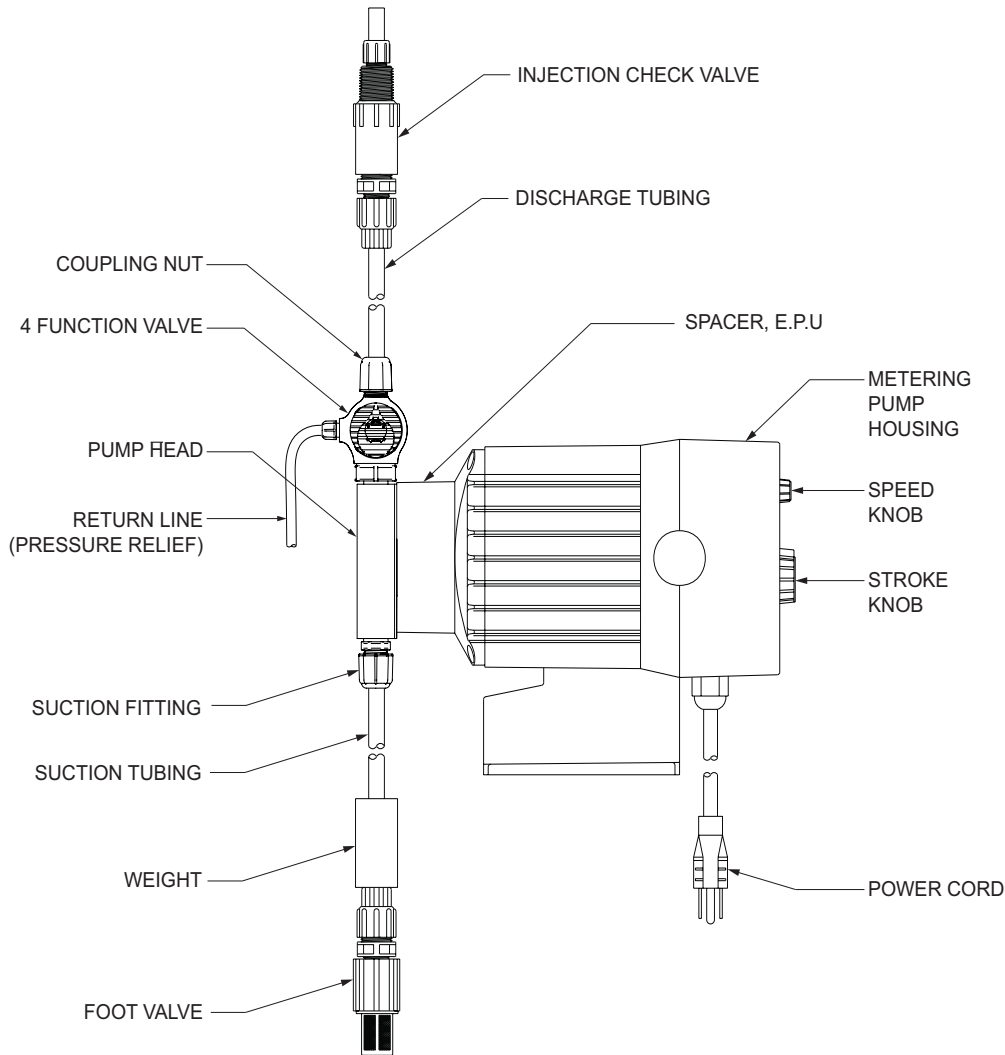




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**Metering Pump Component Diagram**

## Series B7

# Electronic Metering Pump

## Specification Sheet and Assembly Details

Manual No : 1034, 1636

Rev. : H, J

Rev. Date : 6/09, 10/2015

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# Specification Sheet

## Series B

### GENERAL

Chemical metering pumps shall be positive displacement, Liquifram™ type pumps that are UL and CUL approved. Output volume shall be adjustable while pumps are in operation from zero to maximum capacity of:

