



ELECTRIC ACTUATOR CATALOG

**TORQUES THROUGH 5,300 IN/LBS
120VAC, 220V, 24VAC, 12VDC AND 24VDC VOLTAGES
ON-OFF, MODULATING OR JOG SERVICE**



ANYTHING'S POSSIBLE... JUST ASK!

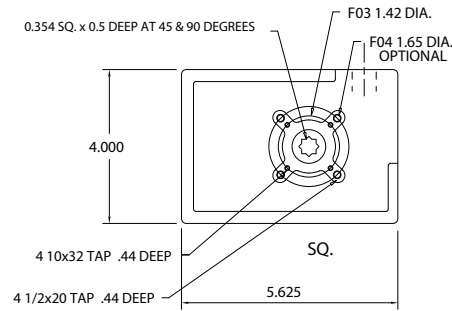
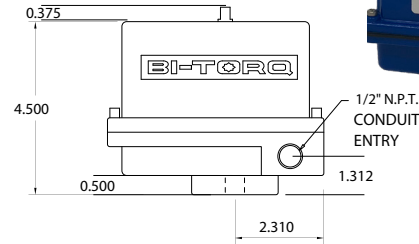
WWW.BITORQ.COM

BI-100-E

115VAC ACTUATOR SPECIFICATIONS

Output Torque	100 inch pounds
Cycle Time	2.5 sec/90°
Duty Cycle	75%
Standard Motor	115VAC/60Hz/1ph
Standard Enclosure	NEMA 4
Enclosure Material	Aluminum
Enclosure Coating	Thermal bonding polyester powder
Temperature Rating**	-40° F to +150° F
Thermal Overload Protection	Standard
Manual Override	Standard (omit on NEMA 7)
Lock Rotor Current	0.55 amps
Switches	15A, 1/2 HP 125 250VAC/0.5A/125VDC
Weight	5 pounds

**heater required below 0° F



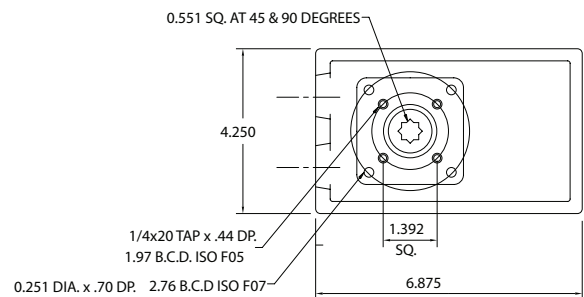
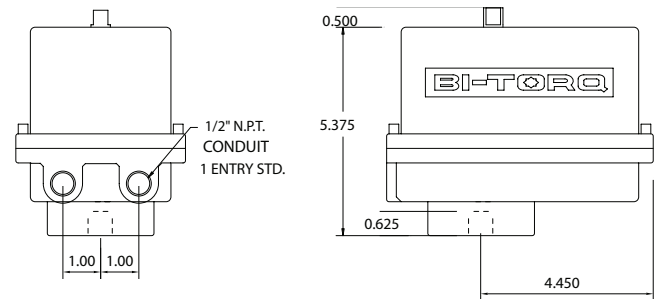
CLEARANCE FOR REQUIRED FOR COVER REMOVAL: 3.000"

BI-200 AND 300-E

115VAC ACTUATOR SPECIFICATIONS

Output Torque	200 or 300 inch pounds
Cycle Time	5 sec/90°
Duty Cycle	25%
Standard Motor	115VAC/60Hz/1ph
Standard Enclosure	NEMA 4
Enclosure Material	Aluminum
Enclosure Coating	Thermal bonding polyester powder
Temperature Rating**	-40° F to +150° F
Thermal Overload Protection	Standard
Manual Override	Standard (omit on NEMA 7)
Lock Rotor Current	0.75 amps
Switches	15A, 1/2 HP 125 250VAC/0.5A/125VDC
Weight	7 pounds

