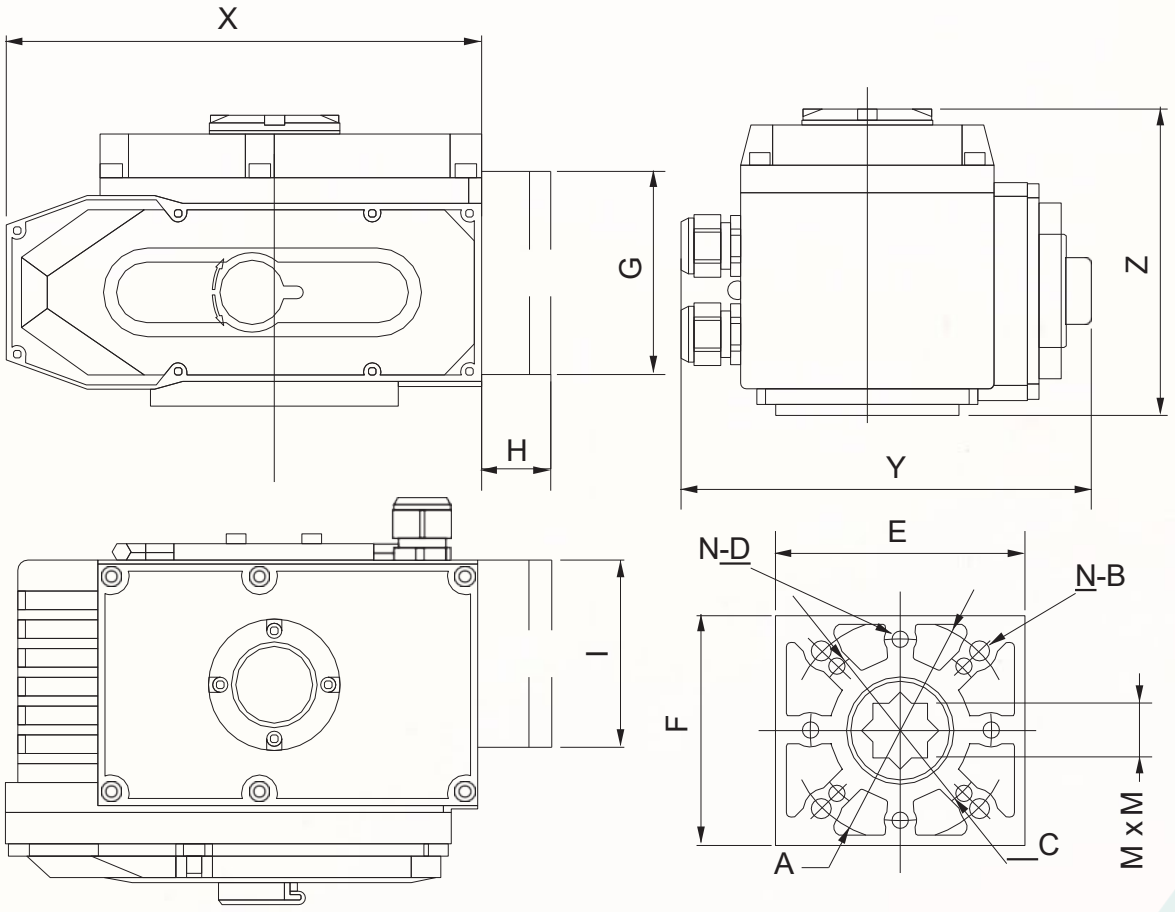
MODEL	MAX OUTPUT TORQUE (NM)	OPERATING TIME 90° (SEC)	DRIVE SHAFT (MM)		MOTOR (W)	RATED CURRENT (A) 220VAC/1PH	WEIGHT (KG)
			SQUARE	DEPTH			
EAC1-003	30	10	11 x 11	15	6	0.25	2.1
EAC1-005	50	30	14 x 14	18	10	0.25	3.5
EAC1-008	80	30	14 x 14	18	15	0.25	3.5
EAC1-010	100	30	17 x 17	22	25	0.35	5
EAC1-015	150	30	17 x 17	22	30	0.35	5
EAC1-020	200	30	22 x 22	26	40	0.48	12
EAC1-040	400	30	22 x 22	26	60	0.92	12
EAC1-060	600	30	22 x 22	32	90	0.92	14
EAC1-080	800	40	27 x 27	32	130	1	14.3
EAC1-100	1000	40	27 x 27	32	130	1	14.5
EAC1-200	2000	On Request					

TECHNICAL DATA STANDARD SPECIFICATIONS	
POWER SUPPLY	24VDC, 110VAC, 220VAC 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
AUX LIMIT SWITCHES	2 x SPST, 250VAC10A, each for Open and Close positions
ROTATION	90° (± 10°) other rotation on request
STALL PROTECTION	Internal overheating thermal protection, open @ 120°C / close @ 97°C (± 5°C)*
MANUAL OPERATION	Mechanical system by allen key
CONDUIT ENTRY	2 x M18
OPERATING TEMP	-20°C to +70°C
AMBIENT HUMIDITY	Max. 90% RH
VIBRATION TESTED	XYZ10g, 0.2~34Hz, 30 minutes
MOUNTING	ISO5211
TORQUE OUTPUT	30 Nm to 1000 Nm (2000 Nm on request)
SELF-LOCKING DEVICE	Self-locking by worm and worm gear