- B11, B71, B91 - 1.6 GPH (6.1 liters per hour)
- B12, B72, B92 - 2.5 GPH (9.5 liters per hour)
- B13, B73, B93 - 4.5 GPH (17.0 liters per hour)
- B14, B74, B94 - 7.0 GPH (26.5 liters per hour)

Chemical metering pumps shall be capable, without a hydraulically backed diaphragm, of injecting solutions against pressures up to:

- B11, B71, B91 - 150 psig(10.3 bar)
- B12, B72, B92 - 100 psig(6.9 bar)
- B13, B73, B93 - 50 psig(3.4 bar)
- B14, B74, B94 - 30 psig(2.1 bar)

### SERIES B1

Adjustment shall be by means of readily accessible dial knobs, one for changing stroke length and the other for changing stroke frequency. Both knobs are to be located opposite the liquid handling end.

### SERIES B7

Control of Series B7 metering pumps shall be selectable between internal and external pulsing by means of a 3-position center-off switch. Stroke length shall be adjustable by means of readily accessible dial knob. When in external pulsed mode, Series B7 units shall accept signals without the use of electrical timer or internal timer. Pressure capacity shall be adjustable to reduce noise, vibration and wear.

### SERIES B9

Series B9 metering pumps shall have a clear liquid crystal display. Control shall be selectable between internal and external pulsing by means of a tactile keypad. Internal stroke frequency shall be adjustable from 1 stroke per hour to 100 strokes per minute. Pressure capacity

shall be keypad adjustable to reduce noise, vibration and wear. Metering pump shall be capable of dividing or multiplying pulse inputs from 1 to 999 or responding directly or inversely to a 4-20mA input signal.

### DRIVE

The pump drive shall be totally enclosed with no exposed moving parts. Solid state electronic pulser shall be fully encapsulated and supplied with quick connect terminals at least 3/16" (4.75 mm) wide. Electronics shall be housed in chemical resistant enclosure at the rear of the pump for maximum protection against chemical spillage. Electrical power consumption shall not exceed 29 watts per hour under full speed and maximum pressure conditions. Pump weight shall not exceed 15 lbs (6.9 kg).

### AUTOMATIC PRESSURE RELIEF

To eliminate need for pressure relief valve, Liquifram™ shall automatically stop pulsating when discharge pressure exceeds pump pressure rating by not more than 35%.

### MATERIAL

Chemical metering pump housing shall be of chemically resistant glass fiber reinforced thermoplastic. All exposed fasteners shall be stainless steel. Chemical metering pump valves shall be ball type, with ceramic balls<sup>1</sup>. Valve seat and seal ring shall be renewable by replacing the combination seat-seal ring<sup>2</sup> or cartridge valve assembly. Pump head shall be of transparent acrylic<sup>3</sup> material capable of resisting the pumped chemical. Fittings and connections at pump head shall be PVC<sup>4</sup>.

