EXPLOSION-PROOF

ELECTRIC VALVE ACTUATORS

SE / LE / OME series

Reliable and Efficiency

Approvals of ISO 9001, 14001, OHSAS 18001, AEO, CSA, REACH and RoHS

C US 204450

ISO 9001: 2015 FM 501148
ISO 14001: 2015 EMS 562513
OHSAS 18001: 2007 OHS 573179

TD0404XY

• RoHS Compliance

SIL/PL Capability

LI JIN INDUSTRIAL CO.,LTD

SE series

Explosion-proof Spring Return Fail-safe Electric Valve Actuators

PRODUCT OVERVIEW

Explosion-proof spring return fail-safe electric actuators, in addition to normal function (floating control, On / Off control, modulating control) are designed for fail-safe positioning of valves and dampers upon loss of power supply. A mechanical spring set is utilized to position the controlled device to either the fully OPEN or fully CLOSED position, without any external power source. For On / Off type actuator, a mechanical BUFFER is employed at the end of the spring stroke, in order to reduce the dynamic effects of the spring return system. Manual override is optional for manual positioning of the controlled device.

SE series explosion-proof spring return fail-safe electric actuators are structured as flame-proof and combustible dust-proof. The directive and standards marking is II 2 GD Ex db IIB T4 Gb, Ex tb IIIC T130°C Db where it is classified as Zone 1 or Zone 2, containing Group IIA and Group IIB gases, Zone 21 or Zone 22, containing the combustible dust atmospheres or a mixture of explosive gas atmospheres and combustible dust atmospheres. Temperature group T1 to T4.

SE series

Explosion-proof
Spring Return Fail-safe Electric Valve Actuators

PRODUCT FEATURES

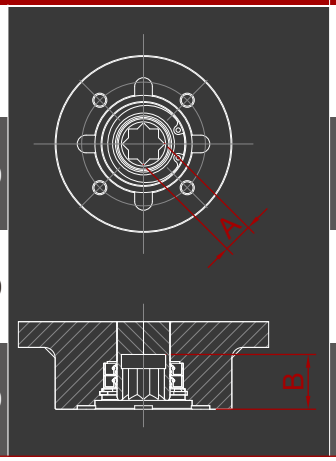
- Enclosure conforms to IP68 (7 m / 72 hrs) with explosion protection.
- Controls: On / Off, floating (optional), modulating (optional).
- Clutch-less manual override (optional).
- ISO 5211 mounting flange.
- Built-in motor thermal protection.

STANDARD SPECIFICATIONS

- Available supply voltages: 24VAC, 24VDC, 110VAC, 120VAC, 220VAC, 240VAC, 220V / 3PH, 240V / 3PH, 380V / 3PH, 440V / 3PH.
- Dry powder coated aluminum alloy housings.
- Standard 50% duty cycle (In accordance with IEC standard).
- Continuous mechanical position indicator.
- 2 limit switches for operation, fail clockwise spring return and On / Off control are provided as standard.
- Relative humidity: 30 to 95%
- Ambient temperature: -30°C to +70°C (-22°F ~ +158°F)

TECHNICAL INFORMATION

Model	Torque		Nominal Motor Power	Running Time	Spring Return Time	Weight				Flange Type	Shaft (A)		Depth of Shaft (B)	
						Standard		W/ Manual Override						
	N•m	in•lb	Watt	(Sec / 90˚)	(Sec / 90˚)	kg	lb	kg	lb	ISO 5211	mm	inch	mm	inch
SE-500	50	445	50	7	3	28	62	38	84	F07	17	0.669	30	1.181
SE-1300	130	1150	130	7	8	59	130	76	168	F10	22	0.866	41	1.614
SE-2000	200	1770	130	11	12	97	214	137	302	F12	27	1.063	45	1.772
SE-2600	260	2300	130	14	12	97	214	137	302	F12	27	1.063	45	1.772



• Note: Motor power is based on 110VAC @60Hz, 50% duty cycle, On / Off control.
• Motors are class F insulated.

LE series

Explosion-proof Linear Electric Valve Actuators

PRODUCT OVERVIEW

Explosion-proof linear electric actuators provide thrust ranges of 250 to 2,000 kgf (550 to 4410 lbf). All models are equipped with modulating controllers and are suitable for globe valves, gate valves and linear travel devices. They can be applied to HVAC and industrial processes, especially for steam and high temperature employments.

LE series explosion-proof linear electric actuators are structured as flame-proof and combustible dust-proof. The directive and standards marking are II 2 GD Ex db IIB T4 Gb, Ex tb IIIC T130°C Db. They are control devices for valves and can be used in places, classified as Zone 1 or Zone 2, containing Group IIA and Group IIB gases, Zone 21 or Zone 22, containing combustible dust atmospheres or explosive gas atmospheres and combustible dust atmospheres. Temperature group T1 to T4.

LE series

Explosion-proof Linear Electric Valve Actuators

PRODUCT FEATURES

- Enclosure conforms to IP68 (7m / 72 hrs) with explosion protection.
- DC motor equipped.
- External stem position indicator.
- Low-power consumption.
- Manual operation can be applied in case of power outage.
- Built-in motor thermal protection.
- All models are equipped with analog feedback.

STANDARD SPECIFICATIONS

- Available supply voltages: 24VAC, 24VDC, 110VAC, 120VAC, 220VAC, 240VAC.
- Dry powder coated aluminum alloy housings.
- The actuator will shut off to prevent overload when the output thrust is overrated.
- 2 limit switches for operation are provided as standard.
- Allows adjustment of actuator stroke to match valve stem travel.
- Relative humidity: 30 to 95%
- Ambient temperature: -30°C to +70°C (-22°F ~ +158°F)

TECHNICAL INFORMATION

Model	Thrust			Weight		Nominal Motor Power	Running Speed		Flange Type	Max. Stroke	
	kgf	lbf	N	kg	lb	Watt	mm / sec	inch / sec	ISO 5210	mm	inch
LE-250	250	550	2450	9.5	21	15	0.46	0.018	F07	50	2
LE-500	500	1100	4900	9.5	21	15			F07	50	2
LE-1000	1000	2205	9805	31	68	35			F10	100	4
LE-2000	2000	4410	19615	31	68	35			F10	100	4

• Note: Motor power is based on 110VAC @60Hz.
• Motors are class F insulated.

OME series

Explosion-proof Quarter-turn Electric Valve Actuators

PRODUCT OVERVIEW

Explosion-proof quarter-turn electric actuators offer torque ranges from 35 N•m to 1,500 N•m (310 in·lb to 13,280 in·lb). All models are with ISO 5211 compliant flange and are equipped with a visual position indicator. The manual operation (except OME-A) can be operated without brake and clutch upon power cut. This could increase the mechanical reliability.

OME series explosion-proof quarter-turn electric actuators are structured as flame-proof and combustible dust-proof. The directive and standards marking are II 2 GD Ex db IIB T4 Gb, Ex tb IIIC T130°C Db. They are classified as Zone 1 or Zone 2, containing Group IIA and Group IIB gases, Zone 21 or Zone 22, containing combustible dust atmospheres or explosive gas atmospheres and combustible dust atmospheres. Temperature group T1 to T4.

OME series

Explosion-proof Quarter-turn Electric Valve Actuators

PRODUCT FEATURES

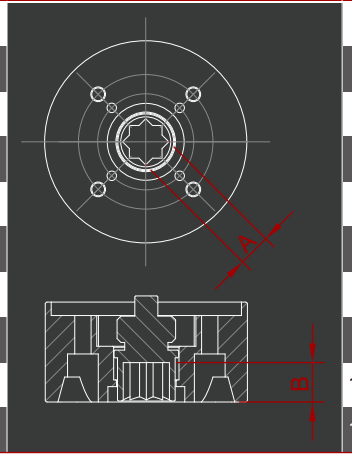
- Enclosure conforms to IP68 (7m / 72hrs) with explosion protection.
- Self-locking gear system.
- Clutch-less manual override for OME-2 to OME-8.
- Externally adjustable mechanical stops for OME-2 to OME-8.
- Continuous mechanical position indicator.
- Built-in motor thermal protection.
- All models are equipped with torque switches (except OME-1, OME-A and OME-AM).

