

Building connections that last™



Series B

Electric Actuator Datasheet



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1. Standard Specifications

Enclosure	IP67, Dust-tight, weather-tight, Type 4/4x CSA Certified Type 4, 4x 120Vac (E-006B through E-050B)
Ambient Temperature	-20°C to +70°C (-4°F to 158°F)
Ambient Humidity	90% RH Max (Non Condensing)
Power Supply	120vac or 220vac 1-phase 380vac or 440vac 3-phase 24vdc or 24vac (E-006 through E-028)
Torque Switches	Open and Close Torque Switches (E-015 through E-350)
Motor Limit Switches	Open and Close Motor Position Limit Switches
Auxiliary Switches	Open and Close Indication Switches (dry contact)
Stall Protection	Internal Thermal Protection Open: 150° C / 300° F, Close: 97° C / 207° F
Travel Angle	90 ± 5°
Visual Indicator	Dome Type, Continuous Position Indicator
Manual Override	Hand / Auto Decutching Mechanism
Self Locking	Provided by means of Worm Gearing
Mechanical Stops	External Adjustable Bolts (Quarter-turn applications)
Space Heater	20W Anti-condensation
Conduit Entries	Two ¾" NPT
Lubrication	Shell Gadus S2 V220 2
Materials	Aluminum Alloy, Aluminum Bronze, Steel
Surface Treatment	Anodizing
External Coating	Dry Power Polyester
Dielectric Strength	AC 1800V / 1min
Insulation	DC500V greater than 100M ohm
Anti-Vibration	X ,Y, Z 10Hz-57Hz 0.15mm 30-min

2. Options

Enclosure Option	(X) IP67, Dust-tight, Weather-tight, Type 4/4X/7/9 – ATEX Ex II 2 G Ex d IIB T4 Gb (W) IP68, Dust-Tight, Water-Tight, Type 4/4x/6
Low Temperature	(L4): -40°C to +70°C (-40°F to 158°F) (L6): -60°C to +70°C (-76°F to 158°F)
Control Option	AC Motor Interface with speed control (on/off service) Integral Motor Starter (3-phase) Digital High Resolution Controller mA and Vdc (modulating service) Log Rate Controller mA and Vdc (modulating service) 135-ohm Slide-wire MODBUS Communication
Additional Option	Local/Remote Control Unit Full Featured Control Unit Repeat Cycle Timer Additional Auxiliary Switches Extended Travel Angle up to 270° (E-006 through E-100)



E-015B with Local Control Unit shown



E-015B with Full Featured Control Unit shown

3. Performance

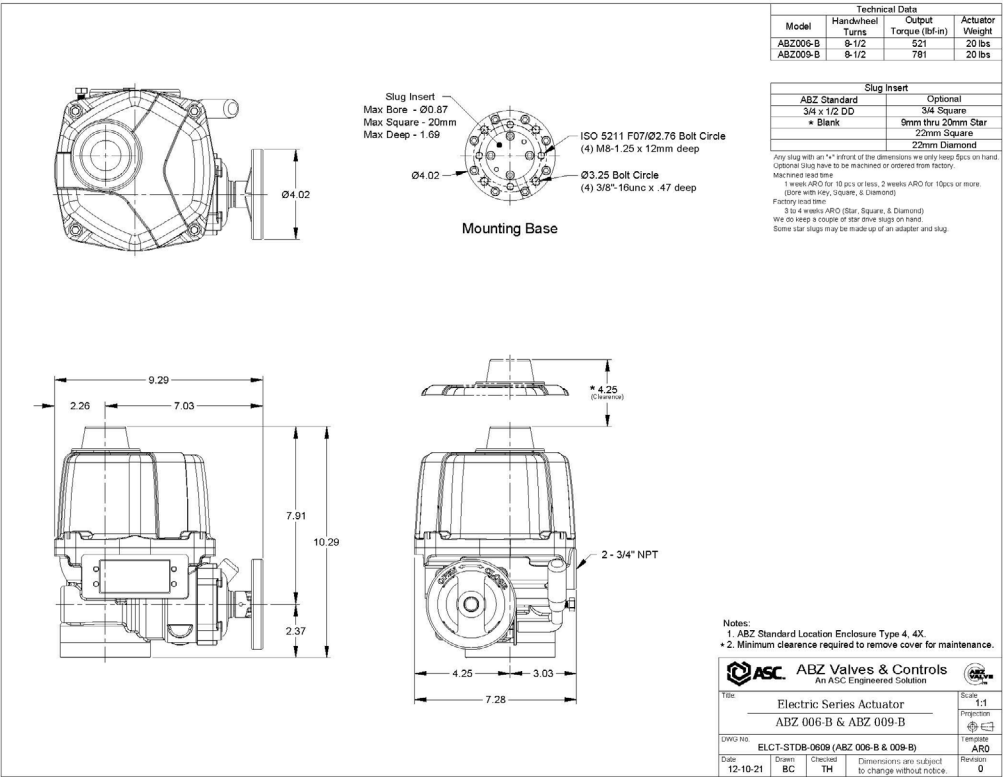
Size		006	009	015	019	028	038	050	060	080	100	150	200	250	300	350
Max Output Torque	in-lbs	520	780	1301	1649	2430	3298	4340	5208	6944	8680	13020	17360	21700	26040	30300
	Nm	60	90	150	190	280	380	500	600	800	1000	1500	2000	2500	3000	3500
Operating Time (90 / sec)	50Hz	17	17	20	20	24	24	24	29	29	29	87	87	87	116	116
	60Hz	14	14	17	17	20	20	20	24	24	24	72	72	72	96	96
Standard Enclosure	STD	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Motor	W	15	25	40	40	40	60	90	90	180	180	90	180	180	180	180
	Class	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Duty Cycle	S4 50	50	50	50	50	50	30	25	25	25	25	25	25	25	25	25
Max Stem Dia (mm)	Bore	22	22	22	22	32	32	32	42	42	42	75	75	75	75	75
	Square	20	20	20	20	26	26	26	34	34	34	65	65	65	65	65
Mounting Base	ISO 5211	F07	F07	F07 / F10	F07 / F10	F10 / F12	F10 / F12	F10 / F12	F12 / F14	F10 / F12	F10 / F12	F16	F16	F16	F16	F16
	ABZ STD	3.25"	3.25"	3.25" 5.00"	3.25" 5.00"	5.00"	5.00"	5.00"	5.00"	5.00"	5.00"	6.50"	6.50"	6.50"	6.50"	6.50"
Handle Turns	STD	8.5	8.5	10	10	12.5	12.5	12.5	14.5	14.5	14.5	43.5	43.5	43.5	58	58
Weight	kg	11	11	14	14	17	17	17	24	25	25	64	65	65	65	65
	lbs	25	25	31	31	38	38	38	53	55	55	141	143	143	143	143

