



35 Green Street  
Malden, MA 02148  
781-321-5409

**INSTRUCTIONS**  
**Series 83A Electric Actuator**  
**12/24 VAC Service**  
**“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 DC gear motor with a set of Diodes in lead wires for AC low voltage operation, which opens and closes the omni or Type-21 ball valve in approximately 5 seconds through 90-degrees of travel. Type-23 Multi-port 3-way ball valves run 10 seconds for 180-degrees of travel.
3. **Operation** Travel is controlled by 2 internal single pole double throw limit switches activated by individual cams located on top of motor with positive and negative lobes. (180-degree for 3-ways)
4. **Adjustment** The Actuator limit switches are fully adjustable for fine tuning the open and close positions. The cams are negative lobe cams. The adjustment can be achieved by loosening the set screws that secure the cams to the motor shaft and by rotating the cams 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**

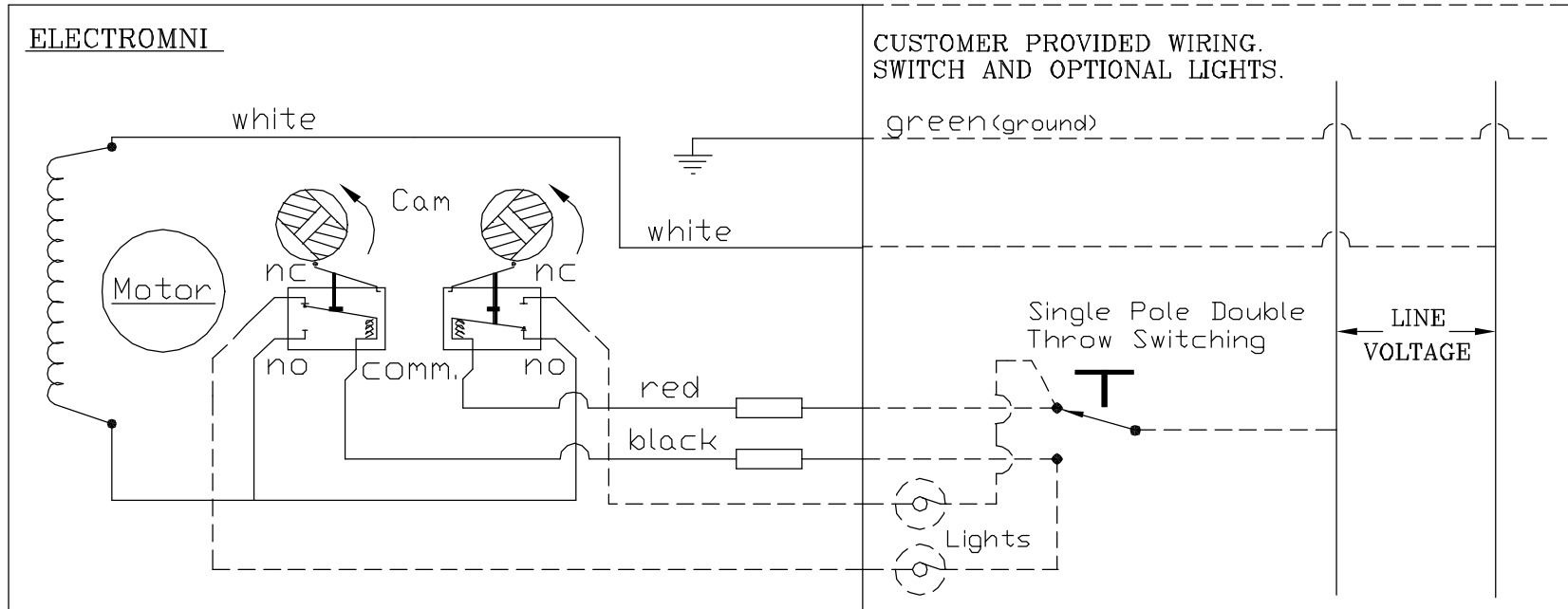
<b>Valve Size</b>	<b>Voltage</b>	<b>Current Draw</b>	<b>Cycle Time</b>	<b>Duty Cycle</b>
1/2”-2”	12 VAC	2.25 AMPS	5 sec.	75%
1/2”-2”	24 VAC	4.0 AMPS	5 sec.	75%

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:** 3-Drawings #0003EL, #0119BV83, #0046BV83, #132BV83.

