



Quarter-Turn Electric Valve Actuator

www.sunyeh.com



Company Profile

Sun Yeh Electrical Ind. Co., Ltd. was founded in 1986. We always strive for technical excellence, innovation and the highest quality standards in everything we do. Sun Yeh is committed to providing the product conforming to market demands and the first class support.

We continue to expand our product ranges to include quarter-turn actuator, spring return fail-safe actuator, linear actuator, explosion-proof actuator and have won patent in several countries. Sun Yeh offers various products which are widely applied to the control on industry, water treatment, air conditioning, chemical engineering, food industry and etc.

Sun Yeh electric valve actuators are built in high quality and have been certified with CE, CSA, CCC, ATEX, IECEx, CQST approvals. Sun Yeh has successfully passed ISO 9001, ISO14001, OHSAS 18001, AEO.



• RoHS Compliance





Perfect solution

is the only goal for Sun Yeh.

Product Overview

OM series electric actuators offer torque ranges from 35 Nm to 4,500 Nm. The actuator comes standard with NEMA 4X (IP 67) environmental rating. All Models are ISO 5211 compliant and equipped with a visual position indicator. The manual override can be operated without clutch and brake under our research and development. It has already won patent in Taiwan, Mainland China, and USA.

Product Features

- Self-locking Gear System.
- Clutch-less Manual Override.
- NEMA 4X, 5 & IP 67, 68 enclosures conform to outdoor use.
- ISO 5211 Mounting Flange.
- Mechanical Stops.
- Domed Position indicator.
- Built-in thermal protection prevents motor burnout.

Enclosure

- Ingress protection : IP 67, NEMA 4X, 5 (Waterproof and dustproof enclosure intended for outdoor use).
- Material : Dry powder coated aluminum alloy.

Motor

- Class F (standard) or H (optional) insulation.
- Built-in thermal protection prevents motor burnout. AC motor : $125\pm 5^{\circ}\text{C}$ / $257\pm 41^{\circ}\text{F}$ DC motor : $90\pm 5^{\circ}\text{C}$ / $194\pm 41^{\circ}\text{F}$

Domed Position Indicator

- All models are equipped with continuous mechanical position indicator on the top of actuator cover.

Duty Cycle

- 30% duty cycle (Contact sales person if the extended duty cycle is required.)

Mechanical Stops

- Externally adjustable mechanical stops are provided on OM-2 ~ OM-13, OM-F, OM-G, OM-H actuators.

Manual Override

- Non-clutch design, the manual operation can be operated without any lever, clutch or brake upon power outage.
- When electric motor is operating, the hand-wheel won't rotate for personal safety purpose.





Gear Train

- High alloy steel gear trains provide self-locking function against back-driving.
- Gear trains are factory lubricated with high temperature resistant lubricant.

Operating Voltages

Model	12V / 24V		1-Phase		3-Phase		
	12V DC / AC	24V DC / AC	110V-120V	220-240V	220V	380V	440V
OM-A \ OMA-M \ OM-1	√	√	√	√			
BM-2			√	√	√	√	√
OM-F, G, H		√	√	√			
OM-2 ~ 10	√	√	√	√	√	√	√
OM-11 ~ 12		√	√	√	√	√	√
OM-13			√	√	√	√	√

- Contact sales person for other voltage requirements.

Service Condition

- Ambient temperature : -30°C ~ +65°C / -22°F ~ +149°F
- Relative humidity : 30% ~ 95%

Certifications

- CE
- RoHS
- CSA
- Reach
- CCC



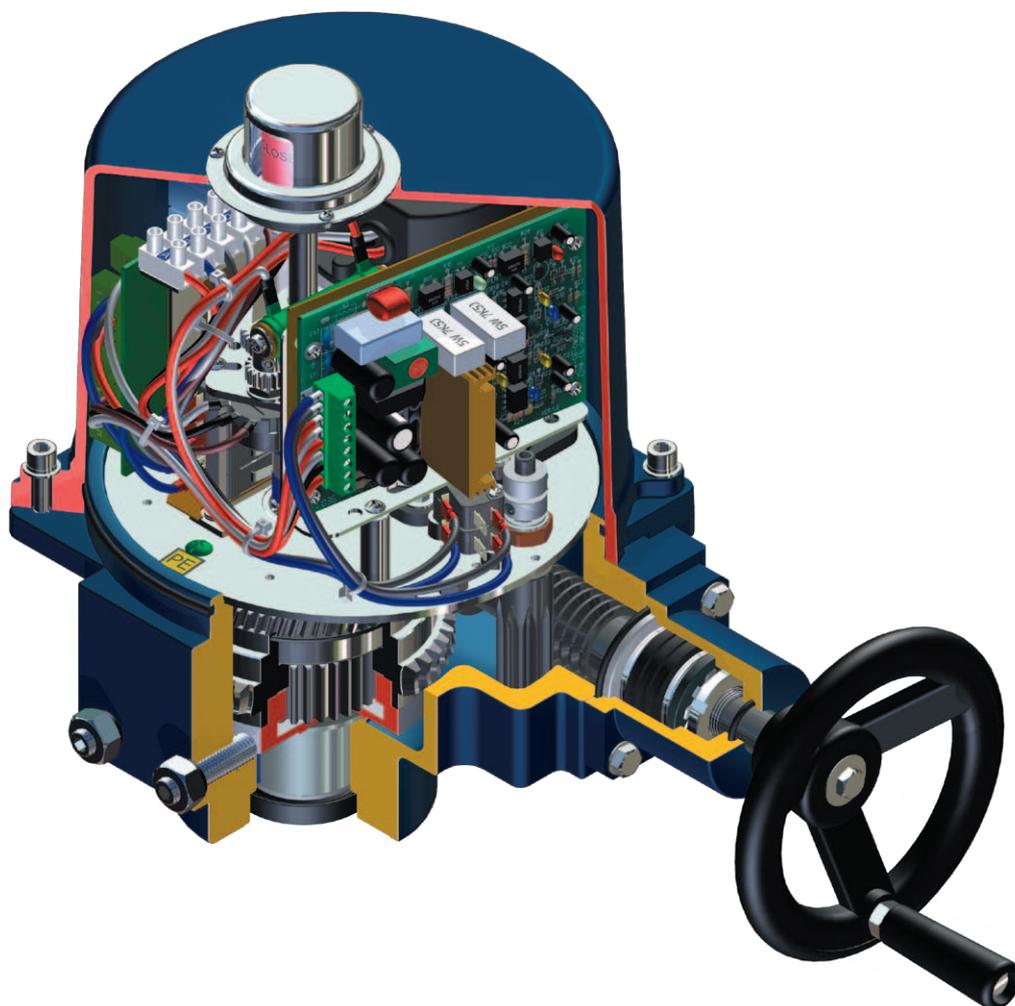
Model	Torque		Weight		Nominal Motor Power	Speed	Manual Override	Mounting Flange
	Nm	in-lbs	kg	lbs	w	(sec / 90°)		ISO 5211
OM-A	50	443	3	6.61	10	20	N / A	F05 / F07
OM-A-M	50	443	3	6.61	10	20	Lever	F05 / F07
OM-1	35	310	2	4.41	10	12		F03 / F07
BM-2	120	1063	5.5	12.13	40	8	N / A	F07
OM-F	65	576	11	24.25	60	6	Hand-Wheel	F07
OM-2	90	797	11	24.25	40	15		F07
OM-G	120	1063	11	24.25	60	8		F07
OM-3	150	1328	11	24.25	40	22		F07
OM-H	300	2656	17	37.48	60	23		F07 / F10
OM-4	400	3542	20	44.09	80	16		F10
OM-5	500	4427	20	44.09	80	22		F10
OM-6	650	5756	20	44.09	80	28		F10
OM-7	1000	8855	32	70.55	120	46		F12 or F14
OM-8	1500	13282	32	70.55	120	46		F12 or F14
OM-9	2000	17709	71	156.53	180	58		F14 or F16
OM-10	2500	22137	71	156.53	180	58		F14 or F16
OM-11	3000	26564	72	158.73	180	58		F14 or F16
OM-12	3500	30991	72	158.73	220	58	F14 or F16	
OM-13	4500	39846	106	233.69	220	80	F16 / F25	

- The motor power and speed data are based on 110V AC 60Hz.