3. Performance – Rated / Starting Current

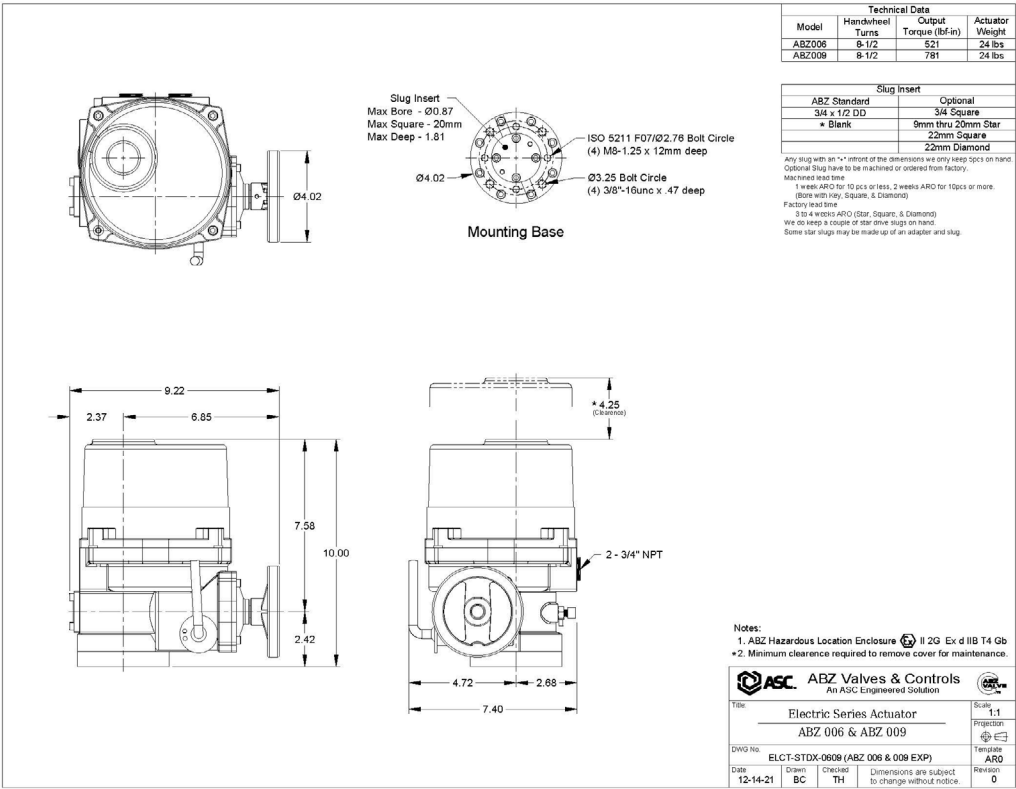
Type		006	009	015	019	028	038	050	060	080	100	150	200	250	300	350
110V 50Hz	Rated Current (A)	0.7	1.1	1.6	1.6	1.6	2.3	3.5	3.5	3.8	4.0	3.5	3.8	4.0	4.0	4.0
	Starting Current (A)	1.35	2.1	2.1	2.1	2.9	3.7	4.9	4.9	7.45	7.45	4.9	7.45	7.45	7.45	7.45
120V 60Hz	Rated Current (A)	0.7	1.1	1.7	1.7	1.8	2.8	3.7	3.7	4.7	4.7	3.7	4.7	4.7	4.7	4.7
	Starting Current (A)	1.36	2.1	2.13	2.13	2.96	3.72	4.9	4.9	7.5	7.5	4.9	7.5	7.5	7.5	7.5
220V 50Hz	Rated Current (A)	0.38	0.51	0.75	0.75	0.75	1.1	1.2	1.2	1.8	2.0	1.2	1.8	2.0	2.0	2.0
	Starting Current (A)	0.63	0.89	1.12	1.12	1.37	1.85	2.34	2.34	3.4	3.4	2.34	3.4	3.4	3.4	3.4
220V 60Hz	Rated Current (A)	0.42	0.52	0.9	0.9	0.9	1.2	1.5	1.5	1.8	2.0	1.5	1.8	2.0	2.0	2.0
	Starting Current (A)	0.63	0.89	1.12	1.12	1.37	1.85	2.34	2.34	3.4	3.4	2.34	3.4	3.4	3.4	3.4
230V 50Hz	Rated Current (A)	0.38	0.56	0.75	0.75	0.75	1.06	1.2	1.2	1.8	2.0	1.2	1.8	2.0	2.0	2.0
	Starting Current (A)	0.6	0.8	1.05	1.05	1.3	1.8	2.3	2.3	3.3	3.3	2.25	3.3	3.3	3.3	3.3
380V 50Hz	Rated Current (A)	0.15	0.18	0.3	0.3	0.32	0.34	0.47	0.47	0.75	0.85	0.47	0.75	0.85	0.85	0.85
	Starting Current (A)	0.32	0.36	0.59	0.59	0.74	0.78	1.23	1.23	1.68	1.68	0.78	1.68	1.68	1.68	1.68
380V 60Hz	Rated Current (A)	0.15	0.18	0.3	0.3	0.32	0.37	0.56	0.56	0.85	0.9	0.56	0.85	0.9	0.9	0.9
	Starting Current (A)	0.32	0.36	0.59	0.59	0.74	0.78	1.24	1.24	1.68	1.68	0.78	1.68	1.68	1.68	1.68
440V 50Hz	Rated Current (A)	0.15	0.18	0.3	0.3	0.32	0.34	0.47	0.47	0.75	0.85	0.47	0.75	0.85	0.85	0.85
	Starting Current (A)	0.32	0.36	0.59	0.59	0.74	0.78	1.24	1.24	1.68	1.68	0.78	1.68	1.68	1.68	1.68
440V 60Hz	Rated Current (A)	0.15	0.18	0.3	0.3	0.3	0.32	0.46	0.46	0.75	0.9	0.46	0.75	0.9	0.9	0.9
	Starting Current (A)	0.32	0.46	0.59	0.59	0.74	0.78	1.24	1.24	1.68	1.68	0.78	1.68	1.68	1.68	1.68
DC 24V	Rated Current (A)	2.5	3.5	5.0	5.0	6.5	-	-	-	-	-	-	-	-	-	-
	Starting Current (A)	8.00	9.00	13.00	13.00	15.00	-	-	-	-	-	-	-	-	-	-