STANDARD SPECIFICATIONS

- Available supply voltages: 24VAC, 24VDC, 110VAC, 120VAC, 220VAC, 240VAC.
- Dry powder coated aluminum alloy housings.
- Standard 30% duty cycle.
- 2 limit switches for operation, torque switches and floating control are provided as standard.
- Relative humidity: 30 to 95%
- Ambient Temperature: -30°C to +70°C (-22°F ~ +158°F)

TECHNICAL INFORMATION

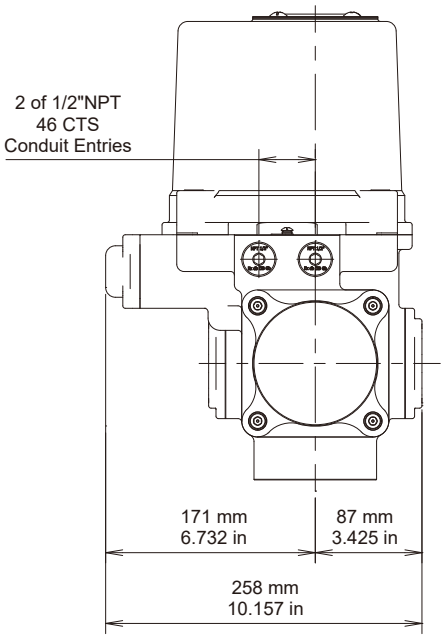
Model	Torque		Weight		Nominal Motor Power	Running Time	Manual Override	Flange Type	Shaft (A)		Depth of Shaft (B)	
	N•m	in•lb	kg	lb	Watt	(Sec / 90˚)		ISO 5211	mm	inch	mm	inch
OME-1	35	310	2	4	10	11	Lever	F03 / F05	14	0.551	17	0.669
OME-A	50	445	3	7	10	21	N / A	F07	17	0.669	20	0.787
OME-AM	50	445	3	7	10	21	Lever	F07	17	0.669	20	0.787
OME-2	90	800	18	40	40	18	Hand-wheel	F07	22	0.866	30	1.181
OME-3	150	1330	18	40	40	28		F07	22	0.866	30	1.181
OME-4	400	3540	32	71	80	20		F10	36	1.417	48	1.889
OME-5	500	4430	32	71	80	27		F10	36	1.417	48	1.889
OME-6	650	5755	32	71	80	36		F10	36	1.417	48	1.889
OME-7	1000	8855	46	101	120	52		F12 or F14	36	1.417	50	1.968
OME-8	1500	13280	46	101	120	54		F12 or F14	36	1.417	50	1.968

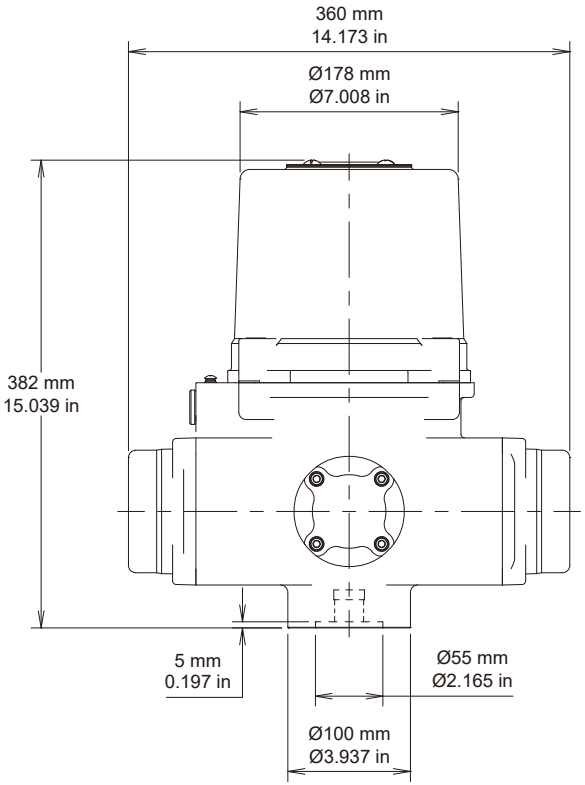


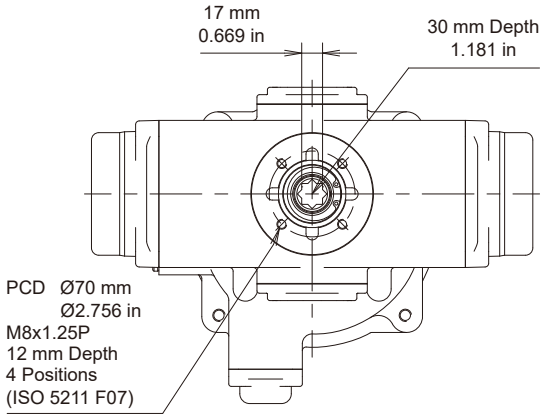
• The motor power and speed data are based on 110VAC @ 60Hz, 30% duty cycle, floating control.
• Motors are class F insulated.

