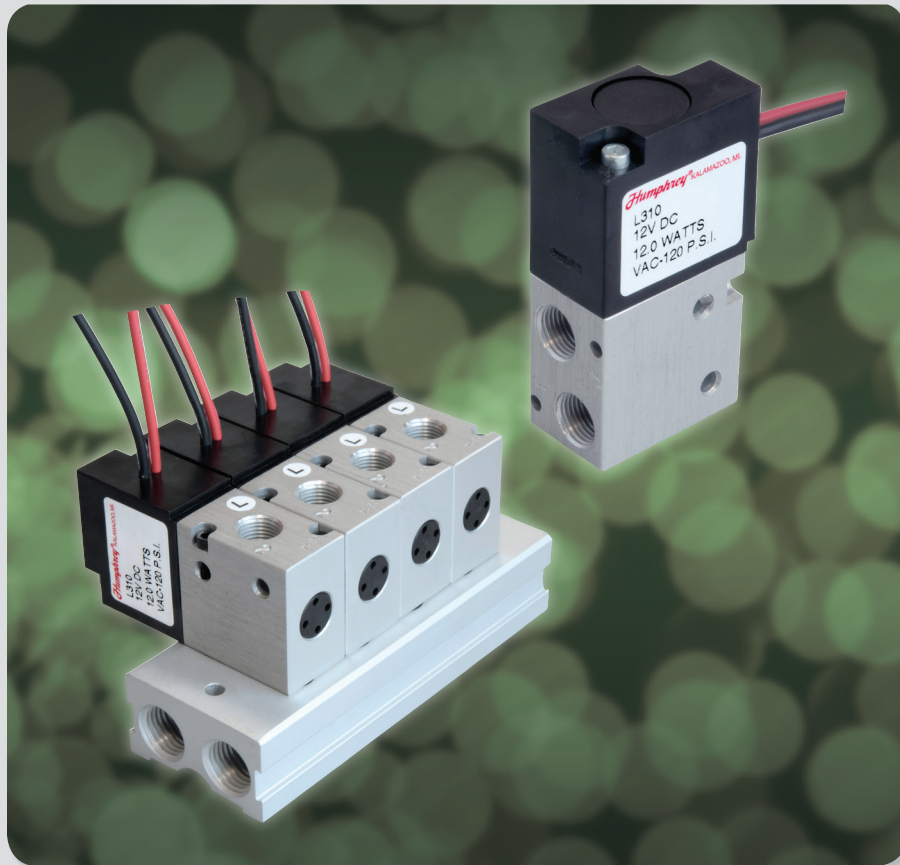


Humphrey[®]

L310

Latching Solenoid Valve



HUMPHREY PRODUCTS COMPANY

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L310 LATCHING SOLENOID VALVE

Developed from proven Humphrey 310 balanced-poppet technology, L310 latching valve is optimized for applications that demand low power consumption and low heat generation.

ENERGY SAVINGS

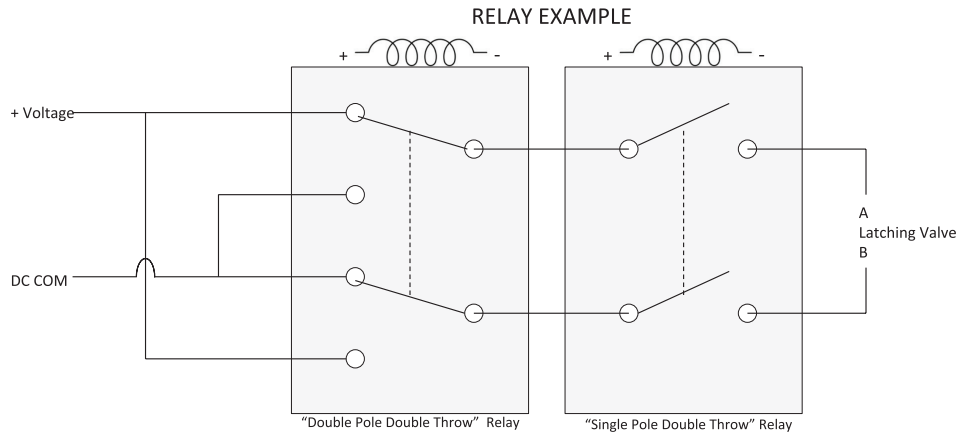
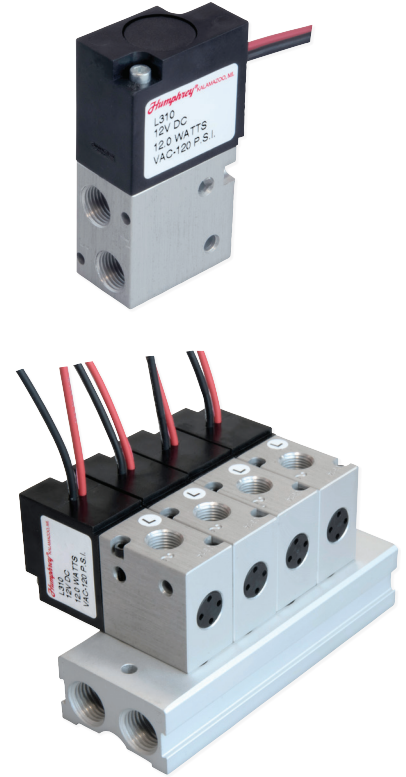
Standard single solenoid valves require electrical power while holding valve in energized position. However, a 50 millisecond pulse to L310 solenoid fully shifts valve from one position to other. Power is removed and latching function holds valve positioned, thereby offering significant energy savings. Valve remains in position until another 50 millisecond electrical pulse, of opposite polarity, is applied. Latching valves are particularly beneficial in applications where valve remains open for long periods of time, where valve is battery powered, or where continuous power supply is limited.