**heater required below 0° F

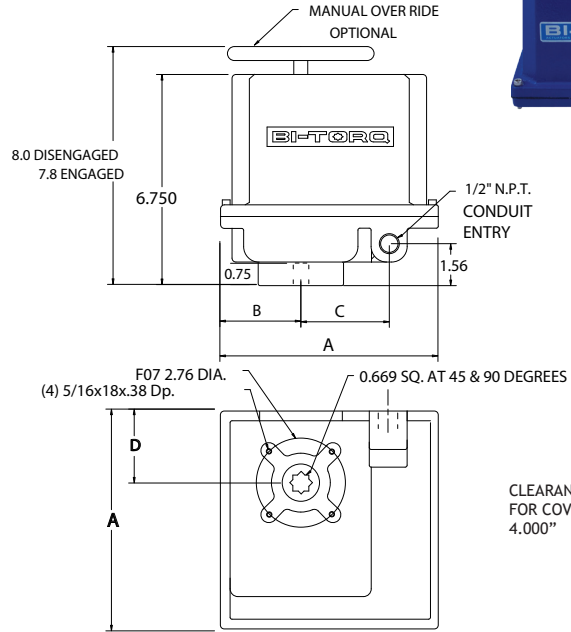


CLEARANCE REQUIRED FOR COVER REMOVAL: 3.000"

BI- 400-E THRU 1500-E

115VAC ACTUATOR SPECIFICATIONS

Output Torque	BI-400...400 inch pounds BI-675...675 inch pounds BI-1000...1000 inch pounds BI-1500...1500 inch pounds
Cycle Time	BI-400...10 sec/90° BI-675-1000...15 sec/90° BI-1500...30 sec/90°
Duty Cycle	25%
Standard Motor	115VAC/60Hz/1ph
Standard Enclosure	NEMA 4
Enclosure Material	Aluminum
Enclosure Coating	Thermal bonding polyester powder
Temperature Rating**	-40° F to +150° F
Thermal Overload Protection	Standard
Manual Override	Standard declutchable
Lock Rotor Current	BI-400/675...0.75 amps BI-1000/1500...1.1 amps
Switches	15A, 1/2 HP 125 250VAC/0.5A/125VDC
Weight	13 pounds



