

QUARTER-TURN ELECTRIC ACTUATOR



FM 522775



EMS 595200



OHS 595201

CE RoHS REACH      

FLOWINN INDUSTRIAL CO., LTD. established itself as a electric actuator manufacturer in 2007. With main focus on the design and development of electric actuator, we have been providing our product and services worldwide. Our quality and technical innovation have contributed to the growing industry recognition and made collaborations with many of the industry elites possible.

Our customer base include countries of Europe, United states, Australia, Africa, South East Asia and Middle East. With application to water treatment, HVAC, petroleum, chemical, electronics, light industry, food, medicine, textile, papermaking, hydropower, ship, smelting, new energy and so forth.

Flowinn is an ISO 9001, ISO 14001 and OHSAS 18001 certified company. Most importantly, Flowinn electric actuators mark with CE, CSA, explosion-proof (ATEX, IECEx), IP68, RoHS and REACH. Most are given by internationally renowned certification bodies such as TUV, NEPSI, DNV, CSA, SGS, BSI and such. There are currently over 40 product patents that FLOWINN possesses as of now.

As one of the leading electric actuator manufacturer, we always adhere to **"CUSTOMER FIRST, RESEARCH & INNOVATION, CONTINUOUS IMPROVEMENT, TEAMWORK"** concepts.

QUARTER TURN OVERVIEW



FLOWINN has many years of experience in the field of valve fluid control. According to the different needs of the market, we have developed a series of quarter-turn products. And our good reputation is gained by the reliability and stability performance in the field of valve fluid control.

The quarter-turn products are categorized into different sections such as the conventional series (EFM, EOM series ...) and explosion-proof series.

All the series are composed by **Basic, Integrated, Integral, Intelligent and Super intelligent** products.

QUARTER TURN CHARACTERISTICS

PATENT MECHANIC DESIGN

-----PAVING THE WAY FOR FUTURE TREND

EOM series of electric actuators are equipped with manual / electric automatic switching function. No clutch design thus enables the hand wheel to be rotated while the machine is running; this is to ensure the safety of the operator. Such design will be the mainstream trend in the future.

PROFESSIONAL GEAR DESIGN

The adoption of the planetary gear design achieved a combination of manual and electric control without the need of the clutch which ensures the operator' s safety. Above all, the unique solar planetary gear design has gotten the national patent.

INTERCHANGEABLE SPLINE SLEEVE

Depending on the spindle of the valve, the output sleeve of the actuator is designed in spline form. The inner holes can be replaced into square holes and keyways and other different sizes. Fast debugging and replacing makes the operation more flexible.

INTERCHANGEABLE CONNECTING FLANGE

The base connecting holes are in accordance with ISO 5211 standard, also with various connecting flange sizes. It can be replaced and rotated for the same type of actuators in order to achieve with different hole positions and angles of the valve flange connection purposes.

360 ° POSITION INDICATOR

Adopts high strength, anti-sunlight and RoHS-compliant plastic 3D window indicator. Users are able to observe the stroke position of the actuator within the 360° visual angle as there' s no dead angles.

USER INTERACTION INTERFACE

Intelligent type is equipped with brand new UI control interface, with the specialized remote control, achieves a variety of functions of the actuator configuration operation. Supports multi-language, satisfies all kinds of demands from the customer. It can also be customized based on special requirements.

ENERGY EFFICIENCY

Single-phase and DC power supply is optional, ultra-low energy consumption, suitable for solar and wind powered applications.



QUARTER TURN CONTROL MODE



NON-INVASIVE CONTROL

Non-through-the-shaft magnetic switch design, it is controlled by the Hall switch inside the actuator. Equipped with local control / remote control / disable knob, and on / off / stop button (knob), accommodating with the indicator light and LCD screen to achieve non-invasive field control operations.

INFRARED REMOTE CONTROL

The intelligent type actuator is able to provide different remote control sets based on different application requirements. Such as portable infrared remote control in general places, and explosion-proof remote control for hazardous locations.

PLANETARY GEARS

Using high strength alloy steel for the planetary gear set, more compact and efficient, achieving greater output for the same volume. At the same time, having differential input for motor drive and hand wheel operation, we are therefore able to operate electrically and manually at the same time.

SPROCKET OPERATION

Based on the features of operating manually and electrically without clutch mechanism, sprocket operation is more convenient to operate the valve at higher positions.

QUARTER TURN

RELIABLE & STABLE

OVERLOAD PROTECTION

The power will automatically shut off when the valve jam occurs. Thus preventing further damage to the valve and actuator.

OPERATIONAL DIAGNOSIS

Intelligent actuators are equipped with multiple sensing devices. With the functions of real-time reflections of the control signal received by the actuator, fault alarm, operating parameters, status indication and other status. Multi-diagnostic function can locate the fault, thus making it easy for the users.

PASSWORD PROTECTION

Intelligent actuators possess classifiable password protection, which can be authorized to different operators to avoid misuse which causing the actuator failure.

OPERATIONAL SAFETY

F grade insulation motor. The motor winding has a temperature control switch to sense the temperature of the motor to protect the overheating issues, thus ensures the operational safety of the motor. (H grade optional).

MOISTURE RESISTANCE

Installed with heater inside the actuator used to remove the internal condensation which cause damages to electrical parts.

PHASE SEQUENCE CONTROL

Phase detection and correction functions avoid the actuator being damaged by connecting to the wrong power supply.

VOLTAGE PROTECTION

Protection against the high and low voltage situations.

WORKING ENVIRONMENT

ANTI-CORROSION

PROTECTION: Epoxy resin enclosure meets NEMA 4X, customer-special painting is available.

INGRESS

PROTECTION: IP67 is standard, IP68 is optional.

The definition of IP68 is:
Depth of water: Maximum 15 m under water level.
Duration of continuous immersion in water: Max.(72 hours).

FIREPROOFING

GRADE: High temperature fireproof enclosure meets requirements in different situation.
It can be customized according to special needs.

EXPLOSION-PROOF

RATING: Ex d IIC T6 design and IECEx, ATEX certifications which satisfy the requirements in hazardous locations.

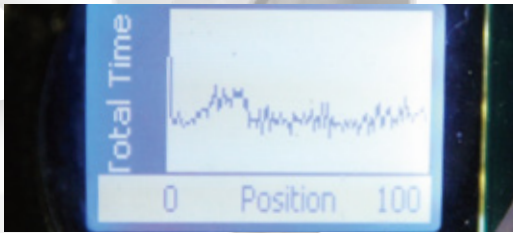
AMBIENT

TEMPERATURE: Temperature range is from -30 °C to 70 °C (-22 °F to +158 °F).

RELATIVE

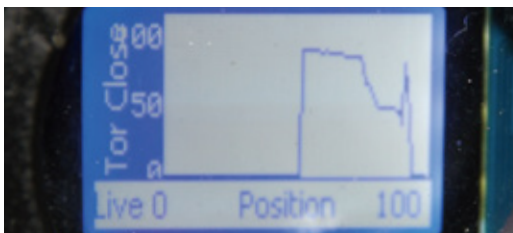
HUMIDITY: ≤ 95 % (at 25 °C /275 °F).

QUARTER TURN DATA MONITORING VS MANAGEMENT



TIME-POSITION CURVE:

The curve shows the running trend of the actuator, and the number of times the actuator has been passed at the corresponding positions.



AVERAGE TORQUE CURVE:

It records the average output torques in the corresponding positions of both OPEN and CLOSE directions. The operating load of the actuator can be detected via the curve.



OPERATION TREND CURVE:

The curve shows the cumulative number of positions corresponding to the control signal received by the actuator so far. It enables the clients to understand the overall controlling trend of the actuator.

QUARTER TURN INSTALLATION & MAINTENANCE

EOM 10 and above models are equipped with lifting ring for easy handling and on-site installation construction.

The mounting flange is in accordance with ISO 5211 international standard, and the replaceable spline sleeve makes the installation more flexible.

The wiring cavity with double sealing structure can be selected, while the actuator is well sealed and protected when installed and debugged on site.

a shrapnel terminal block, doesn't need to install a special wiring copper ring and can be directly connected. On-site installation is more convenient.

Seal off lubrication design, without regular grease supplement, life-long maintenance-free.



