

Building connections that last™



Series EC

Compact Electric Actuator Datasheet



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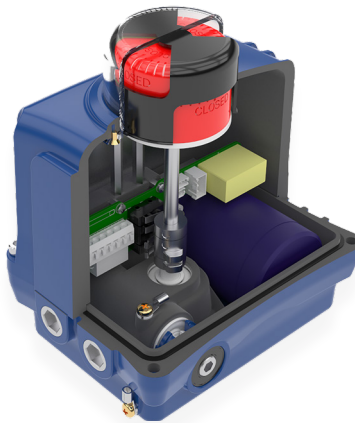
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Note: (S) Cover Option shown.

1. Standard Specifications

Enclosure	IP67, Dust-tight, weather-tight, Type 4/4x (L) tall cover
Ambient Temperature	-20°C to +70°C (-4°F to 158°F)
Power Supply	120vac 60Hz 1-Phase (220v, 24v and 12v option)
Limit Switches	Motor: Open / Close Auxiliary Dry Contact: Open / Close
Stall Protection	Built-in Thermal Protection Cut-off at 120°C (248°F)
Travel Angle	90 ± 5
Indicator	Dome type, illuminated at full Open and full Close position. (L and S cover)
Manual Operation	Allen wrench included (6mm Hexagon)
Worm Gear	Permanently lubricated and self locking
Space Heater	5-Watt Heater (120v, 220v, 24v)
Conduit Entries	Two ½" NPT
Lubrication	Grease (Shell Gadus S2-V220-2)
Materials	Aluminum Alloy, Aluminum Bronze, Steel
Surface Treatment	Anodizing
External Coating	Dry Powder Polyester (TGIC-Free)
Anti-Vibration	X,Y,Z 10Hz-57Hz 0.15mm / 30-min



2. Options

Enclosure Option	(S) IP67, Dust-tight, weather-tight, Type 4, 4x (short cover / dome indicator) (FL) IP67, Dust-tight, weather-tight, Type 4, 4x (tall cover / flat indicator) (FS) IP67, Dust-tight, weather-tight, Type 4, 4x (short cover / flat indicator) (X) IP67, Dust-tight, weather-tight, Type 4, 4x, 7, 9 (ATEX II 2 G Ex d IIB T4)
Voltage Options	220Vac-1PH, 24Vac-1PH, 24Vdc, 24ac/dc or 12Vdc
Control Options	AC Motor Interface with speed control (on / off service) High Resolution Controller, analog (Vdc or mA) or digital signal (modulating service) Log Rate Controller, analog (Vdc or mA) (modulating service) 135-Ohm Slide Wire MODBUS Communication



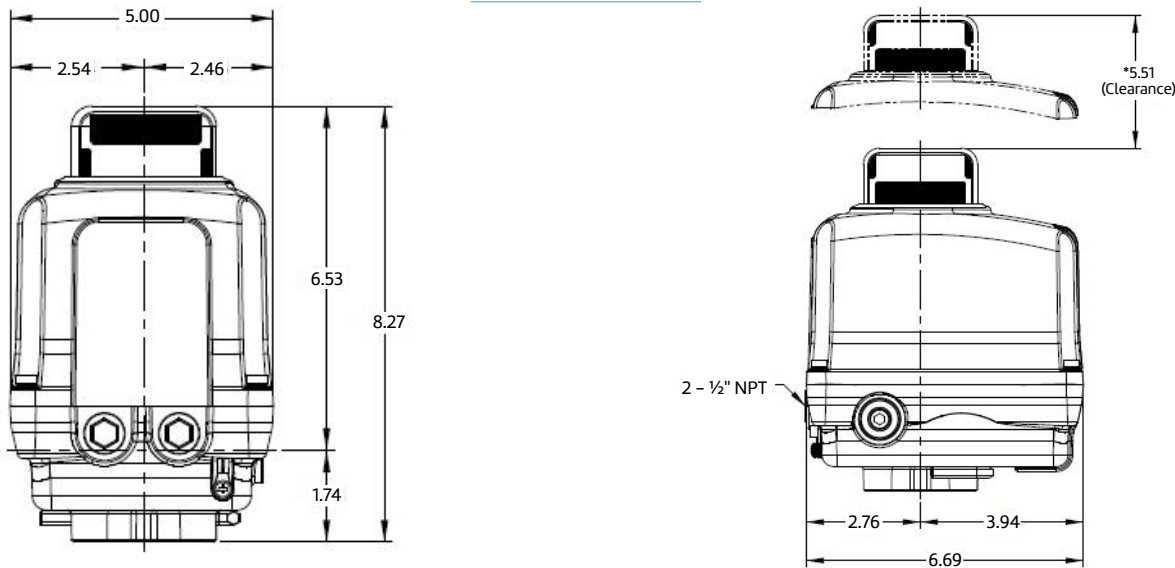
Note: (FS) Cover option shown.