Important Notices and Maintenance

- Make sure that the supply voltage is correct.
- Turn power off before servicing or for maintenance purpose.
- Use proper sealant to seal the conduit connection after wiring procedure to prevent dust or water from entering the actuator.
- The electric actuators should be installed in between 0 to 180 degree. Do not mount the assembly with the actuator top below a horizontal position.
- Not intended for vacuum spaces.
- The actuator should be stored in clean, dry area and with an outer box to protect against excessive temperature differentials or vibration and prevent from affecting the function of the product.
- To avoid functional failure caused by statics, do not touch any components on the PCB with metal tools or bare hands.
- Please connect the ground wire to PE inside the electric actuator.
- When more than one actuator needs to operate simultaneously, please connect with the individual cable or install the coupling board.
- The warranty period is one year from original ship date.



Enclosure

• Non-Hazardous Area Enclosures

Standard	Rating	Standard Temperature
IEC 60529 (Edition 2.1 : 2001)	IP68 - 7meter / 72hrs	-30°C ~ +70°C (-22°F ~ +158°F)

Anti-condensation Heater

- A space heater can increase the internal temperature and keep the inside of actuator dry to avoid the freezing lubricant and moisture causing actuator failure under low temperature or high humidity.
 - Heater is not recommended if the ambient temperature is over 35°C (95 °F).
 - When the temperature varies much from day to night or between summer and winter, heater and thermostat (25±5°C / 77±41°F) are recommended.



Heater Thermostat

- This option can switch the anti-condensation heater off when the temperature inside the actuator is over 25±5°C / 77±41°F.



Additional Limit Switches

- The standard model are equipped with the LS1 & LS2 switches for fully-open and fully-closed position setting. This option consists of the LS3 & LS4 as auxiliary switches provides and dry contacts for fully-open and fully-closed position feedback.

Modulating Controller

- A modulating control unit will follow input signal for positioning and output signal for indicator.
 - Input signal : 4-20mA, 1-5V, 2-10V
 - Output signal : 4-20mA, 2-10V

Potentiometer Unit

- This option should be ordered with ON/OFF actuators to provide feedback signal to position indicator. Two different resistance values, 1K ohm or 5K ohm are available for selection.

Extended Duty Cycle Controller (IEC standard)

- The option is suggested for higher starting frequency.

Model	75% Duty Cycle	50% Duty Cycle
OM-A, OM-A-M	√	
OM-1 ~ OM-8, OM-H	√	
OM-9 ~ OM-13		√



Slow Speed Board

- This option makes the speed (running time) adjustable from standard to 30s, 60s, 90s and so on (Max. 200s, 300s or 600s) according to user's need.
 - Available for OM-2 to OM-13 AC 110 / 220V AC, 1-Phase.

Analog Signal Output

- This option provides various output signals for position indicator and etc.
 - Output signal : 0-20mA, 4-20mA, 0-5V, 0-10V, 1-5V, 2-10V

Coupling Board

- This option is recommended when a set of control wire or switch needs to control two or more actuators at the same time.

Motor

- Standard : Insulation class F • Optional : Insulation class H

Network Communication

- Modbus

Torque Switch

- This option provides overload protection. It must be ordered with actuator and set by factory.
 - Available for OM-2 ~ OM-13, OM-F, OM-G, OM-H.

Junction Box

- All Wiring can be done through this option without removing actuator cover.

Local Control Unit

- This Local Control unit contains Local / Remote and LOCAL / OFF / OPEN rotary switches. When it is placed in LOCAL mode, the controlled valves or dampers can be driven to open, stop, or close by CLOSE / OFF / OPEN rotary switch.
- Ingress Protection : IP 65.



Chain Wheel

- This option can convert the hand-wheel manual override to a chain driving override in application of actuator mounted at a distance above the floor.
 - Available for OM-2 ~ OM-13, OM-F, OM-G, OM-H.



