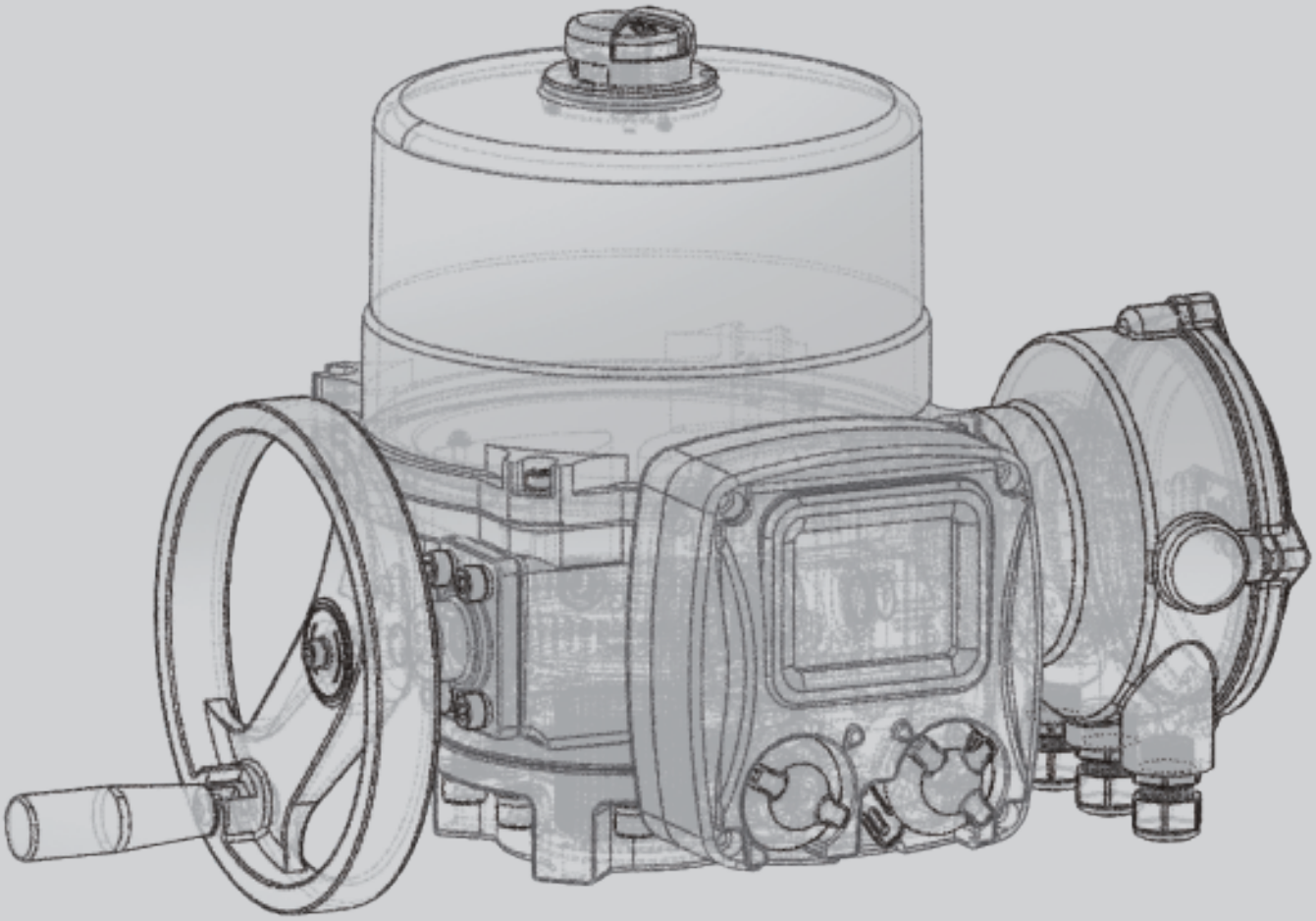
FLOWINN



QUARTER-TURN ELECTRIC ACTUATOR

bsi. ISO 9001 Quality Management FM 522775

bsi. ISO 14001 Environmental Management EMS 595200

bsi. OHSAS 18001 Occupational Health and Safety Management OHS 595201

CE RoHS REACH

Founded in 2007, FLOWINN focuses on R&D, manufacturing and sales of electric actuator for control valves. With an annual production capacity of 150,000 units, FLOWINN has established strategic partnerships with many fortune 500 companies to provide the best flow control solutions. Sales network has been expanded to all continents. We follows the belief of "Continuous Improvement and Pursuit of Excellence", implement lean production and 6 Sigma management mode, hence creating FLOWINN's core competitiveness.

Electric actuators can widely apply to water treatment, HVAC, chemical, petroleum, metallurgy, electric power, medicine, ship building projects. Our electric actuators products are also approved for a number of international certifications, FLOWINN also holds more than 100 patents itself. These include UL, SIL3, CE, CSA, explosion-proof (ATEX, IECEx), IP68, RoHS, REACH and others. Most of them are awarded by TUV, NEPSI, DNV, SGS, BSI and other internationally renowned institutions.