QUARTER TURN TECHNICAL SPECIFICATION

Basic (B)



EFM1/A series



EFM1/A/B-H series



EOM2-9 series



EOM10-12 series



EOM13-15 series

General Parameters	Torque Range	▪ 35 – 20000 N.m	
	Switch Time	▪ 11 – 155 s	
	Ambient Temperature	▪ -25 °C ... 70 °C ○ Optional: -40 °C ... 60 °C	
	Anti-vibration Level	▪ JB/T8219	
	Noise Level	▪ Less than 75 dB within 1 m	
	Electrical interface	▪ TwoPG13.5 (<100N.m) TwoPG16 (≥100N.m) (customized)	
	Ingress Protection	▪ IP67, Optional: IP68 <small>The definition of IP68 is: Depth of water: Maximum 15 m under water level. Duration of continuous immersion in water: Max.(72 hours).</small>	
Connection size	▪ ISO5211		
Mechanical Parameters	Motor Specifications	▪ Class F, with thermal protector up to +135 °C (+275 °F) ○ Optional: Class H	
	Working System	▪ On-off Type: S2 ~ 15 min, no more than 600 times per hour start	
	Applicable Voltage	▪ 3 phase: AC (±10 %); Hz (±5 %) 50 Hz (220, 240, 380, 400, 460, 500, 525 和 550 Volts) 60 Hz (208, 220, 230, 240, 380, 440, 460, 480, Volts) ▪ DC: 24 V (±10 %) ※ EFM series is for 1 phase only (For special inquire, please contact Flowinn)	
	Bus	▪ N/A	
	On/off Type Signal	Input	▪ Built-in contacts for 5A @ 250Vac (depending on the control box)
		Signal Feedback	▪ Opening stroke limit, closing stroke limit ▪ Opening over torque, closing over torque ○ Optional: Semi-modulating type - position feedback potentiometer ○ Optional: 4 ~ 20 mA to send
		Malfunction Feedback	▪ Integrated fault alarm: Motor overheating, over torque and such contacts ○ Optional: Undercurrent protection contact
	Modulating Type Signal	Input	▪ N/A
		Output	▪ N/A
		Signal Reverse	▪ N/A
Loss Signal Mode Setting		▪ N/A	
Dead Zone		▪ N/A	
Time Lag		▪ N/A	
Control mode	Indication	▪ 3D opening indicator	
	Operation Settings	▪ N/A	
	Local Control	▪ N/A	
Others	Intelligently Analyze Data Records	▪ N/A	
	Other Function	▪ Moisture-resistant heaters (anti-moisture device) ▪ Torque protection ▪ Motor overheat protection	

※For explosion protection options, please refer to the P10 explosion-proof rating and parameter list.

Integral (M)



EFMB-1/2/3 series



EFM1/A series



EFM1/A/B-H series



EOM2-9 series



EOM10-12 series



EOM13-15 series

General Parameters	Torque Range		▪ 10 - 20000 N.m
	Switch Time		▪ 11 - 155 s
	Ambient Temperature		▪ -25 °C ... +70 °C
	Anti-vibration Level		▪ JB/T8219
	Noise Level		▪ Less than 75 dB within 1 m
	Electrical interface		▪ Two PG13.5 (<100N.m) Two PG16 (≥100N.m) (customized)
	Ingress Protection		▪ IP67, Optional: IP68 <small>The definition of IP68 is: Depth of water: Maximum 15 m under water level. Duration of continuous immersion in water: Max. (72 hours).</small>
	Connection size		▪ IS05211
Mechanical Parameters	Motor Specifications		▪ Class F, with thermal protector up to +135 °C (+275 °F) Optional: Class H
	Working System		▪ On/off type: S2 ~ 15 min no more than 600 times per hour start ▪ Modulating type: S4 ~ 50% up to 600 triggers per hour Optional: 1200 times per hour
	Applicable Voltage		▪ 1 phase: Voltage (±10 %); Hz (±5 %) 50 Hz (24, 220, 230, 240 Volts) 60 Hz (24, 110, 120, 220, 230, 240 Volts) ▪ 3 phase: Voltage (±10 %); Hz (±5 %) 50 Hz (220, 240, 380, 400, 460, 500, 525 和 550 Volts) 60 Hz (208, 220, 230, 240, 380, 440, 460, 480, Volts) ▪ DC: 24 V (±10 %) ※ EFM series is for 1 phase only (For special inquire, please contact Flowinn)
	Bus		▪ N/A
	On/off Type Signal	Input	▪ AC/DC 24 input control or AC 110/220 V input control
		Signal Feedback	▪ Close the valve contact ▪ Open the valve contact (contact capacity: 5 A @ 250 Vac) Optional: Opening torque signal contact Closing torque signal contact Local/remote contacts Integrated fault contact 4 ~ 20 mA to send ※ EFM series has no torque options
		Malfunction Feedback	▪ Integrated fault alarm: Power off, motor over heating, lack of phase, over torque, signal off ※ EFM series has no torque options
	Modulating Type Signal	Input	▪ Input signal: 4 - 20 mA; 0 - 10 V; 2 - 10 V ▪ Input impedance: 250 Ω (4 - 20 mA)
		Output	▪ Output signal: 4 - 20 mA; 0 - 10 V; 2 - 10 V ▪ Output impedance: ≤ 750 Ω (4 - 20 mA) (Repeatability and linearity within ± 1 % of full valve stroke)
		Signal Reverse	▪ Support
Loss Signal Mode Setting Dead Zone		▪ Support ▪ ≤ 2.5 %	
Time Lag		▪ N/A	
Control mode	Indication		▪ 3D opening indicator
	Operation Settings		▪ N/A
	Local Control		▪ N/A
Others	Intelligently Analyze Data Records		▪ N/A
	Other Function		▪ Phase correction (3-phase power supply only) ▪ Torque protection ▪ Motor overheat protection ▪ Moisture-resistant heaters (anti-moisture device)

※For explosion protection options, please refer to the P10 explosion-proof rating and parameter list.

QUARTER TURN TECHNICAL SPECIFICATION

Integration (Y)



EFM1/A/B-H series



EOM2-9 series

General Parameters	Torque Range		▪ 35 – 20000 N. m
	Switch Time		▪ 11 – 155 s
	Ambient Temperature		▪ -25 °C ... +70 °C
	Anti-vibration Level		▪ JB/T8219
	Noise Level		▪ Less than 75 dB within 1 m
	Electrical interface		▪ Two PG13.5 (<100N. m) Two PG16 (≥100N. m) (customized)
	Ingress Protection		▪ IP65
	Connection size		▪ ISO5211
Mechanical Parameters	Motor Specifications		▪ Class F, with thermal protector up to +135 °C (+275 °F) Optional: Class H
	Working System		▪ On/off type: S2 ~ 15 min no more than 600 times per hour start ▪ Modulating type: S4 ~ 50% up to 600 triggers per hour Optional: 1200 times per hour
	Applicable Voltage		▪ 1 phase: Voltage (±10 %); Hz (±5 %) 50 Hz (24, 220, 230, 240 Volts) 60 Hz (24, 110, 120, 220, 230, 240 Volts) ▪ 3 phase: Voltage (±10 %); Hz (±5 %) 50 Hz (220, 240, 380, 400, 460, 500, 525 和 550 Volts) 60 Hz (208, 220, 230, 240, 380, 440, 460, 480, Volts) ▪ DC: 24 V (±10 %) ※ EFM series is for 1 phase only (For special inquire, please contact Flowinn)
	Bus		▪ N/A
	On/off Type Signal	Input	▪ AC/DC 24 input control or AC 110/220 V input control
		Signal Feedback	▪ Close the valve contact ▪ Open the valve contact (contact capacity: 5 A @ 250 Vac) Optional: Opening torque signal contact Closing torque signal contact Local/remote contacts Integrated fault contact 4 ~ 20 mA to send ※ EFM series has no torque options
		Malfunction Feedback	▪ Integrated fault alarm: Power off, motor overheating, lack of phase, over torque, signal off ※ EFM series has no torque options
	Modulating Type Signal	Input	▪ Input signal: 4 – 20 mA; 0 – 10 V; 2 – 10 V ▪ Input impedance: 250 Ω (4 – 20 mA)
		Output	▪ Output signal: 4 – 20 mA; 0 – 10 V; 2 – 10 V ▪ Output impedance: ≤ 750 Ω (4 – 20 mA) (Repeatability and linearity within ± 1 % of full valve stroke)
		Signal Reverse	▪ Support
Loss Signal Mode Setting		▪ Support	
Dead Zone		▪ ≤ 2.5 %	
Time Lag		▪ N/A	
Control mode	Indication		▪ 3D opening indicator ▪ On/off/remote control/fault indicator (Button type) ▪ Open/close/power indicator (Knob)
	Operation Settings		▪ N/A
	Local Control		▪ Non-intrusive local control knob: Open/close/stop ▪ Non-intrusive local control knob: Local/remote/prohibit
Others	Intelligently Analyze Data Records		▪ N/A
	Other Function		▪ Phase correction(4-phase power supply only) ▪ Torque protection ▪ Motor overheat protection ▪ Moisture-resistant heaters (anti-moisture device)