4. Dimensions

006-009 Standard

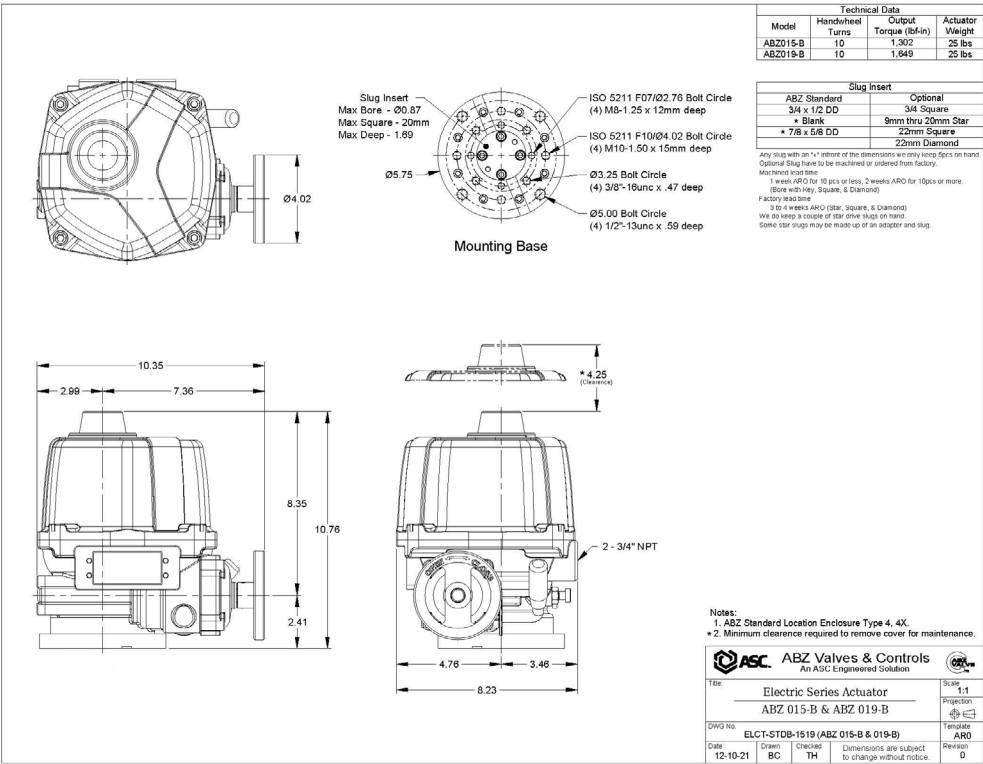


006-009 Explosion Proof or IP68

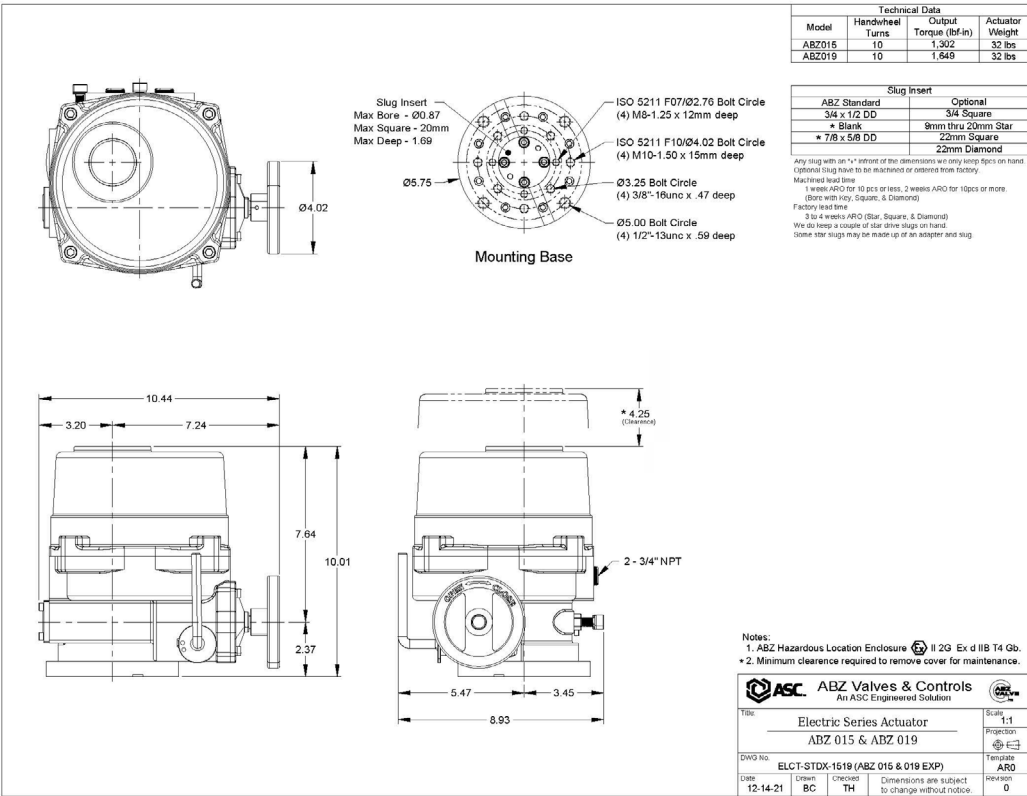


4. Dimensions

015-019 Standard

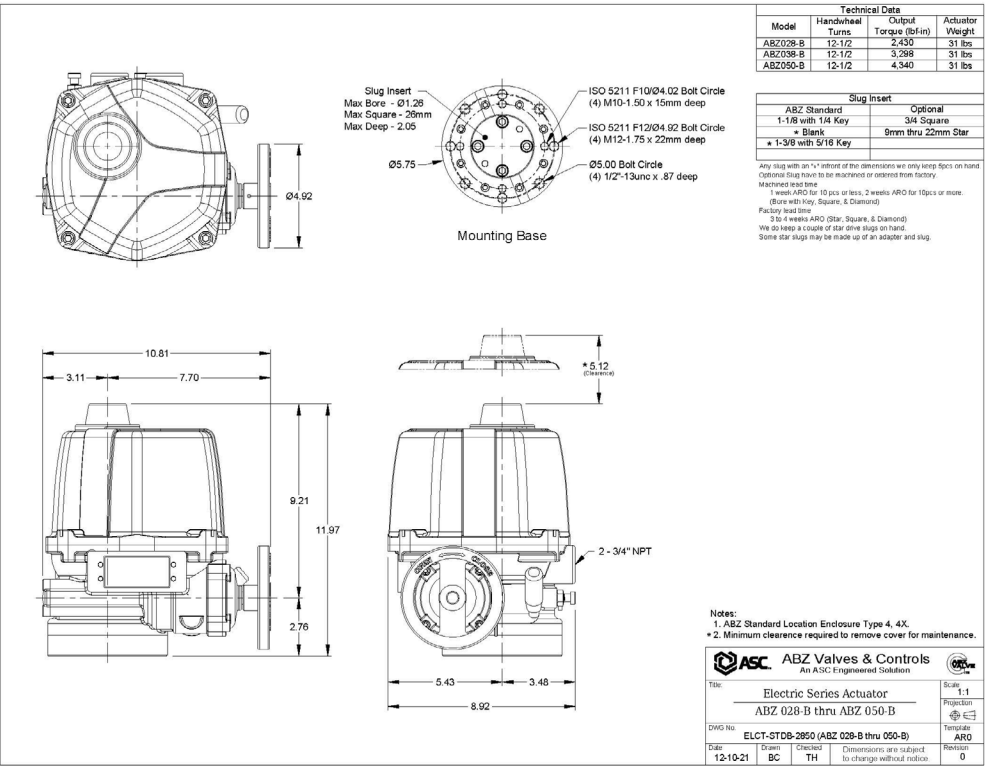


015-019 Explosion Proof or IP68

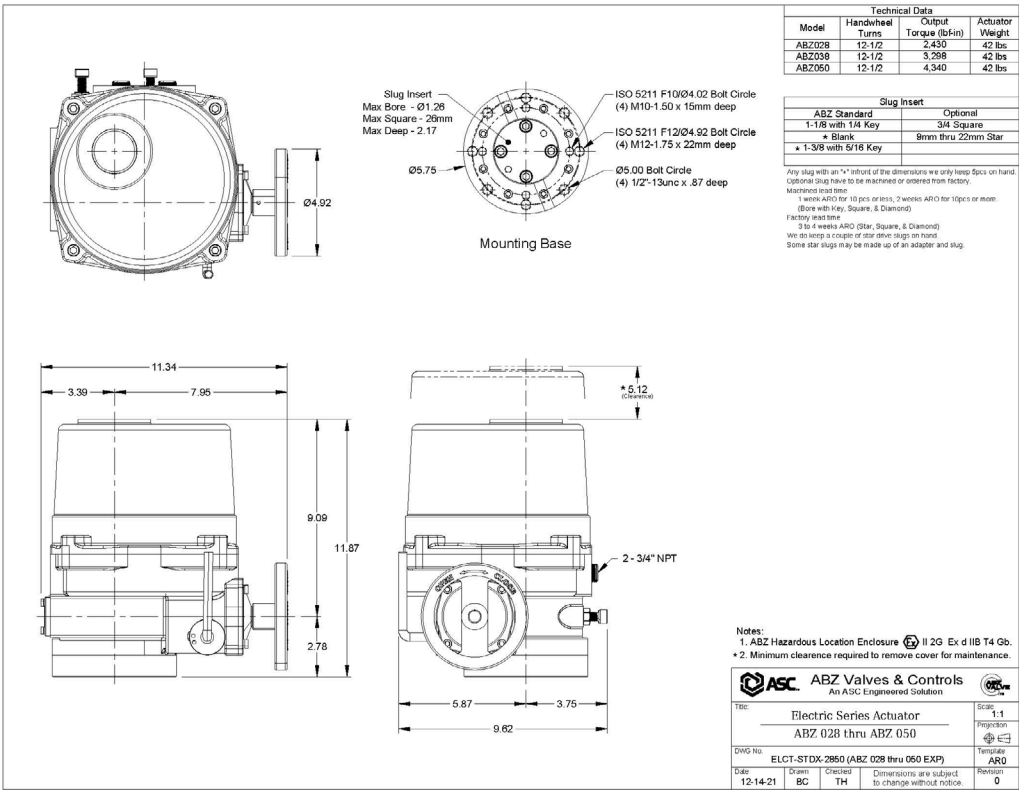


4. Dimensions

028-050 Standard

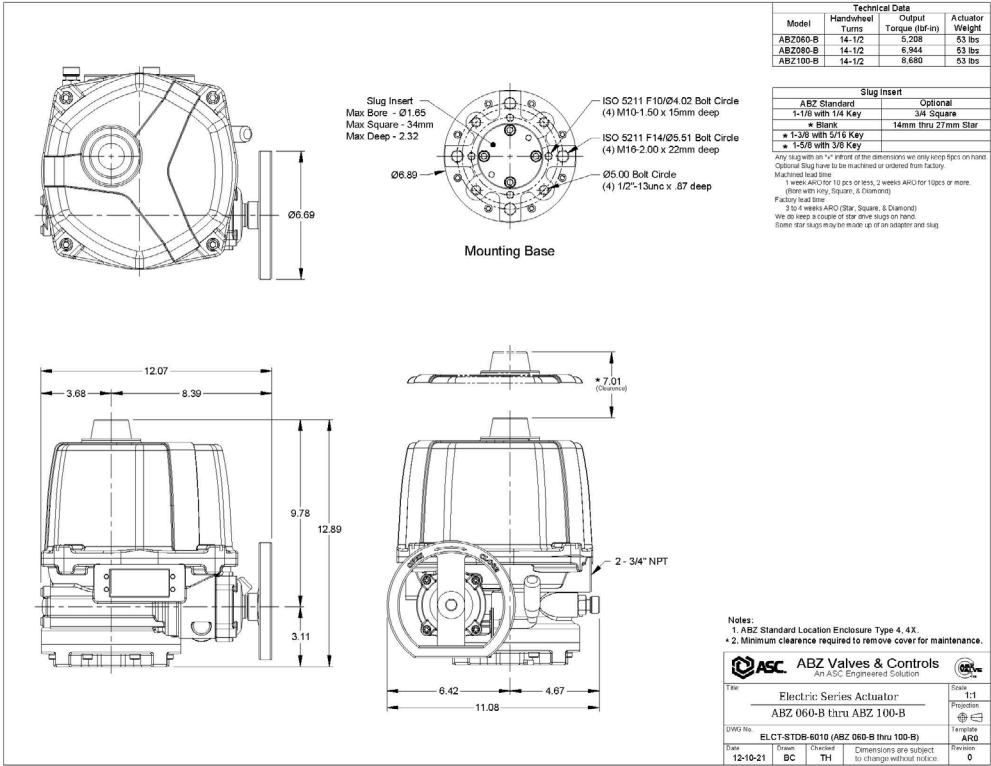


028-050 Explosion Proof or IP68