ENCLOSURE	A	B	C	D
NEMA 4	7.00	2.38	2.81	2.63
NEMA 7	8.50	3.13	2.81	3.38

**heater required below 0° F

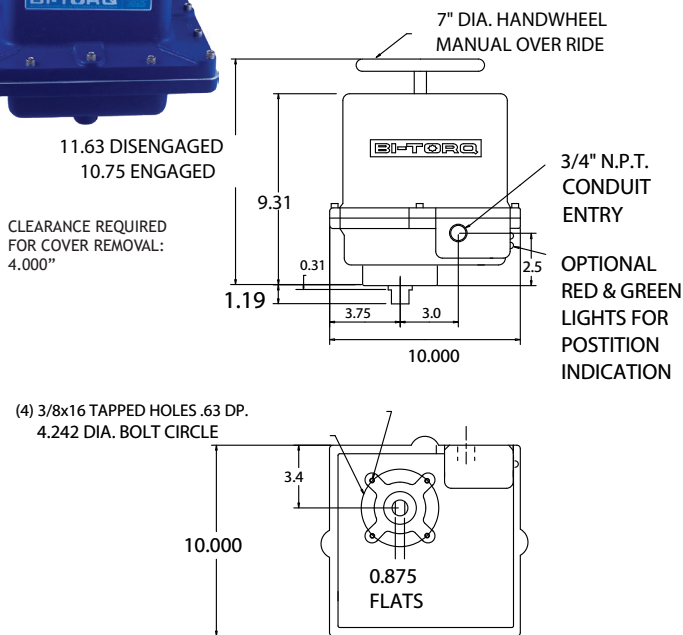


BI-2000-E AND 3800-E

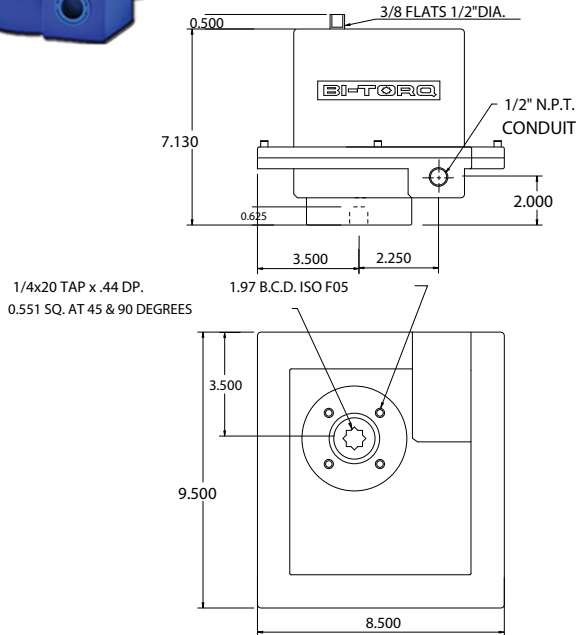
115VAC ACTUATOR SPECIFICATIONS

Output Torque	BI-2000...2000 inch pounds BI-3800...3800 inch pounds
Cycle Time	BI-2000...12 sec/90° BI-3800...14 sec/90°
Duty Cycle	100%
Standard Motor	115VAC/60Hz/1ph
Standard Enclosure	NEMA 4
Enclosure Material	Aluminum
Enclosure Coating	Thermal bonding polyester powder
Temperature Rating**	-40° F to +150° F
Thermal Overload Protection	Standard
Manual Override	Standard Declutchable
Lock Rotor Current	BI-2000...2.6 amps BI-3800...2.9 amps
Switches	15A, 1/2 HP 125 250VAC/0.5A/125VDC
Weight	30 pounds

**heater required below 0° F



BI-200 AND 300 NEMA 7



CLEARANCE REQUIRED FOR COVER REMOVAL: 4.000"

SPECIFICATIONS FOR 115VAC ACTUATOR

Output Torque	BI-200...200 inch pounds BI-300...300 inch pounds
Cycle Time	BI-200...5 sec/90° BI-300...5 sec/90°
Duty Cycle	25%
Standard Motor	115VAC/60Hz/1ph
Standard Enclosure	NEMA 7
Enclosure Material	Aluminum
Enclosure Coating	Thermal bonding polyester powder
Temperature Rating**	-40° F to +150° F
Thermal Overload Protection	Standard
Manual Override	Optional
Lock Rotor Current	BI-200...0.75 amps BI-300...1.1 amps
Switches	15A, 1/2 HP 125 250VAC/0.5A/125VDC
Weight	9 pounds

**heater required below 0° F

FAIL SAFE ELECTRIC ACTUATOR OPTIONS

SPRING RETURN ELECTRIC ACTUATORS



BI-TORQ offers a variety of electric spring return actuator for fail safe applications requiring closure upon loss of power. On-off or modulating service is available in actuators with torque output to 2300 inch pounds. For more information, please consult or sales staff.



BATTERY BACKUP SYSTEM

The uninterruptible power system (UPS) as a stand alone unit allows operation of the actuator 2-4 times even after loss of power. The system can be used with any of the BI-TORQ electric actuator series and is ideal for critical applications. We also offer an internal battery version to go inside our BI series - available with NEMA 4 or 7 enclosures.

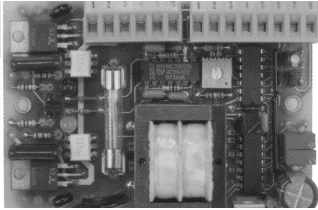


BI-TORQ's electric actuator series features durable construction for long-lasting performance. Our electric actuators are ideal for quarter-turn applications using ball, plug or butterfly valves. BI-TORQ also is pleased to offer a wide range of options for our electric actuators. Please consult our sales personnel for available combinations or additional options not listed below.