3. Performance

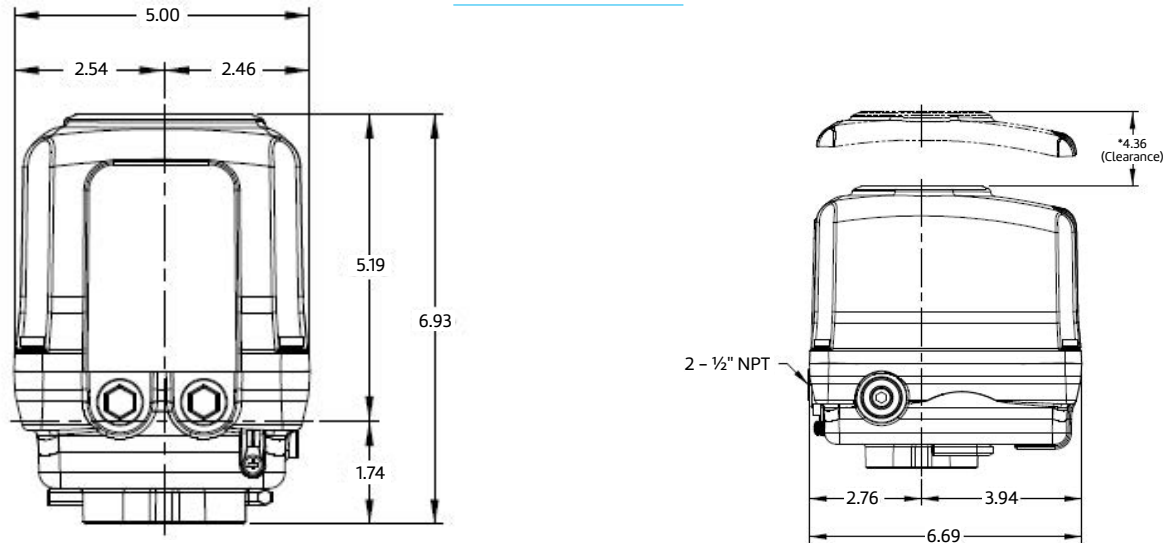
Model	EC005 (L, S, X)	EC009 (L, S, X)
Enclosure	IP67 (L, S) / IP68 (X)	IP67 (L,S) / IP68 (X)
Torque Output	430-inch pounds	780-inch pounds
Operating Time		
AC 60Hz	14-seconds	26-seconds
AC 50Hz	17-seconds	32-seconds
12Vdc	11-seconds	25-seconds
24Vdc	10-seconds	22-seconds
Motor Voltage / Watts	Rated / Locked Rotor AMP	Rated / Locked Rotor AMP
120Vac 60Hz	0.35A / 0.65A	0.35A / 0.65A
220Vac 50Hz	0.23A / 0.35A	0.25A / 0.40A
12Vdc	3.2A / 13.9A	3.4A / 13.9A
24V	1.8A / 7.9A	2.1A / 7.9A
Duty Cycle	S2-15min / S4-50%	S2-15min / S4-30%
Mounting Base	F03, F05, F07	F03, F05, F07
Bore	14mm-Star	14mm-Star
Handle Turns	6-Turns	4.5-Turns
Type Weight		
Tall Cover (L,FL)	7.1 lbs	7.1 lbs
Short Cover (S,FS)	6.2 lbs	6.2 lbs
Explosion Proof (X)	11.0 lbs	11.0 lbs