QUARTER TECHNICAL SPECIFICATION TURN

Intelligent (I)



EOM2-9 series

General Parameters	Torque Range		▪ 100 – 20000 N.m
	Switch Time		▪ 19 – 155 s
	Ambient Temperature		▪ -25 °C ... +70 °C
	Anti-vibration Level		▪ JB/T8219
	Noise Level		▪ Less than 75 dB within 1 m
	Electrical interface		▪ Two PG16. (customized)
	Ingress Protection		▪ IP67, Optional: IP68 <small>The definition of IP68 is: Depth of water: Maximum 15 m under water level. Duration of continuous immersion in water: Max.(72 hours).</small>
	Connection size		▪ IS05211
Mechanical Parameters	Motor Specifications		▪ Class F, with thermal protector up to +135 °C (+275 °F) Optional: Class H
	Working System		▪ On/off type: S2 ~ 15 min no more than 600 times per hour start ▪ Modulating type: S4 ~ 50% up to 600 triggers per hour Optional: 1200 times per hour
	Applicable Voltage		▪ 1 phase: Voltage (±10%); Hz (±5%) 50 Hz (24, 220, 230, 240 Volts) 60 Hz (24, 110, 120, 220, 230, 240 Volts) ▪ 3 phase: Voltage (±10 %); Hz (±5 %) 50 Hz (220, 240, 380, 400, 460, 500, 525 和 550 Volts) 60 Hz (208, 220, 230, 240, 380, 440, 460, 480, Volts) ▪ DC: 24 V (±10 %) (For special inquire, please contact Flowinn)
	Bus		▪ N/A
	On/off Type Signal	Input	▪ AC 24 auxiliary power input control ▪ Optoelectronic isolation
		Signal Feedback	▪ Close the valve contact ▪ Open the valve contact (contact capacity: 5 A @ 250 Vac) Optional: Opening torque signal contact Closing torque signal contact Local/remote contacts Integrated fault contact 4 ~ 20 mA to send
		Malfunction Feedback	▪ Integrated fault alarm: Power off, motor overheating, lack of phase, over torque, signal off, ESD beyond protection, terminal output ※ EFM series has no torque options
	Modulating Type Signal	Input	▪ Input signal: 4 – 20 mA; 0 – 10 V; 2 – 10 V ▪ Input impedance: 250 Ω (4 – 20 mA)
		Output	▪ Output signal: 4 – 20 mA; 0 – 10 V; 2 – 10 V ▪ Output impedance: ≤ 750 Ω (4 – 20 mA) (Repeatability and linearity within ± 1 % of full valve stroke)
		Signal Reverse	▪ Support
Loss Signal		▪ Support	
Mode Setting		▪ 0.5 ~ 9.9 % adjustable rate within full stroke	
Control mode	Indication	▪ LCD screen opening indicator ▪ On/off/remote control/fault indicator (Digital display of the opening percentage)	
	Operation Settings	▪ Settings done opening the cover	
	Local Control	▪ Non-intrusive local control knob: Open/close/stop ▪ Non-intrusive local control knob: Local/remote/prohibit	
Others	Intelligently Analyze Data Records	▪ N/A	
	Other Function	▪ Phase correction (3-phase power supply only) ▪ Alarm signal (local and remote included) ▪ Torque protection ▪ Motor overheat protection ▪ Moisture-resistant heaters (anti-moisture device) ▪ Infrared remote control Optional: Explosion-proof infrared remote control	

※For explosion protection options, please refer to the P10 explosion-proof rating and parameter list.

QUARTER TURN TECHNICAL SPECIFICATION

Super Intelligent (S)



EOM2-9 series

General Parameters	Torque Range		▪ 100 – 20000 N.m
	Switch Time		▪ 19 – 155 s
	Ambient Temperature		▪ -25 °C ... +70 °C
	Anti-vibration Level		▪ JB/T8219
	Noise Level		▪ Less than 75 dB within 1 m
	Electrical interface		▪ Two NPT 3/4, Two NPT1 1/2 (customized)
	Ingress Protection		▪ IP67 Optional: IP68 <small>The definition of IP68 is: Depth of water: Maximum 15 m under water level. Duration of continuous immersion in water: Max. (72 hours).</small>
Connection size		▪ IS05211	
Mechanical Parameters	Motor Specifications		▪ Class F, with thermal protector up to +135 °C (+275 °F) Optional: Class H
	Working System		▪ On/off type: S2 ~ 15 min no more than 600 times per hour start ▪ Modulating type: S4 ~ 50% up to 600 triggers per hour Optional: 1200 and 1800 times per hour
	Applicable Voltage		▪ 1 phase: Voltage (±10 %); Hz (±5 %) 50 Hz (24, 220, 230, 240 Volts) 60 Hz (24, 110, 120, 220, 230, 240 Volts) ▪ 3 phase: Voltage (±10 %); Hz (±5 %) 50 Hz (220, 240, 380, 400, 460, Volts) 60 Hz (208, 220, 230, 240, 380, 440, 460, 480, 575 和 600 Volts) ▪ DC: 24 V (±10 %) (For special inquire, please contact Flowinn)
	Bus		▪ Modbus
	On/off Type Signal	Input	▪ 20 ~ 60 V AC/DC or 60 – 120 V AC ▪ Optoelectronic isolation
		Signal Feedback	▪ Relay X 5 (4 can be set to "constant open" or "constant closed" contacts. 1 integrated fault contact) a. On/off in place b. On/off over torque c. Local/remote d. Center position e. Multiple malfunctions to choose Optional: 4 ~ 20 mA to send
		Malfunction Feedback	▪ Phase correction ▪ Torque switch ▪ Heat protection ▪ Jammed valve protection ▪ Broken signal protection ▪ Instantaneous ▪ Other alarms reverse protection
	Modulating Type Signal	Input	▪ Input signal: 4 ~ 20 mA; 0 ~ 10 V; 2 ~ 10 V (the input signal can be arbitrarily corresponding to the valve position) ▪ Accuracy: (1 %) ▪ Input impedance: 75 Ω (4 ~ 20 mA)
		Output	▪ Output signal: 4 – 20 mA; 0 – 10 V; 2 – 10 V ▪ Output impedance: ≤ 750 Ω (4 – 20 mA) (Repeatability and linearity within ± 1 % of full valve stroke)
		Signal Reverse Loss Signal Setting	▪ Support
Dead Zone		▪ 0 – 25.5 % adjustable rate within full stroke	
Time Lag		▪ 0 – 25.5 s (Adjustable)	
Control mode	Indication		▪ LCD screen opening indicator ▪ On/off/remote control/fault indicator (Digital display of the opening percentage and torque percentage)
	Operation Settings		▪ Settings done without opening cover (menu settings by the remote control) ▪ Configuration settings (such as valve position, the maximum opening, the maximum torque, etc.)
	Local Control		▪ Non-intrusive local control knob: Open/close/stop ▪ Non-intrusive local control knob: Local/remote/prohibit
Others	Intelligently Analyze Data Records		▪ Use infrared remote control to conduct fault diagnosis analysis on the display ▪ Use two-way remote control to achieve fast and safe nonintrusive communication and data exchange. Able to analyze the actuator data and given recommendations
	Other Function		▪ Phase correction (3-phase power supply only) ▪ Alarm signal (local and Telecontrol) ▪ Torque setting and protection ▪ Motor overheat protection ▪ Moisture-resistant heaters (anti-moisture device) ▪ Operation start up recording ▪ Operational trend records ▪ ESD can be set to fully opened, fully closed, and remain still ▪ Torque bypass ▪ Event log ▪ Operation time ▪ Average torque ▪ Valve torque curve Optional: Two-way remote control Optional: Explosion-proof infrared remote control

※For explosion protection options, please refer to the P10 explosion-proof rating and parameter list.