FLOWINN has obtained ISO9001 quality management system, ISO14001 environmental management system and ISO145001 occupational health and safety management system. Flowinn will always adhere to the business philosophy of "serving customers, respecting employees, and be first to serve on site". While working towards the material and psychological benefits of our workers, pay tributes towards the progression of society and humanity.

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.

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.

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.

ENERGY EFFICIENCY

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

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.

QUARTER TURN CONTROLMODE

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

SAFER MORE 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).

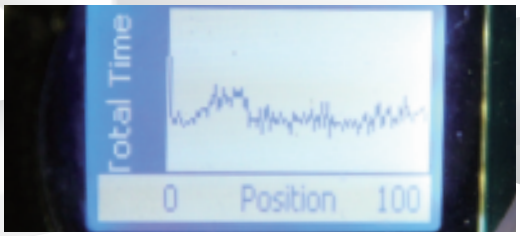
FIREPROOFING GRADE: ····· High temperature fireproof enclosure meets requirements in different situation.
It can be customized according to special needs.

EXPLOSION-PROOF RATING: ····· Ex d IIC T6 design and IECEx, ATEX certifications which satisfy the reqirements in hazardous locations.

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

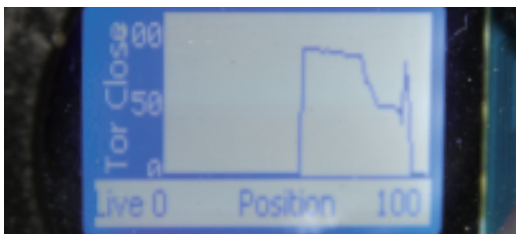
RELATIVE HUMIDITY: ····· ≤ 95 % (at 25 ˚C /275˚F).

DATA MONITORING VS MANAGEMENT QUARTER TURN

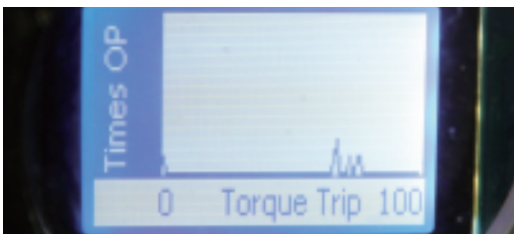


TIME-POSITION CURVE:
The curve shows the running trend of the actuator, and the number of times the actuator has been passed at the corresponding positions.

Super intelligent type actuators adopting high-performance microprocessors, real-time collection of valve position, torque and other operational information. Logical calculation truly reflects the operating status. Real-time monitoring & managing data provides references for the actuator maintenance.



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.

α 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 The definition of IP68 is:Depth of water: Maximum 15 m under water level.Duration of continuous immersion in water: Max.(72 hours).
	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.
※Working system of EOM8A/EOM12 is S2-8min, AC220V.

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 ℃ … +70 ℃
	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 The definition of IP68 is:Depth of water: Maximum 15 m under water level.Duration of continuous immersion in water: Max.(72 hours).
	Connection Size		▪ ISO5211
Mechanical Parameters	Motor Specifications		▪ Class F, with thermal protector up to +135 ℃ (+275 ℉) 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 heat-ing, 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
	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.
※Working system of EOM 8A/EOM12 is S2-8min, AC220V.

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 ± 2.5 % 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)

※Working system of EOM8A/EOM12 is S2-8min, AC220V.

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 The definition of IP68 is:Depth of water: Maximum 15 m under water level.Duration of continuous immersion in water: Max.(72 hours).
	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 600triggers 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		▪ Modbus
	On/off Type Signal	Input	▪ AC/DC 24 auxiliary power input control ▪ Optoelectronic isolation
		Signal Feedback	▪ Close the valve contact ▪ Open the valve contact (contact capacity:3A @ 250 Vac) Standard：Opening torque signal contact Closing torque signal contact Local/Remote contacts Optional: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：150 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 ± 1.5 % of full valve stroke)
		Signal Reverse	▪ Support
		Loss Signal Mode Setting	▪ Support
		Dead Zone	▪ 0.5 ~ 9.9 % adjustable rate within full stroke
		Time Lag	▪ N/A
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.

※Working system of EOM8A/EOM12 is S2-8min, AC220V.

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 ℃ … +70 ℃
	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 The definition of IP68 is:Depth of water: Maximum 15 m under water level.Duration of continuous immersion in water: Max.(72 hours).
	Connection size		▪ ISO5211
Mechanical Parameters	Motor Specifications		▪ Class F, with thermal protector up to +135 ℃ (+275 ℉) 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, 380, 400, 460 Volts) 60 Hz (220, 380, 440,460, 480 Volts) ▪ DC：24 V (±10 %) (For special inquire, please contact Flowinn)
	Bus		▪ Modbus
	On/off Type Signal	Input	▪ 20 ~ 60 V AC/DC Optional: 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 malfuntions 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 (the input signal can be arbitrarily correspond-ing to the valve position) ▪ Accuracy: (1.5 %) ▪ Input impedance: 75 Ω (4 ~ 20 mA)
		Output	▪ Output signal:：4 - 20 mA ▪ Output impedance：≤ 750 Ω (4 - 20 mA) (Repeatability and linearity within ± 1 % of full valve stroke)
		Signal Reverse	▪ Support
		Loss SignalSetting	▪ 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
	Other Function		▪ Phase correction(3-phase power supply only;Electron torque must be greater than 60% to be settable) ▪ 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.

