



655 Andover Street  
Lawrence, MA  
01843

## INSTRUCTIONS

### Series 83A Electric Actuator “ELECTROMNI”

#### Description

- 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 Multi-Port 3-way ball valves.
- Motor** The Series 83 “Electromni” motor is a dc gear motor, which opens and closes the omni or Type 21 ball valve in approximately 5 seconds through 90-degrees of travel. Multi-port 3-way ball valves run 10 seconds for 180-degrees of travel.
- 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)
- 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

Valve Size	Voltage	Current Draw	Cycle Time	Duty Cycle
1/2”-2”	12 VDC	2.0 AMPS	5 sec.	75%
1/2”-2”	24 VDC	3.5 AMPS	5 sec.	75%

Standard enclosure is weather resistant (NEMA 4).

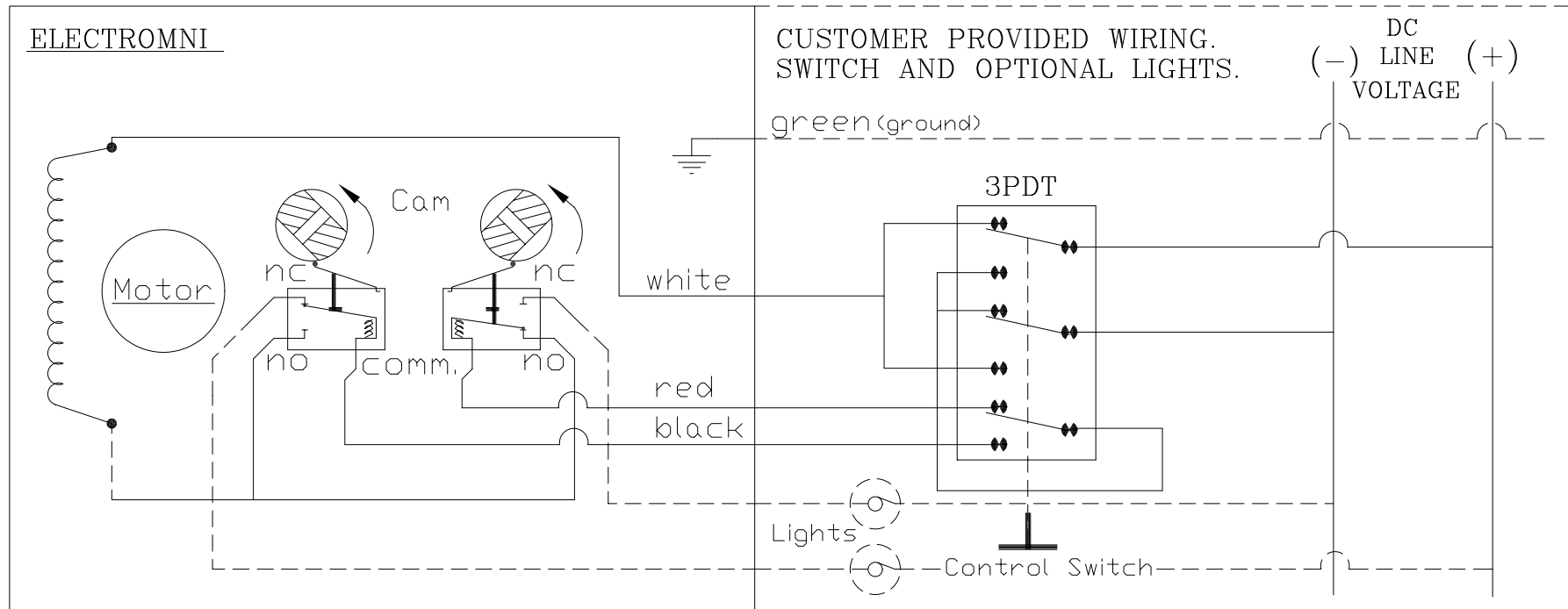
**Options:** 1 additional limit switch (Dry set of contacts)  
2-position indicating lights (For visual position indication)  
2-wire control (For Retrofitting Solenoids must provide constant voltage )

