



# Electric Actuators



# SEA Electric Actuator



## Enclosure:

- IP 67: Waterproof and dust-proof enclosure
- NEMA 4X: Waterproof and dust-proof enclosure
- Material: Dry powder coating aluminum alloy

## Motor:

- Standard extended duty cycle induction motor  
F insulation class for all models
- Built-in thermal protection (275°F) prevents motor burning out

## Position Indicator:

- All models have continuous mechanism position indicator on the top of the actuator cover

## Manual Override:

- Non-clutch design, the manual operation can be operated without any lever, clutch or brake upon power outage
- When electric motor is operating, manual hand-wheel will not rotate for safety purposes

## Gear Train:

- High alloy steel gear trains provide self-locking function to avoid valve back drive
- Gear trains have been already lubricated with high temperature grease at the factory

## Working Conditions:

- Ambient temperature: -22°F to 149°F with heater and thermostat
- Humidity: 30% to 95%

## Various Options:

- Space Heater
- Additional limit switches (2 units)
- Potentiometer unit (1K Ohm or 5K Ohm)
- Local control unit (local/remote, on/off)
- Conduit entrance (1/2" PS, 3/4" PF, 1/2" NPT)
- Torque switches (2 units)
- Current position transmitter (output 4-20mA)
- Modulating controller
- Various voltages
- Nylon enclosure material
- Thermostat

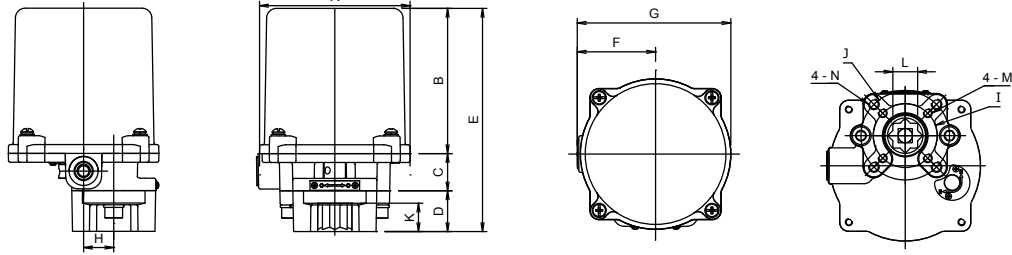
## Certifications:

- CE
- CSA (Conforming to the test standard for outdoor use)

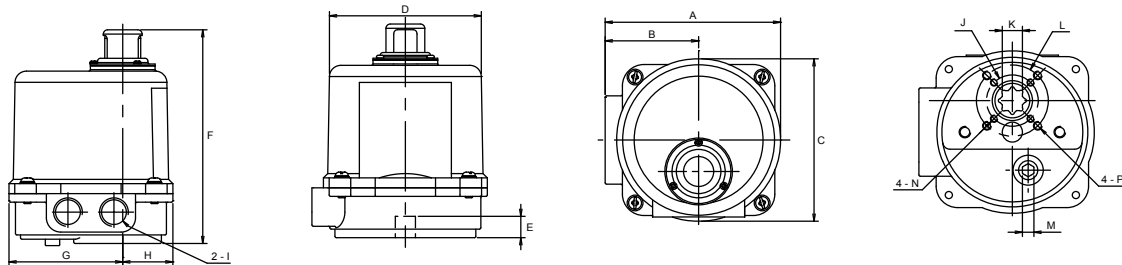
## SEA Technical Information

<b>Model</b>	<b>Power (watts)</b>	<b>Max Torque (In/lb)</b>	<b>Speed (Sec/90°)</b>	<b>Weight (lb)</b>	<b>Manual Override</b>	<b>Mounting Flange</b>
SEA 1	5W	132	19	3.3	Lever	F03 / F05
SEA 3	10W	310	12	4.4	Lever	F03 / F05
SEA 4	10W	443	20	6.6	Lever	F05 / F07
SEA 8	40W	797	12	24.2	Hand-wheel	F07
SEA 13	40W	1328	15	24.2	Hand-wheel	F07
SEA 35	120W	3540	16	44	Hand-wheel	F10
SEA 44	120W	4425	22	44	Hand-wheel	F10
SEA 57	120W	5750	28	44	Hand-wheel	F10
SEA 88	180W	8850	46	71	Hand-wheel	F12 / F14
SEA 132	220W	13275	46	71	Hand-wheel	F12 / F14
SEA 177	180W	17700	58	132	Hand-wheel	F16
SEA 221	220W	22125	58	132	Hand-wheel	F16
SEA 265	250W	26550	58	135	Hand-wheel	F16
SEA 310	300W	31000	58	135	Hand-wheel	F16

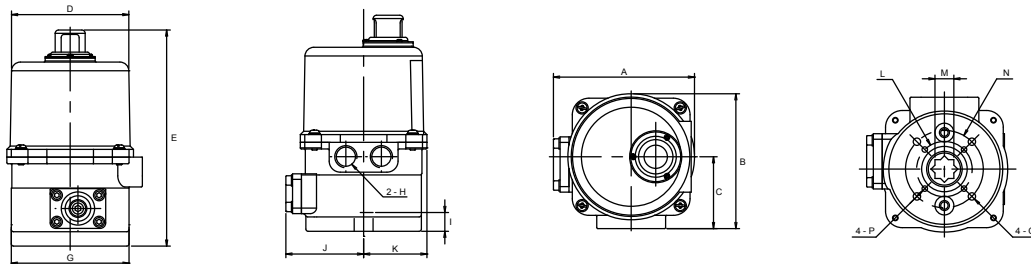
# SEA Electric Actuator Dimensions



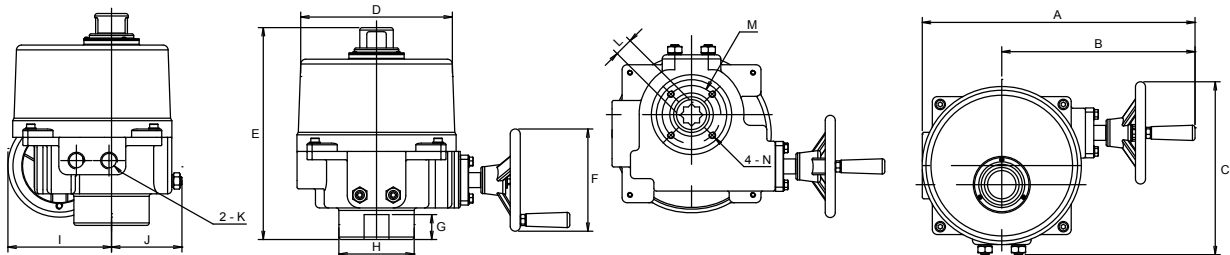
SEA 1															
Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Flange Type
in	3.35	3.23	0.83	0.90	4.96	1.73	3.42	0.67	1.42	1.97	0.63	0.55	M5x0.8	M6x1.0	F03 or F05
mm	85	82	21	23	126	44	87	17	36	50	16	14	M5x0.8	M6x1.0	F05