STANDARD FEATURES	OPTIONAL FEATURES
<p>HEAVY DUTY GEARS To withstand stall conditions, reducing potential down time due to gear failure</p> <p>PERMANENT LUBRICATION Reduces the need for maintenance</p> <p>NEMA 4 ENCLOSURES The standard enclosure protects against splashing, seepage, hose-downs and external applications. Powder coating and stainless steel fasteners provide maximum corrosion protection</p> <p>LIMIT SWITCHES SPDT limit switches allow for independent fine tuning of the open and closed positions. Quick adjust cams permit easy adjustments in the field.</p> <p>UNIVERSAL MOUNTING Actuators can be mounted and operated in any position. ISO 5211 mounting and a double star output are available on most models.</p> <p>REVERSING MOTORS Actuators can be used on a wide range of applications and valve types</p> <p>THERMAL OVERLOAD PROTECTION To protect the motor in stall conditions</p> <p>TERMINAL STRIP Allows for quick and easy field installation</p>	<p>AUXILIARY SWITCHES Dry contact switches for position indication or control of peripheral equipment.</p> <p>ELECTRONIC POSITIONER On-board positioner for precise control applications that use analog signals (4-20mA, 0-10VDC)</p> <p>FEEDBACK POTENTIOMETER Resistive position feedback for control applications</p> <p>HEATER AND THERMOSTAT For prevention of moisture in low temperature or high humidity environments</p> <p>FEEDBACK TRANSMITTER For 4-20mA position feedback</p> <p>POWER BRAKES For butterfly valve automation or modulating service applications requiring secure holding power</p> <p>SPEED CONTROLS AND TIMERS For applications requiring slower cycle times or to repeat cycle applications at specific times</p> <p>TORQUE SENSOR To shut the actuator off in stall conditions</p> <p>ENCLOSURES NEMA 4X and NEMA 7 available</p>

WIRING DIAGRAMS AVAILABLE AT WWW.BITORQ.COM/ELECTRIC_ACTUATOR.HTML

AC MOTOR CONTROLLERS FOR MODULATING SERVICE



BI-TORQ® offers the high quality Peaktronics on-board controller used for proportional positioning of split phase AC motors. An external command signal of 0-10VDC, 1-5VDC or 4-20mA can be used to compare a feedback signal from a potentiometer. This can make any of BI-TORQ®'s electric actuators into the ideal unit for applications requiring precise control, including:

- filling applications*
- batch processing*
- mixing operations*
- cooling towers*
- HVAC control*
- and much more*

FEATURES

- on-board red and green LED indicators for on-off signals
- easy wiring to removable terminal strips
- deadband and non-interactive zero and span for easy field calibration
- multiple units can be easily connected in parallel to a common command signal
- built-in 24VDC utility power supply for 4-20mA input or output signal, or feedback potentiometer
- no external motor resistors are required

SPECIFICATIONS

POWER REQUIREMENTS

- 117VAC +/-10%, 50/60Hz

COMMAND SIGNAL INPUT

- 0-10VDC, 1-5VDC or 4-20mA

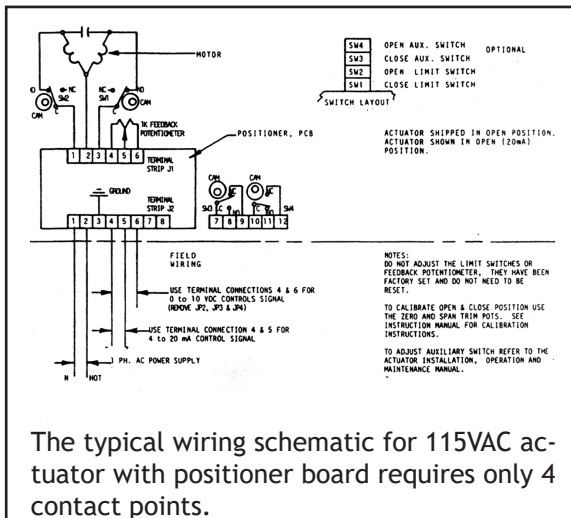
ENVIRONMENTAL CONDITIONS

- Operating temperature range: 0° to 60° C
- Storage temperature range: -40° to 85° C
- Relative humidity range: 0-90% (non-condensing)

CONTROL ADJUSTMENTS

- Zero Adjustment: adjustable throughout feedback signal range
- Span Adjustment: adjustable throughout command signal range
- Deadband: adjustable from 0.12% to 2.4% of span

The modulating service option includes an upgrade to 75% duty cycle motor. Power brakes are available for modulating service with butterfly valves.



The typical wiring schematic for 115VAC actuator with positioner board requires only 4 contact points.

Positioner boards also available for DC motors on all BI-TORQ® electric actuators.



