VNE
Neumo Ehrenberg Group

ELECTRIC ACTUATORS

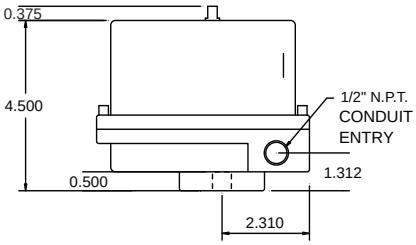
VNE Corporation
1149 Barberry Drive • PO Box 1698
608-756-4930 • 800-356-1111 • Fax: 608-756-3643 • www.vnestainless.com

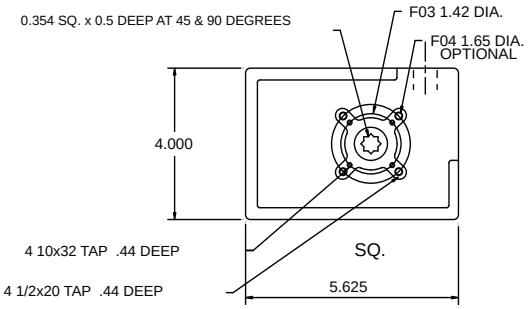
Electric Actuators

BI - 100 - E

SPECIFICATIONS FOR 115 VAC ACTUATOR

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



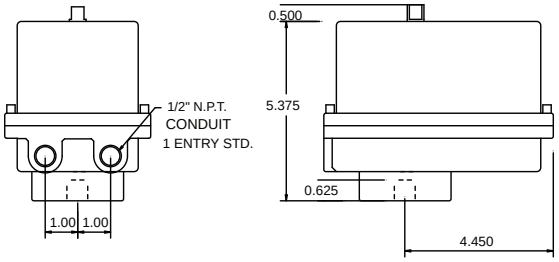


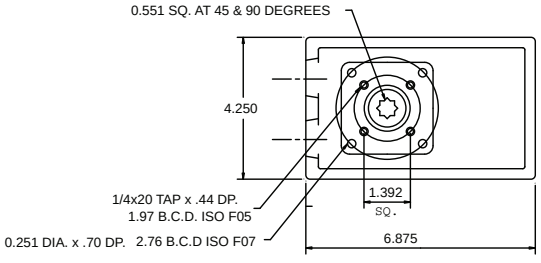
** Heater required below 0°F

BI - 200 AND 300 - E

SPECIFICATIONS FOR 115 VAC ACTUATOR

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

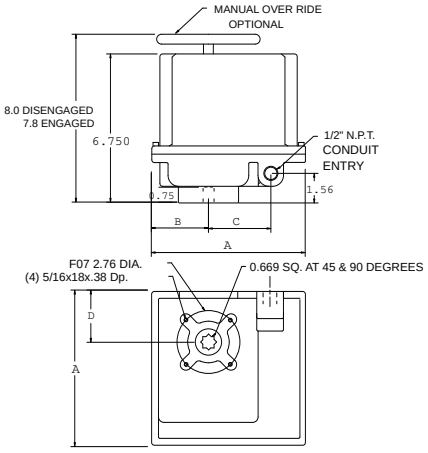
Electric Actuators

BI - 400 - E THRU 1500 - E

SPECIFICATIONS FOR 115 VAC ACTUATOR

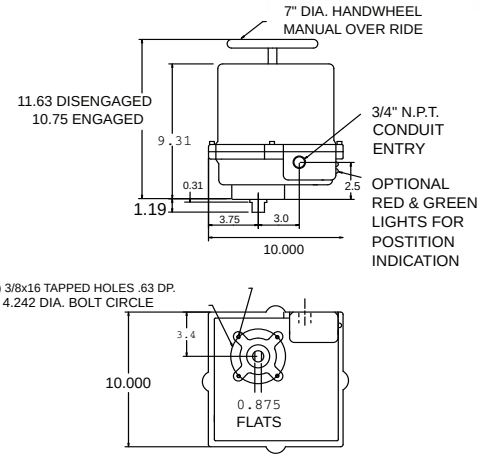
Output Torque	BI-400...400 inch pounds BI-675...675 inch pounds BI-1000...1000 inch pounds BI-1500...1500 inch pounds
Cycle Time	BI-400...10 sec / 90° BI-675-1000...15 sec / 90° BI-1500...30 sec / 90°
Duty Cycle	25%
Standard Motor	115VAC / 60Hz / 1ph
Standard Enclosure	NEMA 4
Enclosure Material	Aluminum
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