SEA 3																
Unit	A	B	C	D	E	F	G	H	I	J	K Max	L	M	N	P	Flange Type
in	4.80	2.56	4.49	4.17	0.59	5.9	3.11	1.38	1/2 PS	1.42	0.551	1.97	0.2	M5x0.8	M6x1.0	F03 or F05
mm	122	65	144	106	15	150	79	35	1/2 PS	36	14	50	8	M5x0.8	M6x1.0	F05



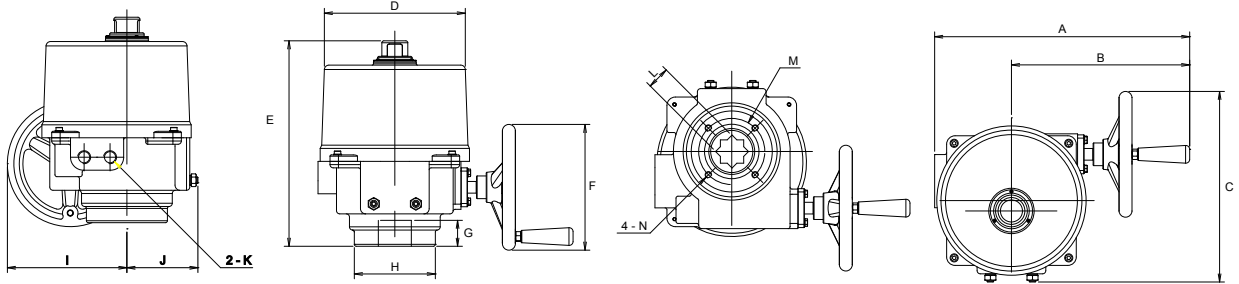
SEA 4																
Unit	A	B	C	D	E	G	H	I	J	K	L	M	N	P	Q	Flange Type
in	4.49	4.8	2.56	4.17	7.71	4.17	1/2 PS	0.67	2.24	2.24	1.97	0.669	2.76	M6x1.0	M8x1.25	F05 or F07
mm	114	122	65	106	196	106	1/2 PS	17	57	57	50	17	70	M6x1.0	M8x1.25	F07



SEA 8 AND SEA 13															
Unit	A	B	C	D	E	F	G	H	I	J	K	L Max	M	N	Flange Type
in	12.83	9.09	8.19	7.13	10.04	4.84	1.18	3.54	4.88	3.31	1/2 PS	0.867	2.76	M8x1.25	F07
mm	326	231	208	181	255	123	30	90	124	84	1/2 PS	22	70	M8x1.25	F07

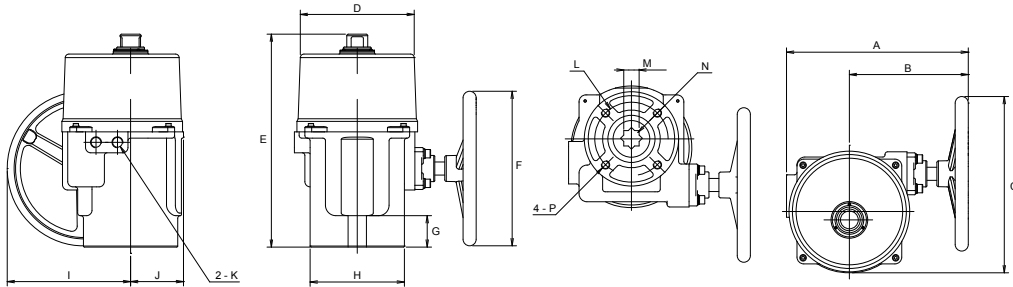
# SEA Electric Actuator Dimensions

## SEA 35, SEA 44 & SEA 57



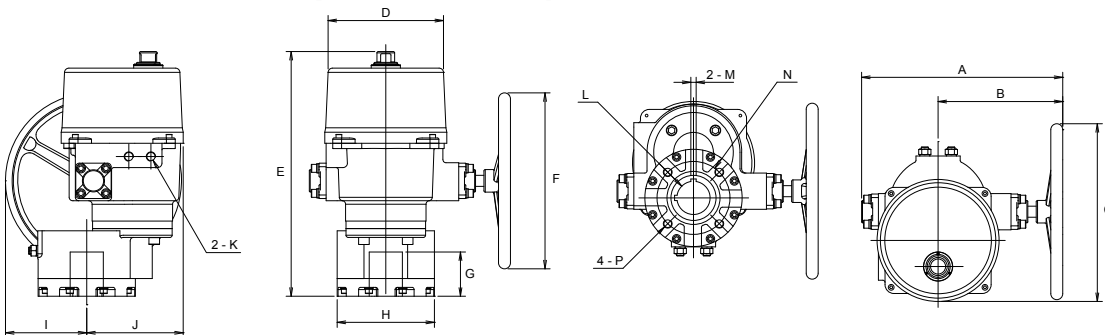
Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Flange Type
in	153.66	107.25	114.66	84.63	123.63	75.66	15.6	48.75	71.76	42.9	.5 PS	13.65	39.78	M10*1.5	F10
mm	394	275	294	217	317	194	40	125	184	110		35	102	M10*1.5	