PERFORMANCE RATINGS FOR BI-TORQ® ELECTRIC ACTUATORS

BI-100 SERIES

VOLTAGE	115VAC	24VDC	24VAC	12VDC	220VAC
PART NUMBER	BI-100-A-4	BI-100-B-4	BI-100-C-4	BI-100-F-4	BI-100-H-4
CYCLE TIME	2.5 SECONDS	3 SECONDS	3 SECONDS	3 SECONDS	2.5 SECONDS
DUTY CYCLE	75%	75%	75%	75%	75%
AMP DRAW	0.55	2.44/0.4	2.44/0.4	2.89/0.6	0.38

BI-200 AND 300 SERIES

VOLTAGE	115VAC	24VDC	24VAC	12VDC	220VAC
PART NUMBER	BI-***-A-4	BI-***-B-4	BI-***-C-4	BI-***-F-4	BI-***-H-4
CYCLE TIME	5 SECONDS	9 SECONDS	9 SECONDS	9 SECONDS	5 SECONDS
DUTY CYCLE	25%	75%	75%	75%	25%
AMP DRAW	0.75	3.2/0.8	3.2/0.8	4.0/1.4	0.38

BI-400 SERIES

VOLTAGE	115VAC	24VDC	24VAC	12VDC	220VAC
PART NUMBER	BI-400-A-4	BI-400-B-4	BI-400-C-4	BI-400-F-4	BI-400-H-4
CYCLE TIME	10 SECONDS	20 SECONDS	20 SECONDS	20 SECONDS	10 SECONDS
DUTY CYCLE	25%	75%	75%	75%	25%
AMP DRAW	0.75	3.2/0.8	3.2/0.8	4.0/1.4	0.38

BI-675 AND 1000 SERIES

VOLTAGE	115VAC	24VDC	24VAC	12VDC	220VAC
PART NUMBER	BI-***-A-4	BI-***-B-4	BI-***-C-4	BI-***-F-4	BI-***-H-4
CYCLE TIME	15 SECONDS	30 SECONDS	30 SECONDS	30 SECONDS	15 SECONDS
DUTY CYCLE	25%	75%	75%	75%	25%
AMP DRAW	1.10	3.2/0.8	3.2/0.8	4.0/1.4	0.38

BI-1500 SERIES

VOLTAGE	115VAC	24VDC	24VAC	12VDC	220VAC
PART NUMBER	BI-1500-A-4	BI-1500-B-4	BI-1500-C-4	BI-1500-F-4	BI-1500-H-4
CYCLE TIME	30 SECONDS	60 SECONDS	60 SECONDS	60 SECONDS	30 SECONDS
DUTY CYCLE	25%	75%	75%	75%	25%
AMP DRAW	1.10	3.2/0.8	3.2/0.8	4.0/1.4	0.38

BI-2000 SERIES

VOLTAGE	115VAC	24VDC	24VAC	12VDC	220VAC
PART NUMBER	BI-2000-A-4	BI-2000-B-4	BI-2000-C-4	BI-2000-F-4	BI-2000-H-4
CYCLE TIME	12 SECONDS	12 SECONDS	12 SECONDS	12 SECONDS	12 SECONDS
DUTY CYCLE	100%	100%	100%	100%	100%
AMP DRAW	2.60/0.98	14/20	14/20	14	2.80/1.30

BI-3800 SERIES

VOLTAGE	115VAC	24VDC	24VAC	12VDC	220VAC
PART NUMBER	BI-3800-A-4	BI-3800-B-4	BI-3800-C-4	BI-3800-F-4	BI-2000-H-4
CYCLE TIME	14 SECONDS	14 SECONDS	14 SECONDS	14 SECONDS	14 SECONDS
DUTY CYCLE	100%	100%	100%	100%	100%
AMP DRAW	2.90/1.12	14/20	14/20	14	2.80/1.30

EXTENDED DUTY CYCLE MOTORS AVAILABLE ON MOST MODELS WITH AC MOTORS (DOUBLES CYCLE TIME)



OTHER QUALITY VALVE AUTOMATION PRODUCTS...



**ANYTHING'S POSSIBLE...
JUST ASK!**

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