4. Dimensions

L-Model Shown

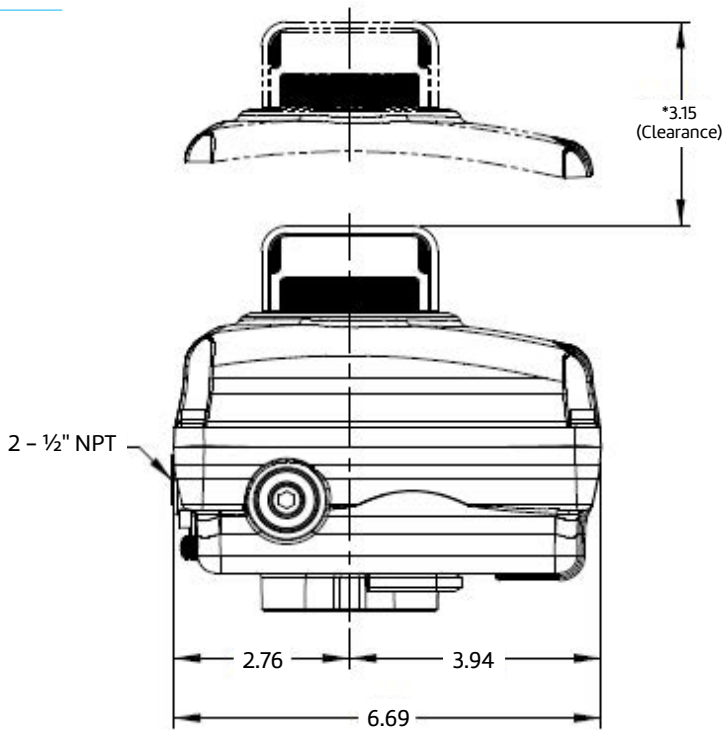
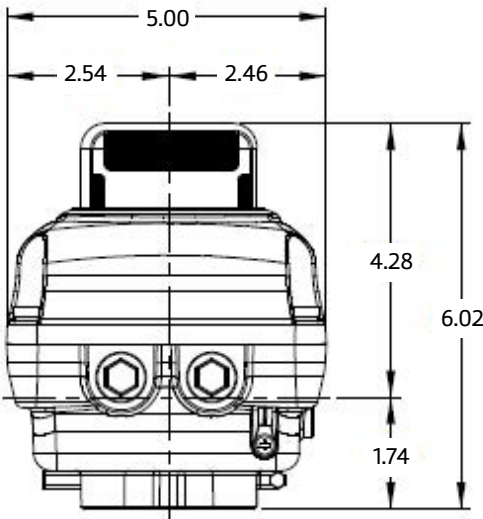


FL-Model Shown

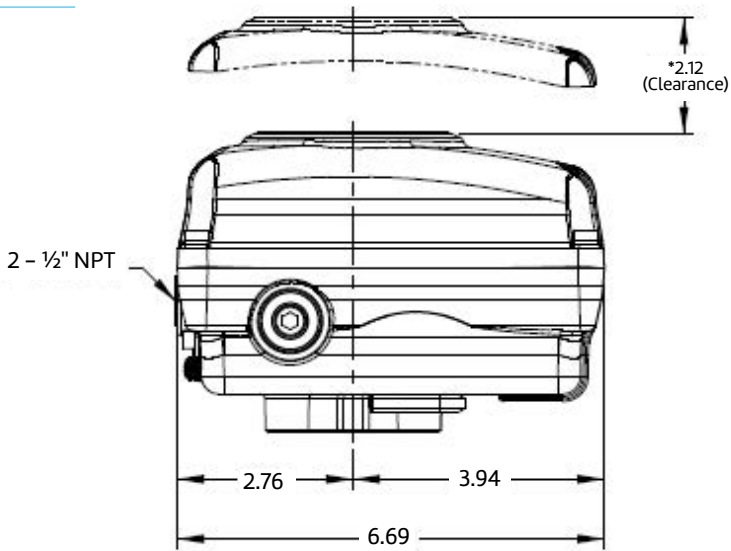
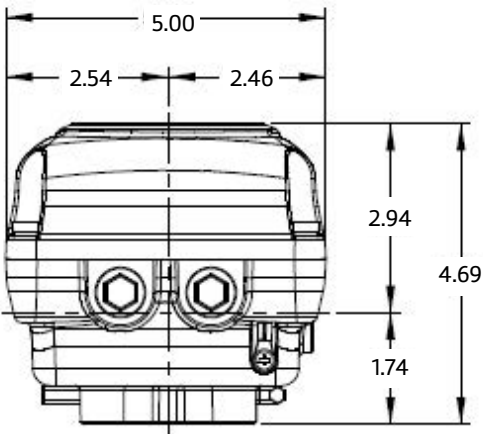