HEAT RISE MINIMIZED

Standard single solenoid valve designs generate heat while in energized state. L310 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.

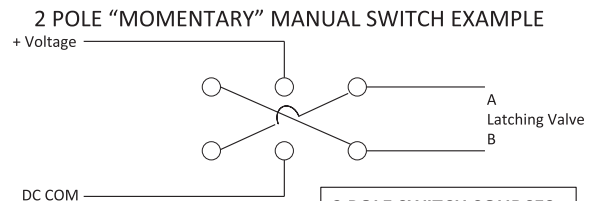
MULTIPLE PURPOSE

L310 is suitable for vacuum or pressures to 125 PSIG, as normally closed or as normally open function. Plug Port 3 for 2-way service. To use selector or diverter, always plumb higher pressure to Port 1. L310 can be used on 410M Manifold with or without single solenoid Humphrey 310 and 410 Series 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.

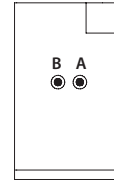


2 POLE SWITCH SOURCES:
NKK Switches: M2028
CW industries: GTB3B17
APEM: 647H

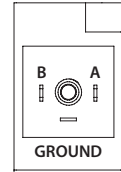
Specifications, Schematics, Drawings

MECHANICAL SPECIFICATIONS

Type of Operation	Direct Solenoid, Latching
Function	3-port, Multi-Purpose
Ports	1/8 PIPE
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	10%
Max. Leakage (@125 PSIG)	4ccm
Lubrication	Not required. If used, ensure compatibility with Buna materials.
Filtration	40 micron, recommended
Weight	.25 lbs (114 grams)
Min. Pulse Width	50 ms
Voltage Tolerance	±10%
Power Consumption	12 watts (L310)
Wetted Materials	Brass, Buna, Aluminum, SST, Acetal (REACH and RoHS Compliant)



LEAD WIRE



DIN - 39

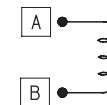
TERMINAL DESIGNATION

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.

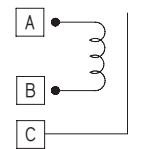
It is responsibility of the user to provide a polarity switching method. Wiring diagrams using either 2-pole switch or relay are depicted on Page 2.