WIRING DIAGRAM:

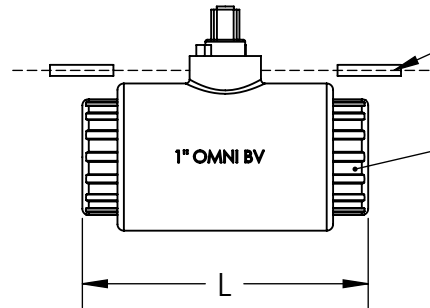
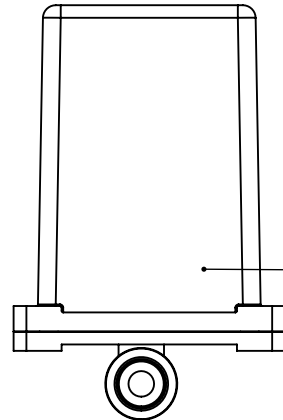
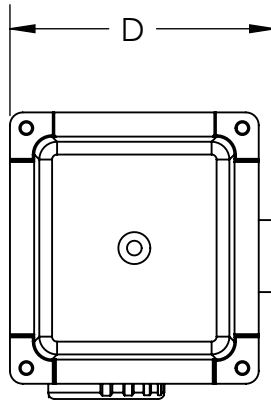


WHITE = NEUTRAL  
 BLACK = HOT COMMAND OPEN  
 RED = HOT COMMAND CLOSE  
 GREEN = GROUND

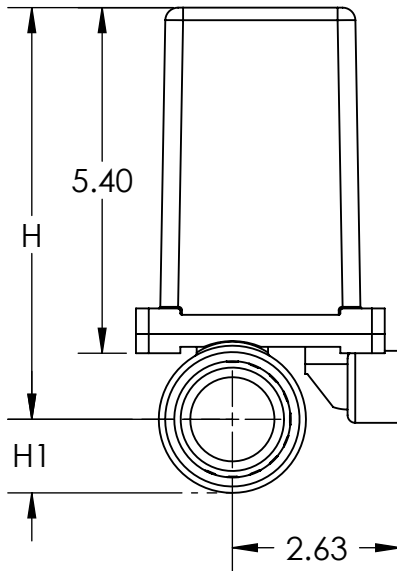
**FOR REFERENCE ONLY**  
**ASAHI/AMERICA**

THIS DRAWING AND ALL INFORMATION HEREON IS THE PROPERTY OF ASAHI/AMERICA. ANY COPYING, REPRODUCTION OR UNAUTHORIZED USE IS FORBIDDEN WITHOUT WRITTEN CONSENT.			<b>ASAHI/AMERICA</b> ISO 9001 CERTIFIED 35 GREEN STREET, P.O. BOX 653, MALDEN, MA.		
			ELECTROMNI WIRING DIAGRAM 12/24 VAC		
DR	JJG	9/9/04	SIZE A	DWG. NO. 0003EL	REV B
APPD	K.BLYSTONE	9/9/04			
PROD	D.HURLEY	9/9/04			
WO#/SO#					
FILE			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

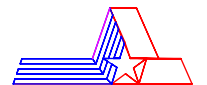


ITEM	DESCRIPTION	MATERIAL	QTY
1	OMNI BALL VALVE	PVC, CPVC, PP, PVDF	1
2	ELECTROMNI ACTUATOR	ABS & PVC	1
3	COUPLING	303 STAINLESS STEEL	1
4	ALLEN SET SCREW	STAINLESS STEEL	2

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

THIS DRAWING AND ALL INFORMATION HEREON IS THE PROPERTY OF ASAHI/AMERICA. ANY COPYING, REPRODUCTION OR UNAUTHORIZED USE IS FORBIDDEN WITHOUT WRITTEN CONSENT.	
NAME	DATE
DR <i>C. Williams</i>	<i>3/8/10</i>
APPD <i>D. Hurley</i>	<i>3/8/10</i>
PROD	
PRODUCT:	
WO#/CO#	

