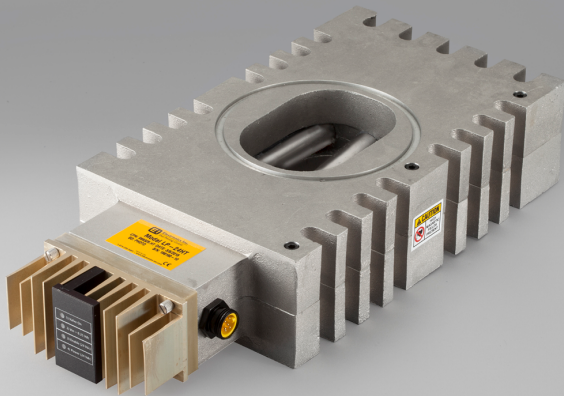


LP-24



VLP-24 and VLP-24 Jr



LP-24HT



VLP-24HT

LP-24, VLP-24 and VLP-24 Jr LP-24HT and VLP-24 HT MagnaValve® Instruction Manual



Electronics Inc.
Shot Peening Control

56790 Magnetic Drive, Mishawaka, Indiana 46545 USA • 1-800-832-5653 or (574)256-5001 • www.electronics-inc.com

Application Note AN-169

WIRE CONNECTIONS FOR VLP-24 OR LP-24 TO AN AC-24 AMPERAGE CONTROLLER

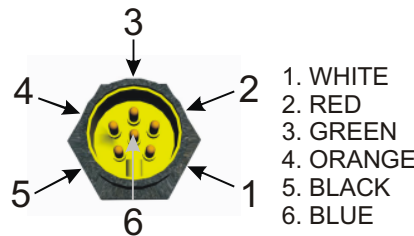


VLP-24/LP-24

- 4) Orange 0-10 Vdc input
- 6) Blue 24 Vdc Enable
- 2) Red 24 Vdc Supply
- 5) Black 0 Vdc Common

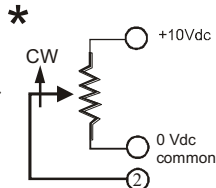
AC-24 Controller

- 8) Servo Out
- 9) Valve Enable
- 19) 24 Vdc Supply
- 20) 0 Vdc Common

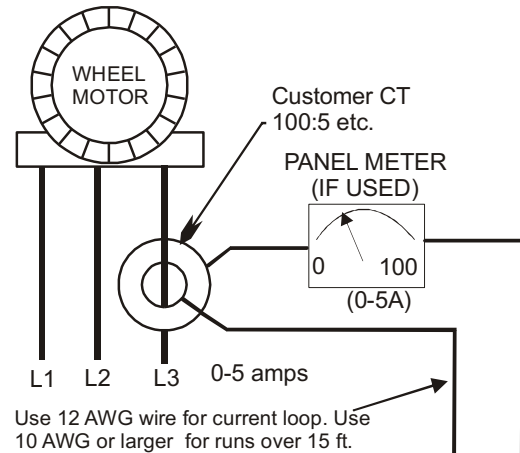


NOTE: The Controller's Full Scale display (typical 100.0) must match the customer's current transformer rating (typical 100:5 ratio). Adjust the control display range to match the actual transformer ratio. See instruction manual.

Remote setpoint can come from customer potentiometer or 0-10 Vdc signal. Also see model Pot-24 remote pot.



NOTE : The valve must be located as close to the wheel as possible for best servo control stability. (5 feet or closer)



AC-24 Rear Terminal

7
5

Current Shunt
.05 ohm 5 watt.
P/N 999200
Included with controller.

Alternate: Long length of current loop may cause inaccuracy. To keep the 0-5 Amp current loop short you may place the .05 ohm shunt at the transformer terminals and run 18AWG shielded cable from shunt to control.

Wiring Connections

	1	0 Vdc, Common		0 Vdc, Common	11
	2	Remote Setpoint (0-10 Vdc)		Alarm Reset (24 Vdc)	12
	3	0 Vdc, Common		Alarm High Relay Contact	13
	4	Enable Input (24 Vdc)		Alarm Common Relay Contact	14
.05 Ohm shunt	5	0 Vdc, Common		Alarm Low Relay Contact	15
	6	Process Input (0-10 Vdc)		Flow OK Relay Contact	16
.05 Ohm shunt	7	Process Input (0- 0.5 Vac)		0 Vdc, Common	17
VLP-24 Orange	8	Servo Output (0-10 Vdc)		Recorder Output (0-10 Vdc)	18
VLP-24 Blue	9	Enable Output (24 Vdc)		24 Vdc Power	19
	10	0 Vdc, Common		0 Vdc, Common	20

+24Vdc to VLP-24 RED
0Vdc to VLP-24 BLACK

Note: Connect power supply directly to the MagnaValve first and then run power back to the control using minimum 16 AWG wire size to prevent (high current) voltage drops. Power supply should be regulated and rated at 50VA per valve.

