ASAHI/AMERICA
35 Green Street
Malden, MA 02148
781-321-5409

INSTRUCTIONS
Series 83A Electric Actuator
"ELECTROMNI"

Description

1. **Valves** Corrosion Resistant Thermoplastic uni-body construction ball valve in PVC or CPVC with Teflon seats and EPDM or Viton Backing Cushions and EPDM or Viton stem seal. Also available for our Tru-Union Type 21 ball valves and Tru-Union Type-23 Multi-Port 3-way ball valves.

2. **Motor** The Series 83 "Electromni" motor is a brushless, uni-directional (non-reversing) shaded pole electric motor, which opens and closes the omni or Type-21 ball valve in approximately 5 seconds through 90-degrees of travel. Type-23 Multiport 3-way ball valves run 10 seconds for 180-degrees of travel.

3. **Operation** Travel is controlled by an internal single pole double throw limit switch activated by a cam/coupling with 90-degree positive and negative lobes. (180-degree for 3-ways)

4. **Adjustment** The Actuator limit switch has a small amount of adjustment for fine tuning the open and close positions. Any changes will affect both open and closed positions simultaneously. The adjustment can be achieved by loosening the hex standoffs that secure the switch plate to the motor housing and moving the plate slightly ahead to trip the switch later or slightly back to trip the switch sooner. To see if change is valid look inside the valve itself and watch the ball travel.

Engineering Data

Valve Size	Voltage	Current Draw	Cycle Time	Duty Cycle
1/2"-2"	115 VAC	2.1 AMPS	5 sec.	25%
1/2"-2"	220 VAC	.60 AMPS	5 sec.	25%

Standard enclosure is weather/corrosion resistant (NEMA 4X).

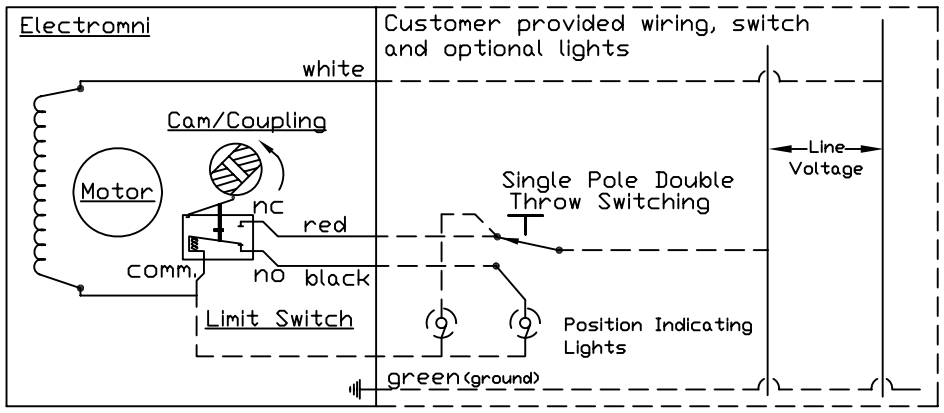
Options: 1 additional limit switch (Dry set of contacts)
2-position indicating lights (For visual position indication)
2-wire control (For Retrofitting Solenoids must provide constant voltage)

Attachments: 4-Drawings #0002EL, #0119BV83, #0046BV83, #132BV83

REV	DESCRIPTION	DFTG	CHK	DATE
B	INTIAL RELEASE	JJG	KB/DH	9/9/04
C	CHANGES PER ECR# 014-07	JJG	KB	6/19/07

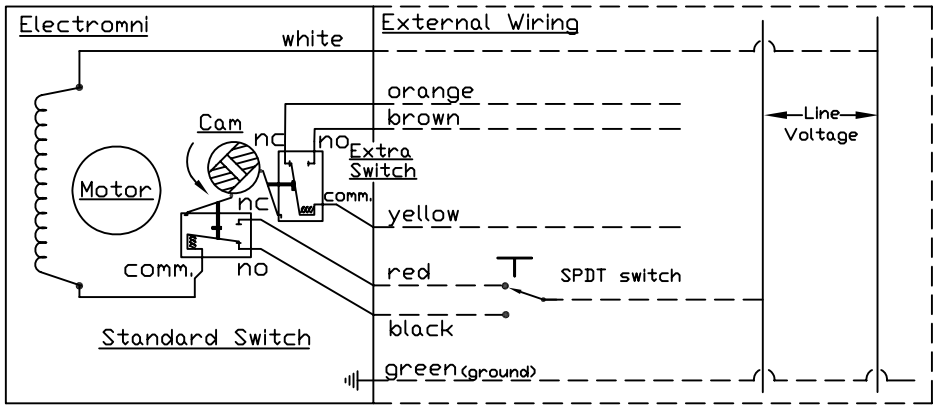
FOR OTHER REVISIONS SEE ECO HISTORY FILE.

