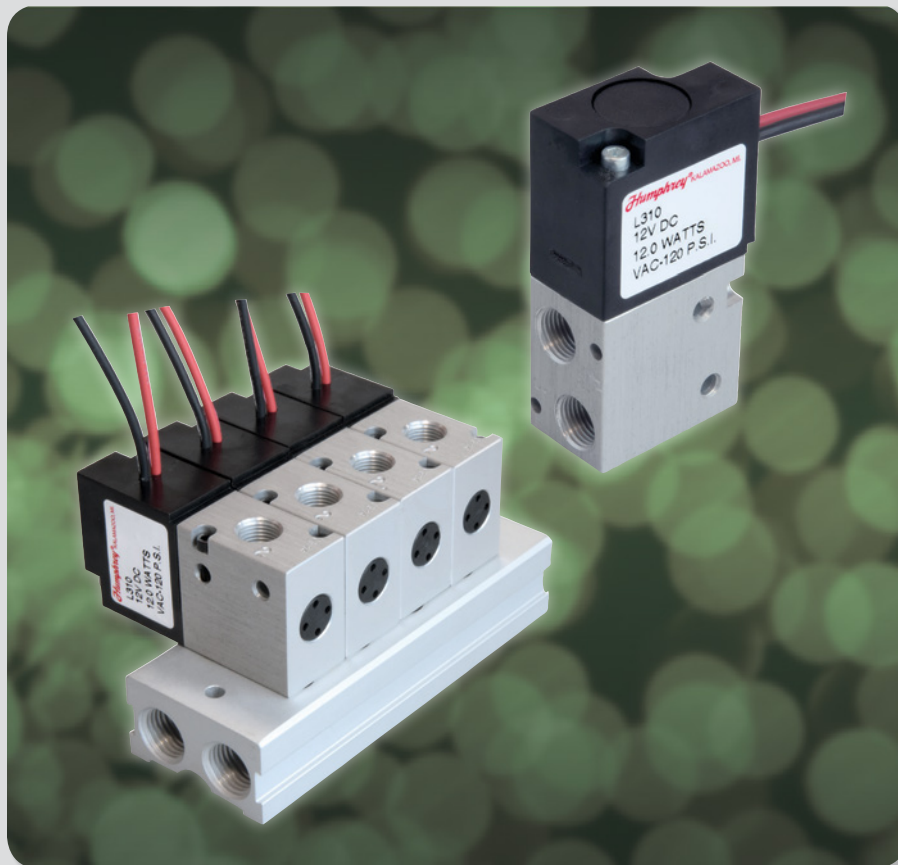




L310

Latching Solenoid Valve



HUMPHREY PRODUCTS COMPANY

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L310 LATCHING SOLENOID VALVE

Developed from proven Humphrey balanced-poppet technology, L310 latching valve is optimized for applications that demand low power consumption and low heat generation.

ENERGY SAVINGS

Traditional single solenoid, spring return valves require electrical power while in energized position. In contrast, the L310 Single Solenoid, Latching Valve changes state with a short 100 millisecond pulse to the single solenoid. When power is removed, latching function holds valve positioned, thereby offering significant energy savings to a traditional valve. To return valve to its original state, simply apply a second 100 millisecond pulse of opposite polarity.