TECHNICAL DATA OPTIONS AVAILABLE
Space Heater, 7 ... 10W (110/220VAC)*
Position Feedback Potentiometer (1K ... 10K)*
Position Feedback Sensor with Current output (4 ... 20mA)*
Proportional Control Unit for modulating control (input/output signal, 4 ... 20mA, 1 ... 5 VDC, 1 ... 10VDC)*
Field control unit (Local control open/stop/close switch, Local/remote control switch)*
Power Failure Self Reset
Quick Opening Version

NOTE : * Except EAC-03

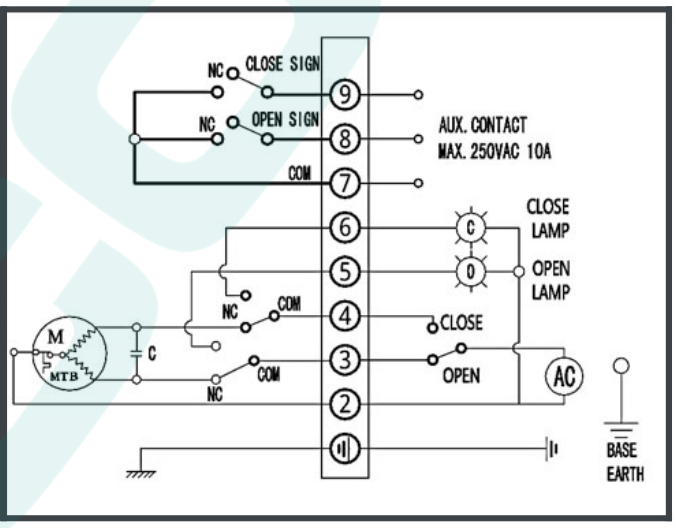
DIMENSION MM



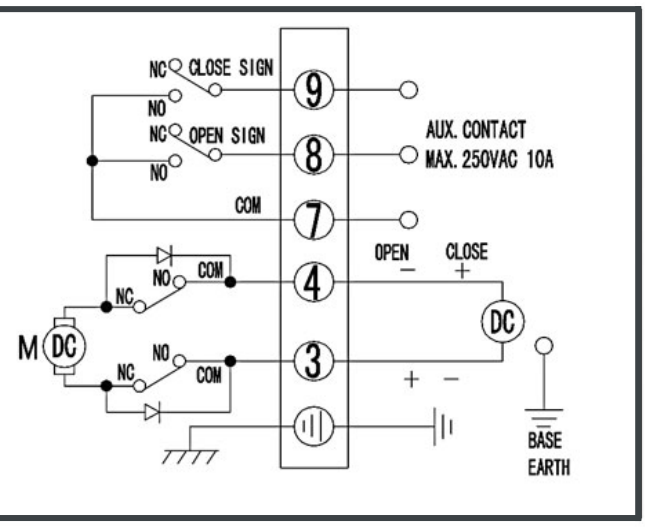
MODEL	X	Y	Z	ØA	N-B	ØC	N-D	E	F	G	H	I	M X M
EAC1-003	123	100	115	50	4-M6	36	4-M4	50	50	114	40	150	11 x 11
EAC1-005	161	121	125	70	4-M8	50	4-M6	66	66	114	40	150	14 x 14
EAC1-008	188	145	127	70	4-M8	50	4-M6	100	90	114	40	150	14 x 14
EAC1-010	188	145	127	70	4-M8	50	4-M6	100	90	114	40	150	17 x 17
EAC1-015	188	145	127	70	4-M8	50	4-M6	100	90	114	40	150	17 x 17
EAC1-020	268	255	164	125	4-M12	102	4-M10	140	130	114	40	150	22 x 22
EAC1-040	268	255	164	125	4-M12	102	4-M10	140	130	114	40	150	22 x 22
EAC1-060	268	255	164	125	4-M12	102	4-M10	140	130	114	40	150	22 x 22
EAC1-080	268	255	164	125	4-M12	102	4-M10	140	130	114	40	150	27 x 27
EAC1-100	268	255	164	125	4-M12	102	4-M10	140	130	114	40	150	27 x 27
EAC1-200	On Request												

WIRING DIAGRAM

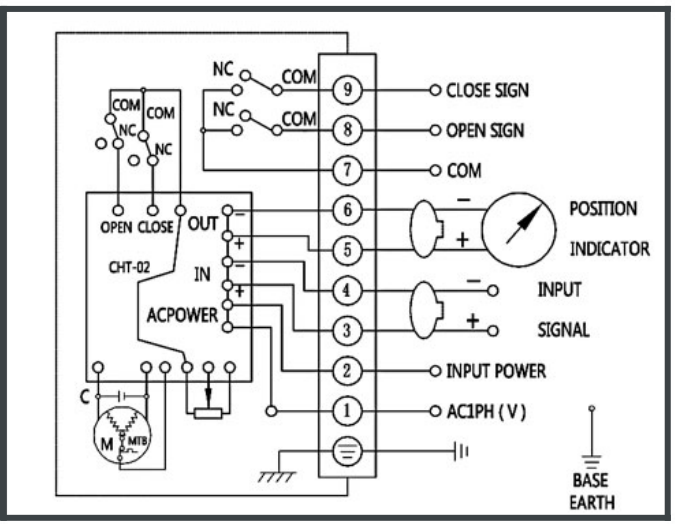
220V AC ON-OFF PASSIVE TYPE



24V DC ON-OFF PASSIVE TYPE



220V AC MODULATING TYPE



380V 50/60 HZ ON-OFF TYPE