



ELECTRIC ACTUATORS

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

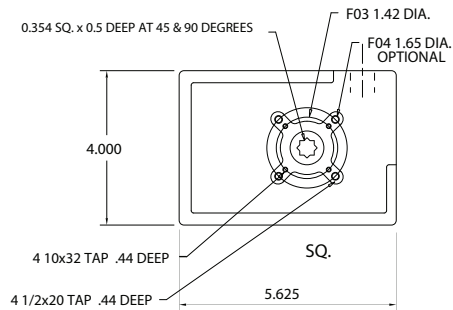
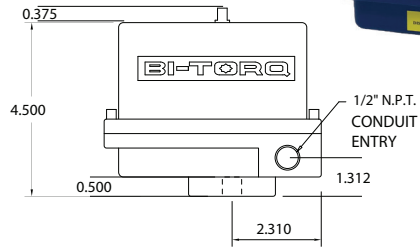


BI-100-E

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

*See page 7 for other voltage or modulating performance specifications
 **heater required below 0° F



CLEARANCE FOR REQUIRED FOR COVER REMOVAL: 3.000"

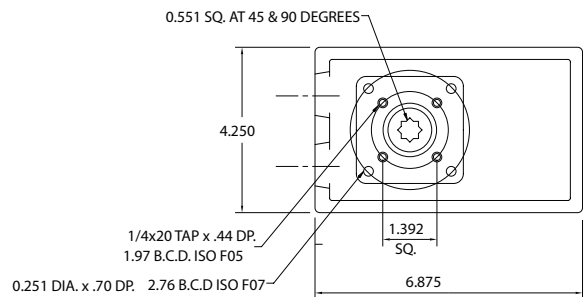
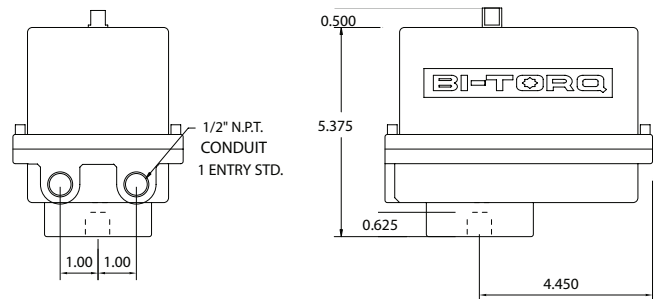


BI-200 AND 300-E

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

*See page 7 for other voltage or modulating performance specifications
 **heater required below 0° F



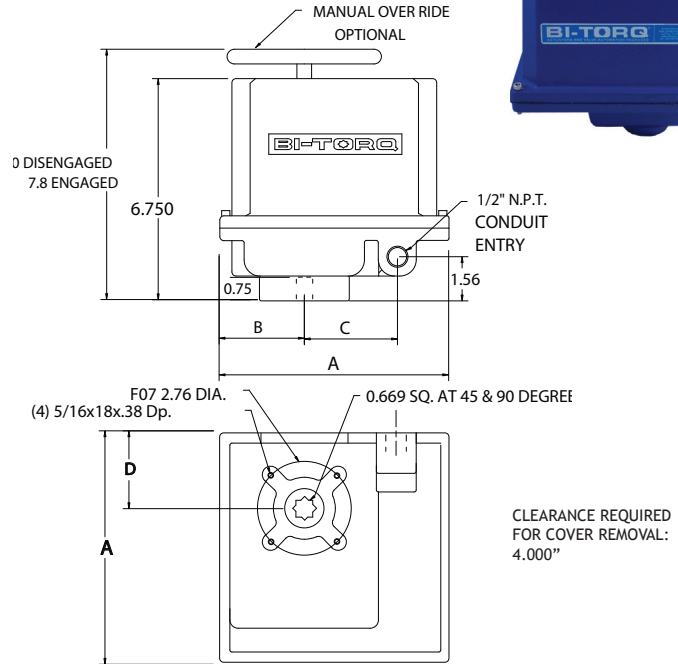
CLEARANCE REQUIRED FOR COVER REMOVAL: 3.000"

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

*See page 7 for other voltage or modulating performance specifications
**heater required below 0° F