Dimension - SE series

SE-500

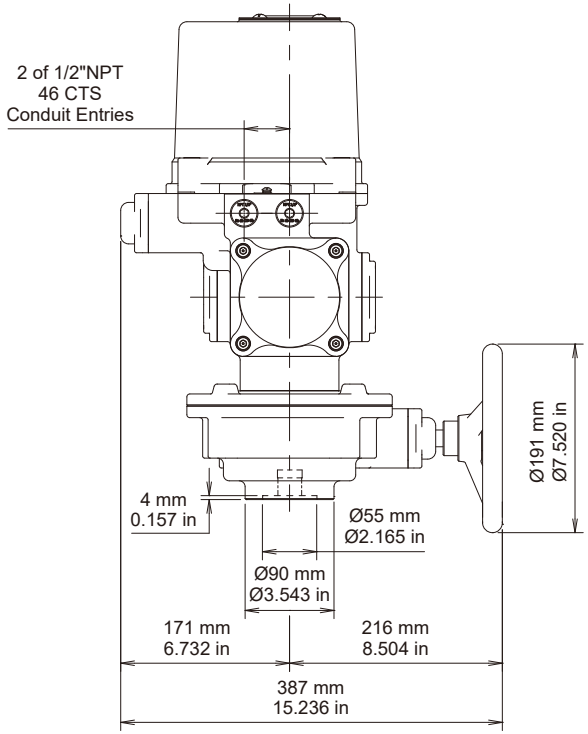


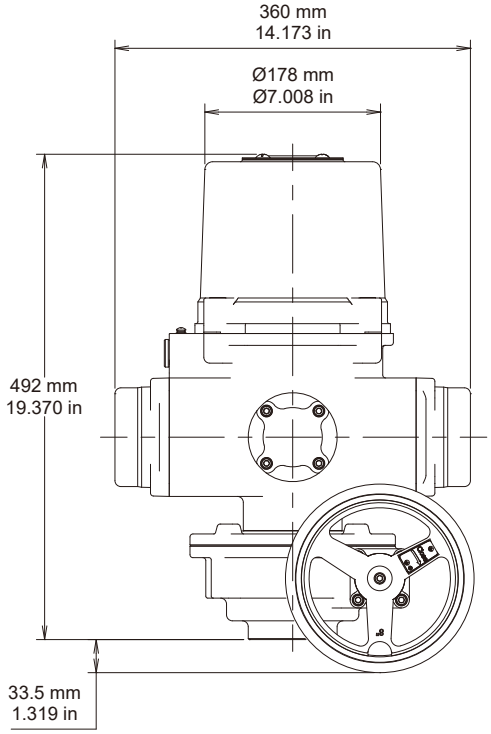


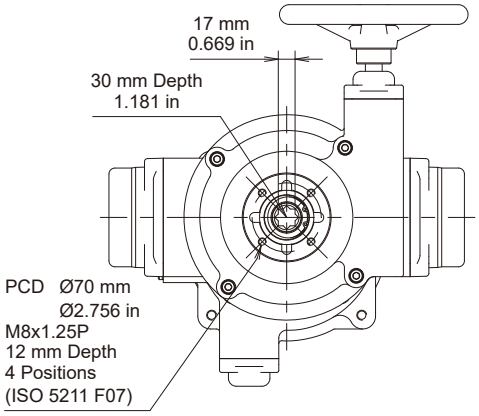


SE-500

W/ MANUAL OVERRIDE

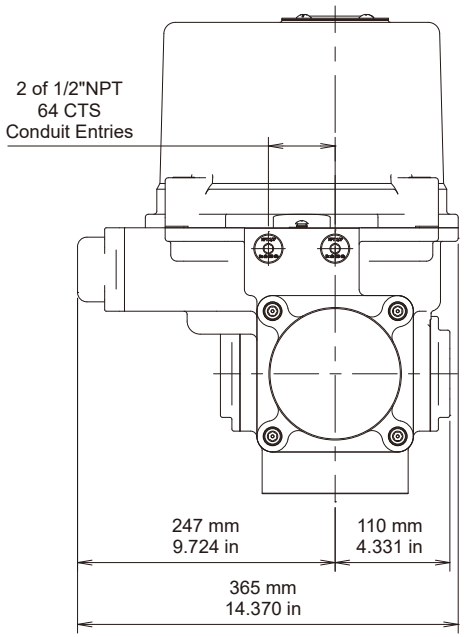


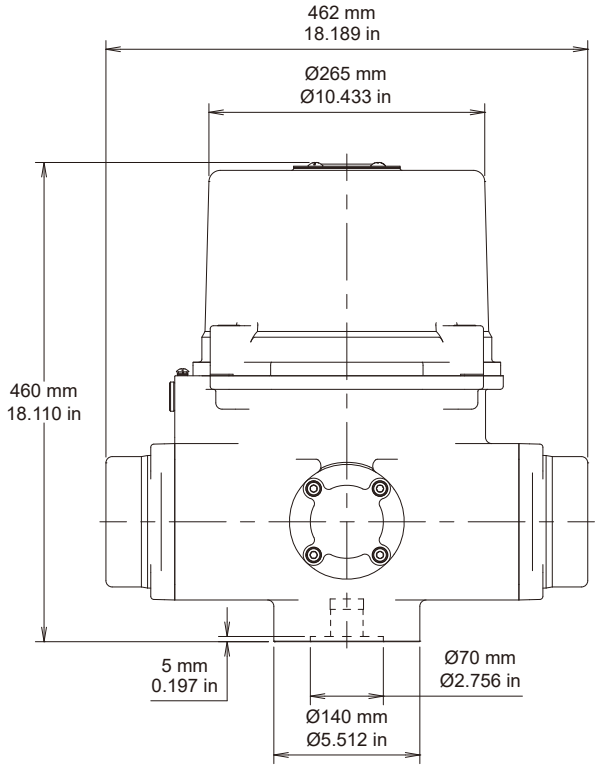


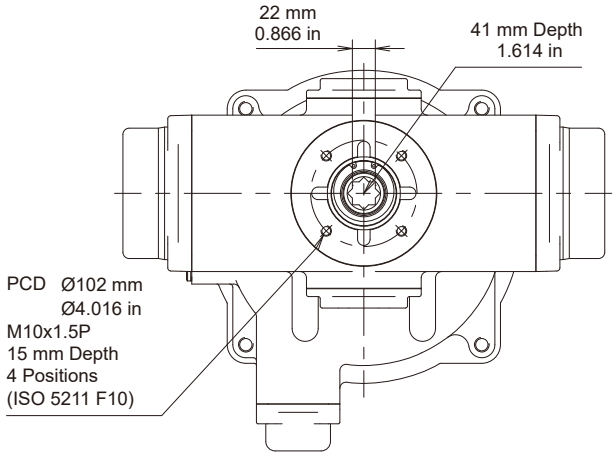


Dimension - SE series