4. Dimensions

S-Model Shown

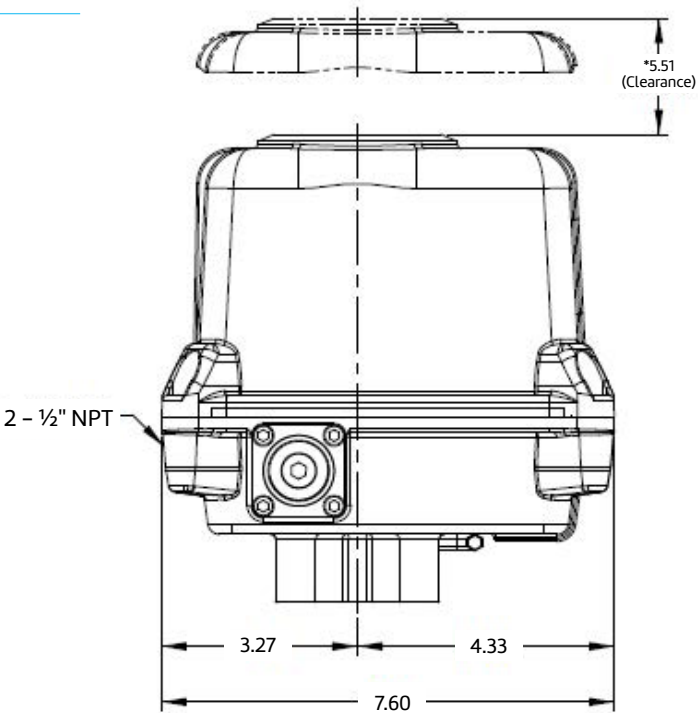
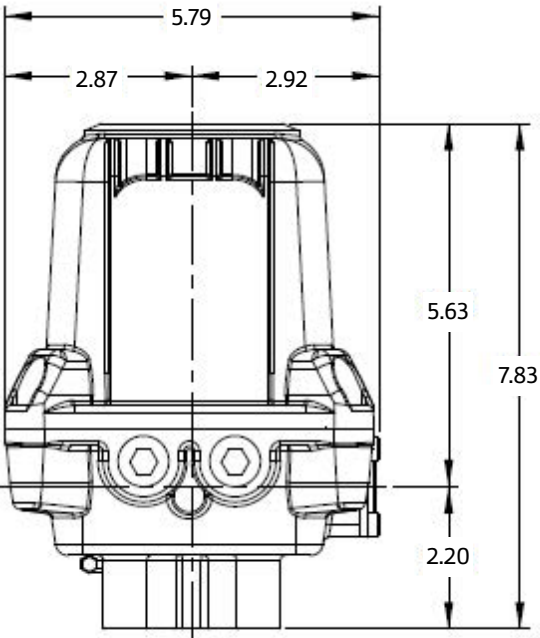