**Attachments:** 4-Drawings #0004EL, #0119BV83T27, #0046BV, #132BV83

WIRING DIAGRAM:

TO CLOSE: NEG. TO WHITE  
POS. TO BLACK

TO OPEN: POS. TO WHITE  
NEG. TO RED



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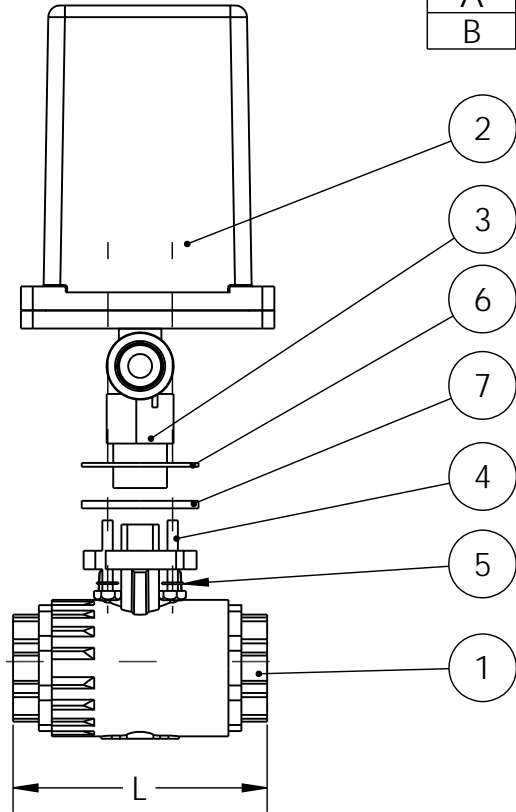
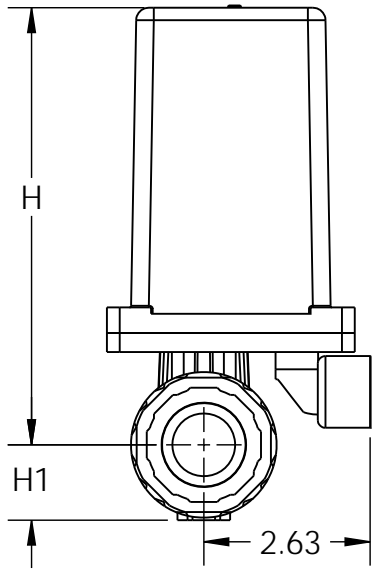
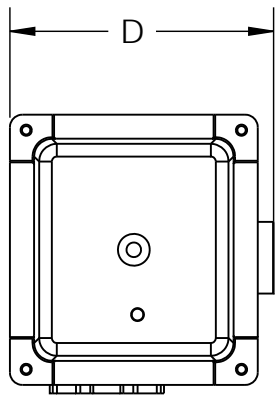
	NAME	DATE
DR	KENICHI MIYAZAKI	3/8/02
APPD	DAVE HURLEY	3/8/02
PROD	LED LESTER	3/8/02
WO#/SO#		
FILE		

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



ELECTROMNI WIRING DIAGRAM 12/24 VDC		
SIZE <b>A</b>	DWG. NO. 0004EL	REV <b>A</b>
SCALE NTS	SHEET <u>1</u> OF <u>1</u>	

REV	DATE	DESCRIPTION	DR	FROM
A	3/8/10	FIRST ISSUE	CW	DH
B	11/29/16	+RING & GASKET	CW	MW



SIZE	H1	H	L	D
1/2"	.81	6.68	3.11	4.14
3/4"	1.00	6.96	3.70	4.14
1"	1.18	7.23	4.25	4.14
1-1/4"	1.38	7.59	4.76	4.14
1-1/2"	1.66	7.92	5.75	4.14
2"	2.09	8.37	6.86	4.37