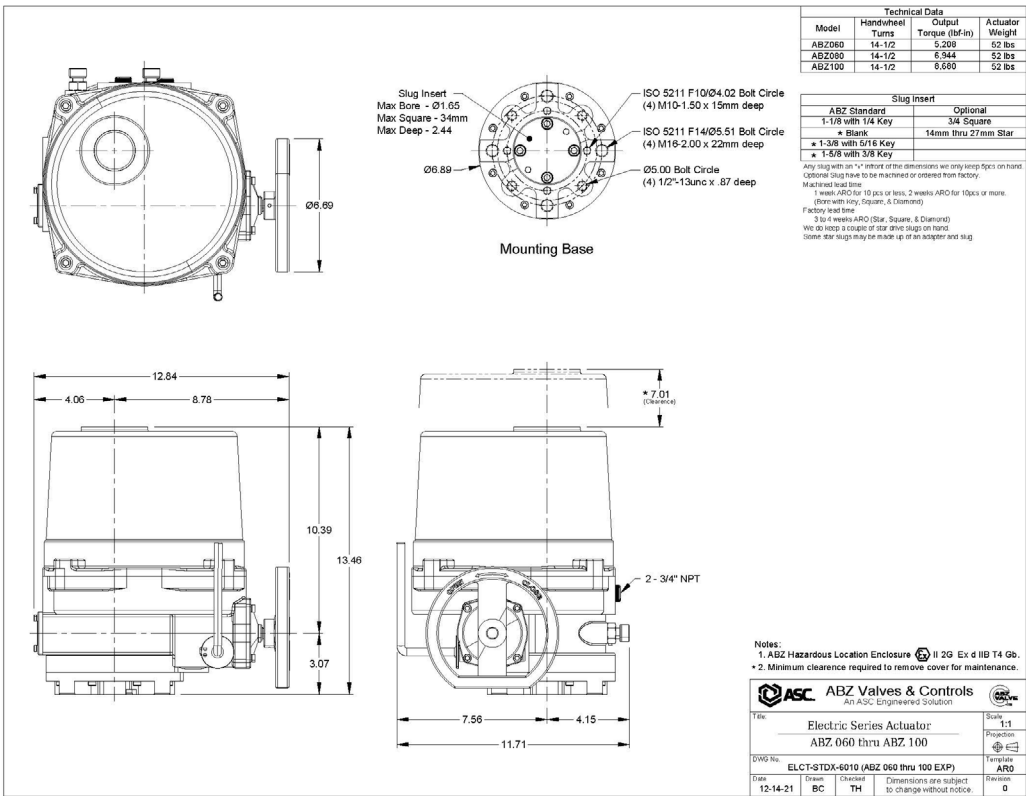


4. Dimensions

060-100 Standard

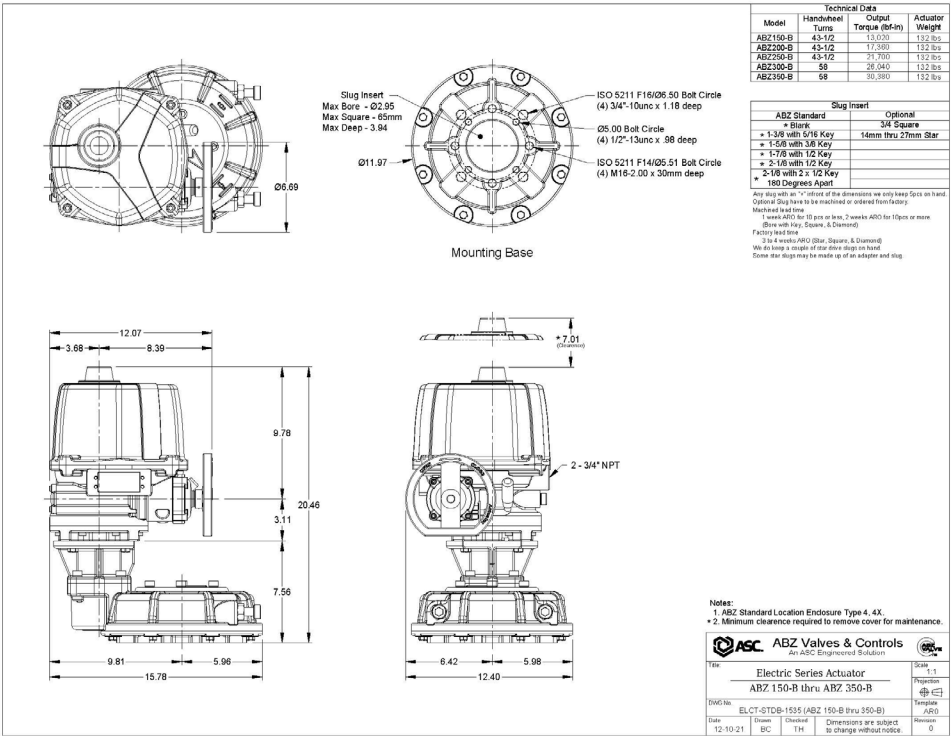


060-100 Explosion Proof or IP68 Standard

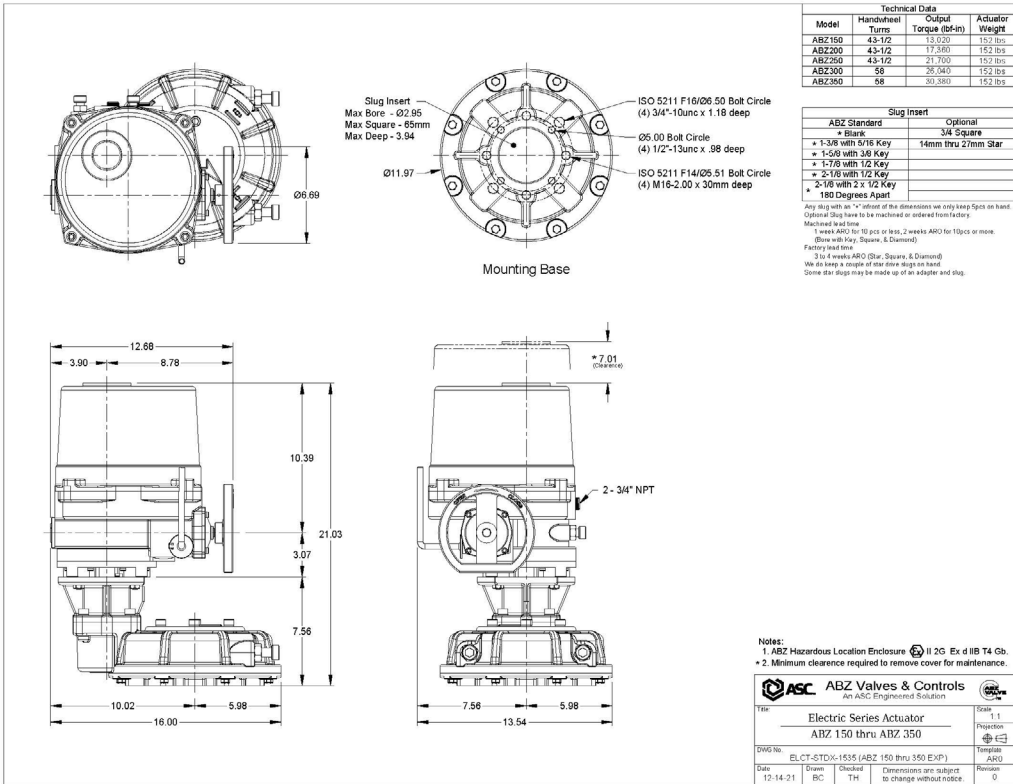


4. Dimensions

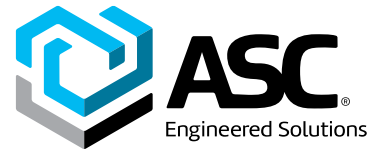
150-350 Standard



150-350 Explosion Proof or IP68 Standard

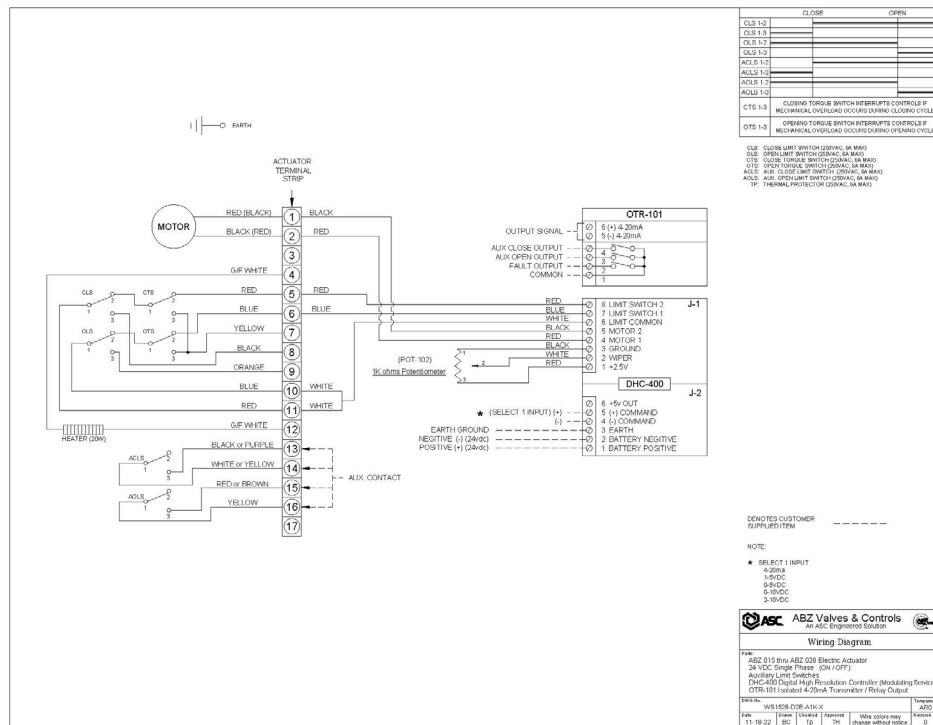
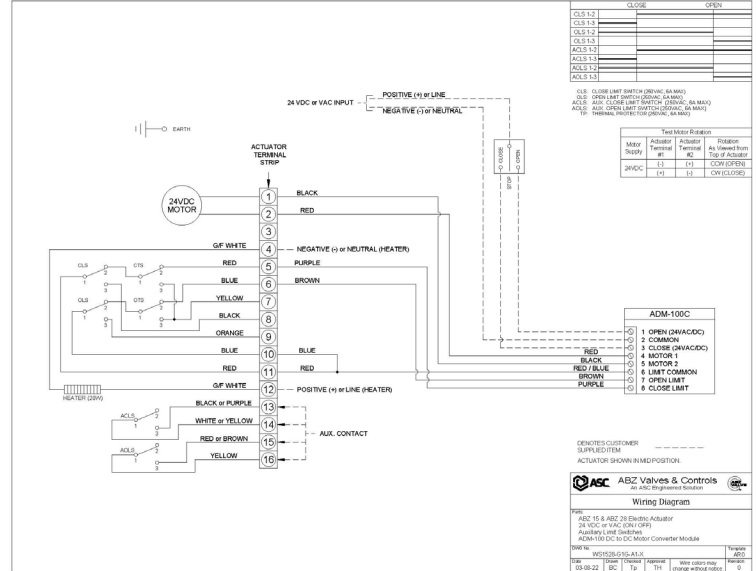
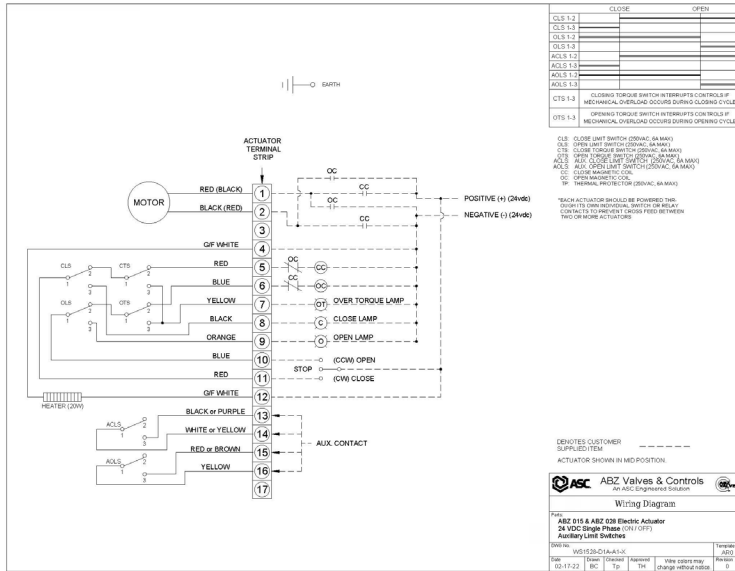