QUARTER TURN

EXPLOSION-PROOF SPECIFICATION

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	▪ NEPSI：GB 3836.1, GB3836.2, GB 12476.1 ▪ Ex d ⅡB/ⅡC T4 — T6 Gb DIP A21 TA, T4 （GB 3836.1, GB 3836.2） ▪ Ex tb ⅢC T85 ℃ to T135 ℃ （GB 12476.1）	▪ NEPSI：GB 3836.1, GB3836.2, GB 12476.1 ▪ Ex d ⅡB/ⅡC T4 — T6 Gb DIP A21 TA, T4 （GB 3836.1, GB3836.2） ▪ Ex tb ⅢC T85 ℃ to T135 ℃ （GB 12476.1）
ATEX certified	▪ 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 ℃/T100 ℃/T135℃ Db T4, IP66 ▪ Temperature range:-20 ℃to+65 ℃ ○ Optional：-40 ℃ to +60 ℃ ○ Optional：IP67/IP68 （EN60529） ▪ Ex d IIC T4 — T6 Gb ▪ Ex tb IIIC T85 ℃/T100 ℃/T135℃ Db T4, IP66 ▪ Temperature range:-20 ℃to+65 ℃ ○ Optional：-40 ℃ to +60 ℃ ○ Optional：IP67/IP68 （EN60529）	▪ 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 ℃/T100 ℃/T135℃ Db T4, IP66 ▪ Temperature range:-20 ℃to+65 ℃ ○ Optional：-40 ℃ to +60 ℃ ○ Optional：IP67/IP68 （EN 60529）
IECEx certified	▪ IECEx. IEC 60079-0 & IEC 600679-1 ▪ Ex d IIC T4 — T6 Gb ▪ Ex tb IIIC T85 ℃ — T135 ℃ Db IP66 ▪ Temperature range:-20 ℃to+65 ℃ ○ Optional：-40 ℃ to +65 ℃ ○ Optional：IP67/IP68 （IEC60529）	▪ IECEx. IEC 60079-0 & IEC 600679-1 ▪ Ex d IIB T4 — T6 Gb ▪ Ex tb IIIC T85 ℃ — T135 ℃ Db IP66 ▪ Temperature range:-20 ℃to+65 ℃ ○ Optional：-40 ℃ to +65 ℃ ○ Optional：IP67/IP68 （IEC 60529） ▪ Ex d IIC T4 — T6 Gb ▪ Ex tb IIIC T85 ℃ — T135 ℃ Db IP66 ▪ Temperature range:-20 ℃to+65 ℃ ○ Optional：-40 ℃ to +65 ℃ ○ Optional：IP67/IP68 （IEC 60529）
CSA certified	▪ 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 ℃to+65 ℃ ○ Optional：IP67/IP68 （EN 60529） ▪ Ex d IIC T4 — T6 Gb ▪ Ex tb IIIC T4 — T6 Db IP66 ▪ Temperature range:-25 ℃ to +65 ℃ ○ Optional：IP67/IP68 （EN 60529）	▪ 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 ℃to+65 ℃ ○ 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
Basic (B)	√	—
Integral (M)	√	√
Integration (Y)	√	√
Intelligent (I)	√	√
Super Intelligent (S)	√	√

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

QUARTER TURN

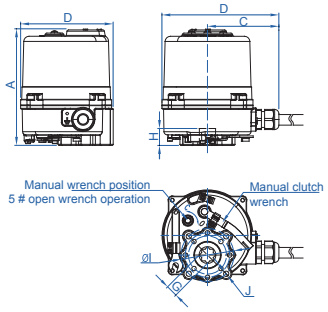
GENERAL SPECIFICATION
— TECHNICAL PARAMETER CHART

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			Handwheel
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			
EOM 7A		1300		11505		47		34			
EOM 8		1700		15045		34		25		F12/F14/ F16	
EOM 8A		2000		17700		34		25	-		
EOM 9	200	2300		20355		47		34	-		
EOM 10		3500		30975		76		55	-	F14/F16	
EOM 11		5000		44250		105		76	-		
EOM 12		8000		70800		143		103	-	F25	
EOM 13	400	-	13000	-	115050	-	109	-		F25/F30	
EOM 14		-	16000	-	141600	-	129	-			
EOM 15		-	20000	-	177000	-	155	-			

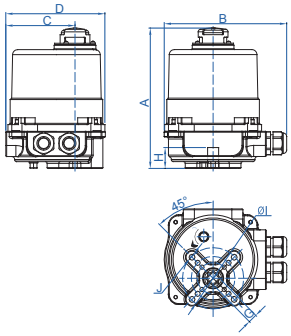
Note: Standard configuration.
1. Rated torque is 75 % of the max torque.
2. Motor insulation is class F. class H is optional.
3. The running time of 60 Hz is 5/6 of that of 50 Hz. The max output torque is the same as above.
4. Above mentioned 3 phase output power doesn't apply to EFM1-(H),EFMA-(H).