\*PVC/CPVC/SOCKET/THREAD

ITEM	DESCRIPTION	MATERIAL	QTY
1	OMNI T27 BV	PVC, CPVC	1
2	ELECTROMNI ACTUATOR	ABS & PVC	1
3	COUPLING	303 STAINLESS STEEL	1
4	BOLT	STAINLESS STEEL	4
5	FLAT WASHER	STAINLESS STEEL	4
6	GASKET	NITRILE	1
7	SEALING RING	PP BLACK	1


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	2 PL DECIMALS ± .01
TOLERANCES:	3 PL DECIMALS ± .005
	ANGULAR ± 1/2°
	FRACTIONAL ± 1/64
FABRICATION	1/2" - 8" ± 1/4
TOLERANCES:	10" AND UP ± 1/2
	ANGULAR ± 1.0°
WELD TYPE:	N/A
MATERIAL:	AS NOTED
FINISH:	125µ"

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DR	C. Williams	11/29/16
REV		
APPR	M. Willen	02/14/17
PRODUCT:	VALVE & ACT	
WO#/SO#		

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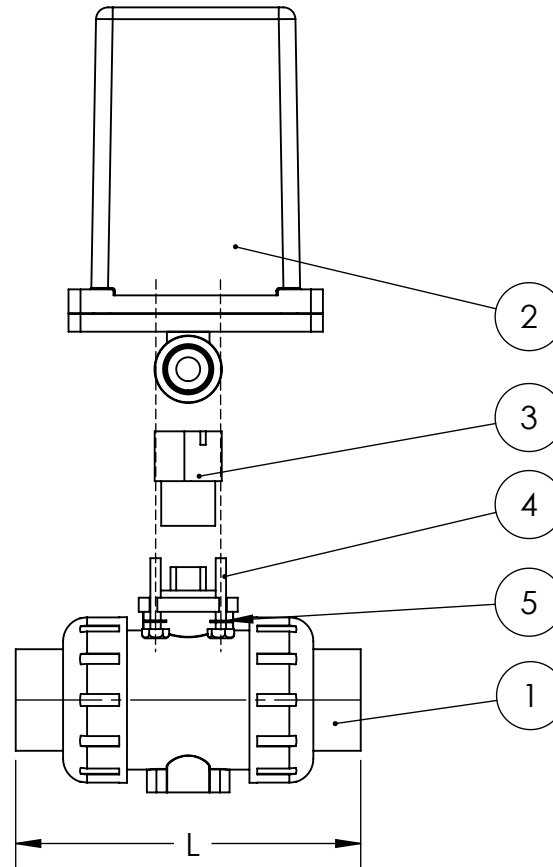
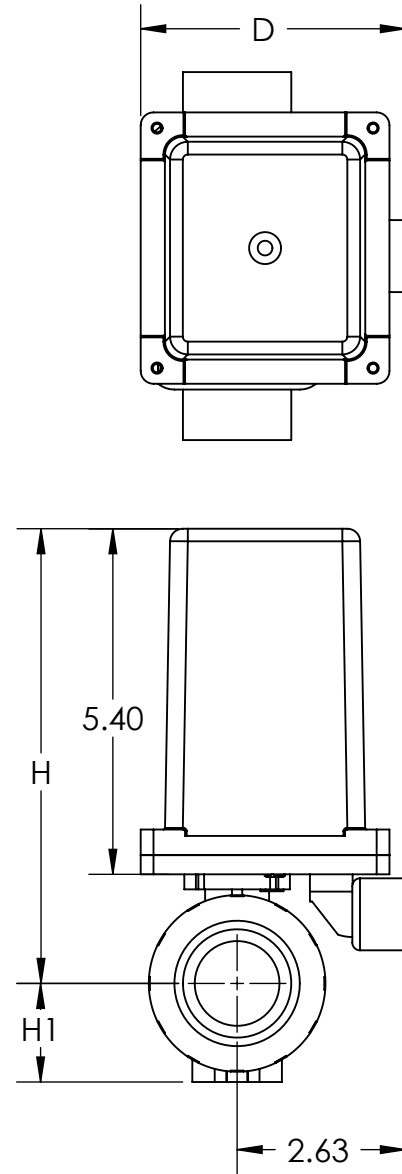