FS-Model Shown



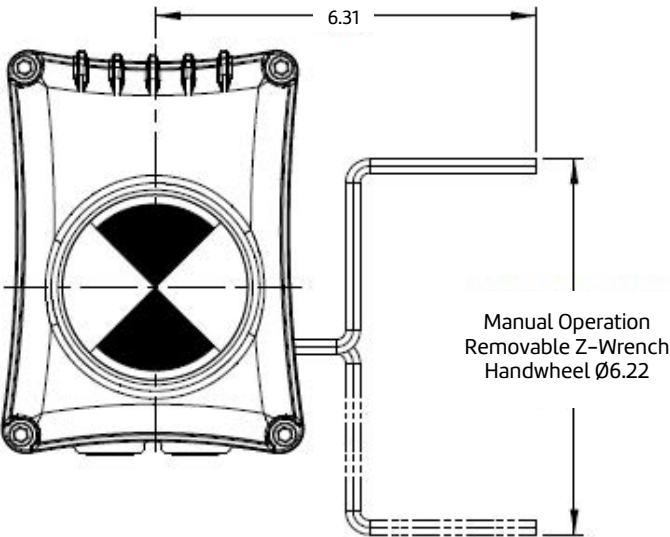
4. Dimensions

X-Model Shown

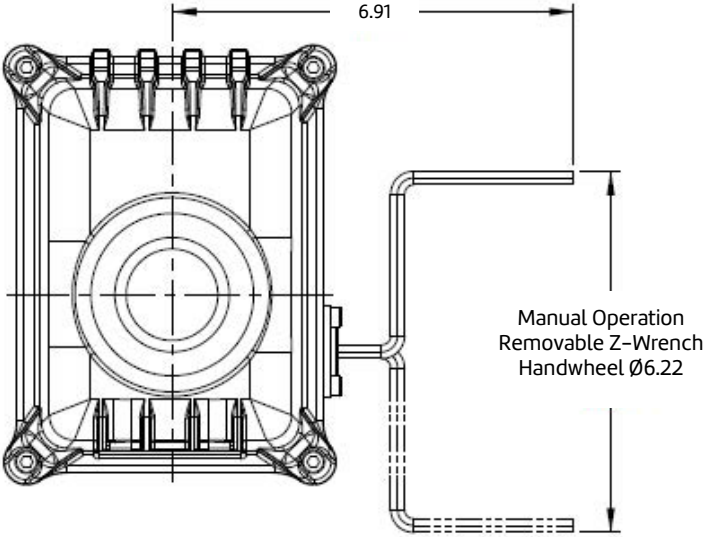


4. Dimensions

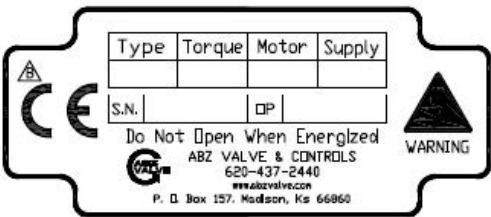
Note: Top View L, S, FL, FS Shown



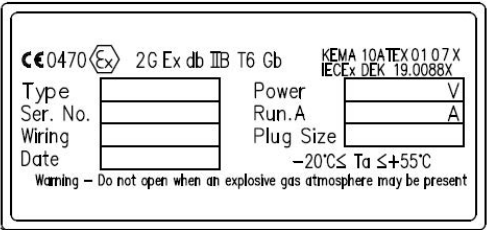
Note: Top View X Shown



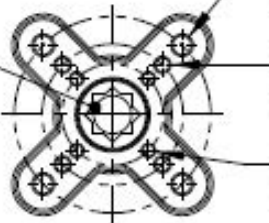
Note: Standard Label information



Note: Explosion Proof Label Information



Star Drive
.55 x .98 Deep



ISO 5211 F07/Ø2.67 Bolt Circle
(4) M8-1.25 x 13mm deep

ISO 5211 F05/Ø1.97 Bolt Circle
(4) M6-1.00 x 11mm deep

ISO 5211 F03/Ø1.42 Bolt Circle
(4) M5-0.80 x 9mm deep

Note: Bottom View All Models

Wiring diagram for a 3-phase motor with a heater and thermal protection. The diagram shows a 3-phase supply connected to a motor, a heater (HW), and a thermal protection unit (TP) via a capacitor. The thermal protection unit has terminals for CLS, OLS, ACLS, and AOLS. It also has a STOP terminal and a CCW terminal. The unit is connected to an ACTUATOR TERMINAL STRIP with terminals 1 through 8. The diagram also shows connections for (L2) NEUTRAL, (L1) LINE (120vac), (CW) CLOSE, (CCW) OPEN, and AUX. CONTACT.

ACTUATOR TERMINAL STRIP

1

2 --- (L1) LINE (HEATER) (120vac)

3

4

5

6

7 --- AUX. CONTACT

8

MOTOR

HEATER (5W)

CAPACITOR

CLS

ACLS

AOLS

OUTPUT SIGNAL

7 VOLTAGE OUTPUT

8 mA OUTPUT

5 GROUND

(SELECT 1 INPUT) (+) -

(L1) LINE (120vac)

(L2) NEUTRAL

1K ohms Potentiometer (POT-102)

RED

WHITE

BLACK

RED

WHITE

BLUE

OTX-100

DHC-100

8 +15V OUT

7 +5V OUT

6 1-5, 3-10V (+)

5 4-20mA (+)

4 SIGNAL GND (-)

3 EARTH/GRN

2 (L1) HOT LINE

1 (L2) NEUTRAL

8 +2.5V

5 WIPER

4 GROUND

3 MOTOR 2 OUTPUT

2 NEUTRAL

1 MOTOR 1 OUTPUT



ABZ VALVE
An ASC Engineered Solution

Compact Electric Actuator Series EC

Example: EC-005L-A1A

A size 005 actuator (434 lbf-in), with IP67 enclosure, 120 Vac / 1 PH power supply, for standard On-Off service, with two limit switches.