EXPLOSION-PROOF SPECIFICATION **QUARTER TURN**

Explosion-proof series



EXC(G)1/A/B series



EXB(C)2-9 series



EXCJ2-9 series

	Basic (B)Integral (M)	Intelligent (I)Super Intelligent (S)
NEPSI certified	<ul style="list-style-type: none"> NEPSI : GB 3836.1, GB 3836.2, GB 12476.1 Ex d IIB/IIC T4 — T6 Gb DIP A21 TA, T4 (GB 3836.1, GB 3836.2) Ex tb IIIC T85 °C to T135 °C (GB 12476.1) 	<ul style="list-style-type: none"> NEPSI : GB 3836.1, GB 3836.2, GB 12476.1 Ex d IIB/IIC T4 — T6 Gb DIP A21 TA, T4 (GB 3836.1, GB 3836.2) Ex tb IIIC T85 °C to T135 °C (GB 12476.1)
ATEX certified	<ul style="list-style-type: none"> ATEX (94/9/EC) II 2 GD c. EN 60079-0, EN 60079-1, EN 60079-31 Ex d IIB T4 — T6 Gb T4 Ex tb IIIC T85 °C/T100 °C/T135 °C Db T4, IP66 Temperature range:-20 °Cto+65 °C ○ Optional: -40 °C to +60 °C ○ Optional: IP67/IP68 (EN 60529) Ex d IIC T4 — T6 Gb Ex tb IIIC T85 °C/T100 °C/T135 °C Db T4, IP66 Temperature range:-20 °Cto+65 °C ○ Optional: -40 °C to +60 °C ○ Optional: IP67/IP68 (EN 60529) 	<ul style="list-style-type: none"> ATEX (94/9/EC) II 2 GD c. EN 60079-0, EN 60079-1, EN 60079-31 Ex d IIC T4 — T6 Gb Ex tb IIIC T85 °C/T100 °C/T135 °C Db T4, IP66 Temperature range:-20 °Cto+65 °C ○ Optional: -40 °C to +60 °C ○ Optional: IP67/IP68 (EN 60529)
IECEX certified	<ul style="list-style-type: none"> IECEX. IEC 60079-0 & IEC 600679-1 Ex d IIC T4 — T6 Gb Ex tb IIIC T85 °C — T135 °C Db IP66 Temperature range:-20 °Cto+65 °C ○ Optional: -40 °C to +65 °C ○ Optional: IP67/IP68 (IEC 60529) 	<ul style="list-style-type: none"> IECEX. IEC 60079-0 & IEC 600679-1 Ex d IIB T4 — T6 Gb Ex tb IIIC T85 °C — T135 °C Db IP66 Temperature range:-20 °Cto+65 °C ○ Optional: -40 °C to +65 °C ○ Optional: IP67/IP68 (IEC 60529) Ex d IIC T4 — T6 Gb Ex tb IIIC T85 °C — T135 °C Db IP66 Temperature range:-20 °Cto+65 °C ○ Optional: -40 °C to +65 °C ○ Optional: IP67/IP68 (IEC 60529)
CSA certified	<ul style="list-style-type: none"> CSA Explosionproof to CSA 60079-0-11, CSA 600679-1-11, CSA 60079-31-12, UL 60079-0-11, UL 600679-1-11, IAS 60079-31-13 Ex d IIB T4 — T6 Gb Ex tb IIIC T4 — T6 Db IP66 Temperature range:-25 °Cto+65 °C ○ Optional: IP67/IP68 (EN 60529) Ex d IIC T4 — T6 Gb Ex tb IIIC T4 — T6 Db IP66 Temperature range:-25 °C to +65 °C ○ Optional: IP67/IP68 (EN 60529) 	<ul style="list-style-type: none"> CSA Explosionproof to CSA 60079-0-11, CSA 600679-1-11, CSA 60079-31-12, UL 60079-0-11, UL 600679-1-11, IAS 60079-31-13 Ex d IIC T4 — T6 Gb Ex tb IIIC T4 — T6 Db IP66 Temperature range:-25 °Cto+65 °C ○ Optional: IP67/IP68 (EN 60529)

※Please refer to P5-P9 for the technical parameters of the above models.

QUARTER TURN REGULAR SERIES, EXPLOSION PROOF

ON-OFF TYPE VS MODULATING TYPE

REGULAR SERIES	ON/OFF TYPE	MODULATING TYPE	Explosion-proof Series	ON/OFF TYPE	MODULATING TYPE
Basic (B)	√	—	Basic (B)	√	—
Integral (M)	√	√	Integral (M)	√	√
Integration (Y)	√	√	Intelligent (I)	√	√
Intelligent (I)	√	√	Super Intelligent (S)	√	√
Super Intelligent (S)	√	√			

QUARTER TURN GENERAL SPECIFICATION

— TECHNICAL PARAMETER CHART

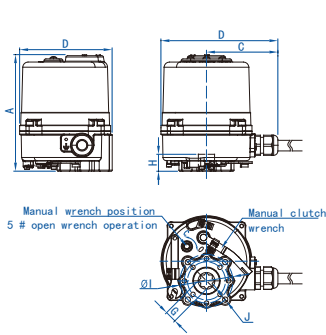
Model	Power (W)	Max Output Torque(N.m)		Max Output Torque(lbf. in)		Running time (Sec)				ISO 5211	Remarks
		AC 110 V AC 220 V AC/DC 24 V	AC 220 V AC 380 V 3 phase	AC 110 V AC 220 V AC/DC 24 V	AC 220 V AC 380 V 3 phase	50 Hz		AC/DC 24 V	Fail-safe		
						AC 110 V AC 220 V	AC 380 V 3 phase				
EFMB-1	5	10	—	89	—	13	—	13	—	F03/F04/ F05	Manual wrench
EFMB-2	8	20	—	177	—	12	—	12	—		
EFMB-3	10	30	—	266	—	11	—	11	—		
EFM1-(H)	10	35	—	310	—	11	—	8	—	F03/F05/ F07	Manual wrench options: Handwheel
EFMA-(H)		50	—	443	—	15	—	10	—		
EFMB-H		80	—	708	—	22	—	15	—		
EOM 2	40	100	—	885	—	19	—	14	—	F05/F07/ F10/F12	Handwheel operation, planetary gear mechanism
EOM 3		200	—	1770	—	39	—	28	—		
EOM 3A		300	—	2655	—	39	—	28	—		
EOM 4	90	400	—	3540	—	29	—	21	—	F10/F12/ F14	
EOM 5		600	—	5310	—	39	—	28	—		
EOM 6		800	—	7080	—	47	—	34	—		
EOM 7	120	1000	—	8850	—	47	—	34	—	F12/F14/ F16	
EOM 7A		1300	—	11505	—	47	—	34	—		
EOM 8		1700	—	15045	—	34	—	25	—		
EOM 8A	200	2000	—	17700	—	34	—	25	—	F14/F16	
EOM 9		2300	—	20355	—	47	—	34	—		
EOM 10		3500	—	30975	—	76	—	55	—		
EOM 11	400	5000	—	44250	—	105	—	76	—	F25	
EOM 12		8000	—	70800	—	143	—	103	—		
EOM 13	400	—	13000	—	115050	—	109	—	—	F25/F30	
EOM 14		—	16000	—	141600	—	129	—	—		
EOM 15		—	20000	—	177000	—	155	—	—		

Note: Standard configuration.

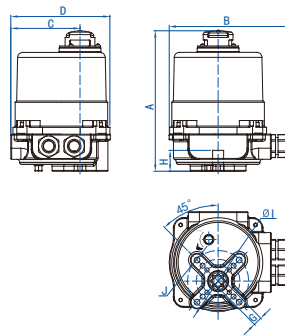
1. Rated torque is 75 % of the max torque.
2. Motor insulation is class F, class H is optional.
3. The running time of 60 Hz is 5/6 of that of 50 Hz. The max output torque is the same as above.
4. Above mentioned 3 phase output power doesn't apply to EFM1-(H),EFMA-(H).