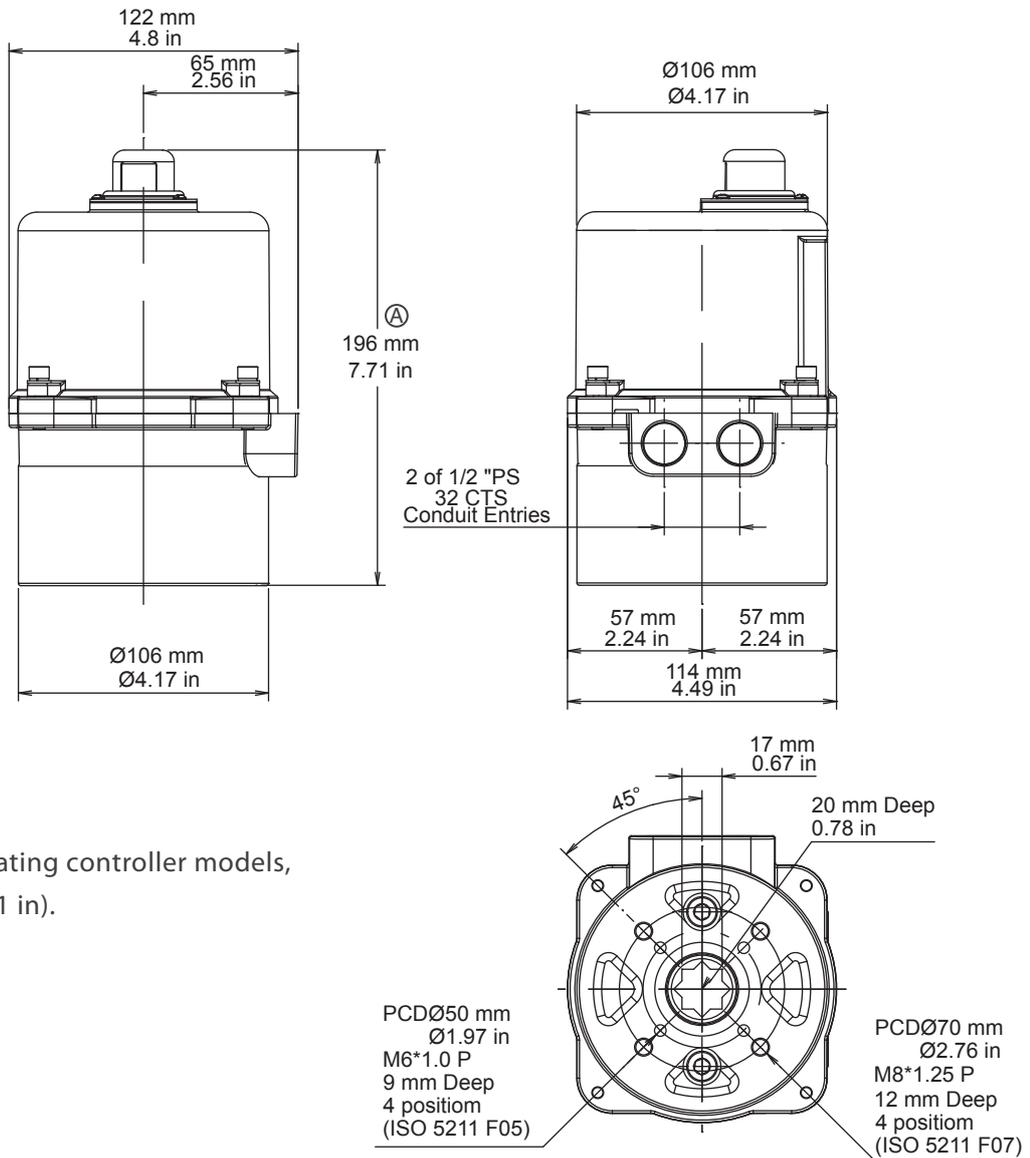
Working Angle

- Standard : 0° ~ 90°
- Optional : 91° ~ 270° · Available for OM-1 ~ OM-8, OM-F, OM-G, OM-H.

Conduit Entrance

- Standard : 1 / 2"PS
- Optional : 3 / 4"PF, 1 / 2"NPT, M20

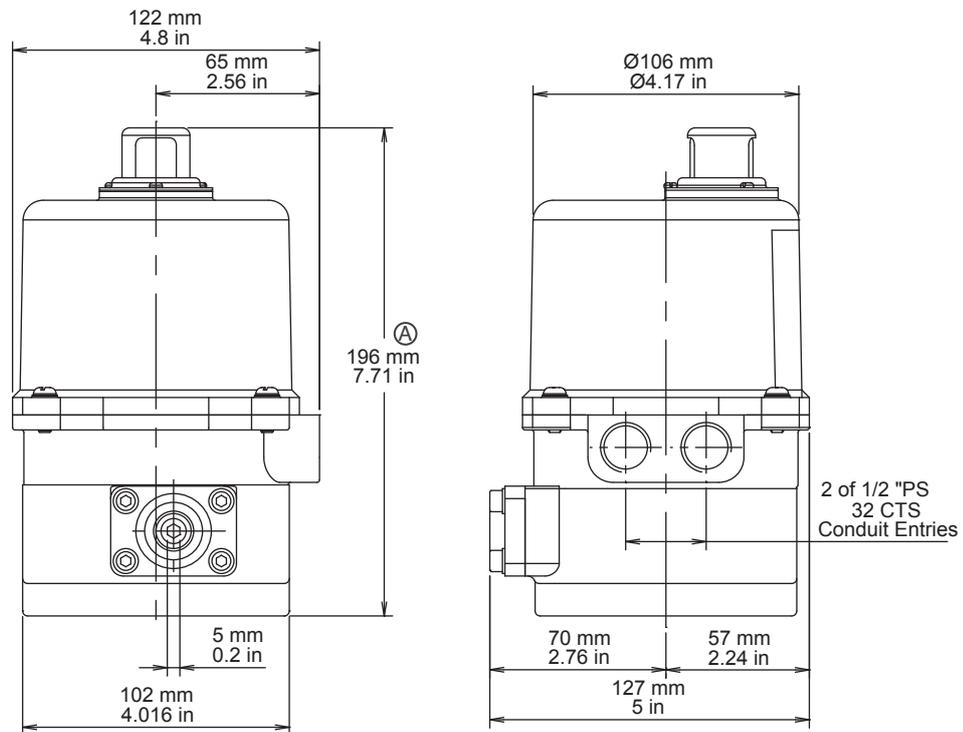
OM-A



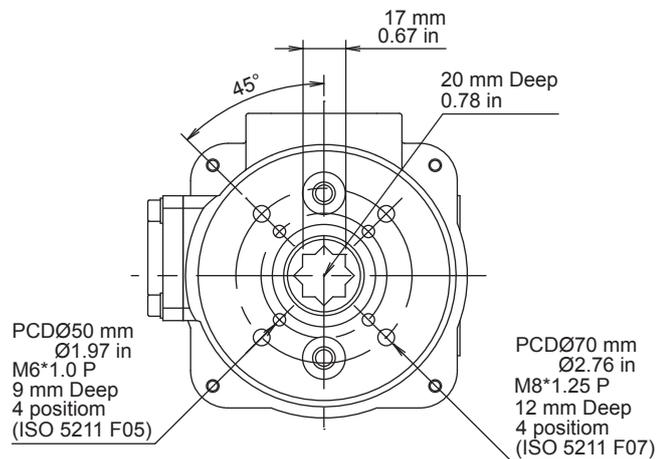
- Apply to modulating controller models, (A)=229mm (9.01 in).
- No mechanical.



OM-A-M



- Apply to modulating controller models,
Ⓐ = 229mm (9.01 in).
- No mechanical.