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

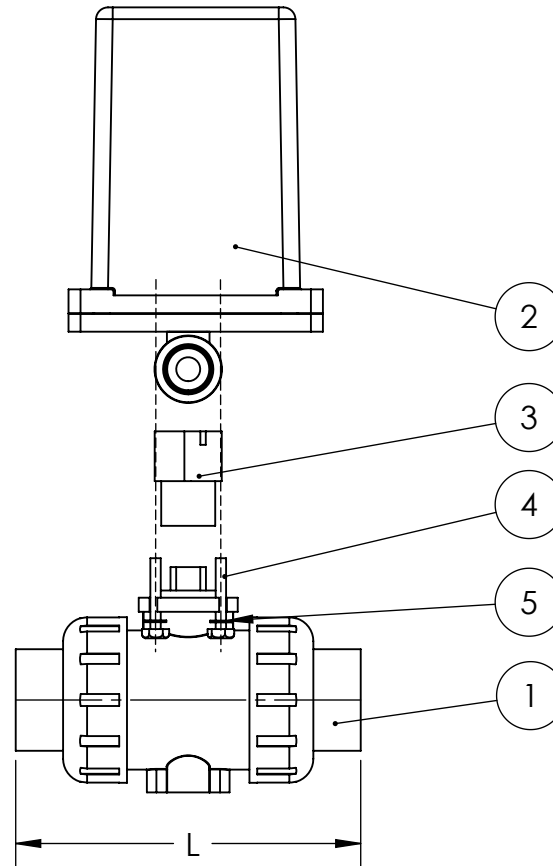
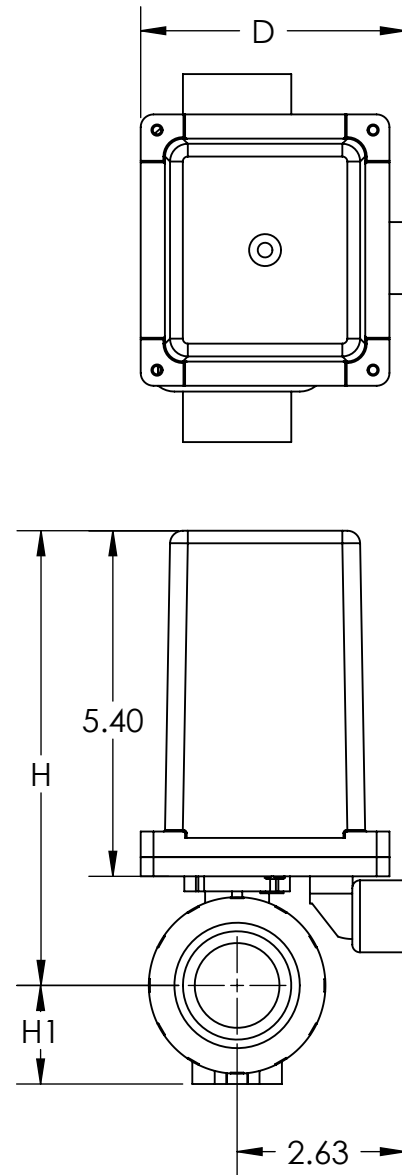


**1/2" THRU 2" OMNI BALL VALVE  
ELECTROMNI**

SIZE A	DWG. NO. 0119BV83	REV A
SCALE 1:5	SHEET 1 OF 1	

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

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

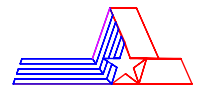
ITEM	DESCRIPTION	MATERIAL	QTY
1	T-21 BALL VALVE	PVC, CPVC, PP, PVDF	1
2	ELECTROMNI ACTUATOR	ABS & PVC	1
3	COUPLING	303 STAINLESS STEEL	1
4	BOLT	STAINLESS STEEL	4
5	FLAT WASHER	STAINLESS STEEL	4