1/2" - 2" OMNI T-27 BV to S83

JDE PART # 0119BV83T27

SIZE	A	DWG #	0119BV83T27	REVISION	B
SCALE	N/A		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:	PRODUCT:		
FINISH:	N/A	WO#/CO#	

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

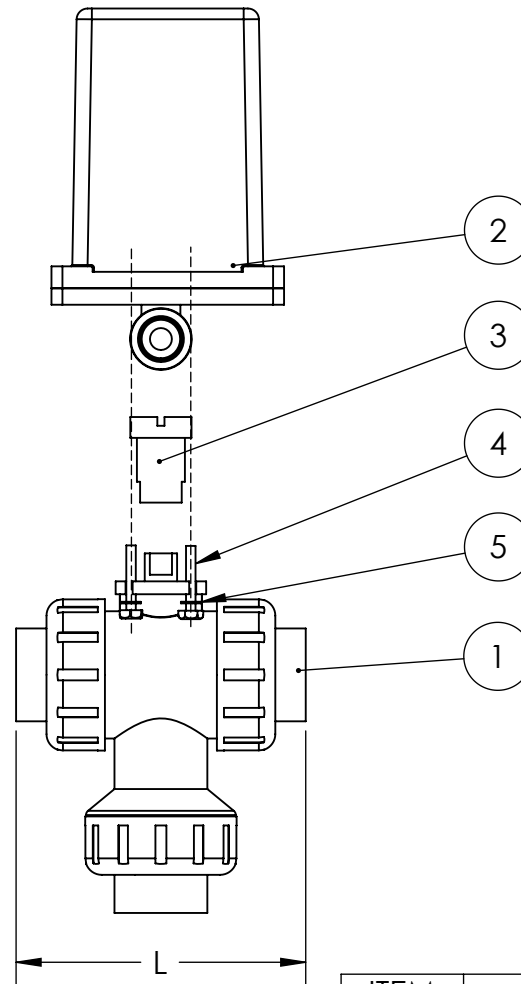
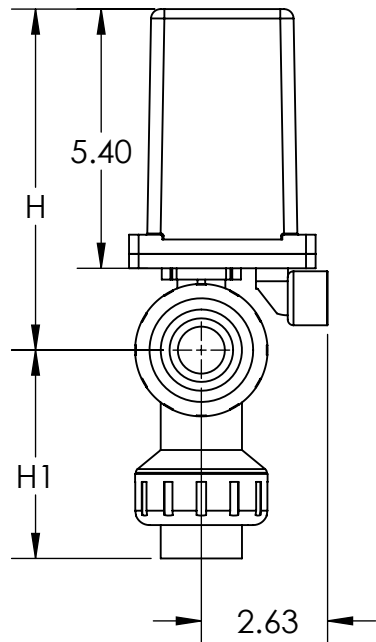
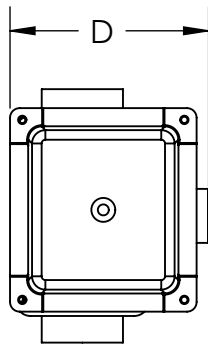
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35 GREEN STREET, P.O. BOX 653, MALDEN, MA.



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

SIZE 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



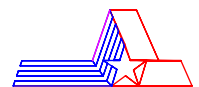
SIZE	H1	H	L	D
1/2"	3.05	6.58	4.45	4.14
3/4"	3.56	6.83	5.08	4.14
1"	4.34	7.11	5.75	4.14
1-1/2"	6.09	7.80	7.24	4.59
2"	6.87	8.25	8.23	5.10

\*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

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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:	PRODUCT:		
FINISH: 125μ"	WO#/CO#		

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



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

DR	<i>C. Williams</i>	DATE	<i>3/8/10</i>
APPD	<i>D. Hurley</i>		<i>3/8/10</i>
PROD			
SIZE	A	DWG. NO.	0132BV83
SCALE	1:5	REV	A
SHEET		1	OF 1

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