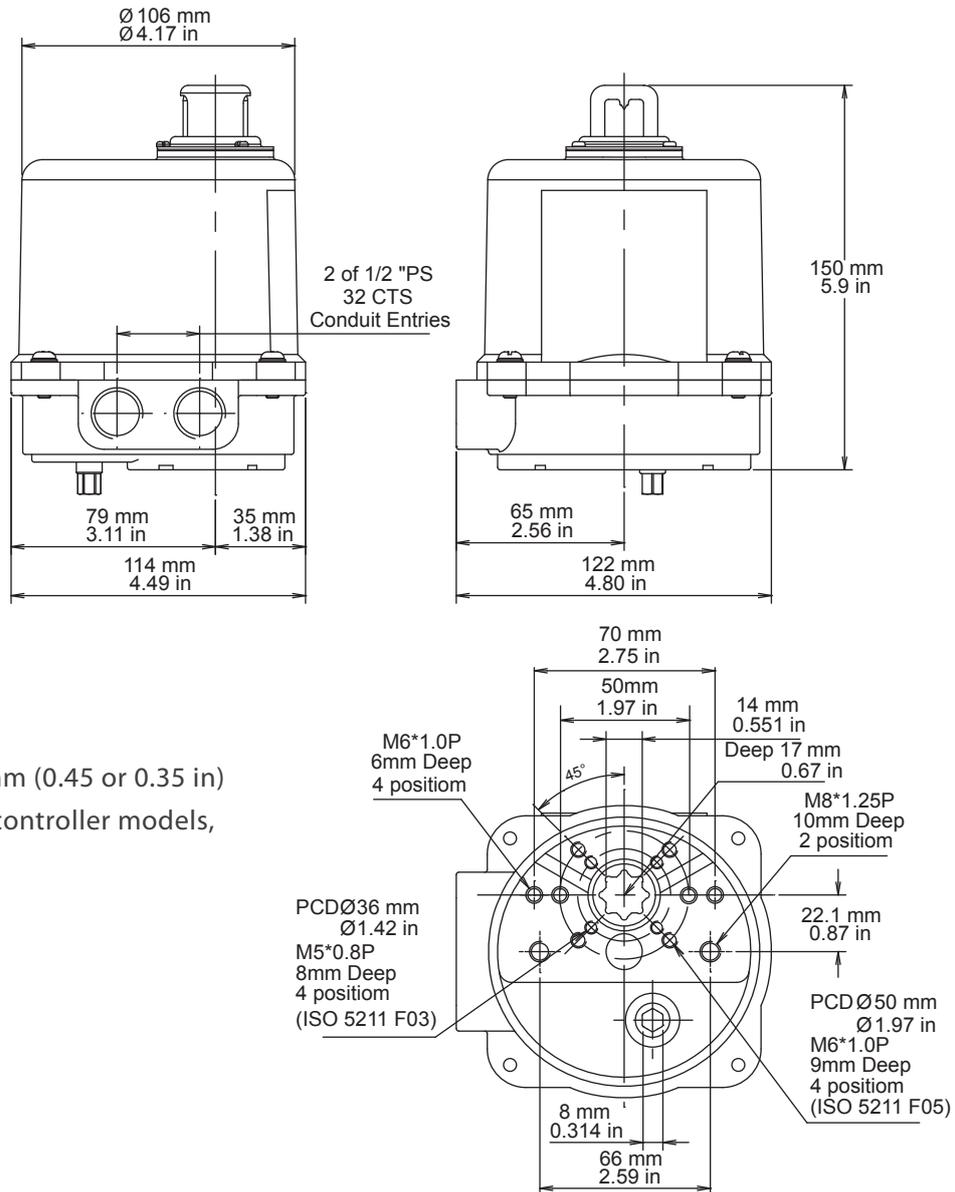
OM-1



Modulating Type



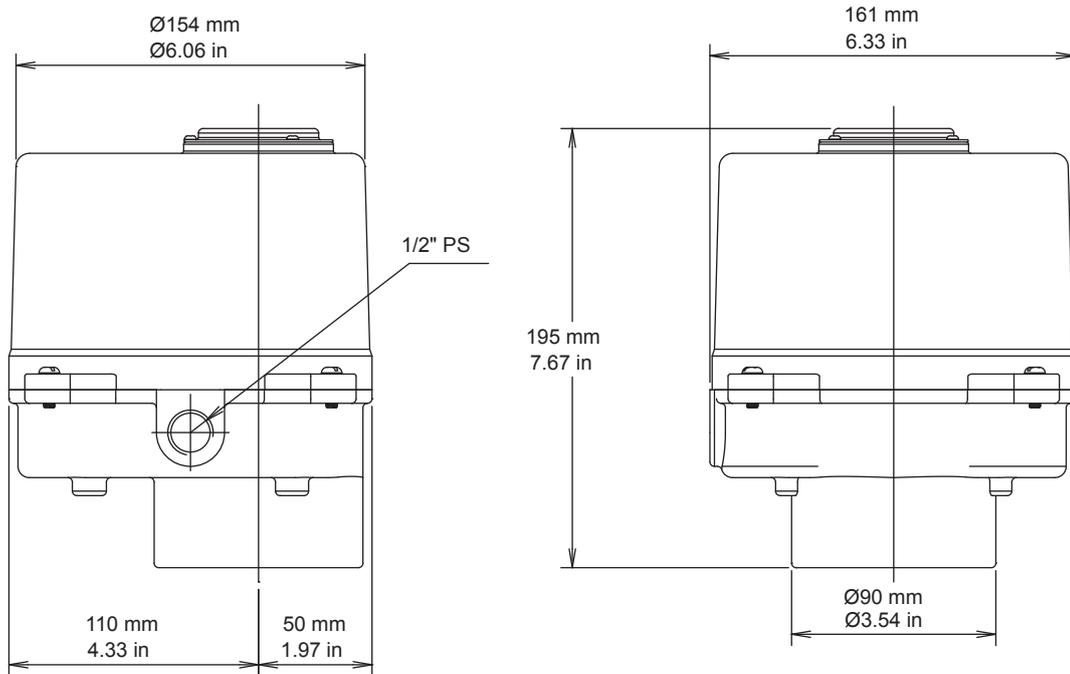
ON-OFF Type



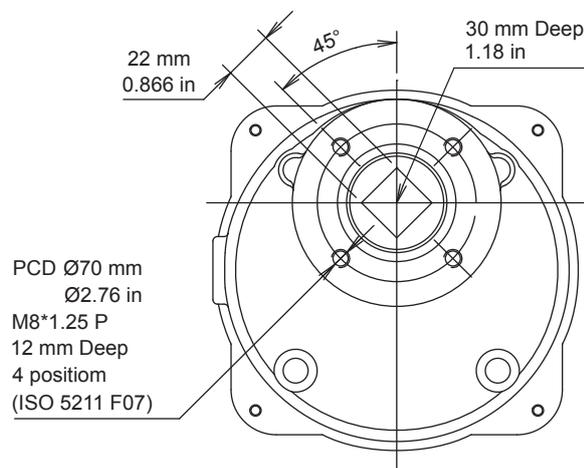
- Option: \textcircled{A} is 11 or 9mm (0.45 or 0.35 in)
- Apply to modulating controller models, \textcircled{B} =183mm (7.21 in).
- No mechanical.