## SEA 88 & SEA 132



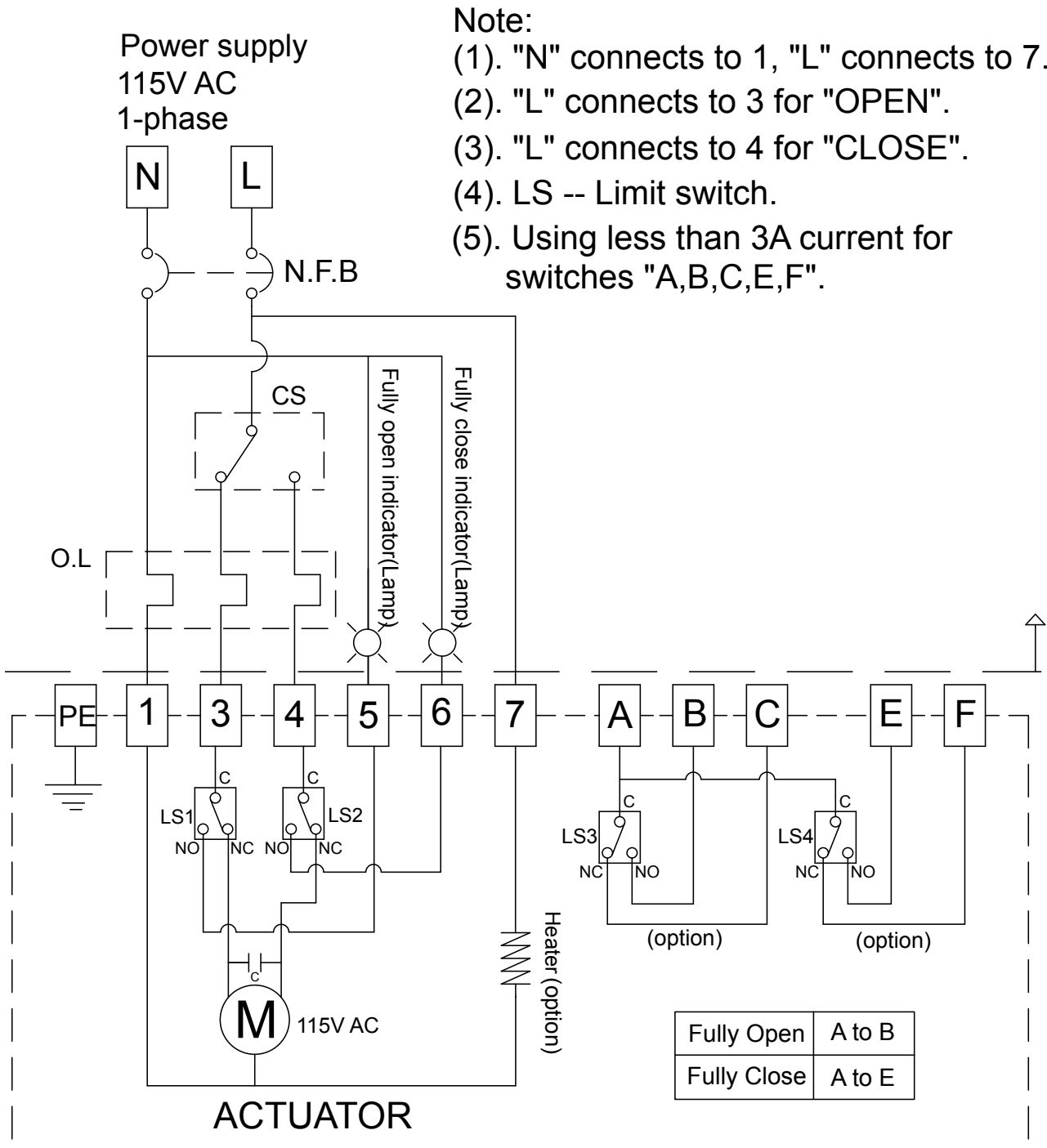
Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Flange Type
in	135.33	88.53	131.04	84.63	158.34	115.05	23.4	70.2	91.65	39.39	1/2 PS	48.75	3.9	13.65	M12*1.75	F12 or F14
mm	347	227	336	217	406	295	60	180	235	101		125	10	35	M16*2.0	