### CHECK VALVES AND TUBING

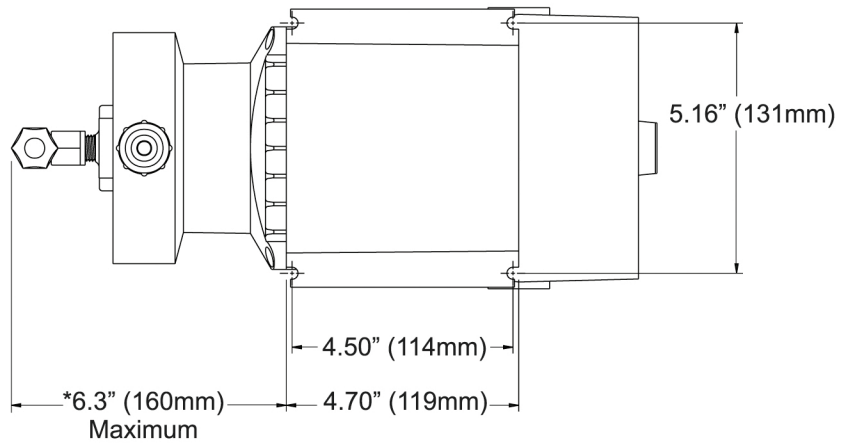
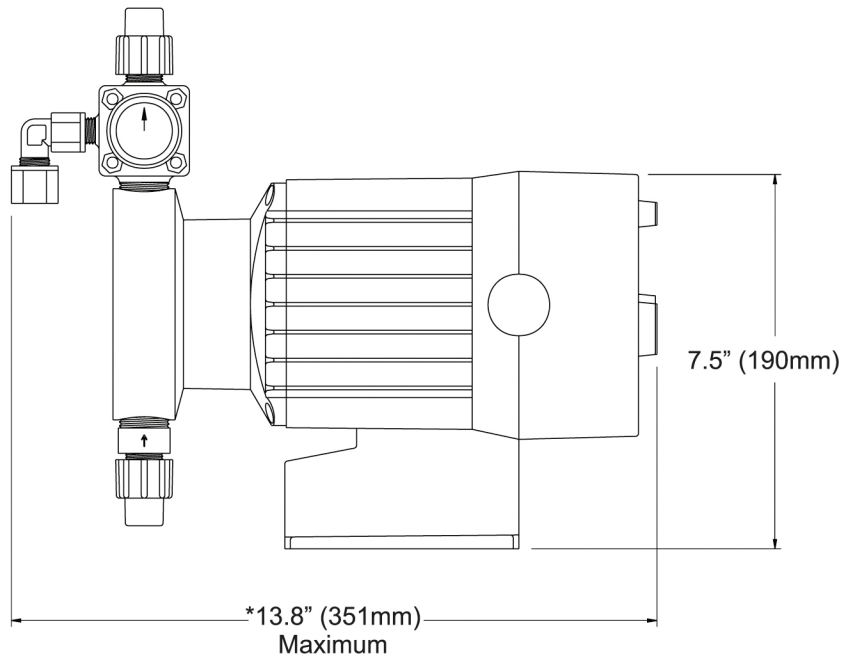
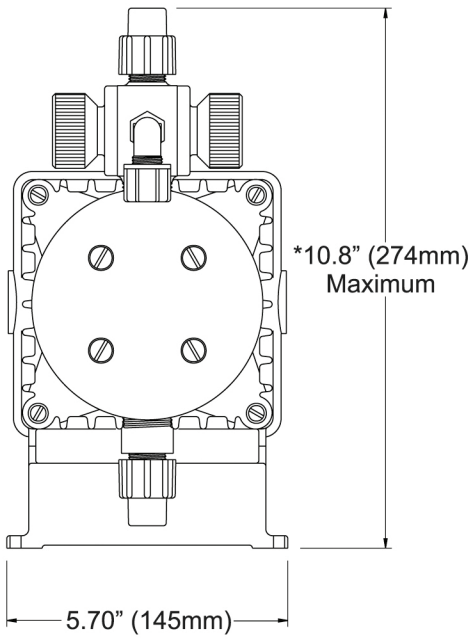
A total of 16 ft (4.8 m) of polyethylene tubing<sup>5</sup> shall be provided per pump complete with compression connections. A foot valve with integral one piece strainer shall be provided for the suction line, and an injection/back pressure check valve with 1/2" NPT male connection for the injection point. The injection check valve shall incorporate a dilating orifice which prohibits scale formation and accumulation of crystalline deposits.

### Notes:

1. Type 316 stainless steel or PTFE may be specified.
2. Hypalon®, PTFE or Polyprel® may be specified.
3. PVDF, PVC, Polypropylene, or Type 316 stainless steel may be specified.
4. PVDF, Polypropylene, or Type 316 stainless steel may be specified.
5. 6 ft (1.8 m) of vinyl suction tubing may be specified in place of polyethylene for the suction side only. 1/4" or 1/2" pipe thread may be specified.