DIMENSION **QUARTER TURN**

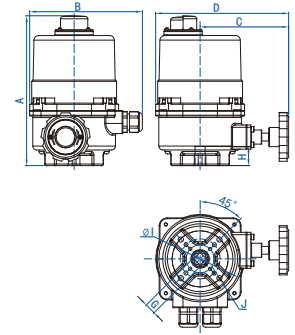
— BASIC TYPE & INTEGRAL TYPE



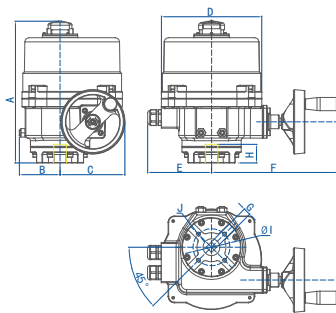
EFMB 1/2/3



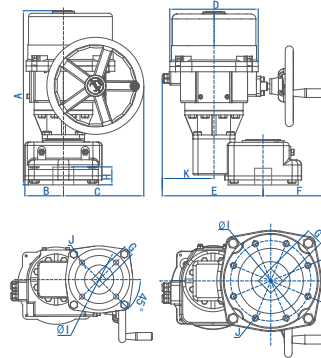
EFM 1/A/B



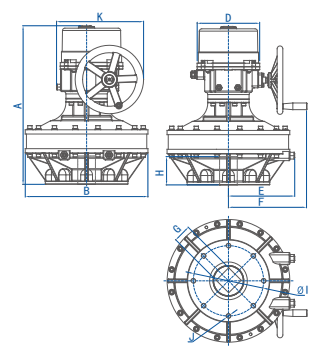
EFM 1/A/B-H



EOM 2~9



EOM 10~12



EOM 13~15

Model	A	B	C	D	E	F	G	H	Φ I	J	Weight (kg)
EFMB-1	110	111	71	87	-	-	11x11	16	36	4-M5	1
EFMB-2										4-M5	
EFMB-3										4-M6	
EFM1	On/off	165	82	118	-	-	11x11	-	36	4-M5	3
	Modulating									4-M5	3.2
EFMA	185						14x14			4-M5	
EFM1-H	On/off	192	150	170	-	-	11x11	20	50	4-M6	3.6
	Modulating									4-M6	3.8
EFMA-H							14x14			4-M6	
EFMB-H							17x17			4-M8	
EOM2	268	77	123	216	121	240	14x14	35	70	4-M8	11
EOM3							17x17				
EOM4							22x22				
							22x22				
EOM5	327	103	187	266	150	297	27x27	55	102	4-M10	22
EOM6							27x27		125	4-M12	
EOM7							27x27		125	4-M12	
EOM8	380	127	242	293	161	333	27x27	65	125	4-M12	36
EOM9							36x36		140	4-M16	
EOM10	532	118	242	293	308	186	40x40	85	140	4-M16	76
EOM11							46x46		165	4-M20	
EOM12	545	160	242	293	343	160	55x55	130	254	8-M16	107
EOM13							55x55		254	8-M16	
EOM14	672	520	-	293	281	331	75x75	120	298	8-M20	218
EOM15							75x75		298	8-M20	

Note: 1. Dimension unit is mm.

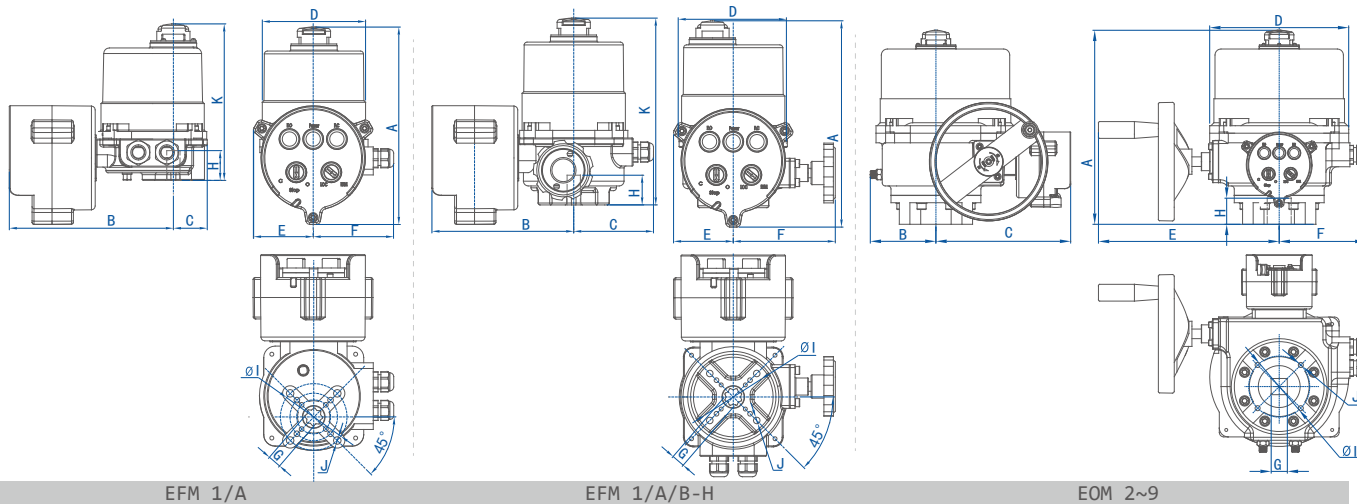
2. Above "G" dimension is what we recommended. However, it can be customized according to customers' requirements.

3. Above "ΦI" and "J" dimensions are in accordance with ISO 5211 flange specifications. Which means that there's only one specification can be chosen, please specify when ordering.

BASIC TYPE	INTEGRAL TYPE
More functions as options:	<input type="checkbox"/> Quick open <input type="checkbox"/> Slow open <small>(The running time can be customized. Quick and slow open functions are added.)</small>
More accessories as options:	<input type="checkbox"/> Flange <input type="checkbox"/> Spine sleeve <input type="checkbox"/> Independent wiring box <input type="checkbox"/> Sprocket

QUARTER TURN DIMENSION

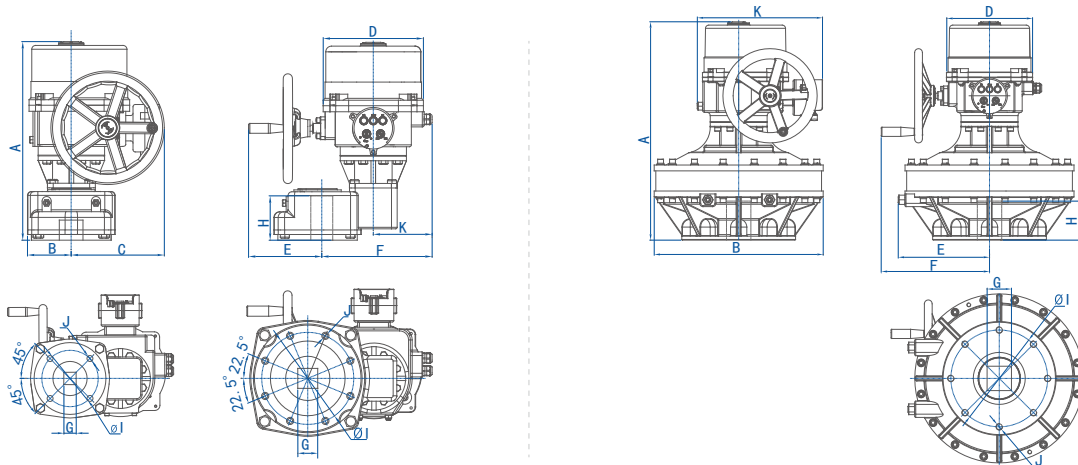
INTEGRATION TYPE



EFM 1/A

EFM 1/A/B-H

EOM 2~9



EOM 10~12

EOM 13~15

Model		A	B	C	D	E	F	G	H	Φ	J	K	Weight (kg)
EFM1	On-off	207	173	36	114	63	85	11 X 11 14 X 14	20	36 50 70	4- M5 4- M6 4- M8	164	4.1 4.3
	Modulating	227											
EFM1 -H	On-off	217	149	84	114	63	108	11 X 11 14 X 14 17 X 17	20	36 50 70	4- M5 4- M6 4- M8	197	4.7 4.9
	Modulating	237											
EOM 2		268	77	208	190	240	121	14 X 14 17 X 17	35	70	4- M8	-	12.2
EOM 3													
EOM 4		327	110	225	266	301	145	22 X 22 27 X 27	55	102 102 125	4- M10 4- M10 4- M12	-	23.2
EOM 5													
EOM 6													
EOM 7		380	127	248	265	333	161	27 X 27 27 X 27	65	125 140	4- M12 4- M16	-	37.2
EOM 8													
EOM 9													
EOM 10		532	118	242	265	194	292	40 X 40 46 X 46	85	140 165 165	4- M16 4- M20 4- M20	156	77.2
EOM 11													
EOM 12													
EOM 13		672	520	-	265	281	331	55 X 55 75 X 75	120	254 298	8- M16 8- M20	385	219.2
EOM 14													
EOM 15													

Note: 1. Dimension unit is mm.

2. Above "G" dimension is what we recommended. However, it can be customized according to customers' requirements.

3. Above "Φ" and "J" dimensions are in accordance with ISO 5211 flange specifications. Which means that there's only one specification can be chosen, please specify when ordering.