WIRING DIAGRAM:



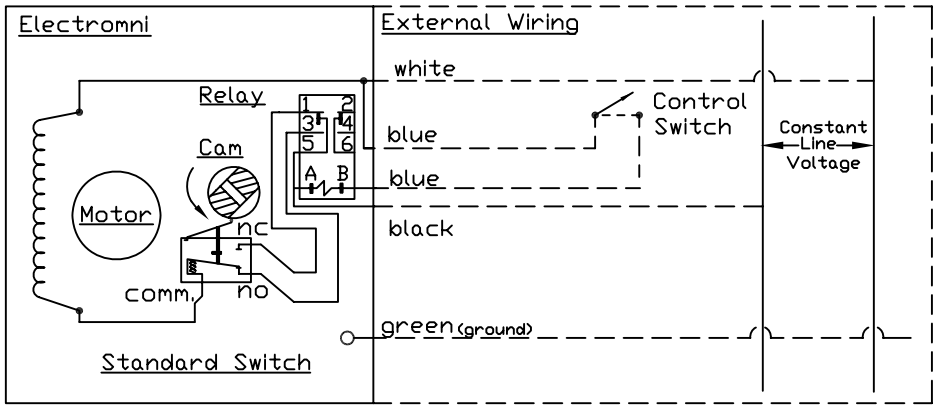
WHITE = NEUTRAL
BLACK = HOT COMMAND OPEN
RED = HOT COMMAND CLOSE
GREEN = GROUND

ELECTROMNI WITH EXTRA LIMIT SWITCH



WHITE = NEUTRAL
BLACK = HOT COMMAND OPEN
RED = HOT COMMAND CLOSE
GREEN = GROUND

ELECTROMNI WITH TWO WIRE CONTROL



CONTROL SWITCH OPERATION

CLOSURE = OPEN COMMAND
NON-CLOSURE = CLOSED COMMAND

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	NAME	DATE
DR	JJG	6/19/07
CHK	K.BLYSTONE	6/19/07
APPD		
PATH		

DO NOT SCALE DRAWING

ASAHI/AMERICA
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19 GREEN STREET, P.O. BOX 653, MALDEN, MA.

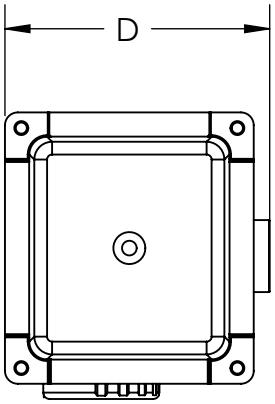
WIRING DIAGRAM
FOR ELECTROMNI 115 & 220 VAC