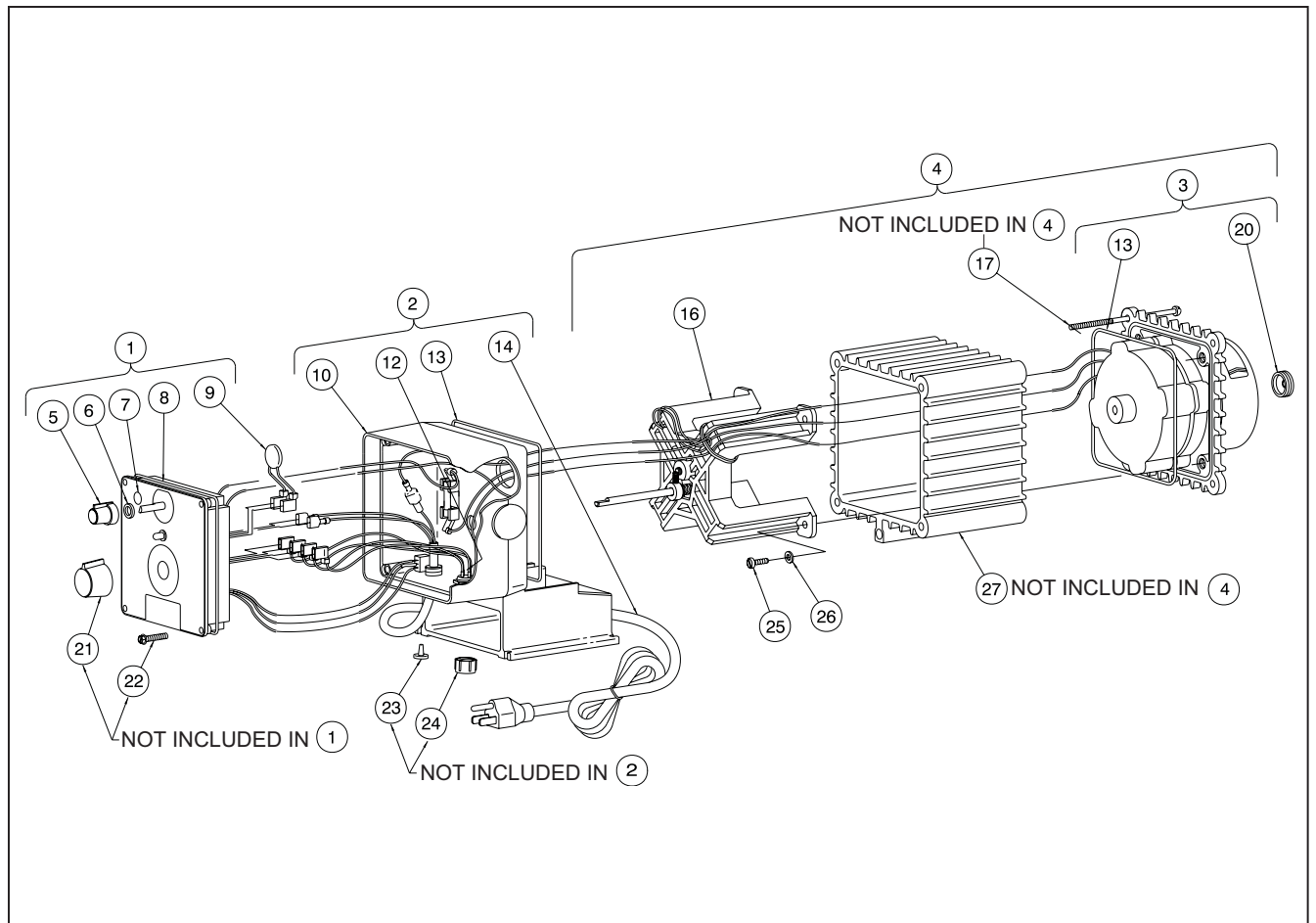


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\*Dimensions shown are maximum for largest liquid end available. These dimensions vary depending on the liquid end selected.