## SEA 177, SEA 221, SEA 265 & SEA310

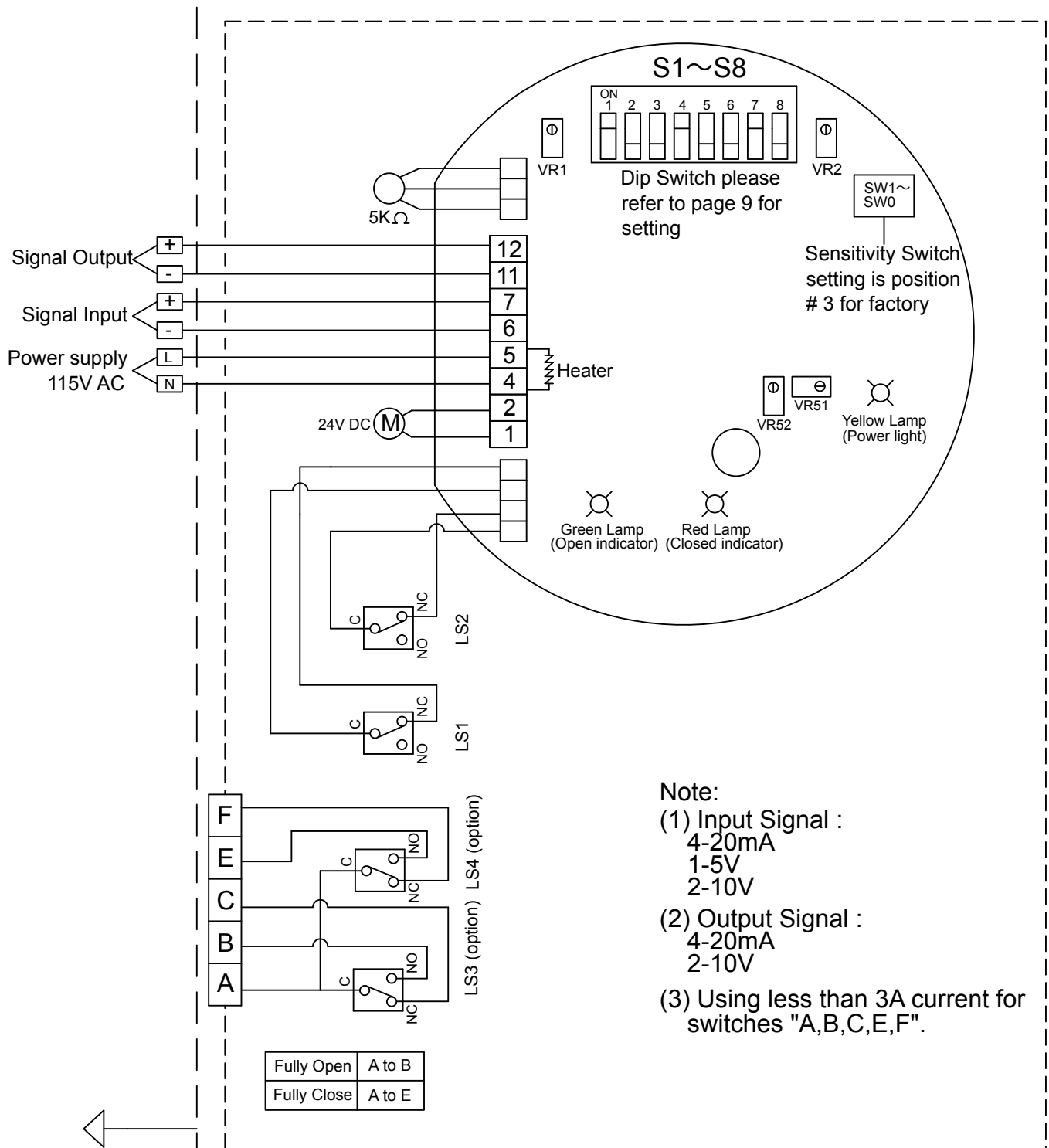


Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Flange Type
in	177.45	109.98	156.78	101.79	216.06	155.22	39	85.8	71.76	85.02	1/2 PS	29.25	4.68	64.35	M20*2.5	F16
mm	455	282	402	261	554	398	100	220	184	218		75	12	165	M20*2.5	

# SEA 3 & SEA 4 - 115VAC ON / OFF



# SEA 3 & SEA 4 - AC MODULATING



**Note:**

(1) Input Signal :  
 4-20mA  
 1-5V  
 2-10V

(2) Output Signal :  
 4-20mA  
 2-10V

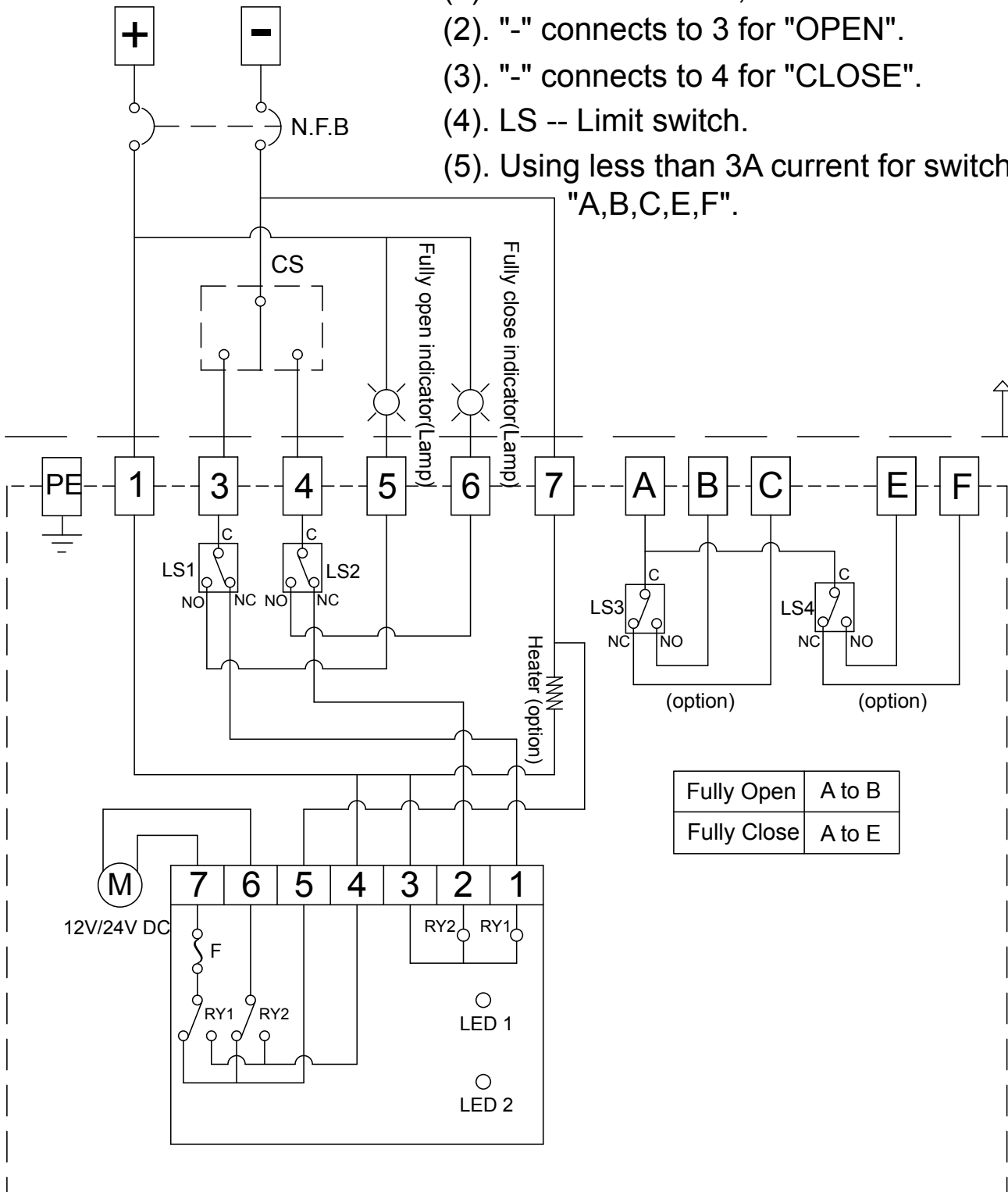
(3) Using less than 3A current for switches "A,B,C,E,F".