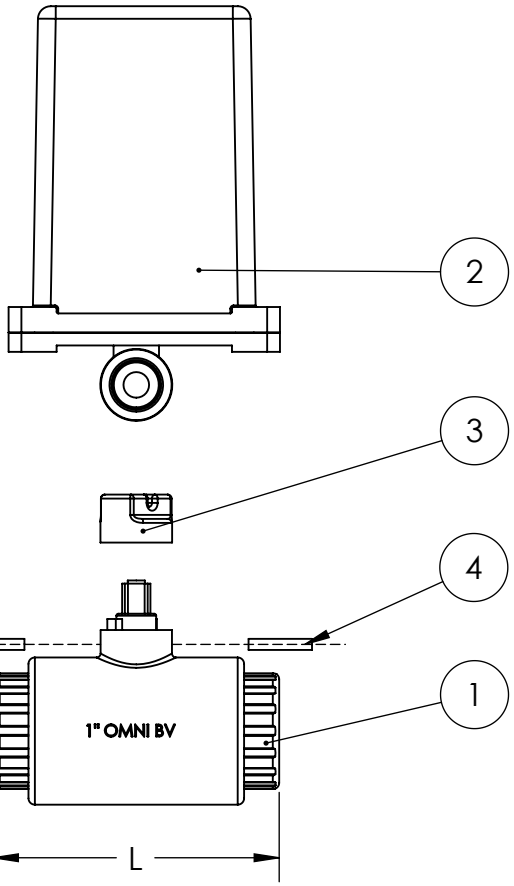
SIZE	DWG. NO.	REV
A	0002EL	C

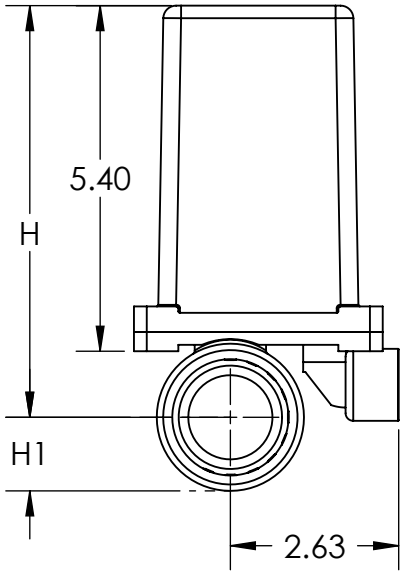
SCALE NTS

SHEET 1 OF 1

REV	DATE	DESCRIPTION	DR	APPD
A	3/8/10	FIRST ISSUE	CW	DH







SIZE	H1	H	W	D
1/2"	.61	5.93	3.82	4.14
3/4"	.94	6.15	4.06	4.14
1"	1.16	6.35	4.45	4.14
1-1/4"	1.15	6.36	5.00	4.14
1-1/2"	1.45	6.75	5.94	4.14
2"	1.74	7.04	6.97	4.37

ITEM	DESCRIPTION	MATERIAL	QTY
1	OMNI BALL VALVE	PVC,CPVC,PP,PVDF	1
2	ELECTROMNI ACTUATOR	ABS & PVC	1
3	COUPLING	303 STAINLESS STEEL	1
4	ALLEN SET SCREW	STAINLESS STEEL	2

NOTE: The shape and appearance of assembly differ a little with nominal size

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES

MACHINING TOLERANCES:	2 PL DECIMALS	± .01
	3 PL DECIMALS	± .005
	ANGULAR	± 1/2°
	FRACTIONAL	± 1/64
FABRICATION TOLERANCES:	1/2" - 8"	± 1/4
	10" AND UP	± 1/2
	ANGULAR	± 1.0°

MATERIAL:

FINISH: N/A

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	NAME	DATE
DR	C. Williams	3/8/10
APPD	D. Hurley	3/8/10
PROD		

PRODUCT:

WO#/CO#

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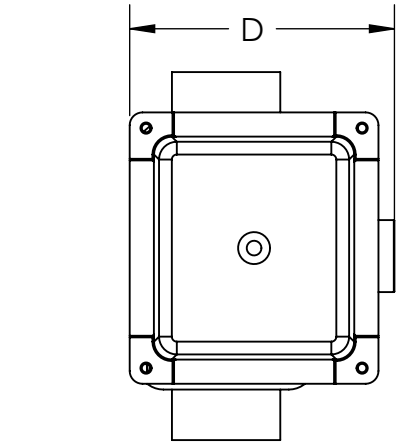
1/2" THRU 2" OMNI BALL VALVE ELECTROMNI