SE-1300

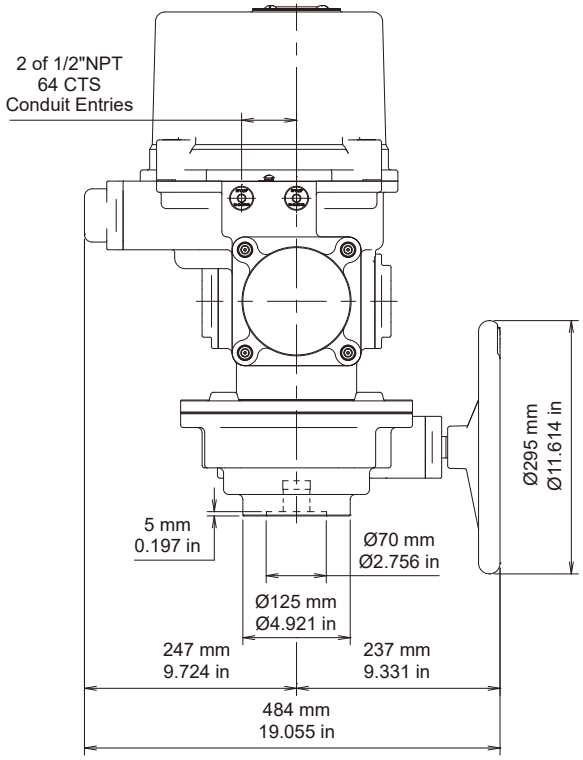


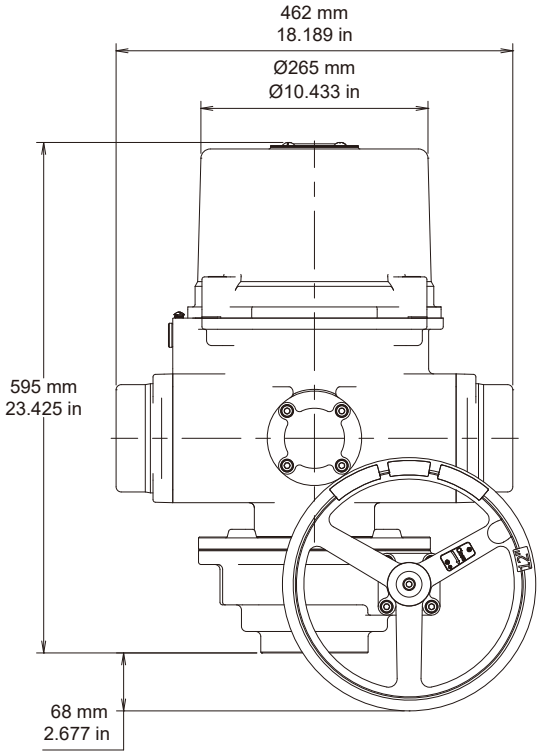


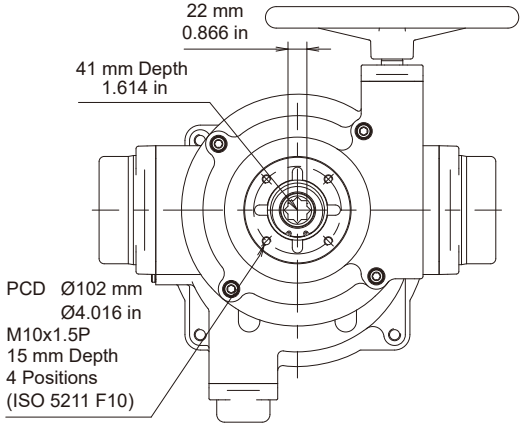


SE-1300

W/ MANUAL OVERRIDE

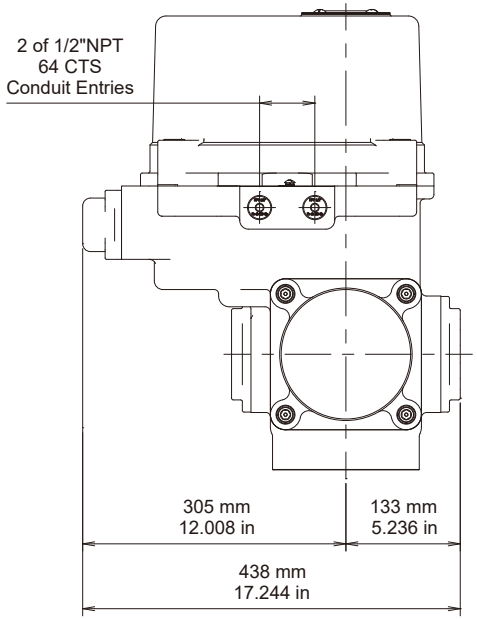


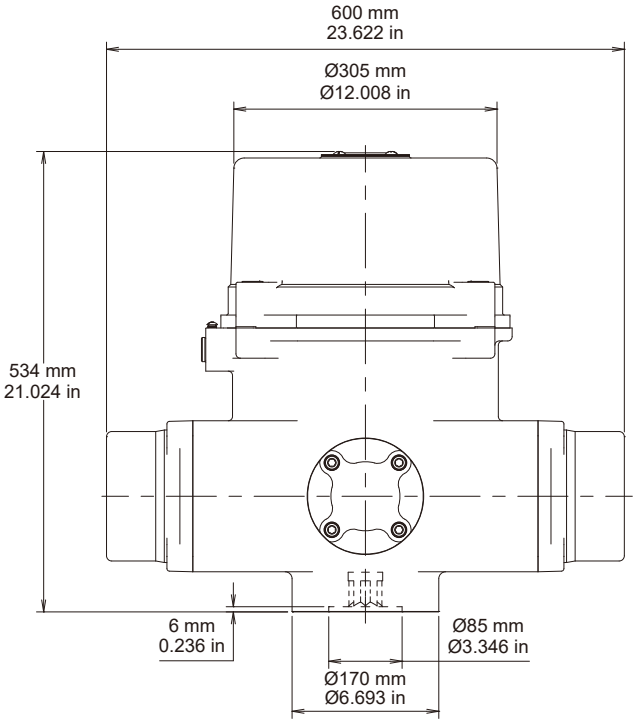


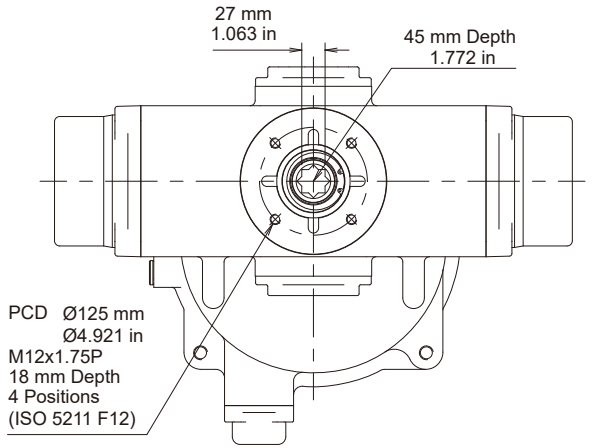


Dimension - SE series

SE-2000
SE-2600