# SEA 3 & SEA 4 - DC ON / OFF

Power supply  
12V/24V DC

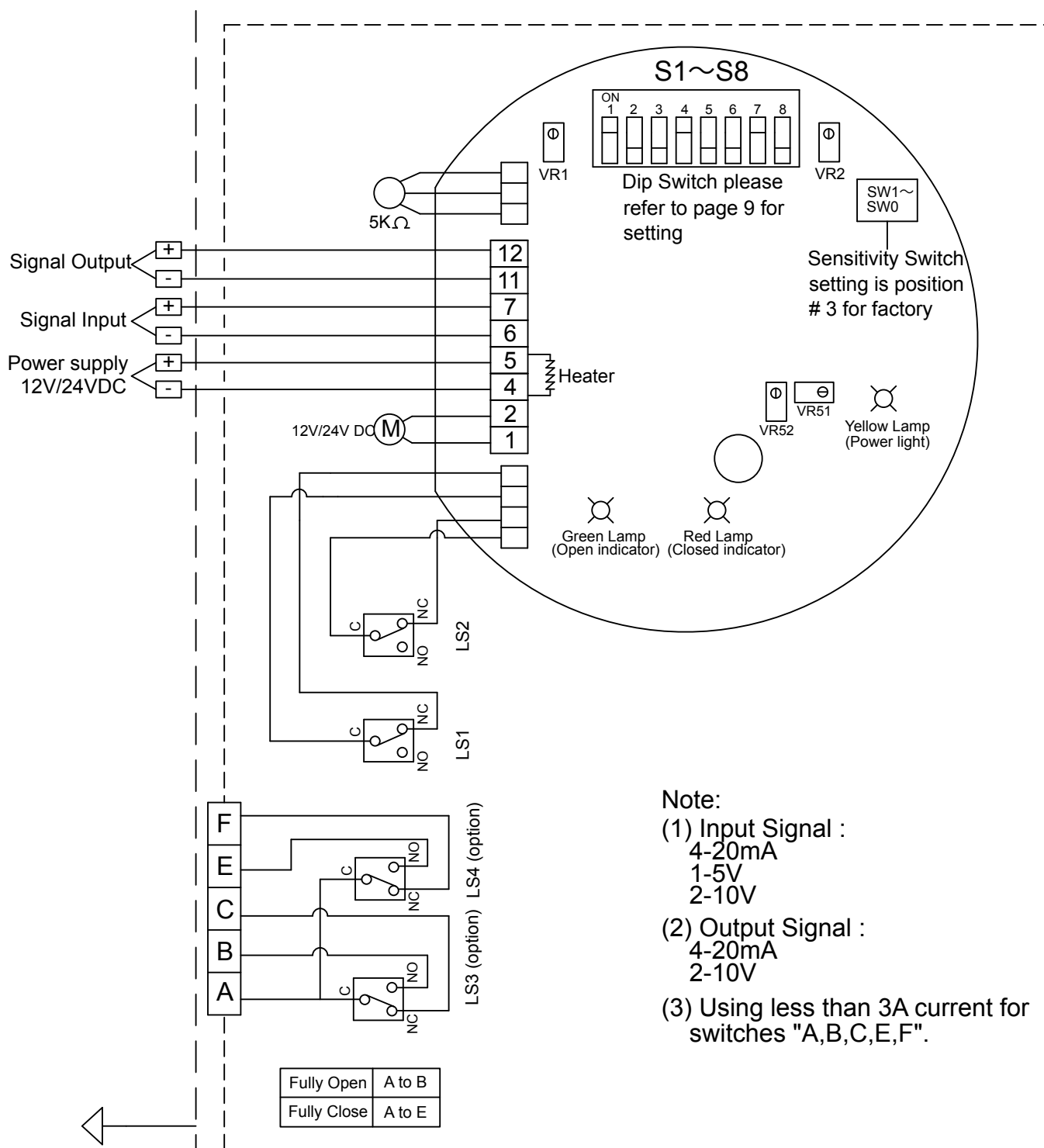
Note:

- (1). "+" connects to 1, "-" connects to 7.
- (2). "-" connects to 3 for "OPEN".
- (3). "-" connects to 4 for "CLOSE".
- (4). LS -- Limit switch.
- (5). Using less than 3A current for switches "A,B,C,E,F".