DIMENSION QUARTER TURN

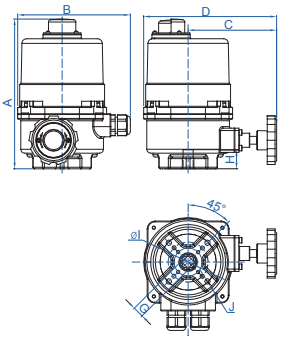
BASIC TYPE & INTEGRAL TYPE——



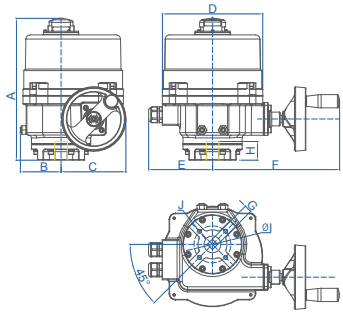
EFMB 1/2/3



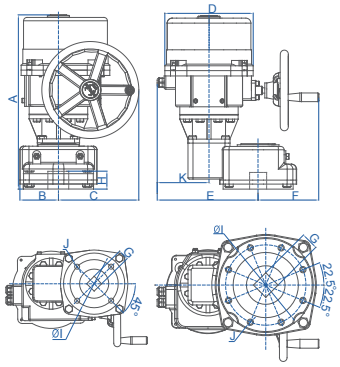
EFM 1/A/B



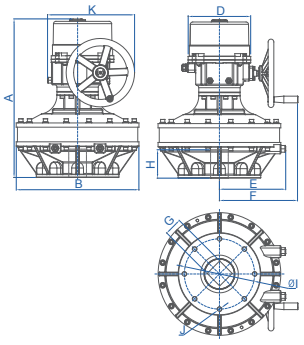
EFM 1/A/B-H



EOM 2~9



EOM 10~12



EOM 13~15

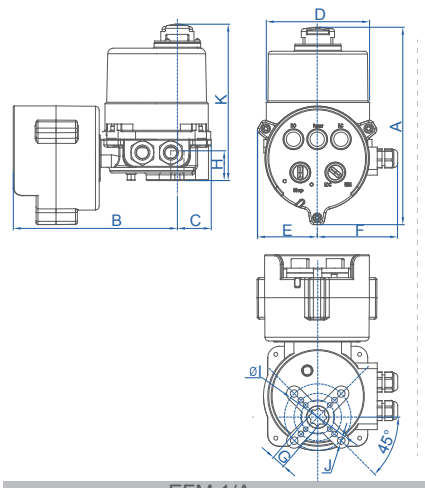
Model		A	B	C	D	E	F	G	H	ΦI	J	Weight (kg)
EFMB-1 EFMB-2 EFMB-3		110	111	71	87	-	-	11x11	16	36 42 50	4-M5 4-M5 4-M6	1
EFM1 EFMA	On/off	165	150	82	118	-	-	11x11	20	36	4-M5	3
	Modulating	185						14x14				3.2
EFM1-H EFMA-H EFMB-H	On/off	192		135	170	-	-	11x11 14x14		50	4-M6	3.6
	Modulating	212		135	170	-	-	17x17		70	4-M8	3.8
EOM2		268	77	123	216	121	240	14x14	35	70	4-M8	11
EOM3								17x17				
EOM4		327	103	187	266	150	297	22x22	55	102	4-M10	22
EOM5								22x22 27x27		102 125	4-M10 4-M12	
EOM6								27x27		125	4-M12	
EOM7												
EOM8		380	127	242	293	161	333	27x27	65	125 140	4-M12 4-M16	36
EOM9								36x36				
EOM10		532	118	242		308	186	40x40	85	140 165	4-M16 4-M20	76
EOM11								46x46		165	4-M20	
EOM12		545	160	242		343	160	55x55	130	254	8-M16	107
EOM13		672	520	-		281	331	55x55 75x75	120	254	8-M16	218
EOM14										298	8-M20	
EOM15												

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.

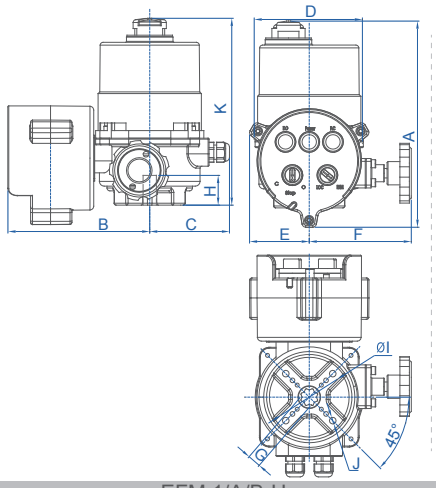
BASIC TYPE	
More functions as options:	○ Quick open ○ Slow open (The running time can be customized. Quick and slow open functions are added.)
More accessories as options:	○ Flange ○ Spline sleeve ○ Independent wiring box ○ Sprocket

INTEGRAL TYPE	
More functions as options:	○ Quick Open ○ Slow Open (The running time can be customized. Quick and slow open functions are added.) ○ Battery mackup ○ Capacitor return ○ Spring return (Fail-safe)
More accessories as options:	○ Flange ○ Spline sleeve ○ Independent wiring box ○ Sprocket