How to Order

E	-	C005	L	-	A	1A	-	A1	
		1 Size	2 Type	3 Voltage		4 Service	5 ALS		6 Feedback
1 Model / Size									
Code		lbf-in							
C005		434							
C009		780							
2 Type									
Code									
L		IP67, Dust-tight, weather-tight, Type 4 / 4x (tall cover-standard)							
S		IP67, Dust-tight, weather-tight, Type 4 / 4x (short cover)							
FL		IP67, Dust-tight, weather-tight, Type 4 / 4x (tall-flat indicator)							
FS		IP67, Dust-tight, weather-tight, Type 4 / 4x (short-flat indicator)							
X		IP67, Dust-tight, weather-tight, Type 4 / 4x, 7,9 (explosion proof)							
3 Voltage									
Code									
A		120 Vac / 1PH							
B		220 Vac / 1PH							
C		24 Vac / 1PH							
D		24 Vdc							
G		24 AC / DC (On / Off)							
J		12 Vdc							
4 Service & Control Type (Card)									
Open / Close (On-Off):									
Standard									
1A		On / Off, 2-Position Control (All Voltages)							
With Motor Interface									
1B		AC Motor Interface with speed control [120 Vac]							
1C		AC Motor Interface with speed control [220 Vac]							
1D		AC Motor Interface with speed control [24 Vac]							
Modulating:									
High-Resolution Controller									
2A		High-Resolution Controller, analog (Vdc or mA) or digital signal [120Vac]							
2B		High-Resolution Controller, analog (Vdc or mA) or digital signal [220Vac]							
2C		High-Resolution Controller, analog (Vdc or mA) or digital signal [24Vac]							
2E		High-Resolution Controller, analog (Vdc or mA) or digital signal [24Vdc]							
3A		High-Resolution Controller, analog 0-135 Ohm slide wire signal [120 Vac]							
3B		High-Resolution Controller, analog 0-135 Ohm slide wire signal [220 Vac]							
3C		High-Resolution Controller, analog 0-135 Ohm slide wire signal [24 Vac]							
3E		High-Resolution Controller, analog 0-135 Ohm slide wire signal [24 Vdc]							
Log Rate Controller									
2F		Log Rate Controller, analog (Vdc or mA) signal [120Vac]							
2G		Log Rate Controller, analog (Vdc or mA) signal [220Vac]							
Motor Controller									
2H		AC Motor Controller, analog (Vdc or mA) signal [120Vac]							
2J		AC Motor Controller, analog (Vdc or mA) signal [220Vac]							
2K		DC Motor Controller, analog 4-20mA signal [24Vdc]							
5 Auxiliary Limit Switches (ALS)									
Code		Standard: 2 switches (one set)							
A1		1-Set Auxiliary Switches (ALS)							
6 Position Feedback									
Code									
<blank>		None. No Position Feedback.							
Potentiometer - Position Feedback Available with Type "L", "FL", "X" only									
B		Potentiometer Feedback, 1000 Ohm (On / Off only)							
Transmitter - Position Feedback Available with Type "L", "FL", "X" only									
All Configurations EXCEPT High-Resolution Controllers									
C		Position Feedback Transmitter, 4-20mA							
E		Position Feedback Transmitter, 2-wire Loop Powered (On / Off only)							
All Configurations EXCEPT High-Res Controllers (2A to 2E), and Analog DC Motor Controllers (2K)									
D		Position Feedback Transmitter, 0-5 or 0-10 Vdc							
Modulating, High-Resolution Controller Feedback									
G		Position Feedback Transmitter, 4-20 mA / 0-10 Vdc [for Vac High-Res Controllers only]							
H		Position Feedback Transmitter, 4-20mA (Loop Powered) [for all High-Res Controllers]							
J		Position Feedback Transmitter with Relays, 4-20 mA / 0-10 Vdc [for Vac High-Res Controllers only]							
K		Position Feedback Transmitter with Relays, 4-20mA (Loop Powered) [for all High-Res Controllers]							
Modbus									
Modulating, High-Resolution Controller Communication									
L		Modbus Option Module [all voltages]							





About ASC Engineered Solutions

ASC Engineered Solutions is defined by quality—in its products, services and support. With nearly 2,000 employees, the company's portfolio of precision-engineered piping support, valves and connections provides products to more than 4,000 customers across industries, such as mechanical, industrial, fire protection, oil and gas, and commercial and residential construction. Its portfolio of leading brands includes ABZ Valve®, AFCON®, Anvil®, Anvil EPS, Anvil Services, Basic-PSA, Beck®, Catawissa, Cooplet®, FlexHead®, FPPI®, Gruvlok®, J.B. Smith, Merit®, North Alabama Pipe, Quadrant®, SCI®, Sharpe®, SlideLOK®, SPF®, SprinkFLEX®, Trenton Pipe and VEP. With headquarters in Oak Brook, IL, ASC also has ISO 9001:2015 certified production facilities in PA, TN, IL, TX, AL, LA, KS, and RI.



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