# SERIES B7 DRIVE ASSEMBLY EXPLODED VIEW DIAGRAM



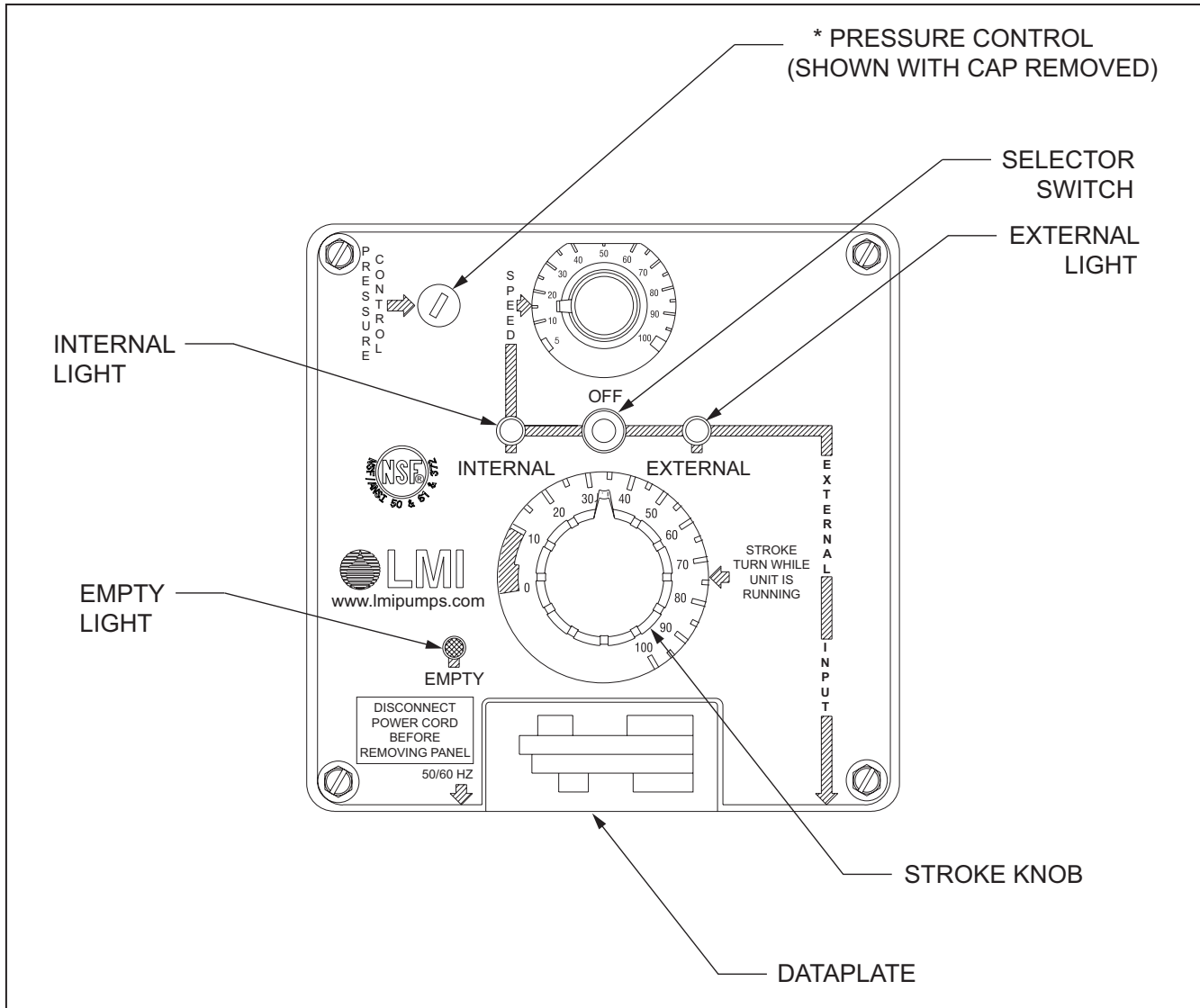
## SERIES B7 DRIVE ASSEMBLY PARTS LIST

Key Number	Model Series	Part Number	Description	Qty
1	B711	34093	Control Panel Assembly,120V	1
	B721, B731, B741	33211	Control Panel Assembly,120V	1
	B712, B713, B715, B716, B717	34094	Control Panel Assembly,230V	1
	B722, B723, B725, B726, B727, B732, B733, B735, B736, B737, B742, B743, B745, B746, B747	33212	Control Panel Assembly, 230V	1
				1
2	B711, B721, B731, B741	28970	Housing Assembly, 120V	1
	B712, B722, B732, B742	28980	Housing Assembly, 230V	1
	B713, B723, B733, B743	28981	Housing Assembly, 220-240V DIN	1
	B715, B725, B735, B745	28982	Housing Assembly, 220-240V UK	1
	B716, B726, B736, B746	28983	Housing Assembly, 220-240V AUST	1
	B717, B727, B737, B747	28984	Housing Assembly, 220-240V SWISS	1
3	B711, B721	26893	EPU and Spacer Assembly	1
	B712, B713, B715, B716, B717, B722, B723, B725, B726, B727	26894		
	B731	26897		
	B732, B733, B735, B736, B737	26898		
	B741	29618		
B742, B743, B745, B746, B747	29619			
3	B711, B721	31927	EPU and Spacer Assembly w/ Stroke Adj.	1
	B712, B713, B715, B716, B717, B722, B723, B725, B726, B727	31928		
	B731	31929		
	B732, B733, B735, B736, B737	31930		
	B741	31931		
	B742, B743, B745, B746, B747	31932		
5	B7	30709	Knob, Push On	1
6	B7	30803	Gasket	1
7	B7	29093	Cap	1
8	B7	10166	O-Ring	1
9	B711, B721, B731, B741	10626	Varistor Assembly, 120V	1
	B712, B713, B715, B716, B717, B722, B723, B725, B726, B727, B732, B733, B735, B736, B737, B742, B743, B745, B746, B747	10627	Varistor Assembly, 230V	1