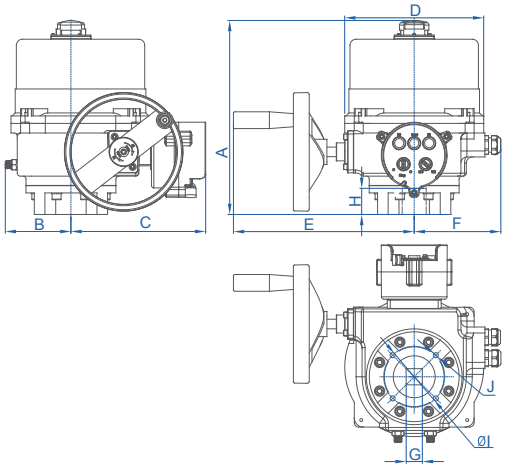
QUARTER TURN DIMENSION —— INTEGRATION TYPE



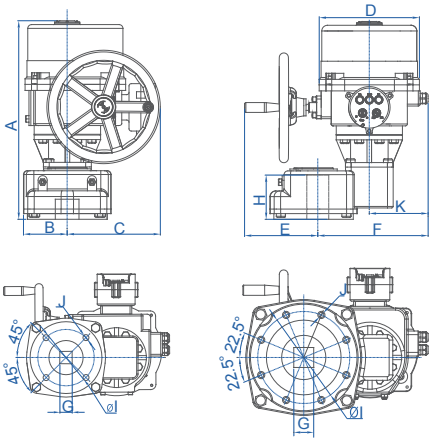
EFM 1/A



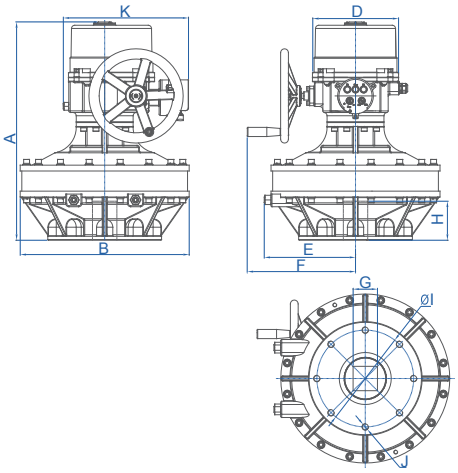
EFM 1/A/B-H



EOM 2~9



EOM 10~12



EOM 13~15

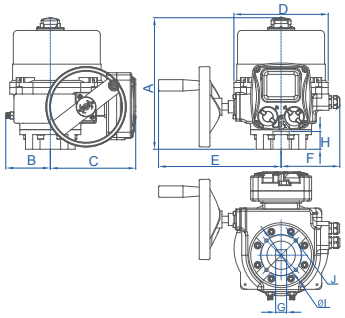
Model		A	B	C	D	E	F	G	H	ΦI	J	K	Weight (kg)
EFM1	On-off	207	173	36	114	63	85	11 X 11 14 X 14	20	36 50 70	4- M5 4- M6 4- M8	164	4.1
EFMA	Modulating	227											4.3
EFM1 -H EFMA -H	On-off	217	149	84	114	63	108	11 X 11 14 X 14 17 X 17	20	36 50 70	4- M5 4- M6 4- M8	197	4.7
EFMB -H	Modulating	237											4.9
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	55	102	4- M10	-	23.2
EOM 5								22 X 22 27 X 27		102 125	4- M10 4- M12		
EOM 6													
EOM 7								27 X 27		125	4- M12		
EOM 8		380	127	248	265	333	161	27 X 27	65	125	4- M12	-	37.2
EOM 9								36 X 36		140	4- M16		
EOM 10		532	118	242	265	194	292	40 X 40	85	140 165	4- M16 4- M20	156	77.2
EOM 11								46 X 46		165	4- M20		
EOM 12		545	160	242	265	168	343	55 X 55	130	254	8- M16	156	108.2
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													

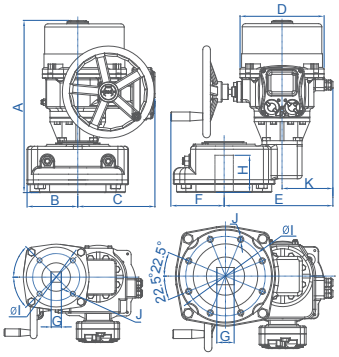
Note: 1. Dimension unit is mm.
2. Above “G” dimension is what we recommended. However, it can be customized according to customers’ requirements.
3. Above “ΦI”and“J”dimensions are in accordance with ISO 5211 flange specifications. Which means that there’s only one specification can be chosen, please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

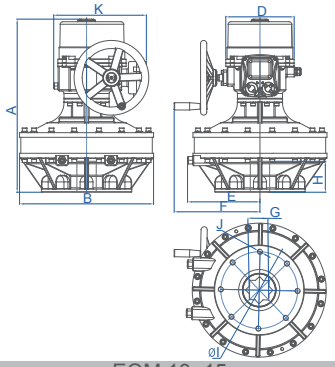
INTEGRATION TYPE	
More functions as options:	○ Quick Open ○ Slow Open (The running time can be customized. Quick and slow open functions are added.)
More accessories as options:	○ Flange ○ Spline sleeve ○ Independent wiring box ○ Sprocket