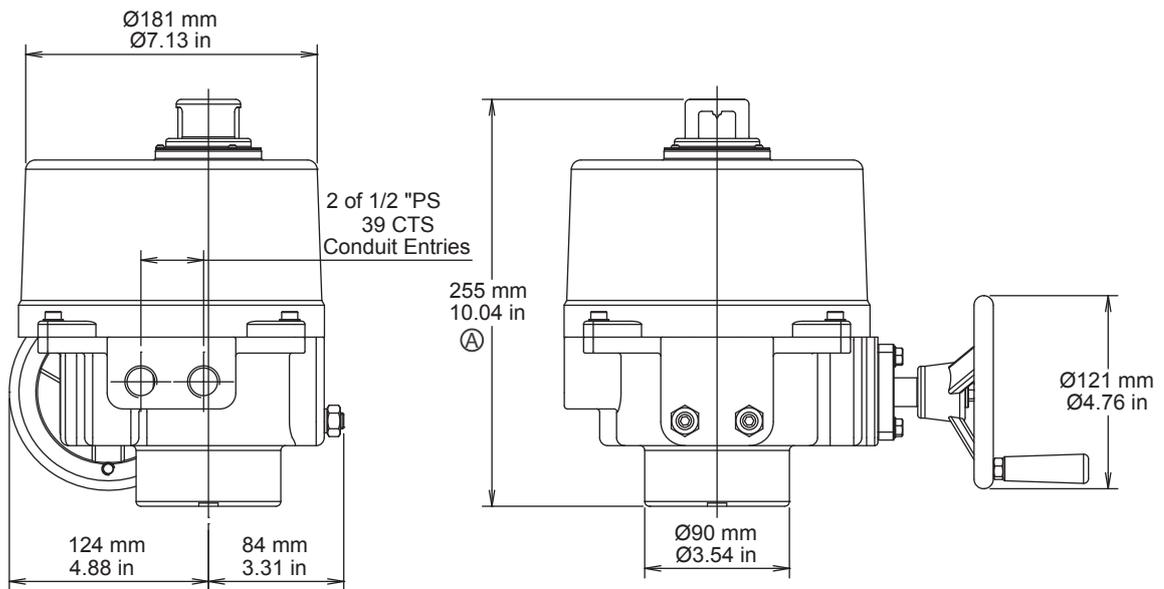
BM-2



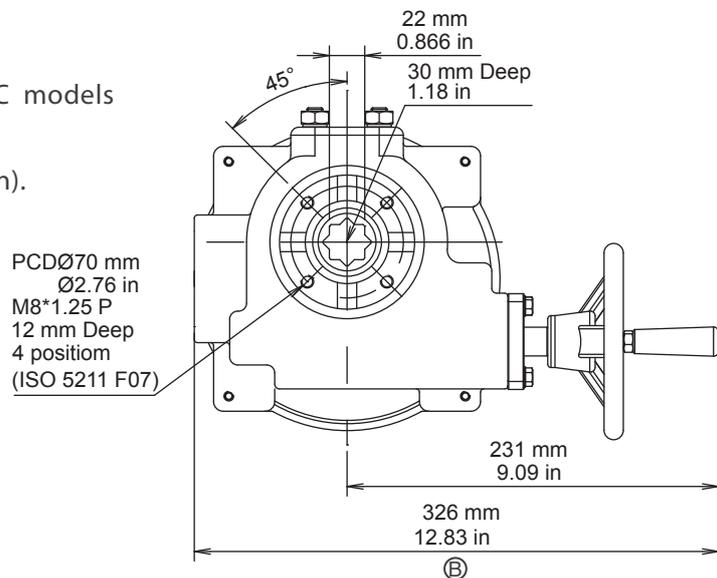
- Plastic cover, No manual override, No mechanical stops, No certificates.



OM-2~OM-3

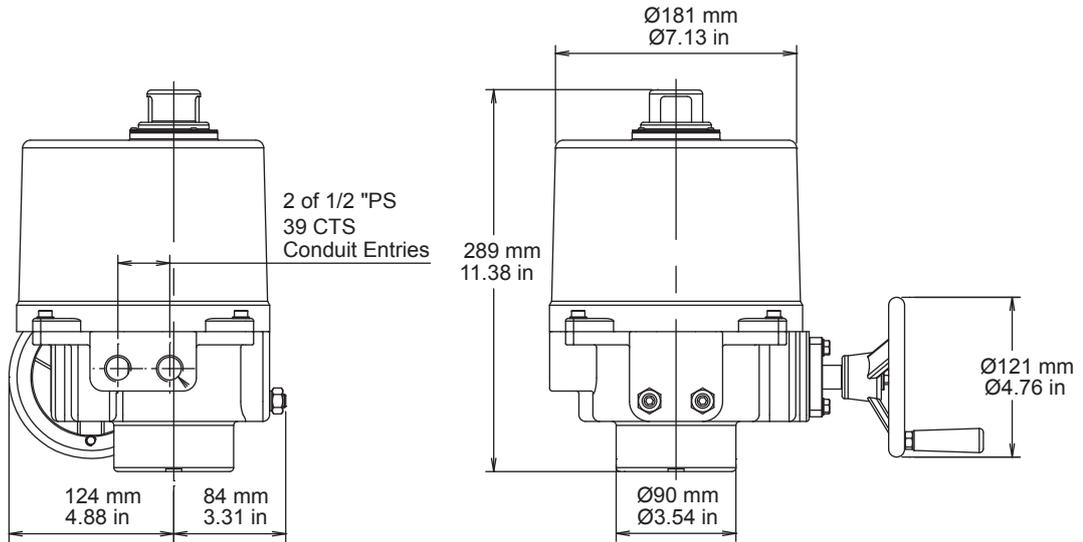


- With DC motor (A)=289mm (Apply to DC models or 75% duty cycle).
- With torque switch (B)=361mm (14.21 in).