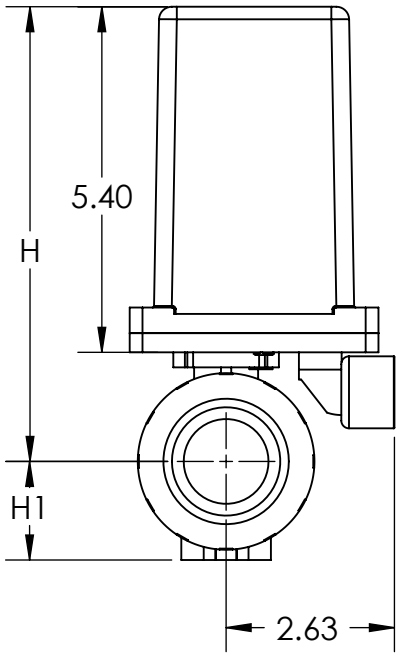
SIZE	DWG. NO.	REV
A	0119BV83	A

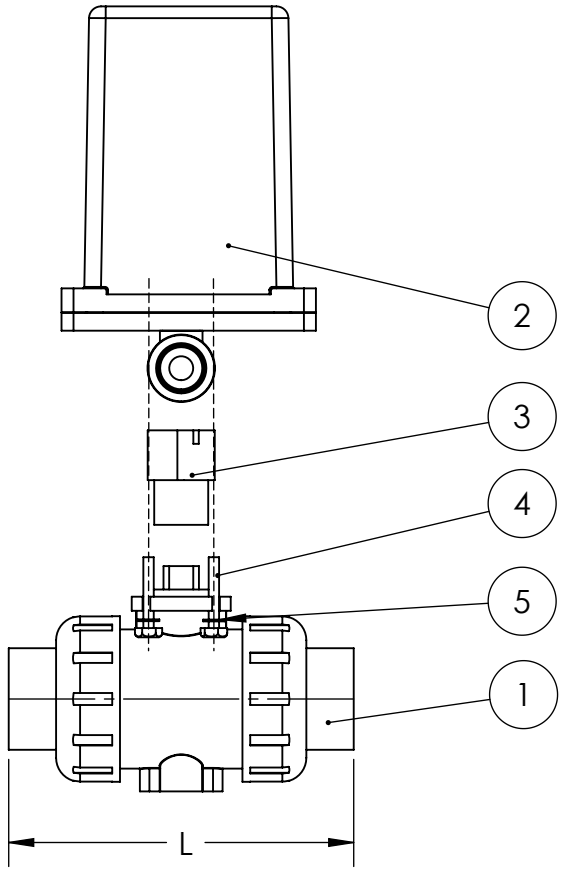
SCALE 1:5

SHEET 1 OF 1

REV	DATE	DESCRIPTION	DR	APPD
A	3/8/10	FIRST ISSUE	CW	DH







SIZE	H1	H	L	D
1/2"	1.14	6.58	4.45	4.14
3/4"	1.38	6.83	5.08	4.14
1"	1.54	7.10	5.75	4.14
1-1/4"	1.85	7.46	6.46	4.24
1-1/2"	2.17	7.79	7.24	4.60
2"	2.60	8.25	8.23	4.90

*PVC/CPVC/SOCKET/THREAD
FOR FLANGED/OTHER SEE CATALOG

ITEM	DESCRIPTION	MATERIAL	QTY
1	T-21 BALL VALVE	PVC,CPVC,PP,PVDF	1
2	ELECTROMNI ACTUATOR	ABS & PVC	1
3	COUPLING	303 STAINLESS STEEL	1
4	BOLT	STAINLESS STEEL	4
5	FLAT WASHER	STAINLESS STEEL	4

NOTE: The shape and appearance of assembly differ a little with nominal size

1 - ELECTROMNI (SERIES 83) ACTUATOR IS AVAILABLE IN 110 VAC, 220 VAC, 24 VAC, 12 VAC, 24 VDC, AND 12 VDC MODELS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES

MACHINING TOLERANCES:	2 PL DECIMALS	± .01
	3 PL DECIMALS	± .005
	ANGULAR	± 1/2°
	FRACTIONAL	± 1/64
FABRICATION TOLERANCES:	1/2" - 8"	± 1/4
	10" AND UP	± 1/2
	ANGULAR	± 1.0°

MATERIAL:
FINISH: N/A

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	NAME	DATE
DR	C. Williams	3/8/10
APPD	D. Hurley	3/8/10
PROD		

PRODUCT:
WO#/CO#

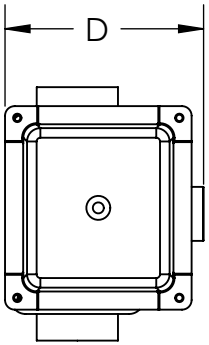
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35 GREEN STREET, P.O. BOX 653, MALDEN, MA.