DIMENSION QUARTER TURN

INTELLIGENT TYPE——





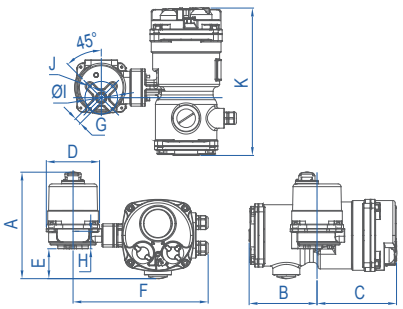


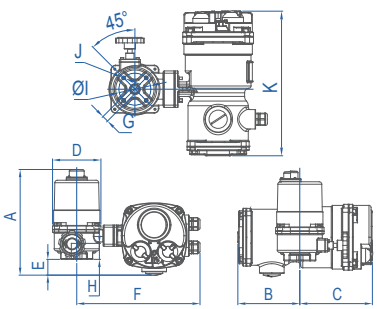
EOM 2~9 | EOM 10~12 | EOM 13~15

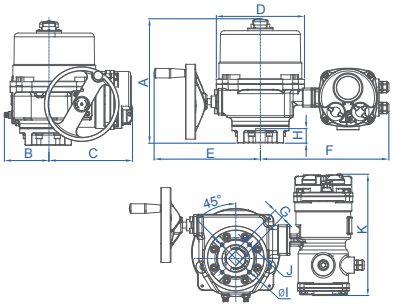
Model	A	B	C	D	E	F	G	H	ΦI	J	K	Weight (kg)
EOM 2 EOM 3	268	79	198	190	240	121	14 X 14 17 X 17	35	70	4- M8	-	13
EOM 4	327	110	210	232	301	145	22 X 22	55	102	4- M10	-	24
EOM 5							22 X 22		102	4- M10		
EOM 6							27 X 27		125	4- M12		
EOM 7							27 X 27		125	4- M12		
EOM 8	380	127	234	265	333	161	27 X 27	65	125	4- M12	-	38
EOM 9							36 X 36		140	4- M16		
EOM 10	532	118	227	265	180	300	40 X 40	85	140	4- M16	156	78
EOM 11							46 X 46		165	4- M20		
EOM 12	545	160	244	265	168	343	55 X 55	130	254	8- M16	156	109
EOM 13	672	520	-	265	281	331	55 X 55	120	254	8- M16	385	220
EOM 14							75 X 75		298	8- M20		
EOM 15												

DIMENSION QUARTER TURN

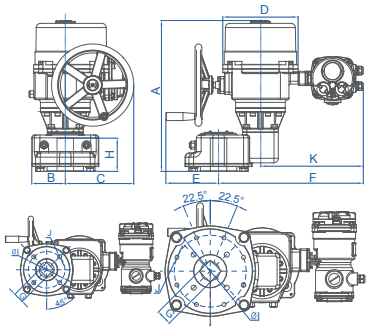
SUPER INTELLIGENT TYPE——

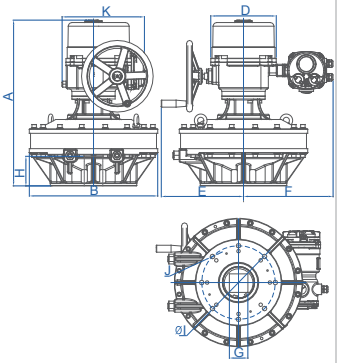






EFM1/A | EFM1/A/B-H | EOM 2~9





EOM 10~12 | EOM 13~15

Model	A	B	C	D	E	F	G	H	ΦI	J	K	Weight (kg)
EFM1/A	185	147	172	115	38	298	11 X 11	30	36	4-M5	319	8
EFM1/A/B-H	212				65		14 X 14		50	4-M6		
EOM 2	268	79	198	190	240	121	14 X 14	35	70	4-M8	319	13
EOM 3							17 X 17					
EOM 4	327	110	210	232	301	338	22 X 22	55	102	4-M10	319	24
EOM 5							22 X 22		102	4-M10		
EOM 6							27 X 27		125	4-M12		
EOM 7							27 X 27		125	4-M12		
EOM 8	380	127	234	265	333	361	27 X 27	65	125	4-M12	319	38
EOM 9							36 X 36		140	4-M16		
EOM 10	532	118	227	265	180	510	40 X 40	85	140	4-M16	361	78
EOM 11							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												

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 ○ Spline 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