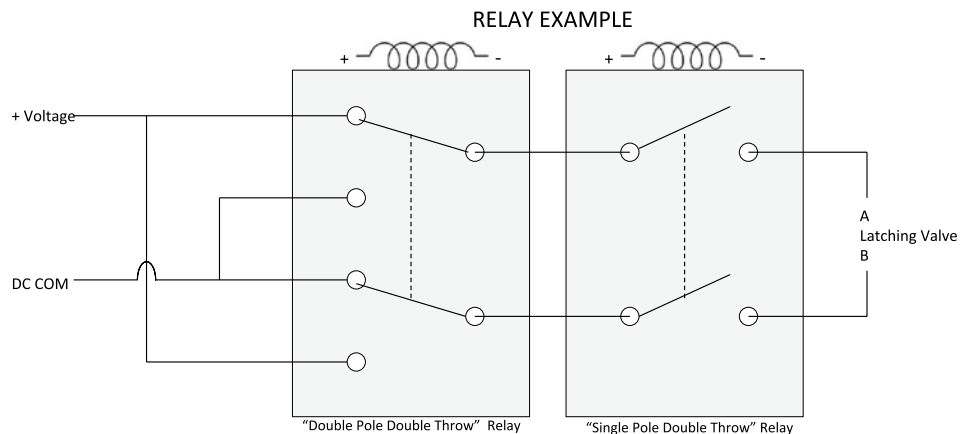
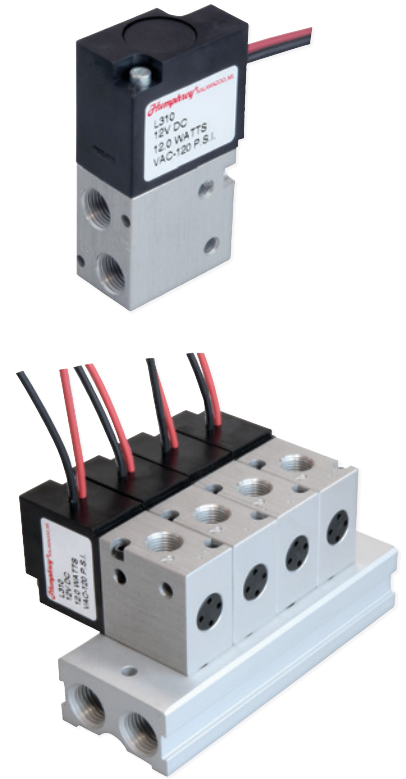
Latching Valves are beneficial when valve is to be open for long periods of time, when battery power is used, or when continuous power supply is limited.

HEAT RISE MINIMIZED

Traditional single solenoid, spring return valves generate heat while in energized state. L310 Single Solenoid, Latching Valve does not require energy to maintain position. Heat rise is temporary and minimized. L310 is ideal for applications where the effect of temperature is a concern.

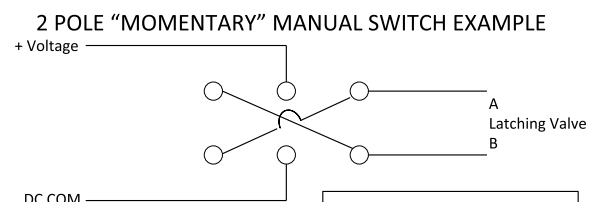
MULTIPLE PURPOSE

With source pressure always to port 1, L310 is suitable as 2-way or 3-way function for stable or variable pressures ranging from vacuum to 125 PSI. Plug port 3 for 2-way. Use as pressure selector with higher source pressure to port 1. Consult factory for diverting function. L310 may be mounted on 410M Series manifolds, with or without 310 and 410 Series single solenoid valves.



ELECTRICAL CONTROL

L310 is 2-wire type latching valve, therefore requiring electrical current to flow in one direction to open flow and opposite direction to close flow. Either schematic, at right, will accomplish function.