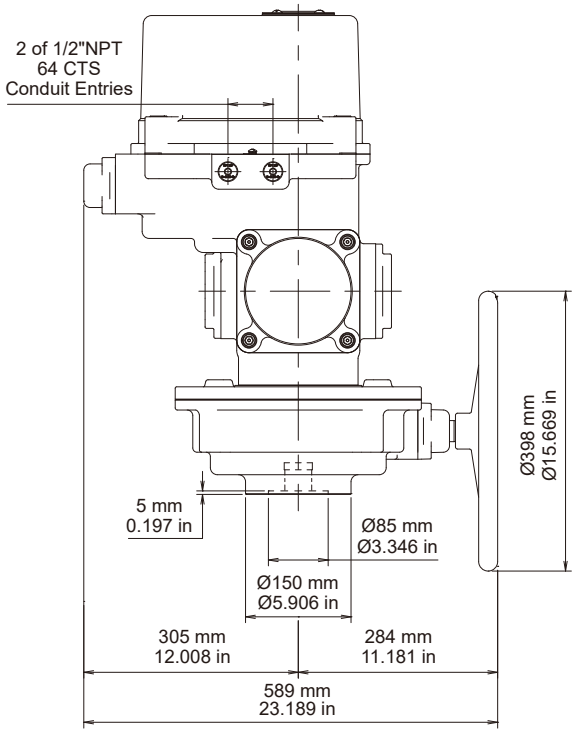


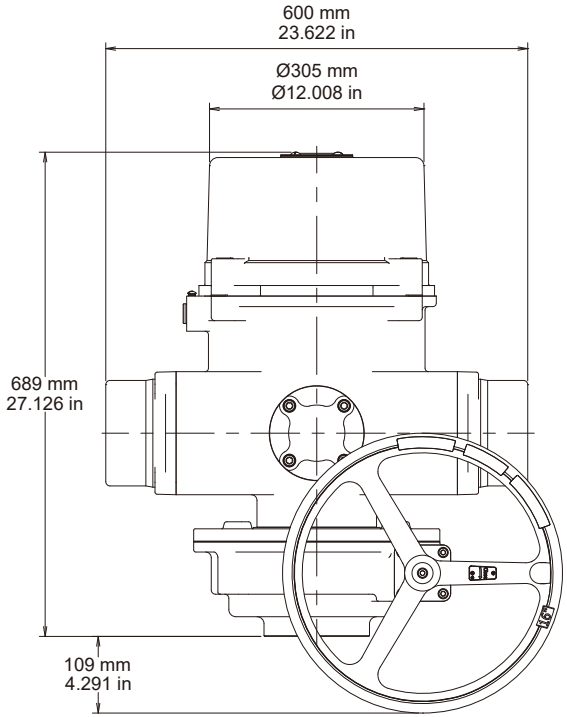


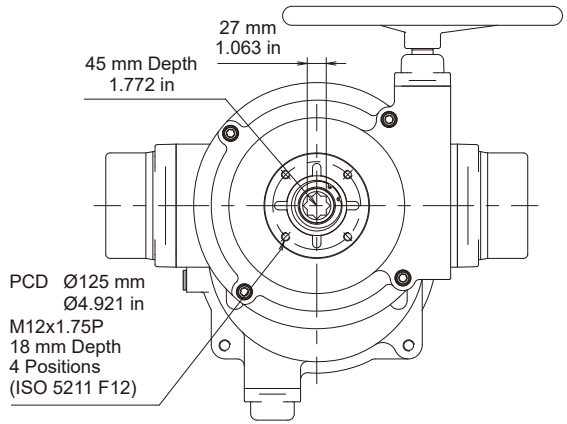


SE-2000
SE-2600

W/ MANUAL OVERRIDE

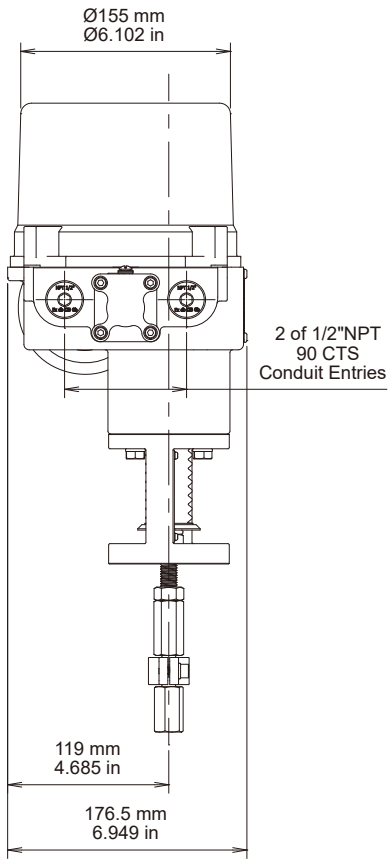


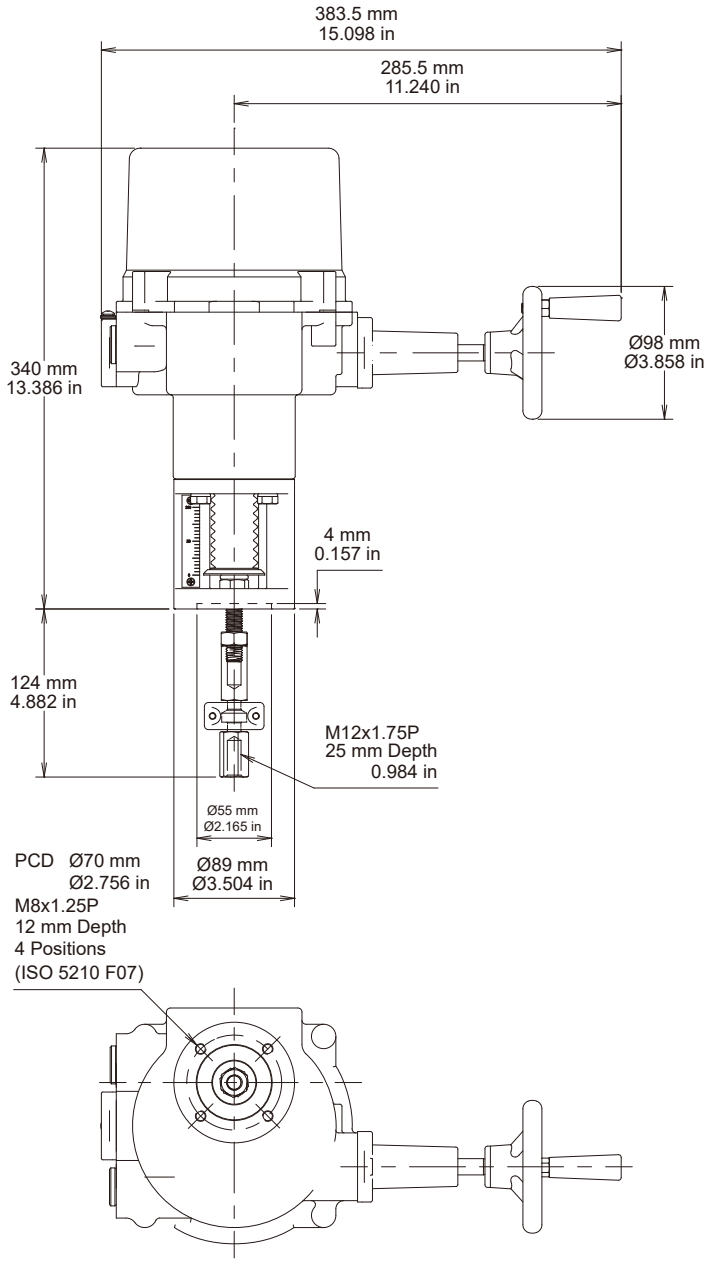




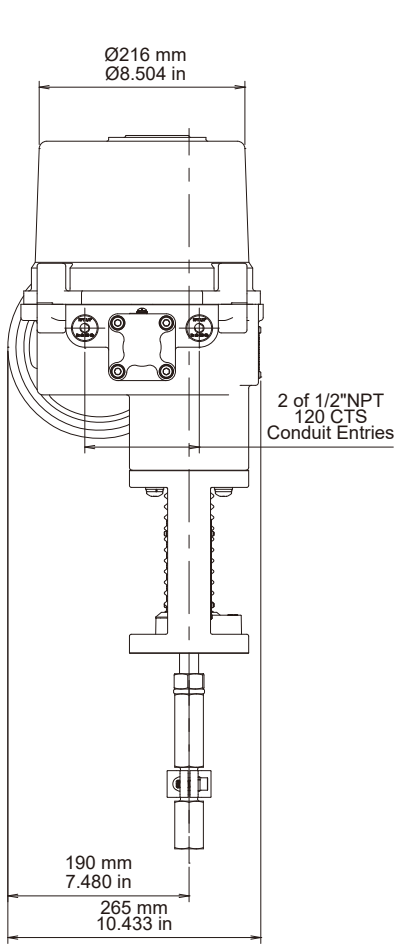
Dimension - LE series

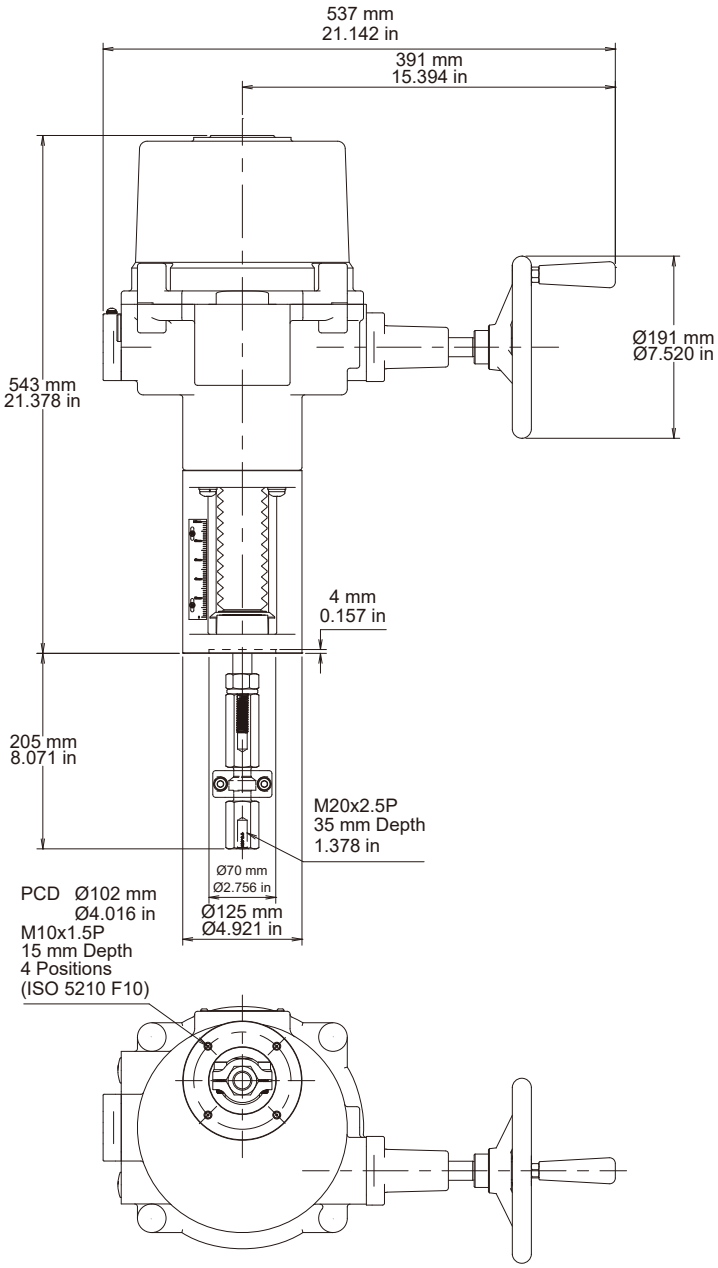