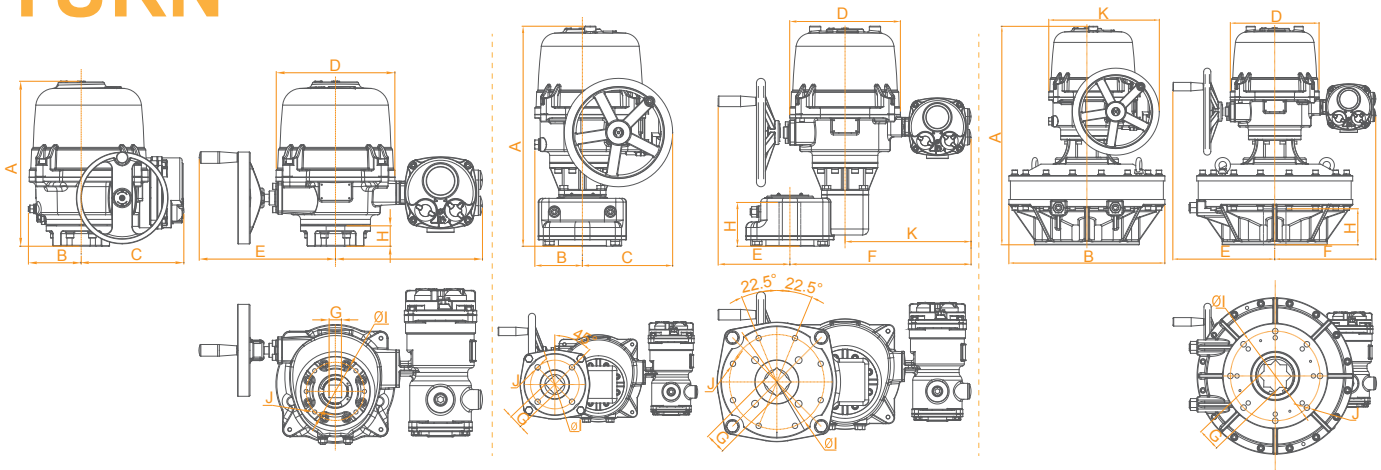
Model	Power (W)	Max Output Torque (N.m)		Max Output Torque (lbf.in)		Running time (Sec)				ISO 5211	Remarks
		AC 110 V AC 220 V AC/DC 24 V	AC 220 V AC 380 V 3 phase	AC 110 V AC 220 V AC/DC 24 V	AC 220 V AC 380 V 3 phase	50 Hz AC 110 V AC 220 V	50 Hz AC 380 V 3 phase	AC/DC 24 V	Fail-safe		
EXC (CG) 1	10	35	-	310	-	11	-	8		F03/F05/ F07	Manual wrench Options: Handwheel
EXC (CG) A		50	-	443	-	15	-	10			
EXC (CG) B		80	-	708	-	22	-	15			Handwheel
EXB (C) 2	40	100		885		19		14		F05/F07/ F10/F12	Handwheel operation, planetary gear mechanism
EXB (C) 3		200		1770		39		28			
EXB (C) 3A		300		2655		39		28			
EXB (C) 4	90	400		3540		29		21		F10/F12/ F14	
EXB (C) 5		600		5310		39		28			
EXB (C) 6		800		7080		47		34			
EXB (C) 7	120	1000		8850		47		34			
EXB (C) 7A		1300		11505		47		34			
EXB (C) 8	200	1700		15045		34		25		F12/F14/ F16	
EXB (C) 8A		2000		17700		34		25	-		
EXB (C) 9		2300		20355		47		34	-		
EXB (C) 10		3500		30975		76		55	-	F14/F16	
EXB (C) 11		5000		44250		105		76	-		
EXB (C) 12		8000		70800		143		103	-	F25	
EXB (C) 13	400	-	13000	-	115050	-	109	-		F25/F30	
EXB (C) 14		-	16000	-	141600	-	129	-			
EXB (C) 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	354	113	220	255	293	315	22 X 22	55	102	4- M10	319	24
EXCJ 5							22 X 22		102	4- M10		
							27 X 27		125	4- M12		
EXCJ 6							27 X 27		125	4- M12		
EXCJ 7												
EXCJ 8	415	127	242	296	340	337	27 X 27	65	125	4- M12	319	38
EXCJ 9							36 X 36		140	4- M16		
EXCJ 10	589	127	242	296	192	484	40 X 40	85	140	4- M16	337	78
									165	4- M20		
EXCJ 11							46 X 46		165	4- M20		
EXCJ 12	545	160	244	296	160	519	55 X 55	130	254	8- M16	337	109
EXCJ 13	729	520	-	296	340	337	55 X 55	120	254	8- M16	369	220
EXCJ 14									298	8- M20		
EXCJ 15							75 X 75					

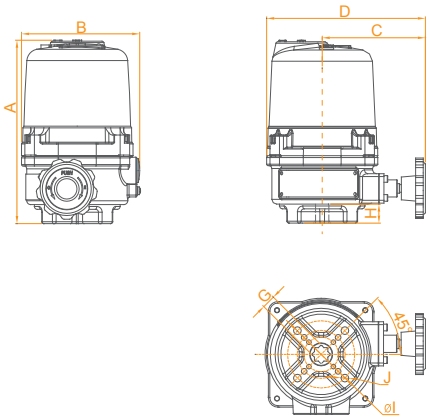
Note: 1. Dimension unit is mm.

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.