# SEA 3 & SEA 4 - DC MODULATING



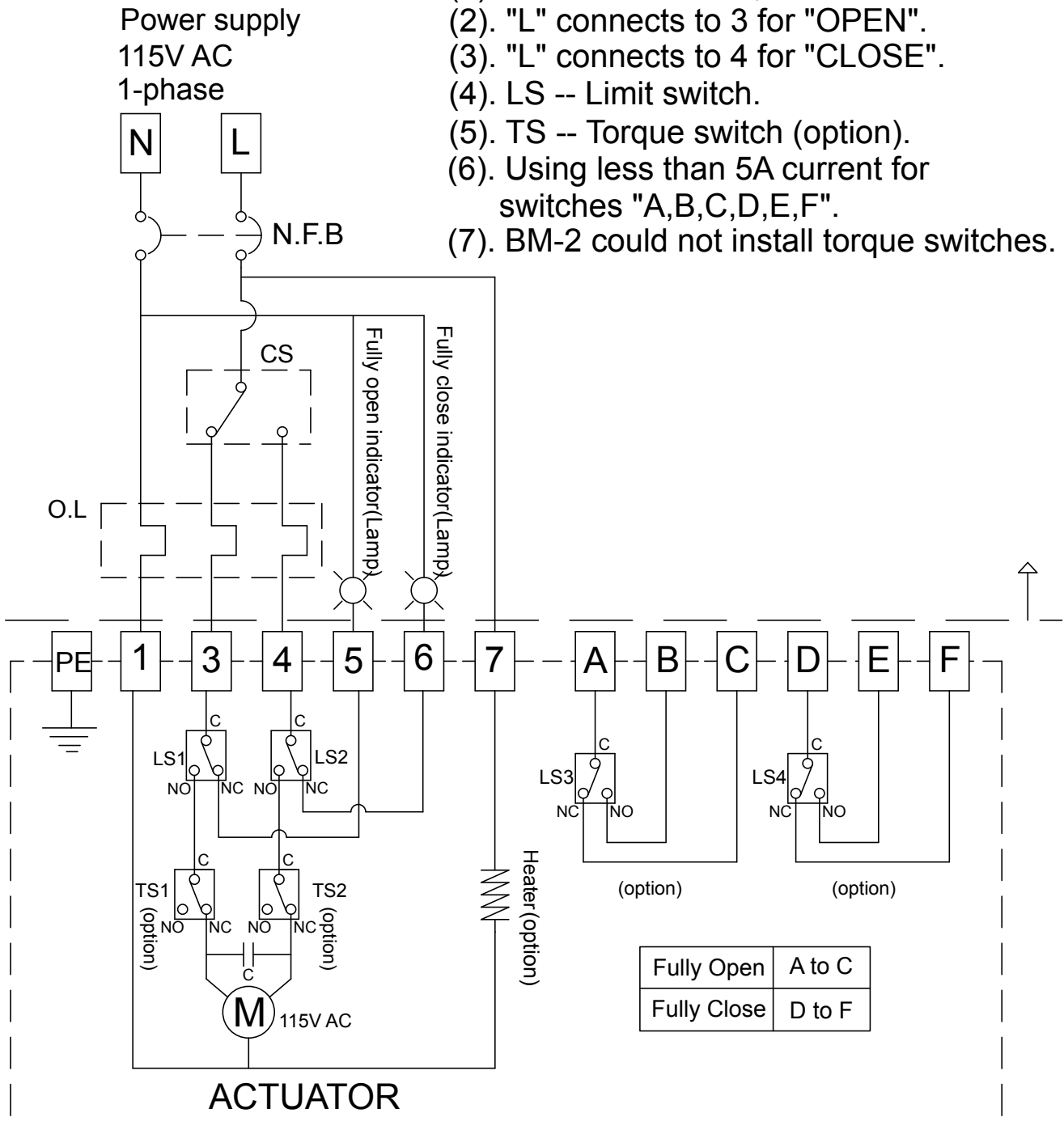
**Note:**

- (1) Input Signal :  
4-20mA  
1-5V  
2-10V
- (2) Output Signal :  
4-20mA  
2-10V
- (3) Using less than 3A current for switches "A,B,C,E,F".