LE-250
LE-500





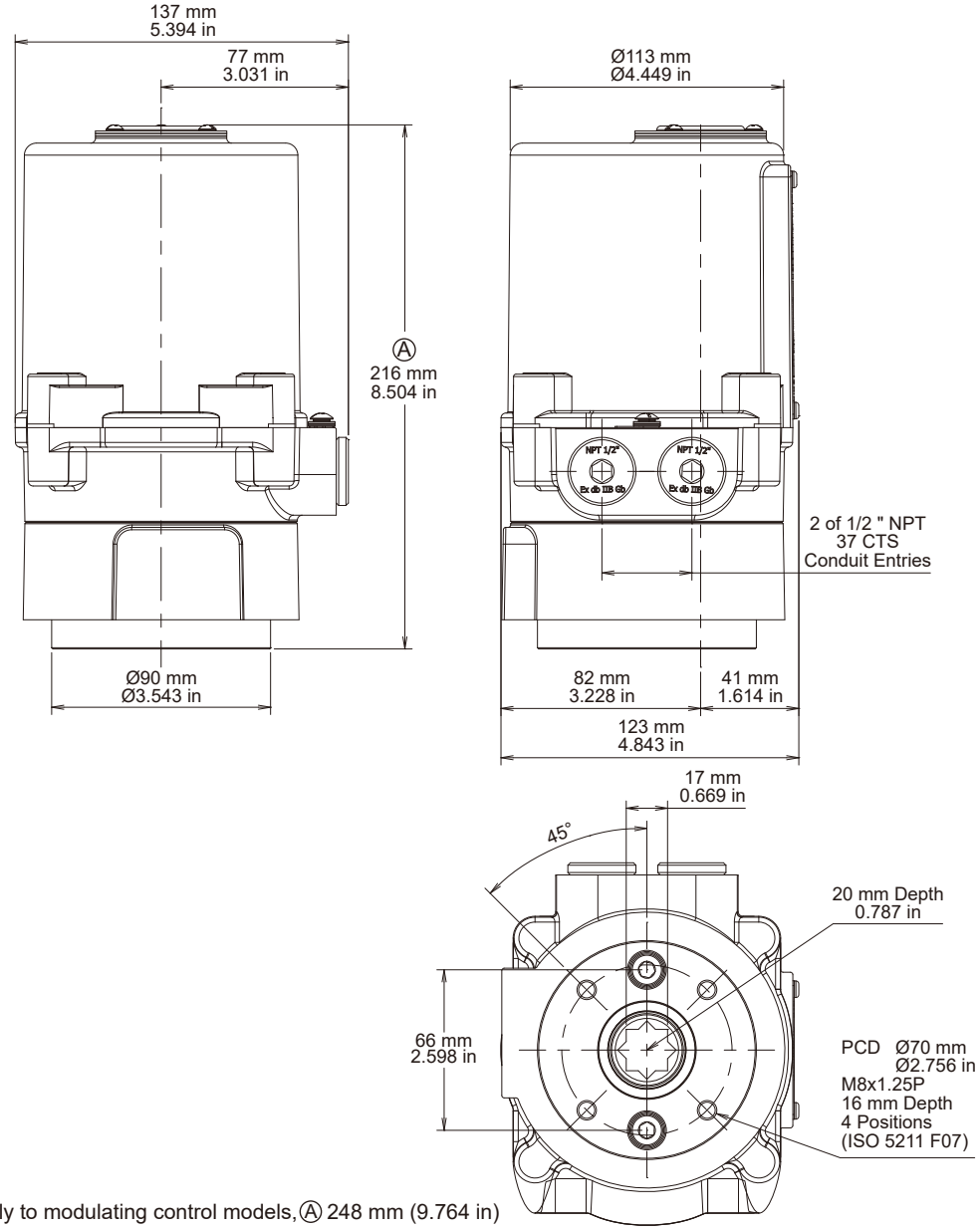
LE-1000
LE-2000





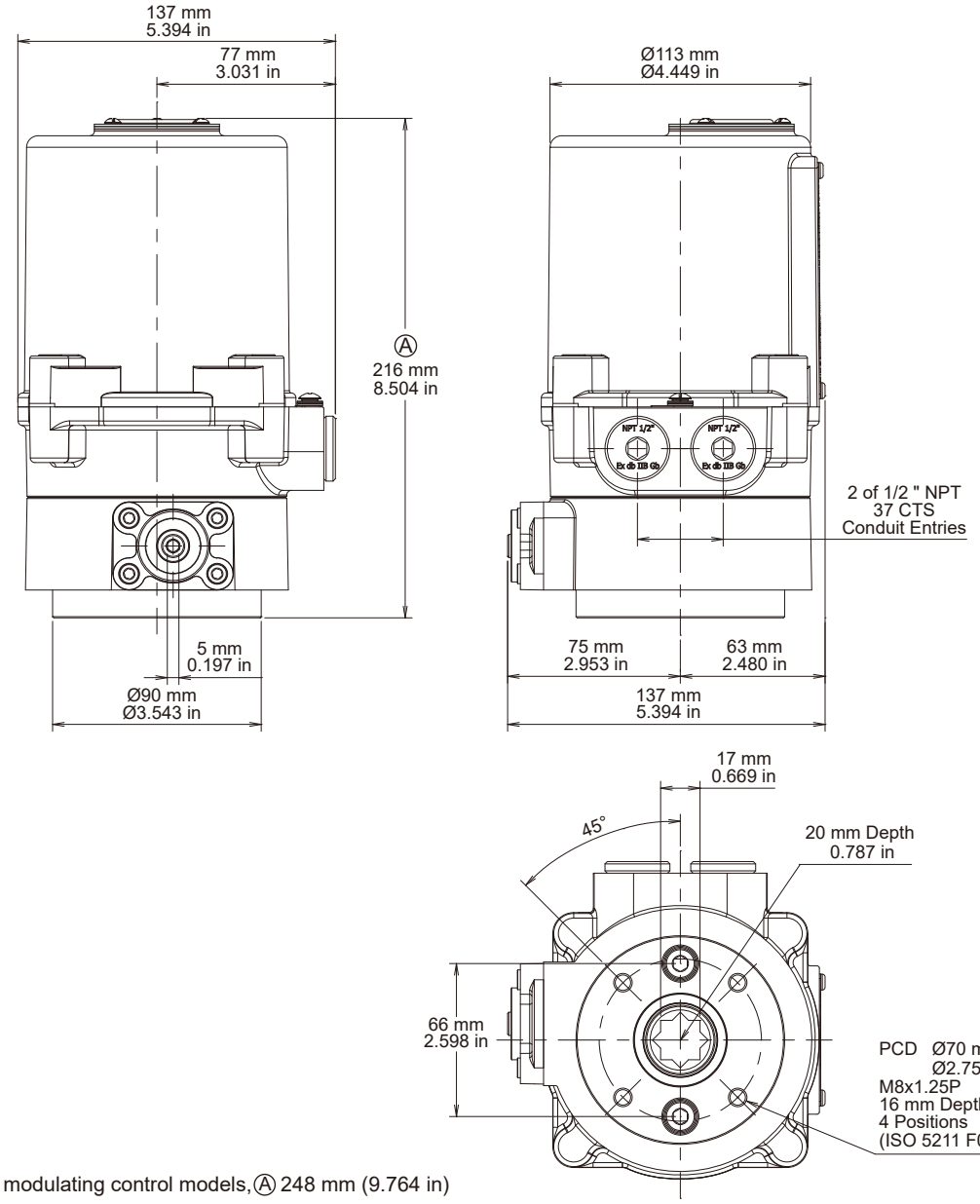
Dimension - OME series

OME-A



• Apply to modulating control models, Ⓐ 248 mm (9.764 in)

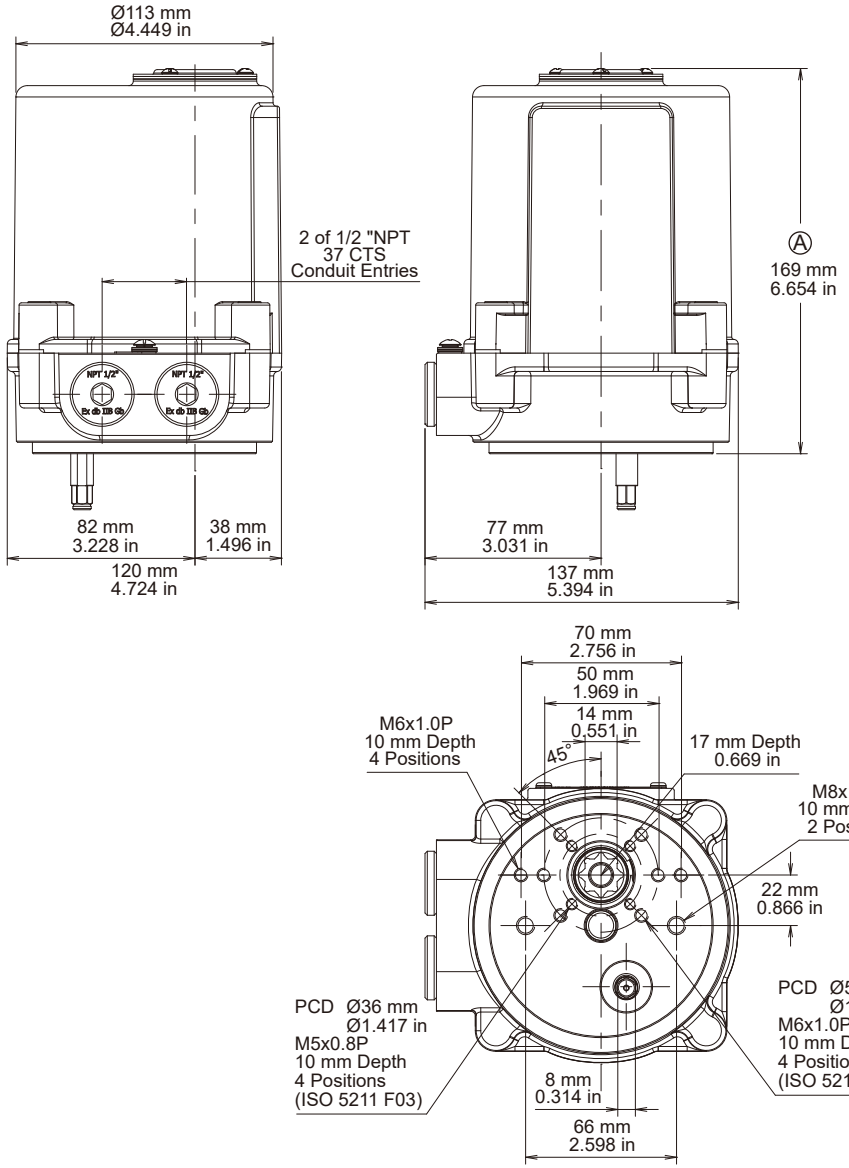
OME-AM



• Apply to modulating control models, Ⓐ 248 mm (9.764 in)