Electric Actuator Series B



5. Wiring

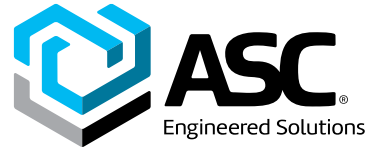
Typical 015-028 Vdc



Note: Actual diagram may vary base on options provided.



Electric Actuator Series B



Example: E-015B-A1A-A1

A size 015 actuator (1301 lbf-in), with IP67 enclosure, 120 Vac / 1 PH power supply, for standard On-Off service, with two auxiliary limit switches.

How to Order

E	-	015	B	-	A	1A	-	A1					
		1Size	2Type		3Voltage	4Service		5ALS	6Feedback	7RCT	8Temp	9LCU	10Suffix

1	Model / Size		Model / Size
Code	lbf-in	Code	lbf-in
006	520	080	6944
009	780	100	8680
015	1301	150	13020
019	1649	200	17360
028	2430	250	21700
038	3298	300	26040
050	4340	350	30300
060	5208		

2	Type
Code	
B	IP67, Dust-tight, weather-tight, Type 4 / 4x
X	IP67, Dust-tight, weather-tight, Type 4/4x/7/9 Explosion Proof
W	IP68, Dust-tight, water-tight, Type 4 / 4X / 6

3		Voltage
Code		
A	120 Vac / 1PH	
B	220 Vac / 1PH	
C	24 Vac / 1PH (006 - 028)	
D	24 Vdc (006 - 028)	
E	380 Vac / 3PH	
F	440 Vac / 3PH	
G	24 AC / DC (006 - 028) (on / off)	



4	Service & Control Type (Card)
Code	
4N	NOTE: If selecting Full Featured Local Control Unit, USE THIS CODE [See Local Control / Local Override, codes N1 to N3M]

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]
1K	AC Motor Interface with speed control [3-phase]