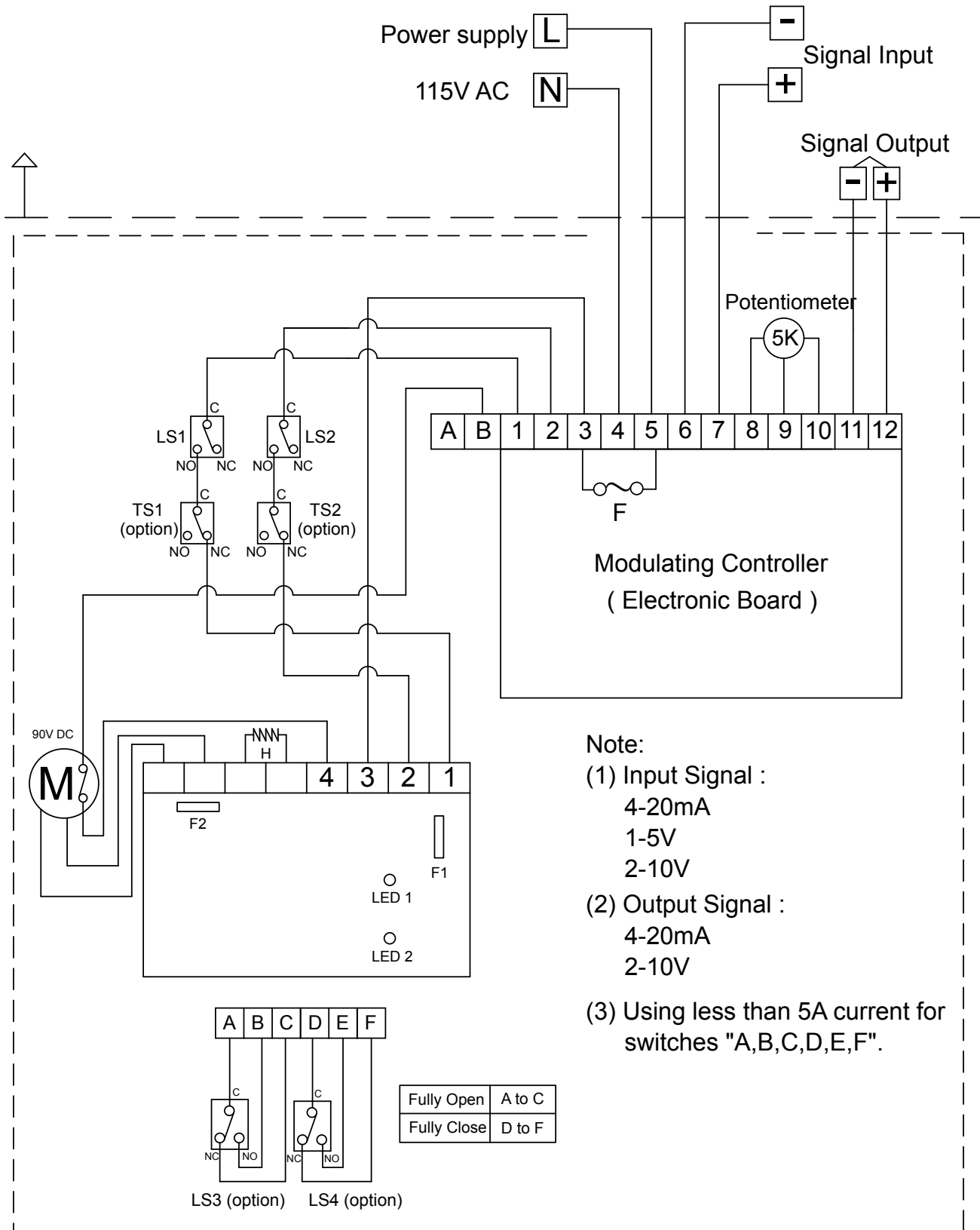
# SEA 8 - SEA 310 - 115VAC ON / OFF

**Note:**

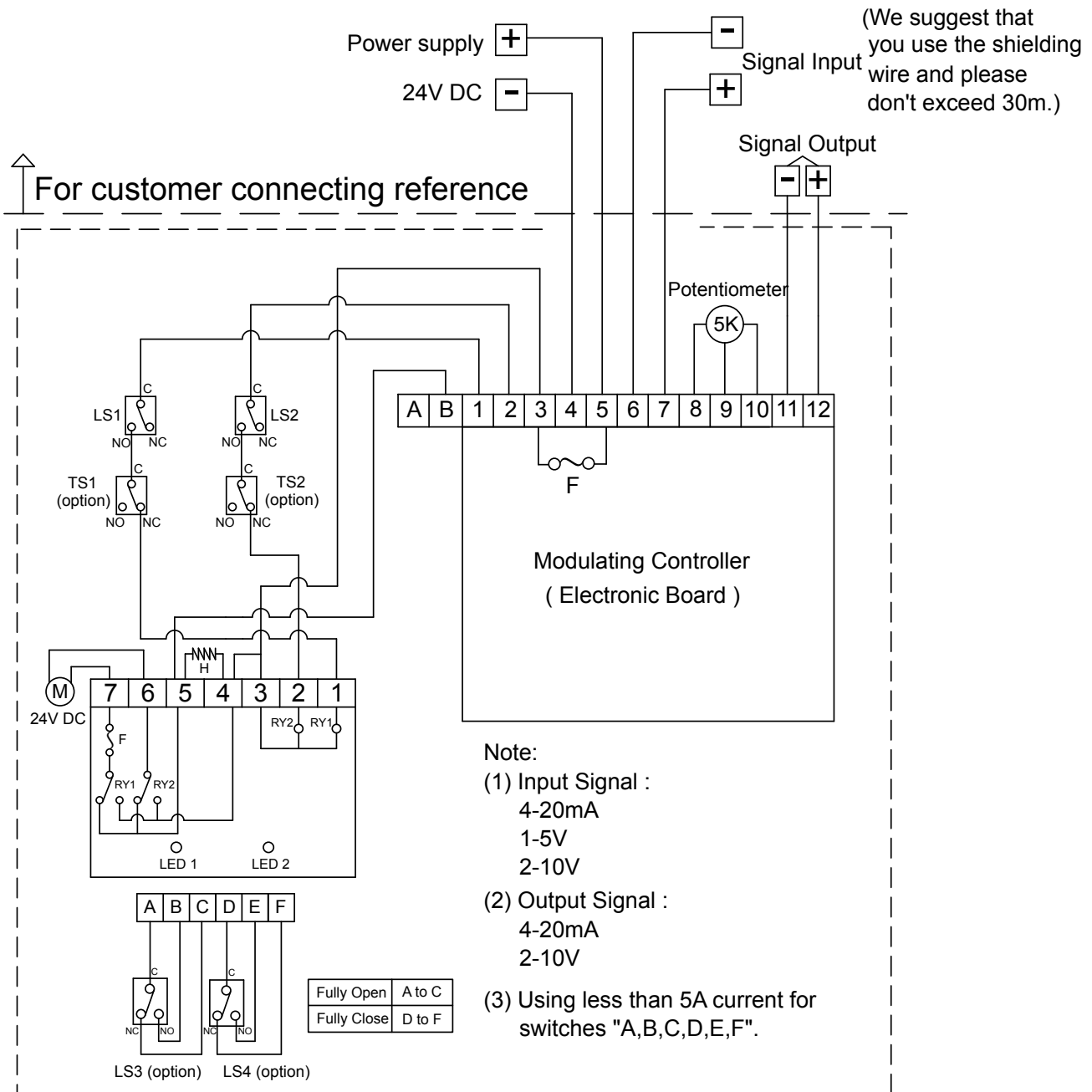
- (1). "N" connects to 1, "L" connects to 7.
- (2). "L" connects to 3 for "OPEN".
- (3). "L" connects to 4 for "CLOSE".
- (4). LS -- Limit switch.
- (5). TS -- Torque switch (option).
- (6). Using less than 5A current for switches "A,B,C,D,E,F".
- (7). BM-2 could not install torque switches.



# SEA 8 - SEA 310 - AC MODULATING



# SEA 8 - SEA 310 - DC MODULATING



# Ordering Information



Fig: SEA3 - 2  
Description: SEA3 - 24V

SEA Part Number Chart	
SEA Series	Options
SEA1	1 220V
SEA3	2 24V
SEA4	3 12 VDC
SEA8	4 24 VDC
SEA13	AS Auxiliary Switches
SEA 35	FP Feedback Potentiometer
SEA 44	CR Control Relays
SEA 57	HT Heater & Thermostat
SEA 88	BD Breather & Drain
SEA 132	PP Proportional Positioner
SEA 177	FT Feedback Transmitter
SEA 221	SC Speed Control
SEA 265	TR Timers
SEA 310	TS Torque Sensor