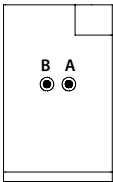


2 POLE SWITCH SOURCES:
NKK Switches: M2028
CW industries: GTB3B17
APEM: 647H

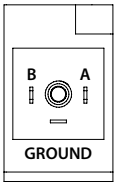
Specifications, Schematics, Drawings

MECHANICAL SPECIFICATIONS

Type of Operation	Direct Solenoid, Latching
Function	3-port Detented
Ports	1/8 NPSF
Media	Air (Dry or Lubricated), Inert Gases, Vacuum
Pressure Range	28" Hg – 125 PSI
Ambient Temp. Range	32° to 125°F (0° to 50°C)
Flow – Cv	0.24
Max. Duty Cycle	15%
Max. Leakage (@125 PSIG)	4ccm
Shock Resistance (G)	15 (axial direction)
Lubrication	Not required. If used, ensure compatibility with Buna materials.
Filtration	40 micron, recommended
Weight	.25 lbs (114 grams)
Min. Pulse Width	100 ms
Voltage Tolerance	±10%
Power Consumption	12 watts
Wetted Materials	Brass, Buna, Aluminum, SST, Acetal (REACH and RoHS Compliant)



LEAD WIRE



DIN - 39

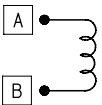
TERMINAL DESIGNATION

By applying positive DC Voltage to "A" Terminal and Negative to the "B" Terminal, valve will open Port 1 to Port 2. When the polarity is reversed, valve shifts and Port 2 opens to Port 3.

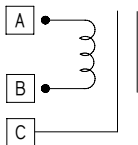
It is responsibility of the user to provide a polarity switching method. Wiring diagrams using either 2-pole switch or relay are depicted on Page 2.

Lead wire valves: L310 "A" Terminal is Red lead wire. "B" Terminal is Black lead wire.

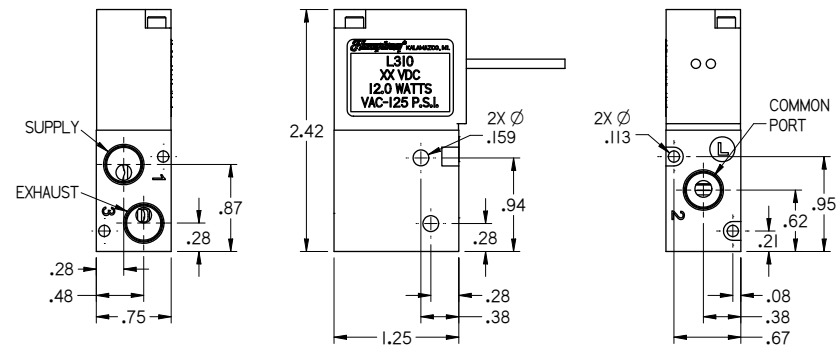
DC SCHEMATIC



DC DIN SCHEMATIC

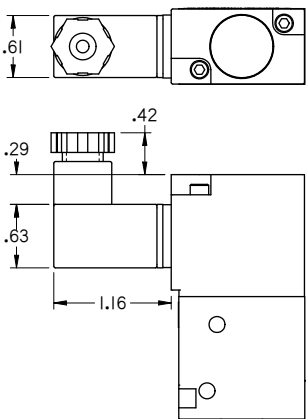
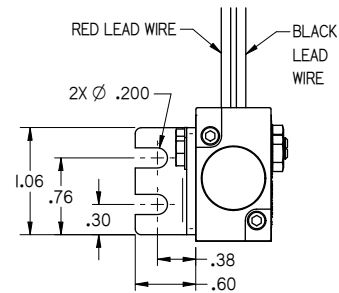