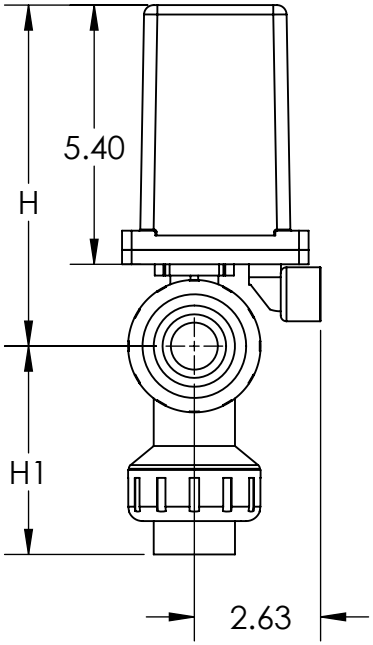
1/2" THRU 2" T-21 BALL VALVE TO SERIES 83 ACTUATOR

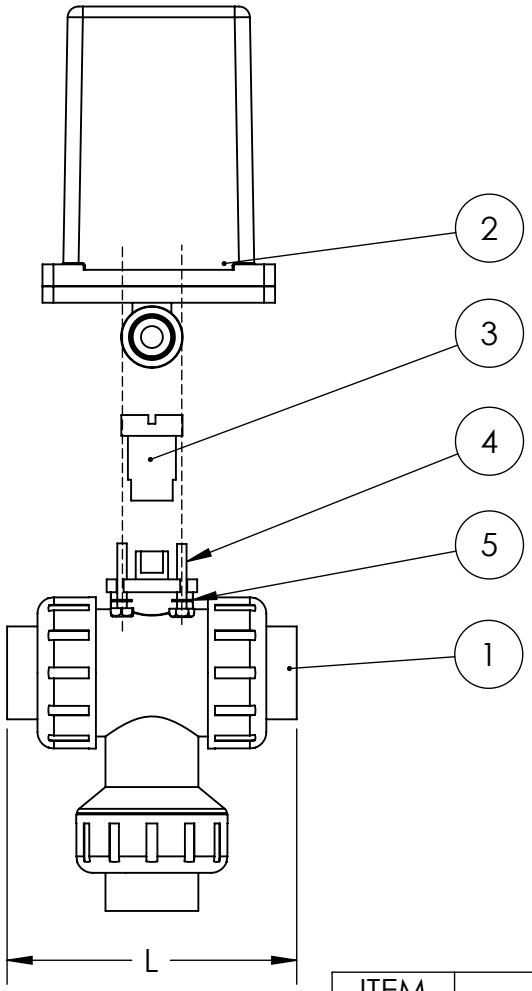
SIZE	DWG. NO.	REV
A	0046BV83	A

SCALE 1:5 SHEET 1 OF 1

REV	DATE	DESCRIPTION	DR	APPD
A	3/8/10	FIRST ISSUE	CW	DH







SIZE	H1	H	L	D
1/2"	3.05	6.58	4.45	4.14
3/4"	3.56	6.83	5.08	4.14
1"	4.34	7.11	5.75	4.14
1-1/2"	6.09	7.80	7.24	4.59
2"	6.87	8.25	8.23	5.10

*PVC/CPVC/SOCKET/THREAD
FOR FLANGED/OTHER SEE CATALOG

ITEM	DESCRIPTION	MATERIAL	QTY
1	T-21 BALL VALVE	PVC,CPVC,PP,PVDF	1
2	ELECTROMNI ACTUATOR	ABS & PVC	1
3	COUPLING	303 STAINLESS STEEL	1
4	BOLT	STAINLESS STEEL	4
5	FLAT WASHER	STAINLESS STEEL	4

NOTE: The shape and appearance of assembly differ a little with nominal size

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES

MACHINING TOLERANCES:	2 PL DECIMALS	± .01
	3 PL DECIMALS	± .005
	ANGULAR	± 1/2°
	FRACTIONAL	± 1/64
FABRICATION TOLERANCES:	1/2" - 8"	± 1/4
	10" AND UP	± 1/2
	ANGULAR	± 1.0°

MATERIAL:
FINISH: 125µ"

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	NAME	DATE
DR	C. Williams	3/8/10
APPD	D. Hurley	3/8/10
PROD		

PRODUCT:
WO#/CO#

ASAHI/AMERICA
ISO 9001 CERTIFIED
35 GREEN STREET, P.O. BOX 653, MALDEN, MA.

1/2" THRU 2" T-23 BALL VALVE TO ELECTROMNI ACTUATOR

SIZE A | DWG. NO. 0132BV83 | REV A
SCALE 1:5 | SHEET 1 OF 1