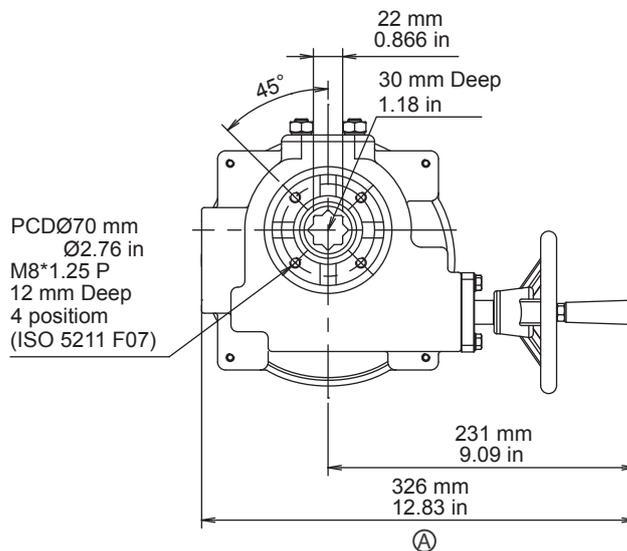




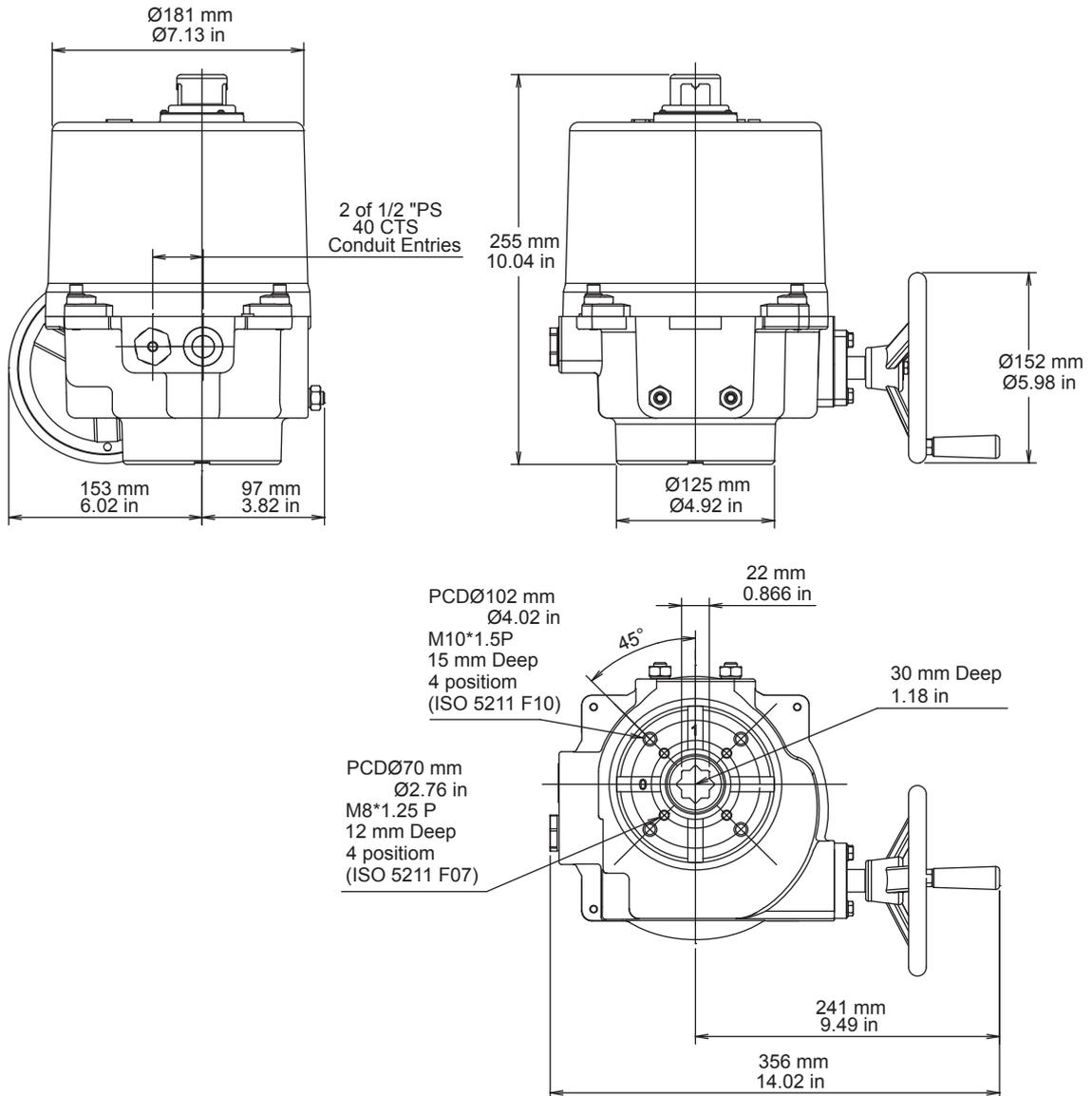
OM-F, OM-G



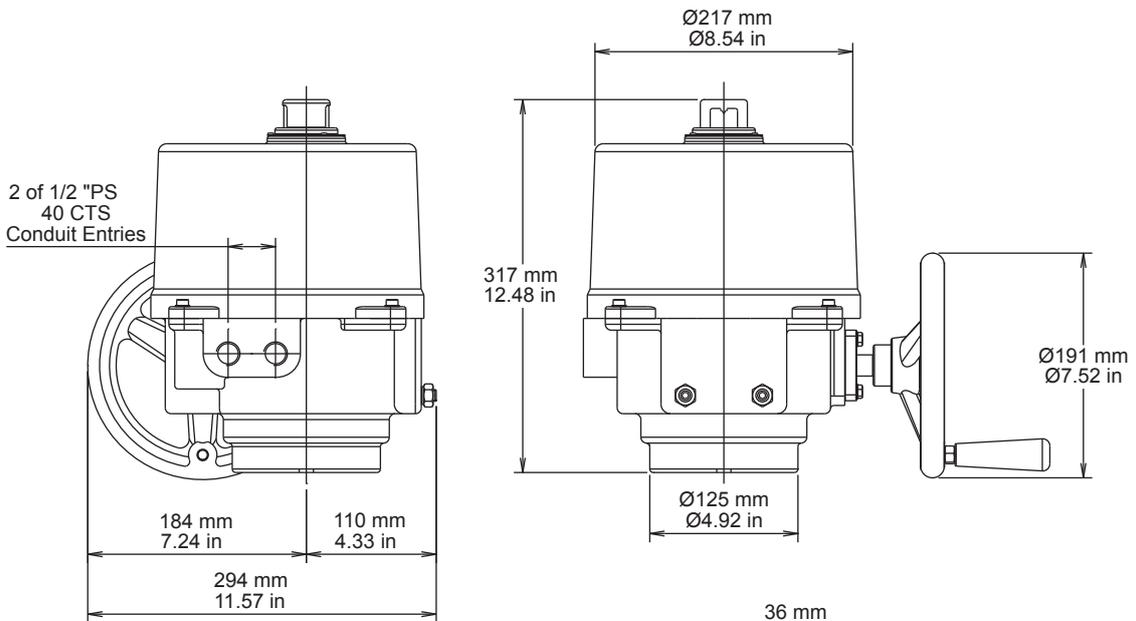
- With torque switch $\textcircled{A}=361\text{mm}$ (14.21 in).



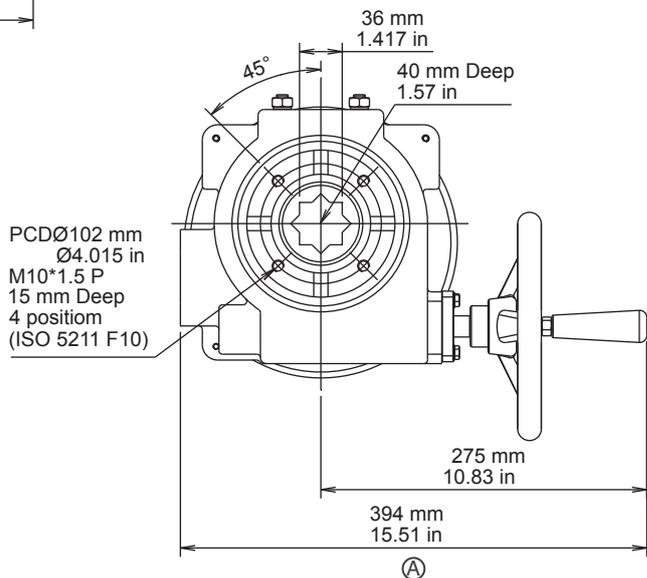
OM-H



OM-4~OM-6

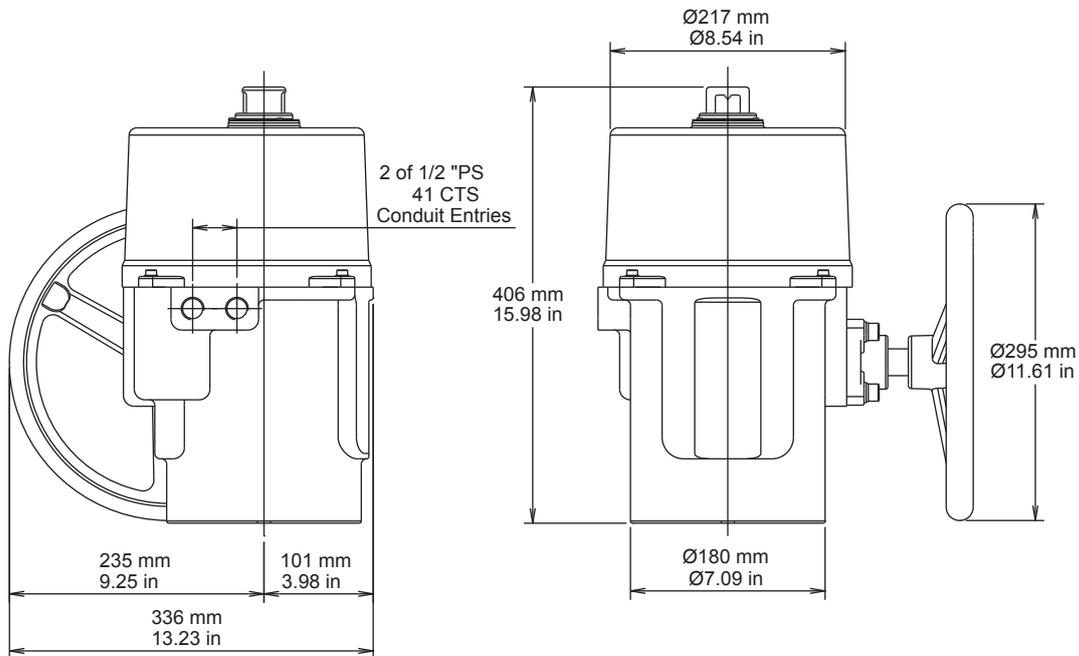


- With torque switch A =460mm (18.11 in).