With Motor Starter

1E	Integral Motor Starter (IMS), Latching [3-phase]
1M	Integral Motor Starter (IMS), Non-Latching [3-phase]

Modulating:

Digital Controller

2A	Digital High-Resolution Controller, Vdc or mA signal [120 Vac]
2B	Digital High-Resolution Controller, Vdc or mA signal [220 Vac]
2C	Digital High-Resolution Controller, Vdc or mA signal [24 Vac]
2D	Digital High-Resolution Controller, Vdc or mA signal [3 phase]
2E	Digital High-Resolution Controller, Vdc or mA signal [24 Vdc]
3A	Digital High-Resolution Controller, 0-135 Ohm slidewire signal [120 Vac]
3B	Digital High-Resolution Controller, 0-135 Ohm slidewire signal [220 Vac]
3C	Digital High-Resolution Controller, 0-135 Ohm slidewire signal [24 Vac]
3D	Digital High-Resolution Controller, 0-135 Ohm slidewire signal [3-phase]
3E	Digital High-Resolution Controller, 0-135 Ohm slidewire signal [24 Vdc]

Log Rate Controller – Analog

2F	Analog, Log Rate Controller, Vdc or mA signal [120 Vac]
2G	Analog, Log Rate Controller, Vdc or mA signal [220 Vac]
3F	Analog, Log Rate Controller, 0-135 Ohm slidewire signal [120 Vac]
3G	Analog, Log Rate Controller, 0-135 Ohm slidewire signal [220 Vac]

Motor Controller – Analog

2H	Analog AC Motor Controller, Vdc or mA signal [120 Vac] (Max size 028)
2J	Analog AC Motor Controller, Vdc or mA signal [220 Vac] (Max size 038)
3H	Analog AC Motor Controller, 0-135 Ohm slidewire signal [120 Vac] (Max size 028)
3J	Analog AC Motor Controller, 0-135 Ohm slidewire signal [220 Vac] (Max size 038)
2K	Analog DC Motor Controller, 4-20 mA signal [24 Vdc]
3K	Analog DC Motor Controller, 0-135 Ohm slidewire signal [24 Vdc]

5 Auxiliary Limit Switches (ALS)	
Code	Standard: 2 switches (one set) [Note-1]
A1	NOTE: If selecting Full Featured Local Control Unit, USE THIS CODE [See Local Control / Local Override, codes N1 to N3M]
A0	No Auxiliary Limit Switches
A2	4 switches (Two sets) [Note-2]
A5	5 switches – "1A" Service Code Only
Note-1: If Size 006 to 019 actuator and Type "X" or "W", use "A0" (no switches). EXCEPTION: If Service Code = "1A", "1E", or "1M". Note-2: If Size 006 to 019 actuator, "A2" only available with Service Codes = "1A", "1E", or "1M".	

6 Position Feedback	
Code	Standard: 2 switches (one set) [Note-1]
<blank>	None
NOTE: If selecting Full Featured Local Control Unit, USE THIS CODE [See Local Control / Local Override, codes N1 to N3M]	
Potentiometer – Feedback Digital Controller	
B	Potentiometer Feedback, 1000 Ohm (on / off only)
Transmitter – Position Feedback	
All Configurations EXCEPT Digital Controllers	
C	Position Feedback Transmitter, 4–20mA
E	Position Feedback Transmitter, 2-wire Loop Powered (on / off only)
All Configurations EXCEPT Digital Controllers (2A to 2E, 3A to 3E), and Analog DC Motor Controllers (2K & 3K)	
D	Position Feedback Transmitter, 0–5 or 0–10 Vdc
Modulating, Digital Controller Feedback	
G	Position Feedback Transmitter, 4–20 mA / 0–10 Vdc [for Vac Digital Controllers only]
H	Position Feedback Transmitter, 4–20 mA [for all Digital Controllers]
J	Position Feedback Transmitter with Relays, 4–20 mA / 0–10 Vdc [for Vac Digital Controllers only]
K	Position Feedback Transmitter with Relays, 4–20 mA [for all Digital Controllers]
Modulating, Digital Controller Communication	
L	Modbus Option Module [all voltages]

7 Repeat Cycle Timer	
Code	None
<blank>	NOTE: If selecting Full Featured Local Control Unit, USE THIS CODE [See Local Control / Local Override, codes N1 to N3M]
K	Repeat Cycle Timer (On / Off Service ... code 1A Only); 120 & 220V 1-Phase

8 Temperature	
Code	
<blank>	Standard: Low Temp (–20° C)
L4	Low Temp (–40° C)
L6	Low Temp (–60° C)

9 Local Control Unit / Local Override – Mounted to Actuator	
Code	
<blank>	None
Standard – IP67	
M1	<ul style="list-style-type: none"> • Vac only (except 24 Vac) • If modulating, Digital Controller required. Enter modulating service code. [see "SERVICE & CONTROL TYPE (Card)"]

Full Featured Local Control Units	
▷	LCD Display
▷	Cycle counter
▷	Auto-calibration, including limits
▷	Phase Protection / Detection

Open-Close / On-Off IP67	
N1	• Vac only (except 24 Vac)

Explosion Proof	
N2	<ul style="list-style-type: none"> • Explosion Proof • Vac only (except 24 Vac)

IP68	
N3	• Vac only (except 24 Vac)

Modulating IP67	
N1M	<ul style="list-style-type: none"> • Vac only (except 24 Vac) • Includes modulation package, including feedback NOTE: "SERVICE & CONTROL TYPE" = code N4

Explosion Proof	
N2M	<ul style="list-style-type: none"> • Explosion Proof • Vac only (except 24 Vac) • Includes modulation package, including feedback NOTE: "SERVICE & CONTROL TYPE" = code N4

IP68	
N3M	<ul style="list-style-type: none"> • Explosion Proof • Vac only (except 24 Vac) NOTE: "SERVICE & CONTROL TYPE" = code N4

10 Suffix	
Code	
<blank>	None

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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