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		THIS DRAWING AND ALL INFORMATION HEREON IS THE PROPERTY OF ASAHI/AMERICA. ANY COPYING, REPRODUCTION OR UNAUTHORIZED USE IS FORBIDDEN WITHOUT WRITTEN CONSENT.	
DIMENSIONS ARE IN INCHES			
MACHINING TOLERANCES:	2 PL DECIMALS ±.01	DR	<i>C. Williams</i> 3/8/10
	3 PL DECIMALS ±.005	APPD	<i>D. Hurley</i> 3/8/10
	ANGULAR ±1/2°	PROD	
	FRACTIONAL ±1/64	SCALE	1:5
FABRICATION TOLERANCES:	1/2" - 8" ±1/4	PRODUCT:	
	10" AND UP ±1/2	WO#/CO#	
	ANGULAR ±1.0°		
MATERIAL:			
FINISH:	N/A		

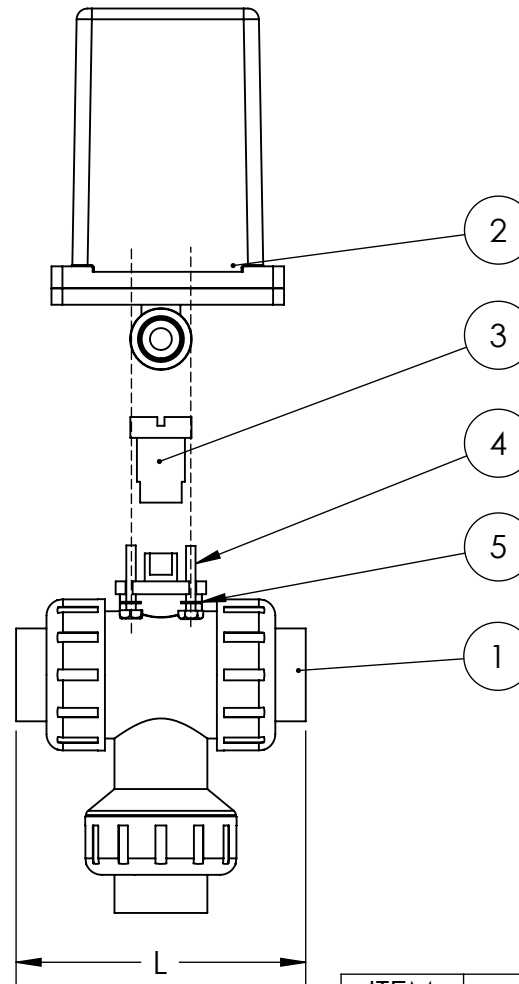
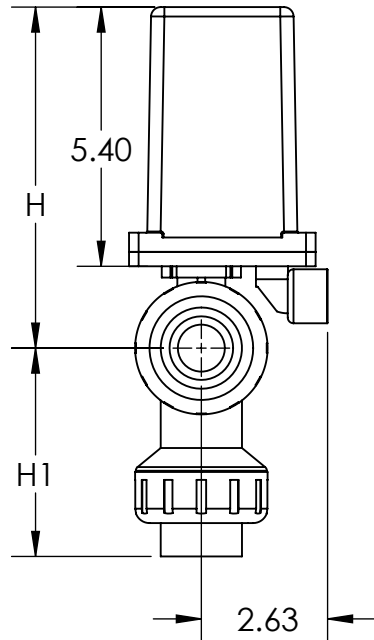
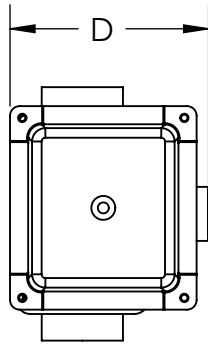
**ASAHI/AMERICA**  
ISO 9001 CERTIFIED  
35 GREEN STREET, P.O. BOX 653, MALDEN, MA.



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

SIZE	A	DWG. NO.	0046BV83	REV	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

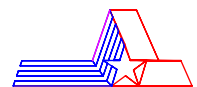
\*PVC/CPVC/SOCKET/THREAD FOR FLANGED/OTHER SEE CATALOG

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

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"

THIS DRAWING AND ALL INFORMATION HEREON IS THE PROPERTY OF ASAHI/AMERICA. ANY COPYING, REPRODUCTION OR UNAUTHORIZED USE IS FORBIDDEN WITHOUT WRITTEN CONSENT.	
NAME	DATE
DR <i>C. Williams</i>	3/8/10
APPD <i>D. Hurley</i>	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	

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