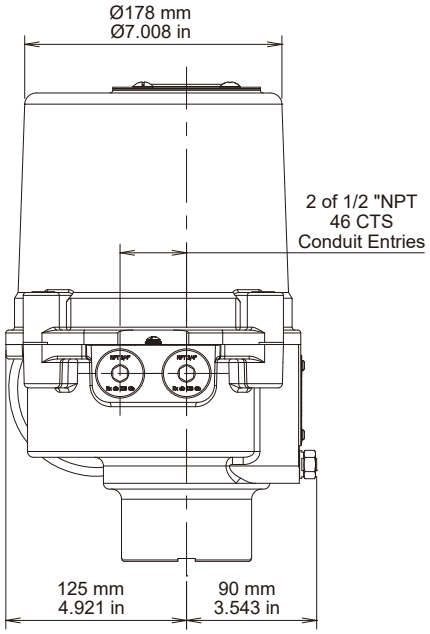
Dimension - OME series

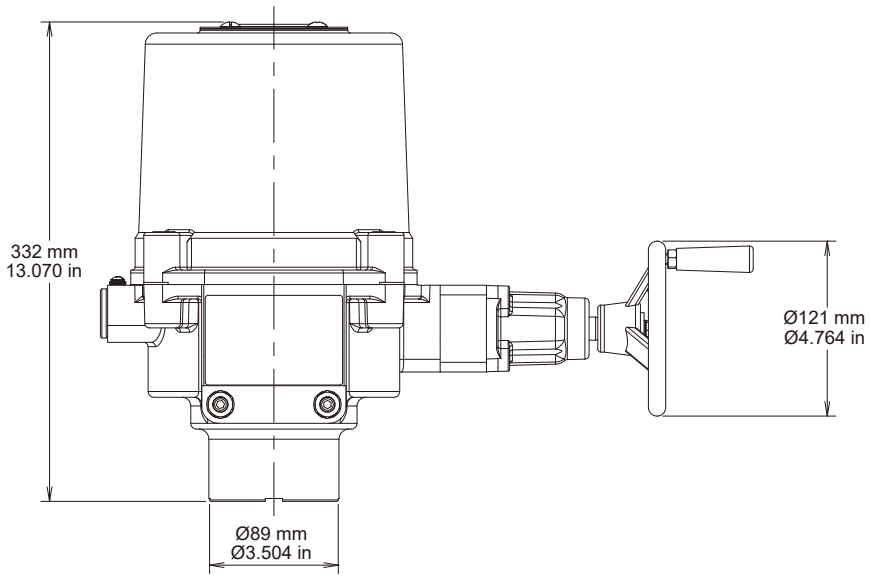
OME-1

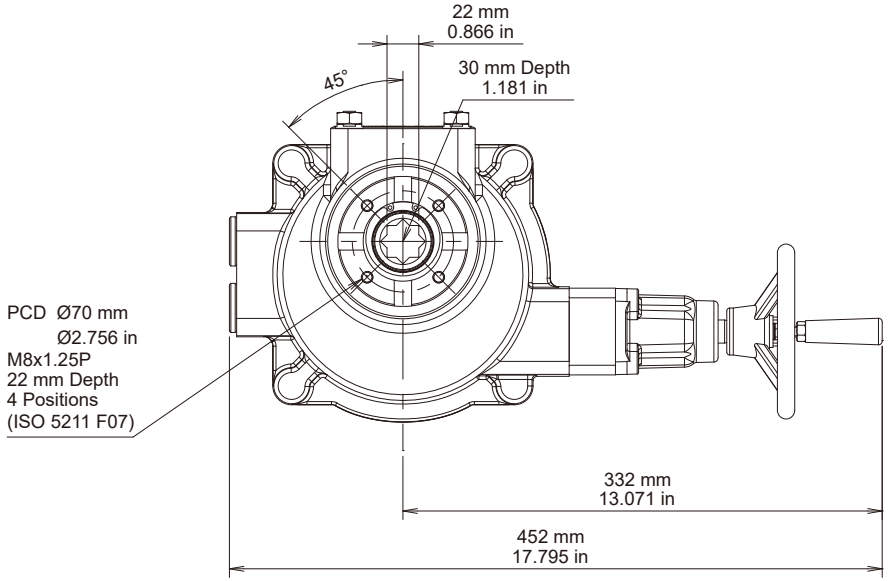


• Apply to modulating control models, Ⓐ201 mm (7.913 in)

OME-2
OME-3

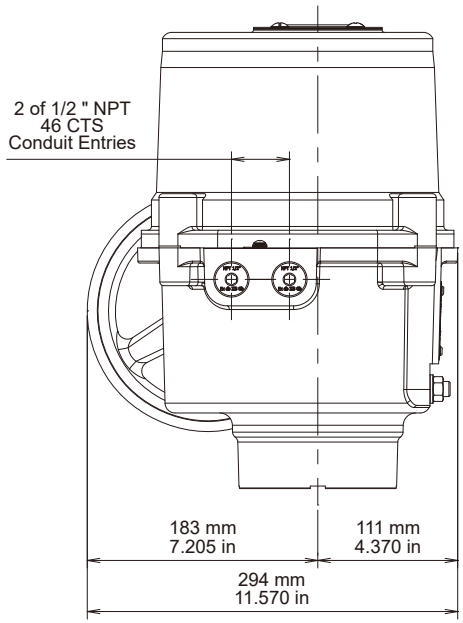

Ø178 mm
Ø7.008 in
2 of 1/2 "NPT
46 CTS
Conduit Entries
125 mm
4.921 in
90 mm
3.543 in

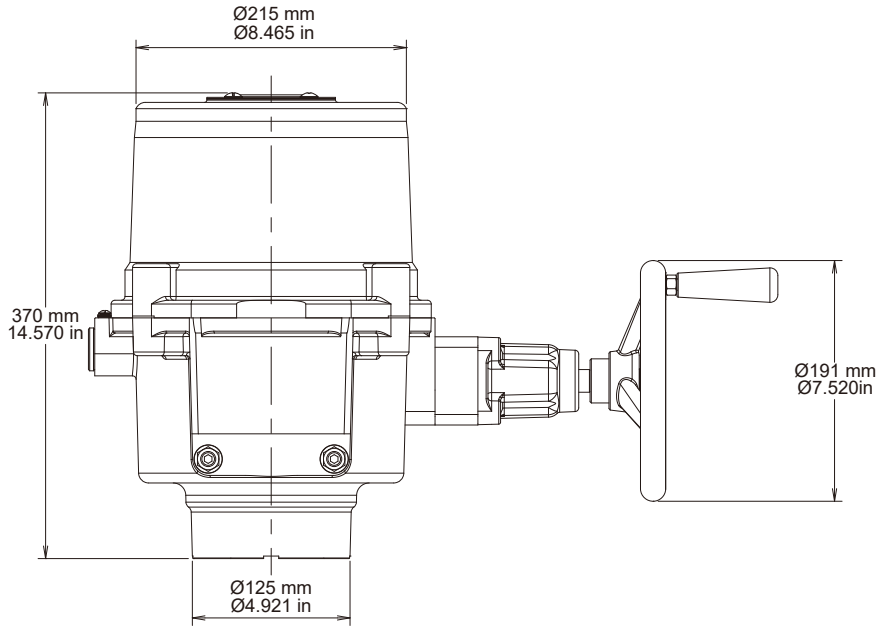

332 mm
13.070 in
Ø121 mm
Ø4.764 in
Ø89 mm
Ø3.504 in

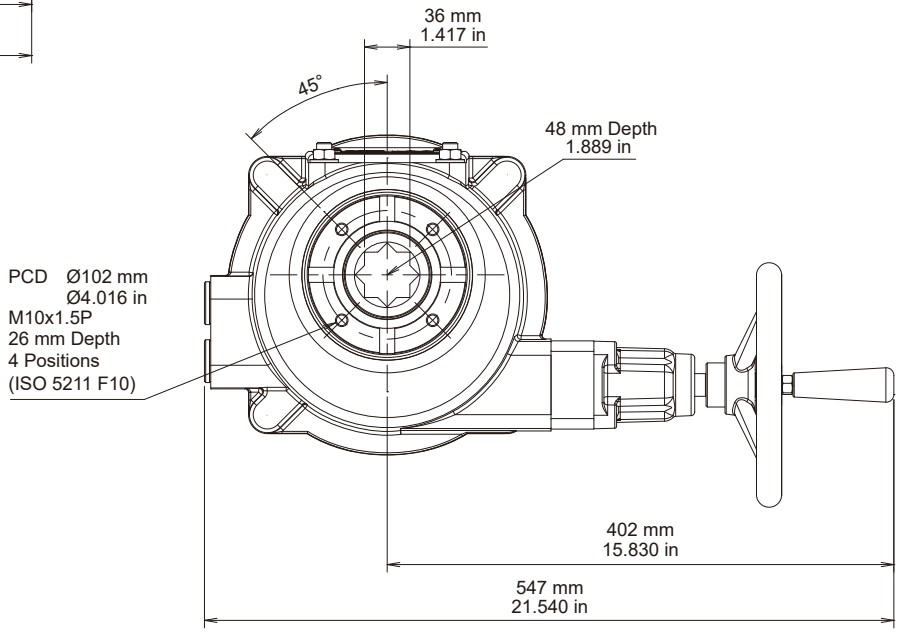

22 mm
0.866 in
45°
30 mm Depth
1.181 in
PCD Ø70 mm
Ø2.756 in
M8x1.25P
22 mm Depth
4 Positions
(ISO 5211 F07)
332 mm
13.071 in
452 mm
17.795 in