**SERIES B7 DRIVE ASSEMBLY PARTS LIST**

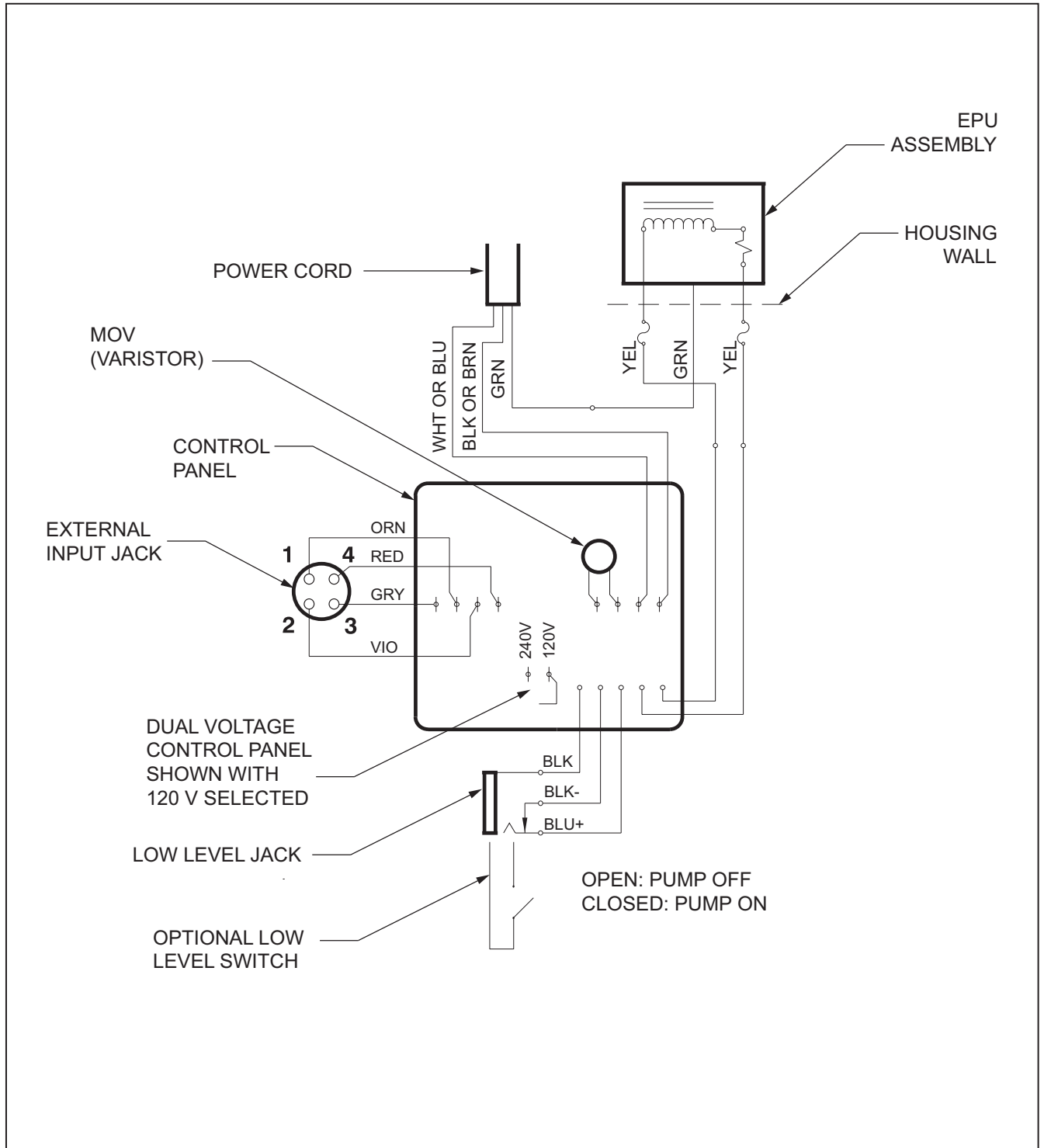
Key Number	Model Series	Part Number	Description	Qty
10	B7	35404-1	Housing	
12	B7	25907	Jack Assembly	1
13	B7	35269	Seal	2
14	B711, B721, B731, B741	26293	Power Cord, 120V	1
	B712, B722, B732, B742	26296	Power Cord, 230V	
	B713, B723, B733, B743	26297	Power Cord, 220-240V DIN	
	B715, B725, B735, B745	26817	Power Cord 220-240V UK	
	B716, B726, B736, B746	26818	Power Cord, 200-240V AUST	
	B717, B727, B737, B747	27701	Power Cord, 220-240V SWISS	
16	B7	31898	Stroke Adjustment Assembly	1
17	B7	25127	Screw 10-24 x 4.56	4
20	B7	10973	Seal	1
21	B7	31891	Stroke Knob	1
22	B7	30306	Screw, Self Tapping	4
23	B7	30307	Plug	1
24	B7	25930	Cap Cover	1
25	B7	10598	Screw	4
26	B7	10415	Washer	4
27	B7	25068	Sleeve	1

# SERIES B7 CONTROL PANEL DETAIL



\* To adjust pressure control: Remove yellow cap. With small screwdriver, and the pump running, turn the pressure control adjustment slowly counterclockwise until pump just begins to stall. From this stall point, turn clockwise approximately 30 degrees. This is the optimum pressure control setting for your application.

# SERIES B7 WIRING DIAGRAM





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