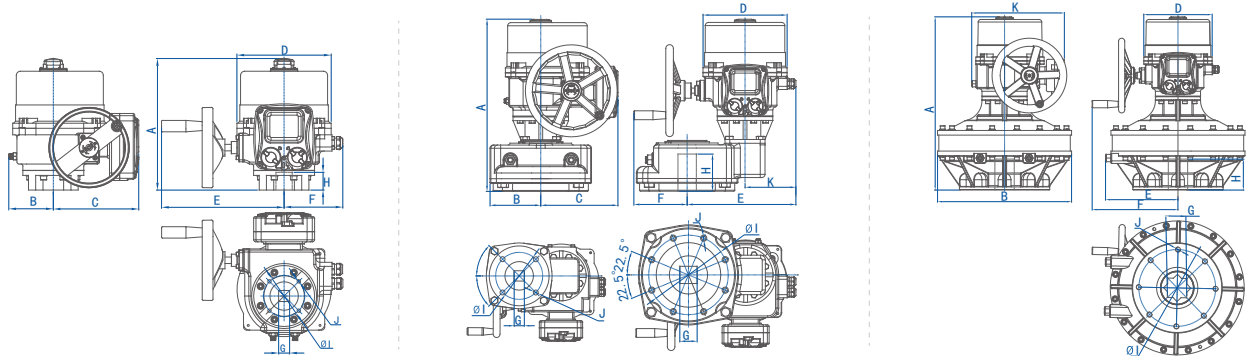
INTEGRATION TYPE

More functions as options: Quick Open Slow Open
(The running time can be customized. Quick and slow open functions are added.)

More accessories as options: Flange Spline sleeve Independent wiring box Sprocket

DIMENSION **QUARTER TURN**

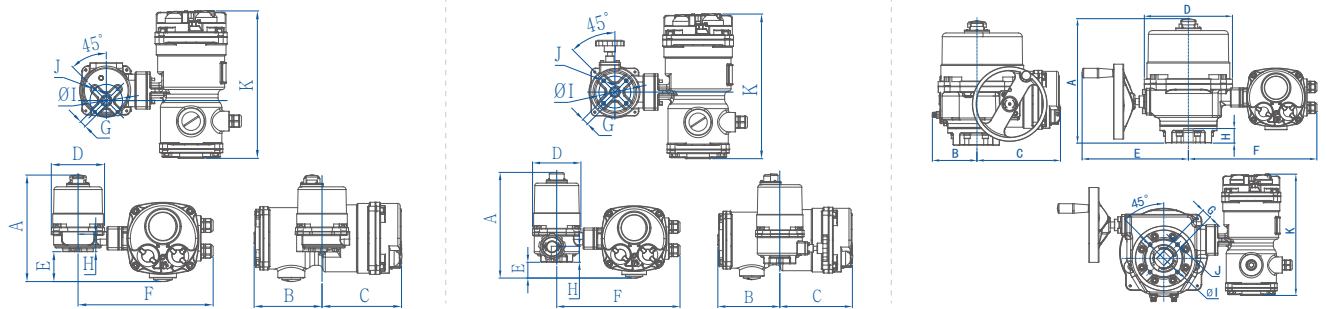
— INTELLIGENT TYPE



Model	EOM 2~9			EOM 10~12				EOM 13~15				Weight (kg)				
	A	B	C	D	E	F	G	H	ΦI	J	K					
EOM 2	268	79	198	190	240	121	14 X 14	35	70	4-M8	-	13				
EOM 3							17 X 17									
EOM 4							22 X 22									
EOM 5	327	110	210	232	301	145	22 X 22	55	102	4-M10	-	24				
EOM 6							27 X 27									
EOM 7							27 X 27									
EOM 8	380	127	234	265	333	161	27 X 27	65	125	4-M12	-	38				
EOM 9							36 X 36									
EOM 10							532						118	227	265	180
EOM 11	46 X 46	165	4-M20													
EOM 12	55 X 55	165	4-M20													
EOM 13	672	520	-	265	281	331	55 X 55	120	254	8-M16	156	109				
EOM 14							75 X 75						298	8-M20	385	220
EOM 15							75 X 75									

DIMENSION **QUARTER TURN**

— SUPER INTELLIGENT TYPE



Model	EFM1/A			EFM1/A/B-H				EOM 2~9				Weight (kg)		
	A	B	C	D	E	F	G	H	ΦI	J	K			
EFM1/A	185	147	172	115	38	298	11 X 11	30	36	4-M5	319	8		
EFM1/A/B-H	212	147	172	115	65	298	14 X 14	50	50	4-M6	319	8		
EOM 2	268	79	198	190	240	121	14 X 14	35	70	4-M8	319	13		
EOM 3							17 X 17							
EOM 4							22 X 22							
EOM 5	327	110	210	232	301	338	22 X 22	55	102	4-M10	319	24		
EOM 6							27 X 27							
EOM 7							27 X 27							
EOM 8	380	127	234	265	333	361	27 X 27	65	125	4-M12	319	38		
EOM 9							36 X 36							
EOM 10							40 X 40						85	140
EOM 11	510	46 X 46	165	4-M20										
EOM 12	545	160			244	265	168	545	55 X 55	130	254	8-M16	361	109
EOM 13	672	520	-	265	281	363	55 X 55	120	254	8-M16	333	220		
EOM 14							75 X 75						298	8-M20
EOM 15							75 X 75							

**INTELLIGENT TYPE/
SUPER INTELLIGENT TYPE**

More functions as options:

- Quick Open Slow Open
- (The running time can be customized. Quick and slow open functions are added.)

More accessories as options:

- Flange Spine sleeve
- Independent wiring box Sprocket Remote control

Note: 1. Dimension unit is mm.
 2. Above "G" dimension is what we recommended. However, it can be customized according to customers' requirements.
 3. Above "ΦI" and "J" dimensions are in accordance with ISO 5211 flange specifications. Which means that there's only one specification can be chosen, please specify when ordering.

QUARTER TURN GENERAL SPECIFICATION

EXPLOSION-PROOF SERIES

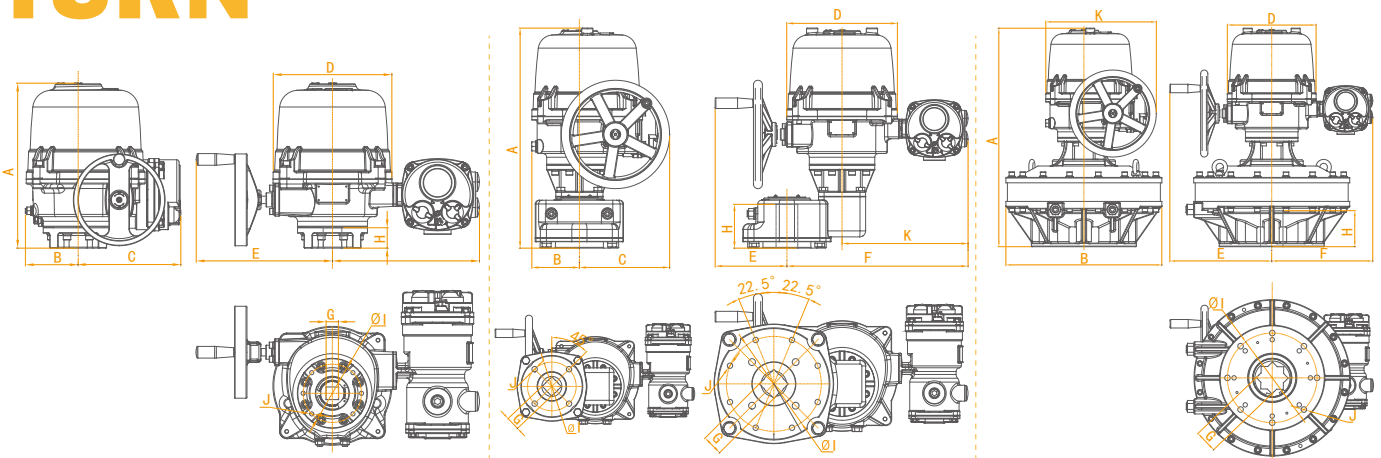
Model	Power (W)	Max Output Torque (N.m)				Max Output Torque (lb.in)				Running time (Sec)				ISO 5211	Remarks
		AC 110 V		AC 220 V		AC 110 V		AC 220 V		50 Hz		AC/DC 24 V	Fail-safe		
		AC 220 V	AC/DC 24 V	AC 380 V 3 phase	AC 220 V	AC/DC 24 V	AC 380 V 3 phase	AC 220 V	AC 380 V 3 phase	AC 110 V	AC 380 V				
EXC (G) 1	10	35	-	-	310	-	-	11	-	-	8	-	F03/F05/ F07	Manual wrench Options: Handwheel	
EXC (G) A		50	-	-	443	-	-	15	-	-	10	-		Handwheel	
EXC (G) B		80	-	-	708	-	-	22	-	-	15	-			
EXB (G) 2	40	100	-	-	885	-	-	19	-	-	14	-	F05/F07/ F10/F12	Handwheel operation, planetary gear mechanism	
EXB (G) 3		200	-	-	1770	-	-	39	-	-	28	-			
EXB (G) 3A		300	-	-	2655	-	-	39	-	-	28	-			
EXB (G) 4	90	400	-	-	3540	-	-	29	-	-	21	-	F10/F12/ F14		
EXB (G) 5		600	-	-	5310	-	-	39	-	-	28	-			
EXB (G) 6		800	-	-	7080	-	-	47	-	-	34	-			
EXB (G) 7	120	1000	-	-	8850	-	-	47	-	-	34	-	F12/F14/ F16		
EXB (G) 7A		1300	-	-	11505	-	-	47	-	-	34	-			
EXB (G) 8		1700	-	-	15045	-	-	34	-	-	25	-			
EXB (G) 8A	200	2000	-	-	17700	-	-	34	-	25	-	-			
EXB (G) 9		2300	-	-	20355	-	-	47	-	34	-	-			
EXB (G) 10		3500	-	-	30975	-	-	76	-	55	-	-	F14/F16		
EXB (G) 11	400	5000	-	-	44250	-	-	105	-	76	-	-			
EXB (G) 12		8000	-	-	70800	-	-	143	-	103	-	-	F25		
EXB (G) 13		-	13000	-	-	115050	-	-	109	-	-	-	-		
EXB (G) 14	400	-	16000	-	-	141600	-	-	129	-	-	-	F25/F30		
EXB (G) 15		-	20000	-	-	177000	-	-	155	-	-	-			