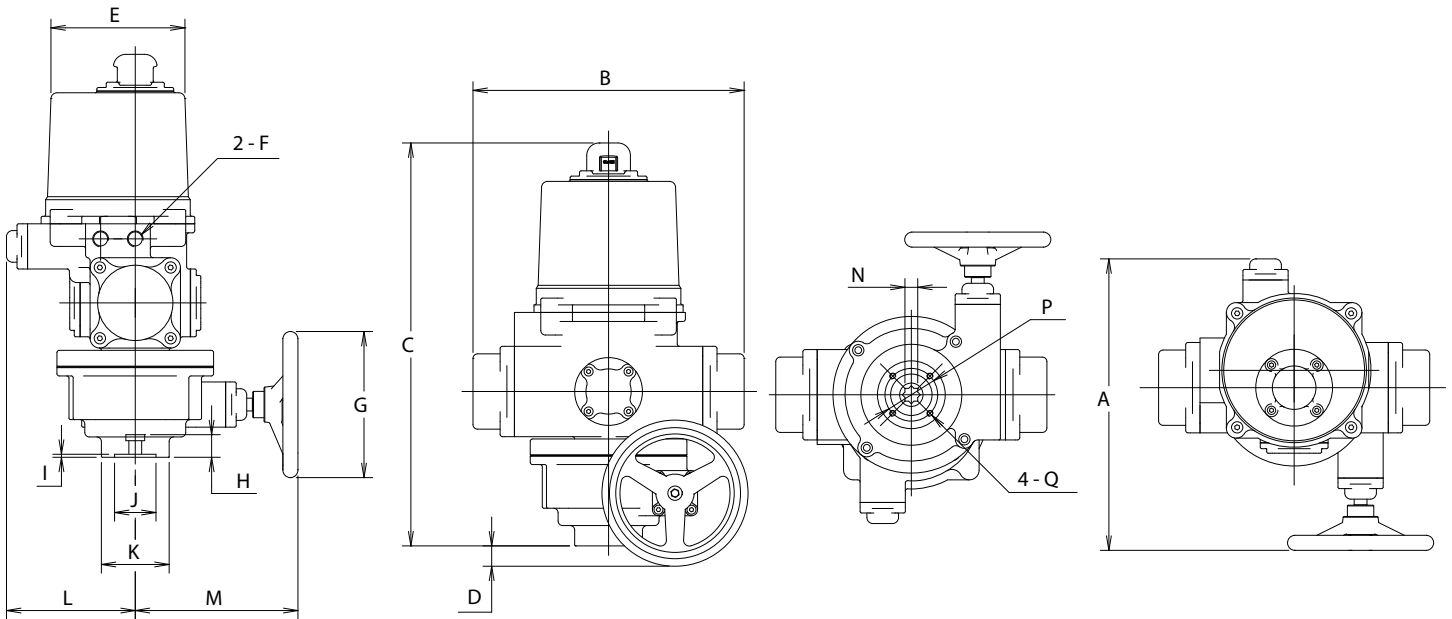
# SEA Spring Return Actuator



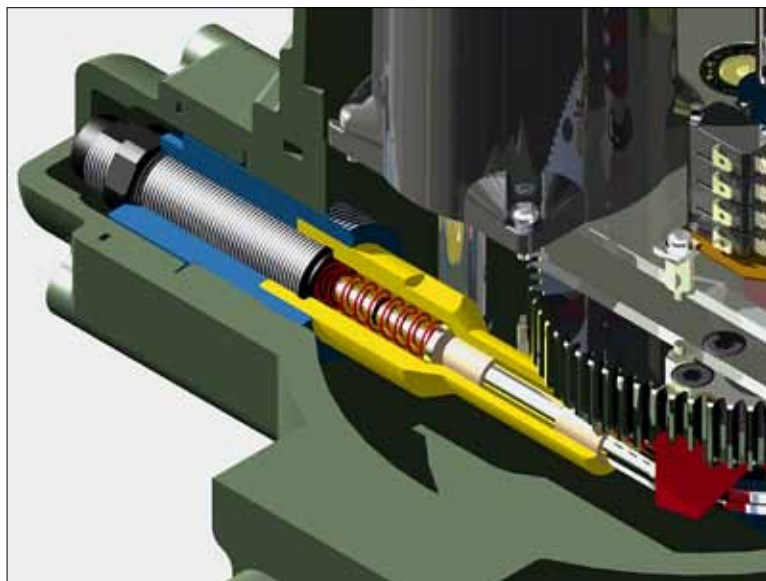
- Spring return models are designed to provide a fail-safe position in the event of a power loss of supply voltage a mechanical spring set is utilized to position the valve or damper to either the fully open or fully closed position without any external power source.
- A mechanical buffer system is employed at the end of the spring stroke to reduce the dynamic effect of the springs returning to the fail safe position.
- Standard unit fails clockwise, counter-clockwise rotation is available.
- A clutchless, leverless manual over-ride provides full - time manual capabilities.
- Patented in taiwan, USA, Japan and China
- 50% duty rated
- Temperature range: -30F TO 149F with use of heater and thermostat
- Powder coated aluminum alloy enclosure
- Nema 4
- Gear train comes lubricated for life from factory
- Visual indicator
- Voltage options include: 24VAC, 24VDC, 440 VAC

Model	Power (watts)	Max Torque (In/lb)	Motor Speed (Sec/90°)	Speed Spring	Mounting Flange
SEA-4-SR-MO	1.5A RUN / 2.8A LOCK	440	7-9 SECONDS	3 SECONDS	F07
SEA-11-SR-MO	3.8A RUN / 11A LOCK	1100	7-9 SECONDS	8 SECONDS	F10
SEA-17-SR-MO	3.8A RUN / 11.5A LOCK	1770	11-13 SECONDS	12 SECONDS	F12
SEA-23-SR-MO	3.8A RUN / 11.5A LOCK	2300	14-17 SECONDS	12 SECONDS	F12

# SEA Spring Return Actuator Dimensions



Model	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	
SEA-4-SR-MO	in	15.09	14.04	20.87	1.05	6.94	1/2"	7.57	1.17	0.16	2.15	3.51	6.67	8.42	0.66	2.73	M8 *	F07
	mm	387	360	535	27	178	NPT	194	30	4	55	90	171	216	17	70	1.25	
SEA-11-SR-MO	in	18.84	18.02	25.08	2.26	10.22	1/2"	11.54	1.52	0.20	2.73	4.88	9.63	9.20	0.86	3.98	M10 *	F10
	mm	483	462	643	58	262	NPT	296	39	5	70	125	247	236	22	102	1.5	
SEA-17-SR-MO	in	22.97	23.40	28.78	3.90	11.86	1/2"	15.60	1.76	0.20	3.32	5.85	11.90	11.08	1.05	4.88	M12 *	F12
	mm	589	600	738	100	304	NPT	400	45	5	85	150	305	284	27	125	1.75	
SEA-23-SR-MO	in	22.97	23.40	28.78	3.90	11.86	1/2"	15.60	1.76	0.20	3.32	5.85	11.90	11.08	1.05	4.88	M12 *	F12
	mm	589	600	738	100	304	NPT	400	45	5	85	150	305	284	27	125	1.75	



SPRING BUFFER SYSTEM



**Series 50M76 Ball Valves**  
 Threaded Full Port  
 316 Stainless Steel  
 1/4" - 3"



**Series N66  
 3-Piece Ball Valve**  
 Tube Full Port  
 316 Stainless Steel  
 1/2" - 2"



**150#, 300#, 600#  
 Flanged Ball Valves**  
 Full & Reduced Port  
 Carbon Steel, 316 Stainless & Alloy 20  
 1/2" - 12"



**Series 39034 & 39036  
 3-Piece Ball Valves**  
 Threaded & Socket Weld Full Port  
 Carbon Steel & 316 Stainless Steel  
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**High Performance Ball Valves**  
 Available in a wide range of materials  
 Pressures up to 6000 lb.



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 Gate, Globe 1/2" - 2"  
 Check 1/4" - 3"



**150#, 300#, 600#**  
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 Up to 36"



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