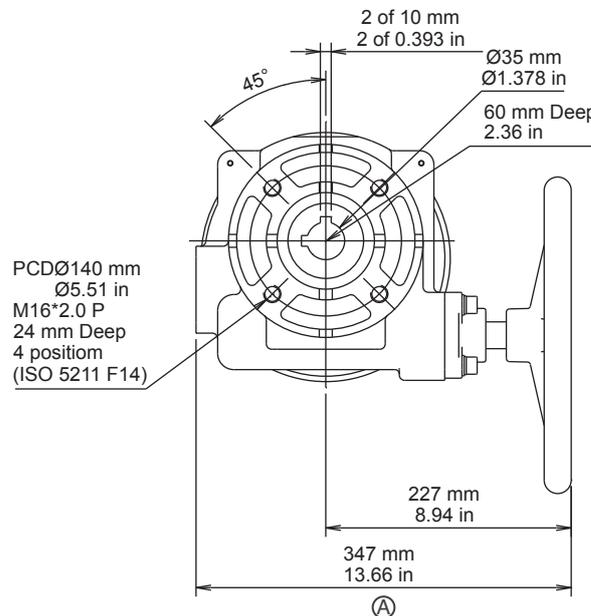




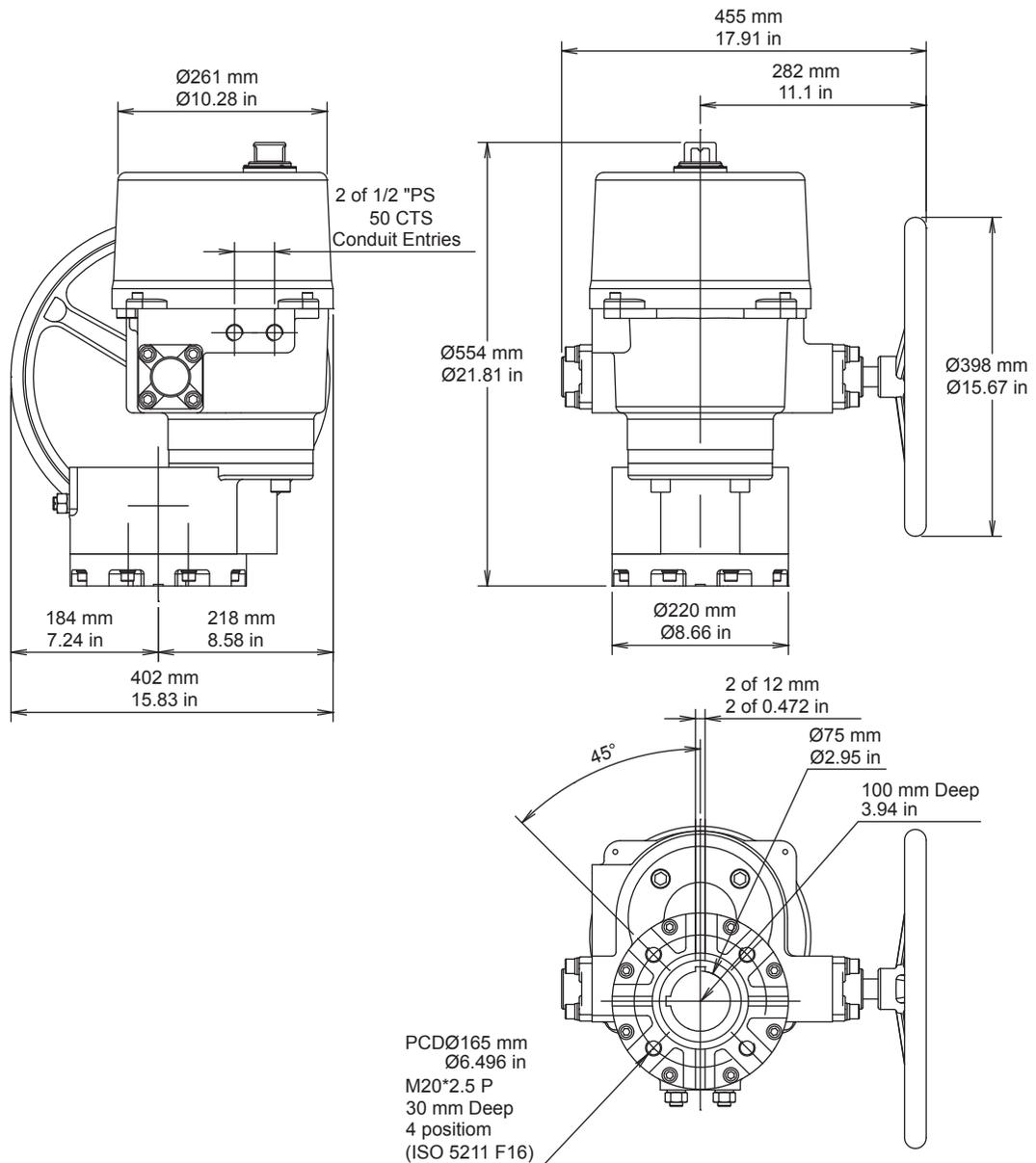
OM-7~OM-8



- With torque switch \textcircled{A} = 435 mm (17.13 in).