Note: Standard configuration.

1. Rated torque is 75 % of the max torque.
2. Motor insulation is class F, class H is optional.
3. The running time of 60 Hz is 5/6 of that of 50 Hz. The max output torque is the same as above.
4. Above mentioned 3 phase output power doesn't apply to EXC(G)1, EXC(G)A, EXC(G)B.

QUARTER TURN DIMENSION

— INTELLIGENT TYPE & SUPER INTELLIGENT TYPE



	EXCJ 2~9				EXCJ 10~12				EXCJ 13~15			
Model	A	B	C	D	E	F	G	H	ΦI	J	K	Weight (kg)
EXCJ 2	286	83	160	209	242	294	14 X 14	35	70	4- M8	319	13
EXCJ 3							17 X 17					
EXCJ 4							22 X 22					
EXCJ 5	354	113	220	255	293	315	22 X 22	55	102	4- M10	319	24
EXCJ 6							22 X 22		102			
EXCJ 7							27 X 27		125			
EXCJ 8	415	127	242	296	340	337	27 X 27	65	125	4- M12	319	38
EXCJ 9							36 X 36		140			
EXCJ 10							40 X 40		140			
EXCJ 11	589	127	242	296	192	484	46 X 46	85	165	4- M16	337	78
EXCJ 12							55 X 55		165			
EXCJ 13							55 X 55		254			
EXCJ 14	729	520	-	296	340	337	55 X 55	120	254	8- M16	369	220
EXCJ 15							75 X 75		298			

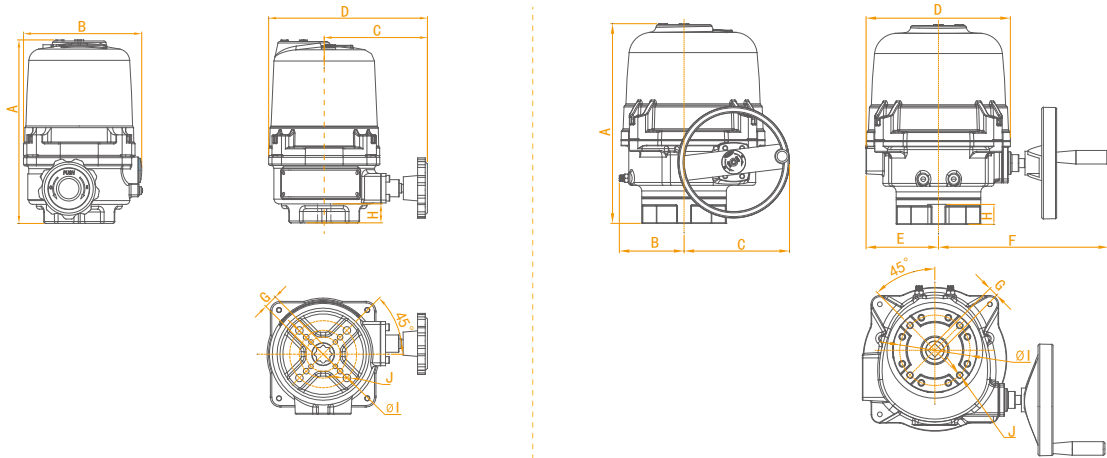
Note: 1. Dimension unit is mm.

2. Above "G" dimension is what we recommended. However, it can be customized according to customers' requirements.
3. Above "ΦI" and "J" dimensions are in accordance with ISO 5211 flange specifications. Which means that there's only one specification can be chosen, please specify when ordering.
4. EXCJ13~15 series are not certified due to that the only difference with the EXCJ10~12 series is the replacement of the gearbox, thus there's no effect on the explosion-proof performance.

INTELLIGENT TYPE	SUPER INTELLIGENT TYPE
More functions as options:	More functions as options:
<input type="checkbox"/> Quick Open <input type="checkbox"/> Slow Open (The running time can be customized. Quick and slow open functions are added.) <input type="checkbox"/> Spring return (Fail-safe)	<input type="checkbox"/> Quick Open <input type="checkbox"/> Slow Open (The running time can be customized. Quick and slow open functions are added.) <input type="checkbox"/> Spring return (Fail-safe)
More accessories as options:	More accessories as options:
<input type="checkbox"/> Flange <input type="checkbox"/> Spine sleeve <input type="checkbox"/> Sprocket <input type="checkbox"/> Explosion-proof remote control	<input type="checkbox"/> Flange <input type="checkbox"/> Spine sleeve <input type="checkbox"/> Sprocket <input type="checkbox"/> Explosion-proof remote control

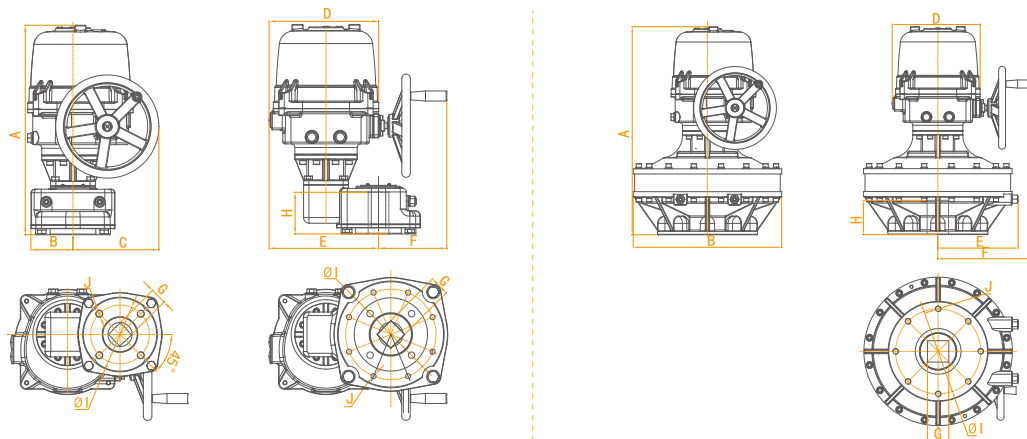
DIMENSION **QUARTER** TURN

— BASIC TYPE & INTEGRAL TYPE



EXC(G) 1/A/B-H

EXB(C) 2~9



EXB(C) 10~12

EXB(C) 13~15

Model	A	B	C	D	E	F	G	H	Φ I	J	Weight (kg)
EXC1-H EXCA-H EXCB-H	192	121	108	167	-	-	11 X 11 14 X 14	20	36 50 70	4- M5 4- M6 4- M8	3.2
EXCG1-H EXCGA-H EXCGB-H											
EXB(C) 2	286	83	126	209	108	242	14 X 14 17 X 17	35	70	4- M8	11
EXB(C) 3											
EXB(C) 4	354	115	187	256	129	302	22 X 22 22 X 22 27 X 27	55	102 102 125	4- M10 4- M10 4- M12	22
EXB(C) 5											
EXB(C) 6											
EXB(C) 7											
EXB(C) 8	415	136	242	308	152	340	27 X 27 36 X 36	65	125 140	4- M12 4- M16	36
EXB(C) 9											
EXB(C) 10	589	118	242	308	308	192	40 X 40 46 X 46	85	140 165 165	4- M16 4- M20 4- M20	76
EXB(C) 11											
EXB(C) 12	602	160	242	308	343	160	55 X 55	130	254	8- M16	107
EXB(C) 13	729	520	-	308	281	340	55 X 55 75 X 75	120	254 298	8- M16 8- M20	218
EXB(C) 14											
EXB(C) 15											

Note: 1. Dimension unit is mm.