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

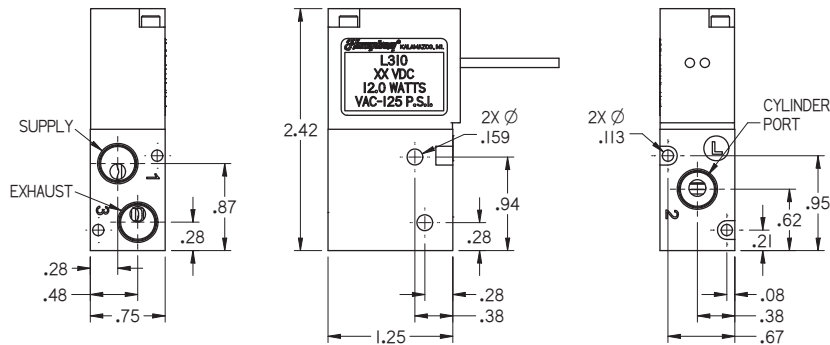
DC SCHEMATIC



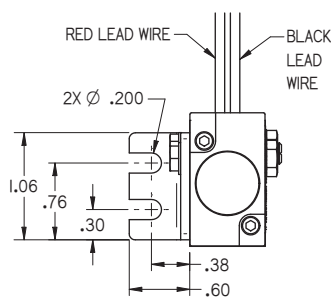
DC DIN SCHEMATIC



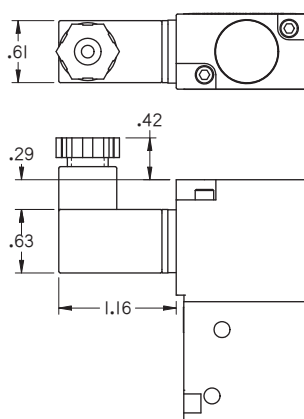
L310 DIMENSIONAL DRAWINGS



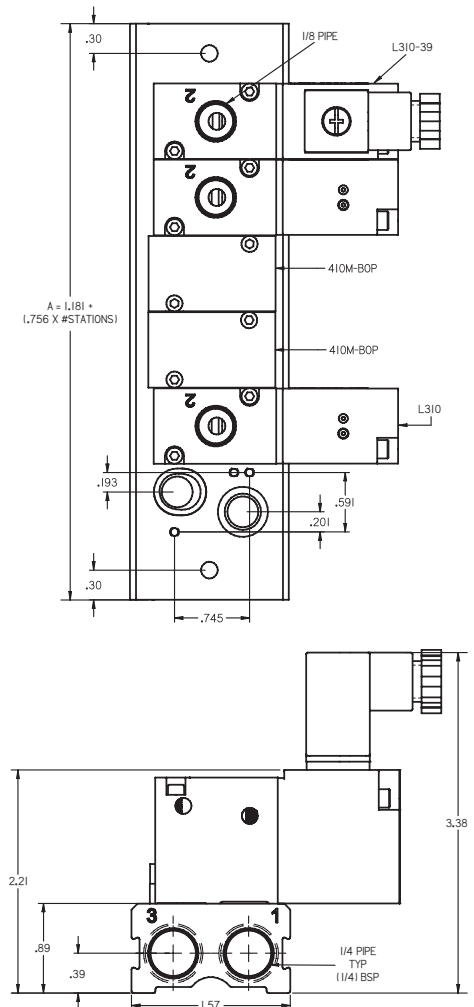
WITH 8-288A BRACKET



CODE 39 WITH HS2



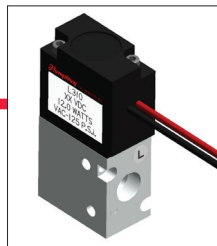
L310 MOUNTED ON 410M



HOW TO ORDER

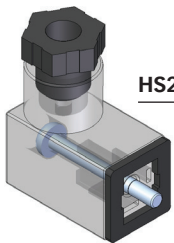
VALVE MODEL	ELECTRICAL ENTRY		ROTATED COIL OPTION		VOLTAGE CHOICES		REMARKS
	24" Lead Wires	DIN Connector	Standard Position	Rotate 180 Degrees	12VDC	24VDC	
L310	•	39	•	RC	12VDC	24VDC	2- or 3-port Latching Function, Direct-Acting Solenoid, 1/8 PIPE ports
<ul style="list-style-type: none"> • Standard Offering (no code necessary) 					Order Example: L3103912VDC		

Valve Accessories

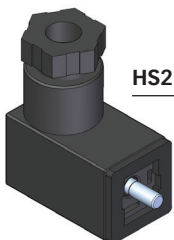


ACCESSORIES – VALVES

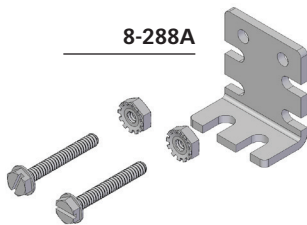
MODEL	DESCRIPTION	NOTES
8-288A	Mtg. Bracket	Accepts one L310 model valve.
130-31	1/8 PIPE Plug	Plug 1 or 3 port on L310 models for 2-way.
HS-2	DIN	Receptacle for L310 models.
HS-2LED-(voltage)	DIN w/LED light	



HS2-LED



HS2

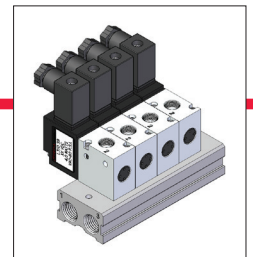


8-288A



130-31

Manifolds and Accessories

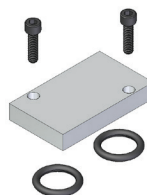


MANIFOLDS

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



DRC



130-15



410M-VMK