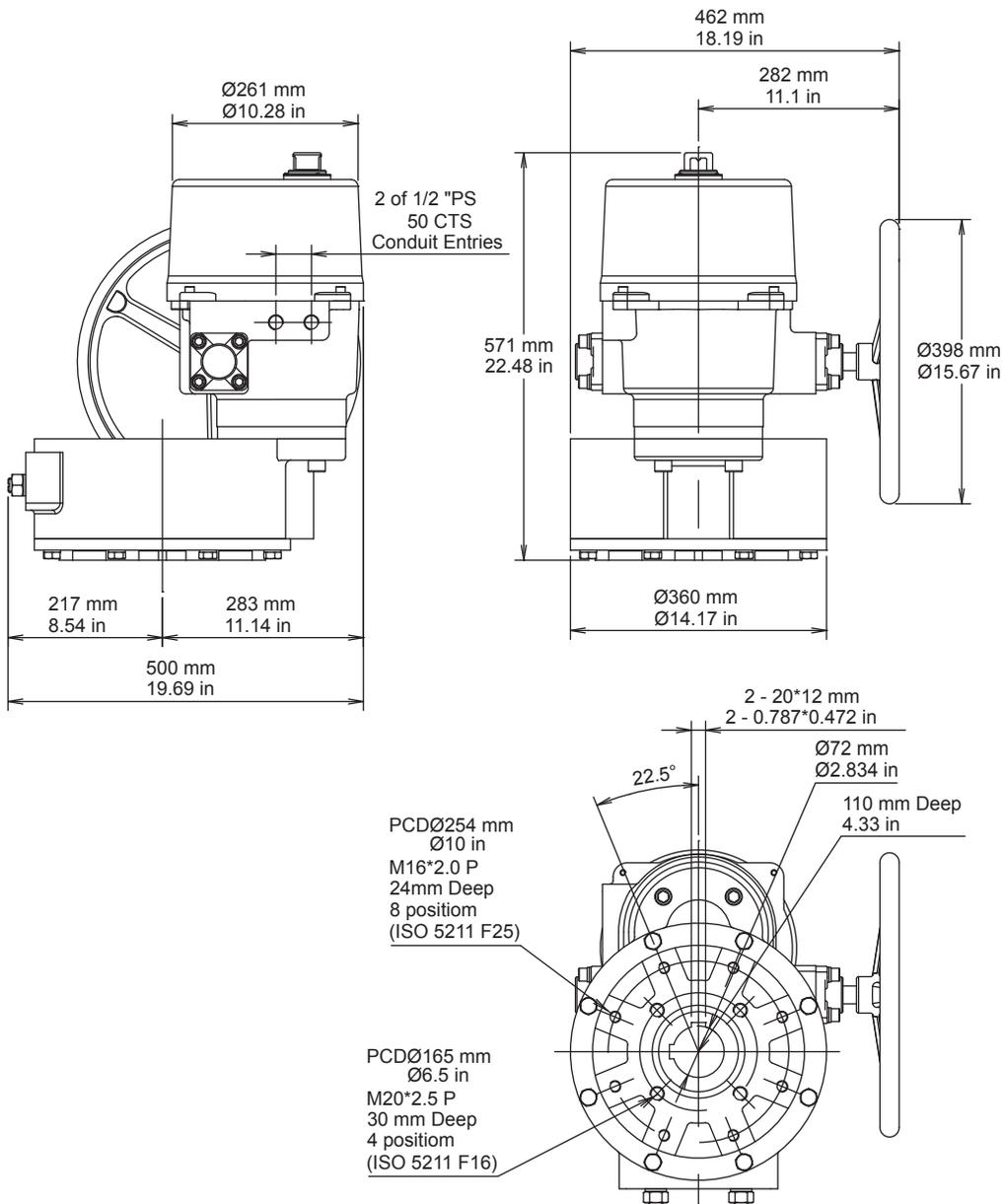


OM-9~OM-12





OM-13



Model	Type	Size (inch)	Material
OM-1	Screwed Ends Ball Valve	1 / 2" ~ 1 - 1 / 2"	SUS 316 / Bronze / PVC / PP
OM-A / AM	Screwed Ends Ball Valve	2"	SUS 316 / Bronze / PVC / PP
BM-2	Screwed Ends Ball Valve	2" ~ 3"	SUS 316 / Bronze / PVC / PP
OM-2	Screwed Ends Ball Valve	1 - 1 / 4" ~ 2"	SUS 316 / Bronze / PVC / PP
OM-3	Screwed Ends Ball Valve	2 - 1 / 2" ~ 3"	SUS 316 / Bronze / PVC / PP
OM-4	Screwed Ends Ball Valve	4"	SUS 316 / Bronze / PVC / PP
OM-1	Socket Welded Ends Ball Valve	1 / 2" ~ 1 - 1 / 2"	Bronze / PVC / PP
OM-A / AM	Socket Welded Ends Ball Valve	2"	PVC / PP
BM-2	Socket Welded Ends Ball Valve	2" ~ 3"	PVC / PP
OM-2	Socket Welded Ends Ball Valve	1 - 1 / 4" ~ 2"	PVC / PP
OM-3	Socket Welded Ends Ball Valve	2 - 1 / 2" ~ 3"	PVC / PP
OM-4	Socket Welded Ends Ball Valve	4"	PVC / PP
OM-1	Flange Ends Ball Valve	1 / 2" ~ 1"	Cast Iron / SUS 304 / SUS 316
OM-A / AM	Flange Ends Ball Valve	1 - 1 / 4" ~ 2"	Cast Iron / SUS 304 / SUS 316
BM-2	Flange Ends Ball Valve	1 - 1 / 4" ~ 3"	Cast Iron / SUS 304 / SUS 316
OM-2	Flange Ends Ball Valve	1 - 1 / 4" ~ 2"	Cast Iron / SUS 304 / SUS 316
OM-3	Flange Ends Ball Valve	2 - 1 / 2" ~ 3"	Cast Iron / SUS 304 / SUS 316
OM-4	Flange Ends Ball Valve	4" ~ 5"	Cast Iron / SUS 304 / SUS 316
OM-5	Flange Ends Ball Valve	6"	Cast Iron / SUS 304 / SUS 316
OM-6	Flange Ends Ball Valve	8"	Cast Iron / SUS 304 / SUS 316
OM-7	Flange Ends Ball Valve	10"	Cast Iron / SUS 304 / SUS 316
OM-8	Flange Ends Ball Valve	12"	Cast Iron / SUS 304 / SUS 316
OM-1	3-Way Screwed Ends Ball Valve	1 / 2" ~ 1 - 1 / 2"	Bronze / SUS 316
BM-2	3-Way Screwed Ends Ball Valve	2"	Bronze / SUS 316
OM-2	3-Way Screwed Ends Ball Valve	1 - 1 / 2"	Bronze / SUS 316
OM-3	3-Way Screwed Ends Ball Valve	2"	Bronze / SUS 316
OM-1	3-Way Screwed Ends Ball Valve	1"	Cast Iron / SUS 304 / SUS 316
BM-2	3-Way Screwed Ends Ball Valve	1 - 1 / 2" ~ 2"	Cast Iron / SUS 304 / SUS 316
OM-2	3-Way Screwed Ends Ball Valve	1 - 1 / 2"	Cast Iron / SUS 304 / SUS 316
OM-3	3-Way Screwed Ends Ball Valve	2"	Cast Iron / SUS 304 / SUS 316
OM-4	3-Way Screwed Ends Ball Valve	2 - 1 / 2" ~ 3"	Cast Iron / SUS 304 / SUS 316
OM-5	3-Way Screwed Ends Ball Valve	4"	Cast Iron / SUS 304 / SUS 316
OM-A / AM	Butterfly Valve	2" ~ 3"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
BM-2	Butterfly Valve	2" ~ 4"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
OM-2	Butterfly Valve	2" ~ 3"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
OM-3	Butterfly Valve	4" ~ 5"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
OM-4	Butterfly Valve	6" ~ 8"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
OM-5	Butterfly Valve	10" ~ 12"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
OM-6	Butterfly Valve	14"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
OM-7	Butterfly Valve	16"	Cast Iron / SUS 304 / SUS 316 / PVC / PP
OM-8	Butterfly Valve	18"	Cast Iron / SUS 304 / SUS 316 / PVC / PP

- Notes :
1. Please check valve torque before mounting.
 2. Please check working pressure, service fluid, and temperature.



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