2. Above "G" dimension is what we recommended. However, it can be customized according to customers' requirements.

3. Above "ΦI" and "J" dimensions are in accordance with ISO 5211 flange specifications. Which means that there's only one specification can be chosen, please specify when ordering.

4. EXB(C)13 ~ 15series are not certified due to that the only difference with the EXB(C)10 ~ 12 series is the replacement of the gearbox, thus there's no effect on the explosion-proof performance.

BASIC TYPE

More functions as options: Quick open Slow open
(The running time can be customized. Quick and slow open functions are added.)

More accessories as options: Flange Spline sleeve Sprocket

INTEGRAL TYPE

More functions as options: Quick Open Slow Open
(The running time can be customized. Quick and slow open functions are added.)

More accessories as options: Flange Spline sleeve Sprocket

what? FAIL-SAFE?

For the demand of the actuator to be returned to the default location when the power is off, we provide 3 solutions in battery return, capacitor return and spring return.

BATTERY BACKUP

With high-performance lithium battery as a backup power supply, when the system power is normal, the battery is charged and in standby mode. The battery is powered by the actuator and is executed to the preset position.

CAPACITOR RETURN

With super capacitor set as a backup power supply. When the system power is normal, the capacitor set is charged and in standby mode. When the system power is loss, the capacitor set supplies power to the actuator and performs to the preset position. Capacitors don't require special maintenance, no memory effect, charging time is short and up to 500,000 times for charge and discharge with the lifespan up to ten years.

SPRING RETURN

The special scroll wrap spring set is used as the energy storage unit. The spring stores energy when the system power is normal. When the system loss the power supply, the spring drives the valve and other devices to fully closed or fully open position. Pure mechanical mechanism unit with strong environmental adaptability, safe and reliable.

PERFORMANCE PARAMETERS

Voltage:
24 V AC / DC standard configuration
Other voltages must be matched with the power adapter.
(Transformer / switch power box).
EFM 1/A/B-(H) series 100 VA
EOM 2-3 series 250 VA
EOM 4-7 series 500 VA

Ambient temperature: -20 °C ~ +50 °C
Relative humidity: ≤ 95 % (25 °C)

Working environment:
Does not contain strong corrosive, flammable, explosive medium
Working time: S1 continuous working system

Control signal:
On/off type --- Switch contact signal
Modulating type --- 0 ~ 10 V / 2 ~ 10 V / 4 ~ 20 mA

Ingress protection class:
IP67 is the standard configuration, IP68 is optional

Battery parameters:
24 V DC, 1500 mA·h, charging time is 5 hours

Power failure mode: Fully open, fully close, remain still
Loss of power operation: ≥ 5 times full stroke
Output torque: ≤ 1000 N.m

PERFORMANCE PARAMETERS

Voltage:
24 V AC / DC standard configuration
Other voltages must be matched with the power adapter.
Power 100 VA
(Transformer / switch power box).

Ambient temperature: -20 °C ~ +65 °C
Relative humidity: ≤ 95 % (25 °C)

Working environment:
Does not contain strong corrosive, flammable, explosive medium

Working time:
S1 continuous working system

Control signal:
On/off type --- Switch contact signal
Modulating type --- 0 ~ 10 V / 2 ~ 10 V / 4 ~ 20 mA

Ingress protection class:
IP67 is the standard configuration, IP68 is optional

Capacitor parameters:
24 V DC, 6F, charging time is 20 min

Power failure mode:
Fully open, fully close, remain still
Loss of power operation: ≥ 1 time full stroke
Output torque: ≤ 80 N.m

PERFORMANCE PARAMETERS

Voltage:
24 V AC/DC, AC 110 V ~ 120 V
AC 220 V ~ 240 V, AC 380 V ~ AC 440 V(50Hz, 60Hz)

Ambient temperature: -25 °C ~ +70 °C
Relative humidity:
≤ 95 % (25 °C)

Working environment:
Does not contain strong corrosive, flammable, explosive medium

Working time:
S2-30 min

Control signal:
On/off type --- Switch contact signal
Modulating type --- 0 ~ 10 V / 2 ~ 10 V / 4 ~ 20 mA

Ingress protection class:
IP67 is the standard configuration, IP68 is optional

Power failure mode:
Fully open; fully close
(Standard configuration, please specify when ordering)

Loss of power operation:
1 time full stroke
Output torque:
50 N.m / 150 N.m / 300 N.m / 600 N.m

QUICK OPEN & SLOW OPEN?

There may be requirement to quick or slow open and close the valve based on actual situations. FLOWINN can provide the corresponding solution according to the specific needs.

QUARTER TURN ORDER CODE

EOM2 - 0 - dB - K5 - M

Product configuration (B: basic type; M: integral type; Y: integration type ...)
Signal code (KS: A set of fully open and fully close dry contact feedback; T3-4~20 mA input and feedback ...)
Color code (B: black; Y: yellow; G: gray; A: blue ...)
Voltage code (a: AC 24 V; l: AC 24 V/1 ph; O: 380 V/3 ph ...)
Control type (l: Modulating type; O: on/off; Mb-Modbus ...)
Torque code (Please refer to the actuator parameter chart ...)
Product series (EFM: multi-stage gear structure small size actuator ...)
(EOM: Planetary gear structure with large torque actuators. Manual without clutch ...)

EXB2 - 0 - dB - K5 - M

Product configuration (B: basic type; M: integral type; Y: integration type ...)
Signal code (KS: A set of fully open and fully close dry contact feedback; T3-4~20 mA input and feedback...)
Color code (B: black; Y: yellow; G: gray; A: blue ...)
Voltage code (a: AC 24 V; l: AC 24 V/1 ph; O: 380 V 3/ph ...)
Control type (l: Modulating type; O: on/off; Mb-Modbus ...)
Torque code (Please refer to the actuator parameter chart ...)
Product series (EXB: Ex d IIB T4/T6 series explosion-proof electric actuators)
EXC: Ex d IIB T4/T6 series explosion-proof electric actuators
EXCG: Ex d IIB T4/T6 series explosion-proof electric actuators (Modulating types under 100 N.m)
EXCJ: Ex d IIB T4/T6 series intelligent type, super intelligent type explosion-proof electric actuators

STANDARD

- EN15714
- JB/T8219
- EN60730
- IS05211
- GB3836
- GB12476
- EN60079
- CSA60079
- UL60079



Complying with ISO 9001, 6 Sigma and virtual board management system, Flowinn inspect all actuators in each step of the production process. Collecting all of the production data for further analysis and tracing.

PERFECTION HAS ALWAYS BEEN OUR ULTIMATE GOAL
TWO YEARS WARRANTY IS OUR COMMITMENT



■ Please visit our website at WWW.FLOWINN.COM for all certifications.

SERVICES

Flowinn's professional service team is ready to provide users with comprehensive services and professional technical supports at all time:

- No matter is it by phone, mail or on the site, we are standing by for your inquiry.
- Stable delivery time.
- On-site installation and debugging.
- Regularly follow up our products status and maintenance.
- We provide training for structure knowledge, operation, debugging, maintenance and more.

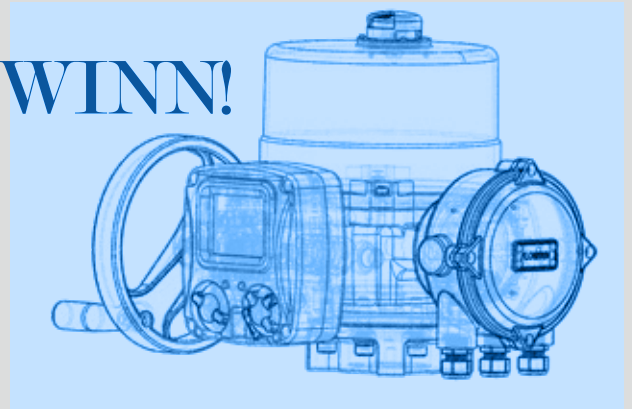
CUSTOMIZED PRODUCTION

As to Flowinn, there is no such thing called **IMPOSSIBLE**.
 For special requirements, we provide customized solutions.



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Go with the FLO' & WINN!



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