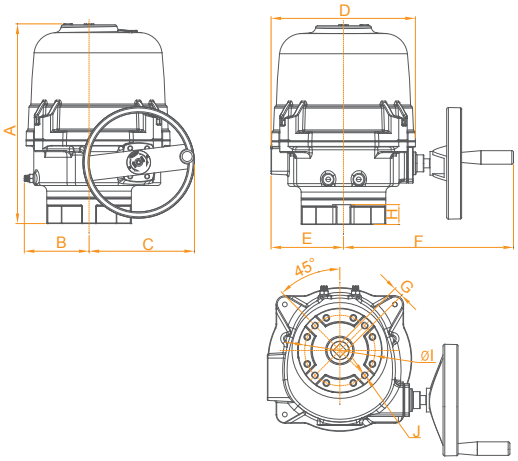
INTELLIGENT TYPE		SUPER INTELLIGENT TYPE	
More functions as options:	○ Quick Open ○ Slow Open (The running time can be customized. Quick and slow open functions are added.) ○ Spring return (Fail-safe)	More functions as options:	○ Quick Open ○ Slow Open (The running time can be customized. Quick and slow open functions are added.) ○ Spring return (Fail-safe)
More accessories as options:	○ Flange ○ Spline sleeve ○ Sprocket ○ Explosion-proof remote control	More accessories as options:	○ Flange ○ Spline sleeve ○ Sprocket ○ Explosion-proof remote control

DIMENSION QUARTER TURN

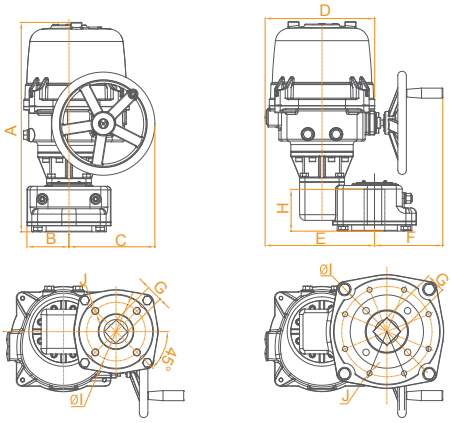
BASIC TYPE & INTEGRAL TYPE——



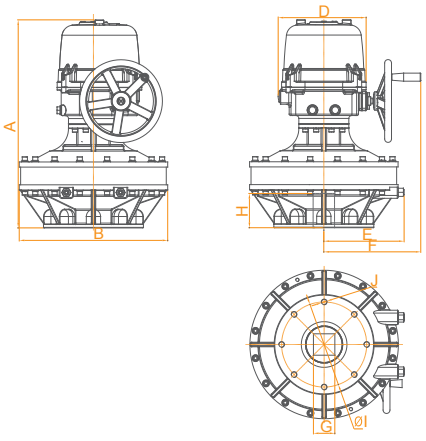
EXC(G) 1/A/B-H



EXB(C) 2~9



EXB(C)10~12



EXB(C)13~15

Model	A	B	C	D	E	F	G	H	ΦI	J	Weight (kg)
EXC1-H EXCA-H EXCB-H On-off	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 Modulating	212										3.6
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	55	102	4- M10	22
EXB(C) 5							22 X 22 27 X 27		102 125	4- M10 4- M12	
EXB(C) 6							27 X 27		125	4- M12	
EXB(C) 7											
EXB(C) 8	415	136	242	308	152	340	27 X 27	65	125	4- M12	36
EXB(C) 9							36 X 36		140	4- M16	
EXB(C) 10	589	118	242	308	308	192	40 X 40	85	140 165	4- M16 4- M20	76
EXB(C) 11							46 X 46		165	4- M20	
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	120	254	8- M16	218
EXB(C) 14							75 X 75		298	8- M20	
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.) ○ Spring return (Fail-safe)
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.

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 mAH, charging time is 5 hours
Power failure mode: Fully open, fully close, remain still

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.

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

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, 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

what 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 – O – 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; I: AC 24 V/1 ph; O: 380 V3/ph …)
- Control type (I: 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; I: AC 24 V/1 ph; O: 380 V 3/ph …)
- Control type (I: 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
- •ISO5211
- •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

FM 522775 EMS 595200 OHS 595201

CE RoHS REACH

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

SERVICES

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

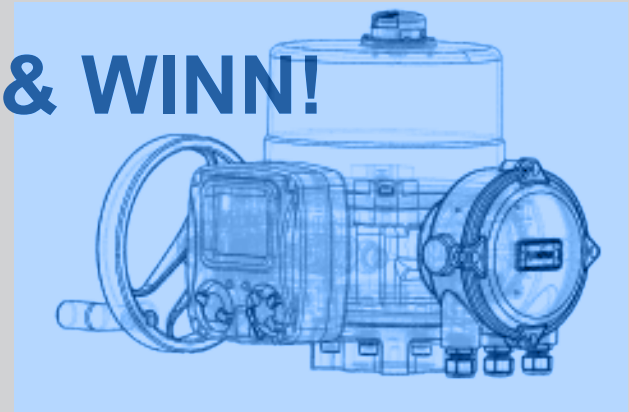
- No matter is it by phone, mail or on the site, we are standing by for your inquiry.
- Stable delivery time.
- On-site installation and debugging.
- Regularly follow up our products status and maintenance.
- We provide training for structure knowledge, operation, debugging, maintenance and more.

CUSTOMIZED PRODUCTION

As to Flowinn, there is no such thing called IMPOSSIBLE.

For special requirements, we provide customized solutions.

Go with the FLO' & WINN!



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