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

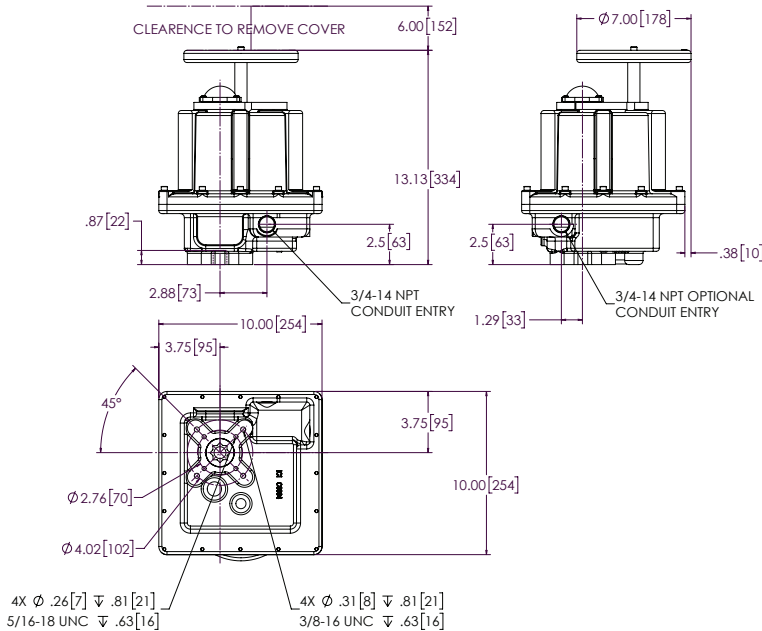


BI-2000-E AND 3800-E

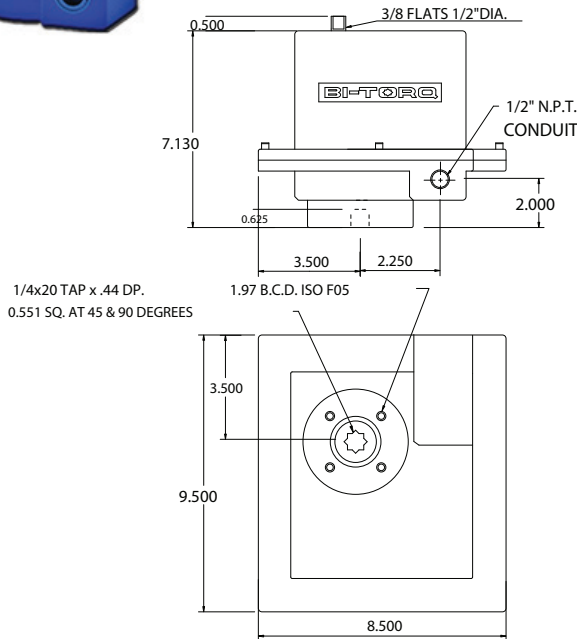
115VAC* ACTUATOR SPECIFICATIONS

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

*See page 7 for other voltage or modulating performance specifications
**heater required below 0° F



BI-200 AND 300 NEMA 7



CLEARANCE REQUIRED FOR COVER REMOVAL: 4.000"

115VAC* ACTUATOR SPECIFICATIONS

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

*See page 7 for other voltage or modulating performance specifications
**heater required below 0° F

FAIL SAFE ELECTRIC ACTUATOR OPTIONS



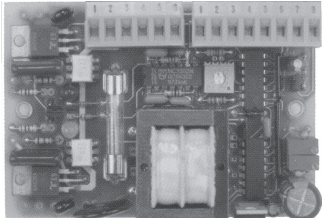
BATTERY BACKUP SYSTEM

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>

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*
- *mixing operations*
- *HVAC control*
- *batch processing*
- *cooling towers*
- *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

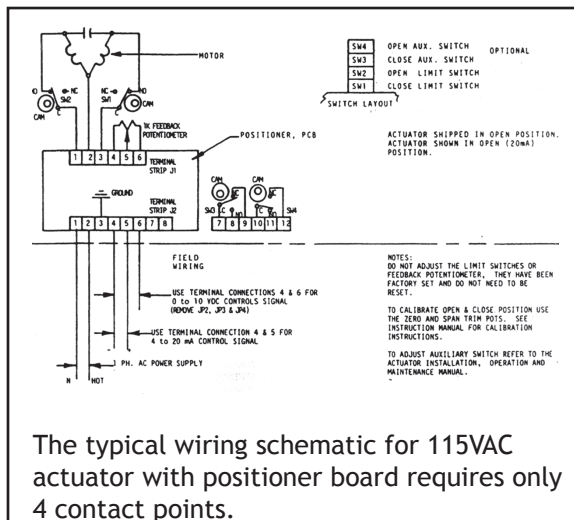
ENVIRONMENTAL CONDITIONS

- 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.



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)

THE STRAHMAN FAMILY OF PRODUCTS INCLUDE:



WASH DOWN EQUIPMENT

Cleaning and sanitizing equipment for applications where safety is the number one concern — built to outlast and outperform all others.

AUTOMATED VALVES & THERMAL SHUT-OFF VALVES

Completely assembled automated valves and fire-safe thermal shut-off valves fabricated for quick and reliable problem-solving solutions for industrial applications.

PROCESS VALVES


Engineered solutions for the transfer of fluid and flow control for highly critical applications from sampling to inline process to permanent isolation.





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PRECISION AND PERFORMANCE

an **fch** business