L310 DIMENSIONAL DRAWINGS

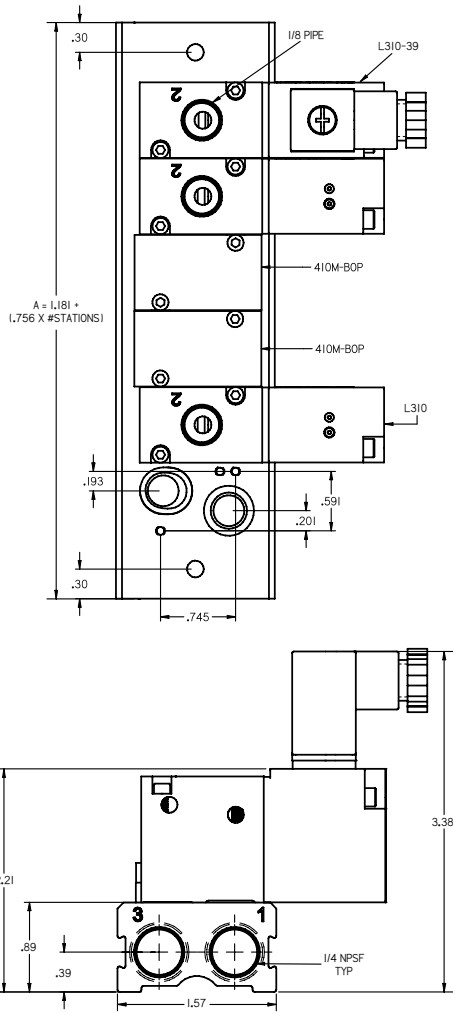


WITH 8-288A BRACKET

CODE 39 WITH HS2



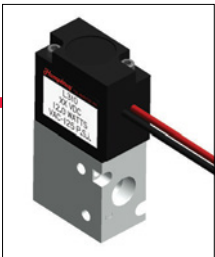
L310 MOUNTED ON 410M



HOW TO ORDER

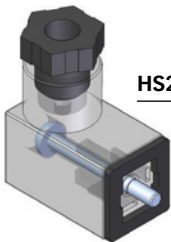
VALVE MODEL	ELECTRICAL ENTRY		ELECTRICAL ENTRY POSITION		VOLTAGE CHOICES		REMARKS
	24" Lead Wires	DIN Connector	Standard Over Port 2	Rotated, Over Port 1			
L310	•	39	•	RC	12VDC	24VDC	2- or 3-port Latching Function, Direct-Acting Solenoid, 1/8 PIPE ports
• Standard Offering (no code necessary)					Order Example: L3103912VDC		

Valve Accessories



ACCESSORIES – VALVES

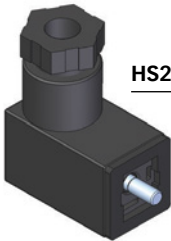
MODEL	DESCRIPTION	NOTES
8-288A	Mtg. Bracket	Accepts one L310 model valve.
130-31	1/8 PIPE Plug	Plug 3 port for 2-way function.
HS-2	DIN	Receptacle for L310-39 models.
HS-2LED-(voltage)	DIN w/LED light	



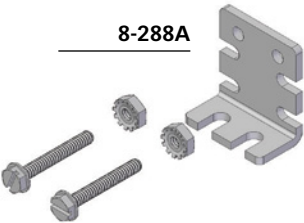
HS2-LED



130-31

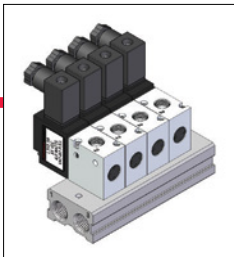


HS2



8-288A

Manifolds and Accessories

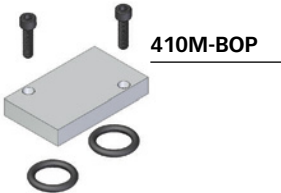


MANIFOLDS

MODEL		DESCRIPTION	NOTES
410M	4	4-stn	1/4 PIPE, Supply and Exhaust ports each end.
	6	6-stn	Also accepts 310 and 410 valve models. <i>Ex. 410M4</i>
	8	8-stn	
	12	12-stn	

ACCESSORIES – MANIFOLDS

MODEL	DESCRIPTION	NOTES
DRC	DIN Rail Clip	Kit, includes (2) brackets and (2) screws.
130-15	1/4 PIPE Plug	Plug for manifold Supply and Exhaust ports.
410M-BOP	Block-Off Plate	Includes plate, (2) gaskets and (2) screws.
410M-VMK	Valve Mtg. Kit	Includes (2) brackets and (2) screws (replacement).



410M-BOP



130-15



DRC



410M-VMK