Dimension - OME series

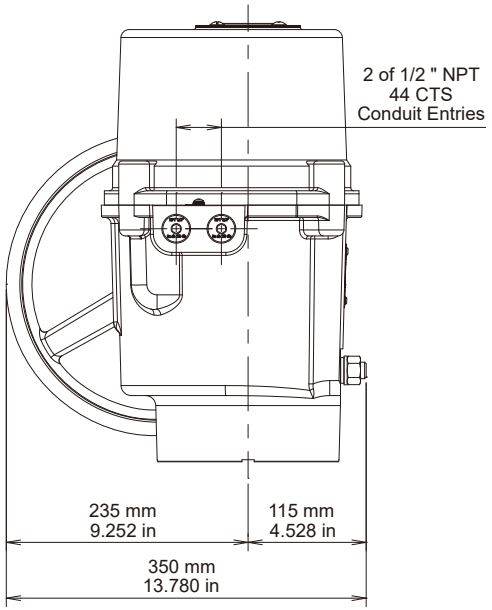
OME-4
OME-5
OME-6

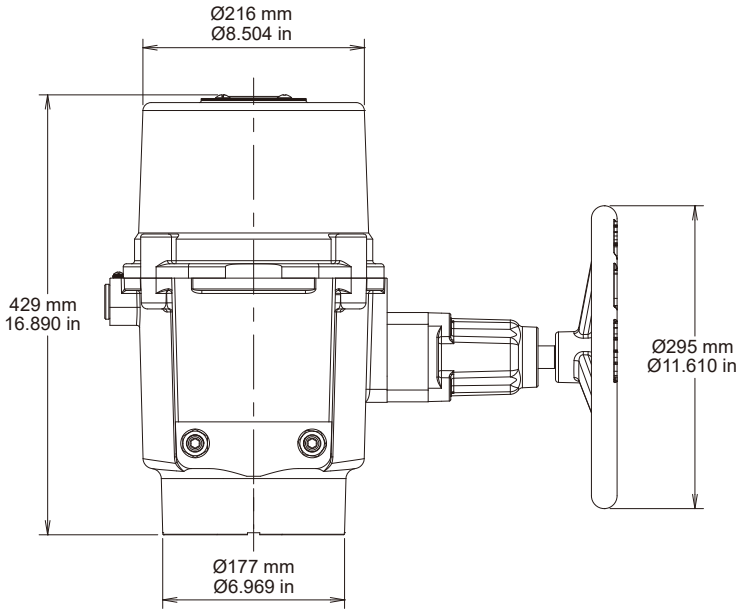


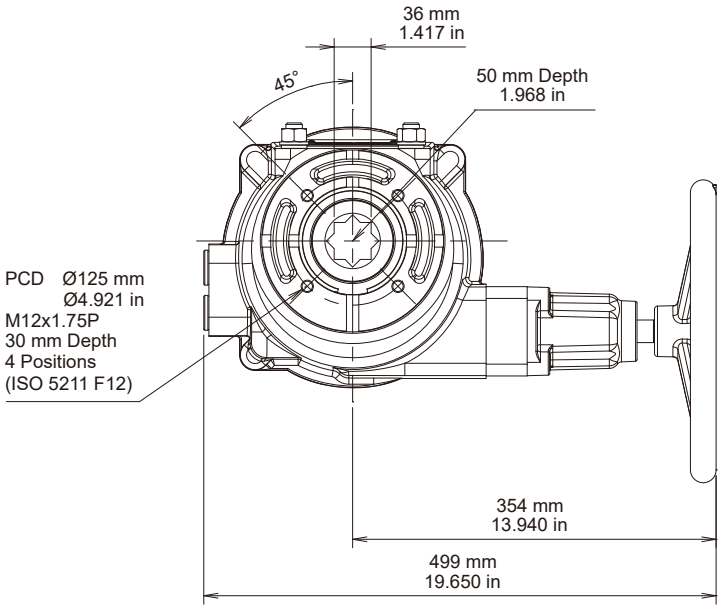




OME-7
OME-8


2 of 1/2 " NPT
44 CTS
Conduit Entries
235 mm
9.252 in
115 mm
4.528 in
350 mm
13.780 in


Ø216 mm
Ø8.504 in
429 mm
16.890 in
Ø295 mm
Ø11.610 in
Ø177 mm
Ø6.969 in


36 mm
1.417 in
45°
50 mm Depth
1.968 in
PCD Ø125 mm
Ø4.921 in
M12x1.75P
30 mm Depth
4 Positions
(ISO 5211 F12)
354 mm
13.940 in
499 mm
19.650 in

Optional itmes

Enclosure

Hazardous Area Enclosures				SE series	LE series	OME series
ATEX Certification				V	V	V
Directive	Group	Ambient Temperature				
ATEX II 2 GD	Ex db IIB T4 Gb	-30°C to +70°C (-22°F to +158°F)				
ATEX II 2 GD	Ex tb IIIC T130°C Db	-30°C to +70°C (-22°F to +158°F)				
Standards: EN 60079-0, EN 60079-1, EN 60079-31						
IECEx International Certification				V	V	V
Group	Ambient Temperature					
Ex db IIB T4 Gb	-30°C to +70°C (-22°F to +158°F)					
Ex tb IIIC T130°C Db	-30°C to +70°C (-22°F to +158°F)					
Standards: IEC 60079-0, IEC 60079-1, IEC 60079-31						
CSA Hazardous Area Certification				V		V
Zone	National Conformity	Class	Zone	Protection Method	Groups	T-Code	Ambient Temperature
	AEx / Ex	I	1	db	IIB, IIA	T4	-30°C to +70°C (-22°F to +158°F)
	AEx / Ex	II	21	tb	IIIC, IIIB, IIIA	T130°C	-30°C to +70°C (-22°F to +158°F)
	Standards: CAN / CSA-C22.2 No. 0-10, CAN / CSA-C22.2 No. 60079-0, CAN / CSA-C22.2 No. 60079-1, CAN / CSA-C22.2 No. 60079-31, UL 60079-0, UL 60079-1, UL 60079-31						
Division	Class	Division	Groups	T-Code	Ambient Temperature		
	I	1	C, D	T4	-30°C to +70°C (-22°F to +158°F)		
	II	1	E, F, G	T130°C	-30°C to +70°C (-22°F to +158°F)		
	Standards: CAN / CSA-C22.2 No. 0-10, CSA C22.2 No. 30-M1986, CSA C22.2 No. 25-17, FM 3600, FM 3615, FM 3616						

	SE series	LE series	OME series
Manual Override • The operator can drive the valve or damper to appropriate position by handwheel upon loss of power supply. • When the electric motor is operating, for personal safety the handwheel won't rotate.	V		
Operating Direction • The spring return direction cannot be changed. The spring return direction must be configured by the manufacturer. Please select the fail action according to the required application, i.e. based on clockwise or counter-clockwise operation. • Standard: Fail clockwise spring return. • Optional: Fail counter-clockwise spring return.	V		
Anti-condensation Heater • A heater can increase internal temperatures and keep the inside of the actuator dry to avoid freezing of the lubricant and moisture causing actuator failure under low temperatures or high humidity. • A heater is not recommended if the ambient temperature is over 35˚C (95˚F). • When temperatures vary significantly from day to night or between summer and winter, a heater and thermostat 25±5°C (77±9°F) are recommended.	V	V	V

Optional itmes

	SE series	LE series	OME series
Heater Thermostat • This option can switch the anti-condensation heater off when the temperature inside the actuator is over 25±5°C (77±9°F).	V	V	V
Auxiliary Limit Switches • Actuators come standard with two limit switches, LS1 for fully-open and LS2 for fully-closed positioning. Two auxiliary limit switches are optional for fully-open and fully-closed position feedback.	V		V
Modulating Control • A proportional control unit that could efficiently control the flow via analog signal and position the valve to open / close in the system as well. • Analog signal input: 4-20mA, 1-5V and 2-10V. • Analog signal output: 4-20mA and 2-10V.	V		V

	SE series	LE series	OME series
Floating Control • The actuator can be controlled by an external signal to open, close or stop at any intermediate positions. • SE series actuators will fail either clockwise or counter-clockwise to the end position on loss of power.	V	V	
Analog Signal Output • This option provides a signal output to a position indicator. • Analog signal output: 0-20mA, 4-20mA, 0-5V, 0-10V, 1-5V and 2-10V.	V		V
Potentiometer Unit • Recommended to use with an On / Off or floating control actuator to output signal for position indication. Two resistors, 1K ohm or 5K ohm are available for selection.	V		V
Extended Duty Cycle Control (IEC standard) • This option is suggested for extending duty cycle.			V

Optional itmes

Conduit Entries	SE series	LE series	OME series
• Standard ：2 x 1/2” NPT	V	V	V
• Optional ：2 x 3/4” NPT	V	V	OME-2 to 8
• Optional ：2 x M20	V	V	V
• Optional ：2 x M25	V	V	OME-2 to 8

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