** 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



SPECIFICATIONS FOR 115 VAC ACTUATOR

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

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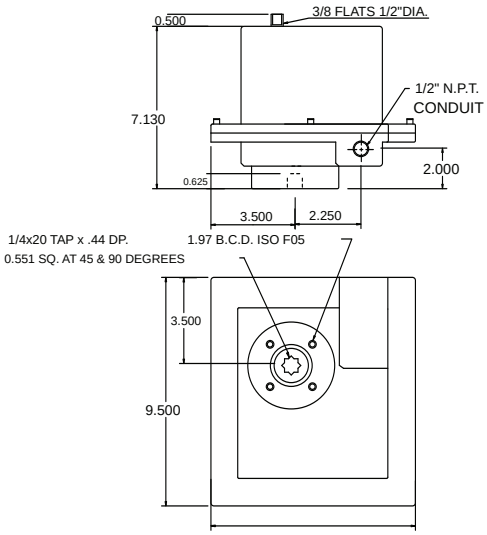
Electric Actuators

BI - 200 AND 300 NEMA 7



SPECIFICATIONS FOR 115 VAC 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
CLEARANCE REQUIRED FOR COVER REMOVAL:4.00¨

FAIL SAFE ELECTRIC ACTUATOR OPTIONS

VNE offers an 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 1200 inch pounds. For more information, please consult our sales staff.

Battery Backup System

The uninterruptible power system (UPS) allows operation of the actuator 2-4 times even after loss of power. The system can be used with any of the VNE electric actuator series and is ideal for critical applications.

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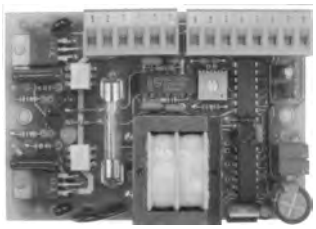
Electric Actuators

VNE's electric actuator series features durable construction for long-lasting performance. Our electric actuators are ideal for quarter-turn applications using ball, or butterfly valves. VNE 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
Heavy Duty Gears To withstand conditions, reducing potential down time due to gear failure	**Auxiliary Switches** Dry contact switches for position indication or control of peripheral equipment
Permanent Lubrication Reduces the need for maintenance	**Electronic Positioner** On-board positioner for precise control applications that use analog signals (4-20mA, 0-10VDC)
NEMA 4 Enclosures The standard enclosure protects against splashing, seepage, hose-downs and external applications. Powder coating and stainless steel fastners provide maximum corrosion protection	**Feedback Potentiometer** Resistive position feedback for control applications
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.	**Heater and Thermostat** For prevention of moisture in low temperature or high humidity environments
Universal Mounting Actuators can be mounted and operated in any position. ISO 5211 mounting and a double star output are available on most models.	**Feedback Transmitter** For 4-20mA position feedback
Reversing Motors Actuators can be used on a wide range of applications and valve types	**Power Brakes** For butterfly valve automation or modulating service applications requiring secure holding power
Thermal Overload Protection To protect the motor in stall conditions	**Speed Controls and Timers** For applications requiring slower cycle times or to repeat cycle applications at specific times
Terminal Strip Allows for quick and easy field installation	**Torque Sensor** To shut the actuator off in stall conditions
	Enclosures NEMA 4X and NEMA 7 available

Electric Actuators

AC MOTOR CONTROLLERS FOR MODULATING SERVICE



VNE 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 VNE's electric actuators into the ideal controlling 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 connect ed in parallel to a common command signal
- built-in 24VDC utility power supply can provide power for 4-20mA input or output signal, or feedback potentiometer
- no external motor resistors are required

WIRING SCHEMATIC

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

Positioner boards also available for DC motors on all VNE electric actuators

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.

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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 SEC	3 SEC	3 SEC	3 SEC	2.5 SEC
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 SEC	9 SEC	9 SEC	9 SEC	5 SEC
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 SEC	20 SEC	20 SEC	20 SEC	10 SEC
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 SEC	30 SEC	30 SEC	30 SEC	15 SEC
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 SEC	60 SEC	60 SEC	60 SEC	30 SEC
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 SEC	12 SEC	12 SEC	12 SEC	12 SEC
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 SEC	14 SEC	14 SEC	14 SEC	14 SEC
DUTY CYCLE	100%	100%	100%	100%	100%
AMP DRAW	2.90/1.12	14/20	14/20	14	2.80/1.30

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