Diagnostic LED's

VALVE ON – When this LED is on or blinking, the electromagnet is receiving power. When the LED is off, the permanent magnets will hold or block the shot flow. When the LED is on, but not blinking, the valve flow rate is at full capacity. When the LED is blinking, the electromagnet is regulating the shot flow.

Vin > 0.25 Vdc- This LED indicates that the valve is receiving an analog signal input greater than 0.25 Vdc. When this LED is off there is no media flow allowed. The input signal range is 0-10 Vdc. At 10 Vdc the valve will “open” to full capacity, which is usually 10% to 50% higher than the calibrated range. The relationship between the 0-10 Vdc input signal and actual flow rate is nonlinear. The output signal 0-10 Vdc signal is linear and this makes accurate regulation by the AC-24 control possible.

24Vdc ENABLE – This LED indicates that the valve is receiving a 24 Vdc Enable signal. When this LED is off, the valve is inhibited, and no shot will flow. This feature is an on-off action so there is no need to disable or remove the 0-10 Vdc input signal.

24 Vdc Power – This LED indicates that 24 Vdc is available to operate the electromagnets for media flow. It should always be available and able to supply 2 Amps. If the LED is blinking, the supply is above the recommended operating range +/- 2VDC (22-26VDC). If the LED is OFF, then the supply is below the recommended range. If that condition occurs, please call for technical support.

All of the LED's must be on in order to have media flow.

Replacement Parts

There are no user serviceable parts.

Contacting Electronics Inc.

Mailing and Shipping Address:

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Fax: (574) 256-5222

Email: sales@electronics-inc.com

Website: www.electronics-inc.com

Limited Warranty

The warranty obligations of Electronics Inc. for this product are limited to the terms set forth below.

Length of Warranty Period

This limited warranty lasts one (1) year from the shipping date of this product.

What is Covered

This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance or use of a media for which the MagnaValve was not calibrated, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Electronics Inc. to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover equipment enclosures, cables or accessories used in conjunction with this product.

How to Obtain a Remedy Under this Limited Warranty

To obtain a remedy under this limited warranty, contact Electronics Incorporated by letter, email, fax or telephone with the following information:

- Product name and model
- Product serial number
- Original shipping date (see label on product)
- Company name and location
- Name of contact person for description of symptoms
- Return shipping address and any special instructions

If it is determined that the product must be returned under this limited warranty, a Returned Goods (RG) number, obtained from Electronics Inc., will be required. This product should be properly packed to prevent damage in transit. Cartons not bearing a RG number will require additional processing time and repair service may be delayed.

What Electronics Inc. Will Do Under This Limited Warranty

Electronics Inc. will, at its sole discretion, provide one of the following remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

- 1.) Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Electronics Inc. will pay the shipping costs necessary to return this product once the repair is complete.
- 2.) If the defective product cannot be repaired, it will be replaced with a new unit and the original warranty period will be extended by six (6) months. Electronics Inc. will pay the shipping costs necessary to replace this product.

If this product is returned to Electronics Inc., the product must be insured during shipment, with the insurance and shipping charges prepaid. If this product is returned uninsured, Electronics Inc. does not assume any risk of loss or damage during shipment. Electronics Inc. will not be responsible for any costs related to the removal or re-installation of this product.

Out-of-Warranty Product

Product that is out-of-warranty will be repaired at customer's request and the cost of repair will be disclosed prior to proceeding with the repair. A purchase order must be received prior to repair. If the product cannot be repaired, Electronics Inc. will provide one of the following remedies:

- 1) New unit at current pricing with a one (1) year Limited Warranty from the shipping date of product.

2) Refurbished unit (if available) at a discounted price with a six (6) month Limited Warranty from the shipping date of product.

Limitation on Liability

The maximum liability of Electronics Inc. under this limited warranty shall not exceed the actual purchase price paid for the product. Electronics Inc. is not responsible for direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory to the maximum extent permitted by law.

Exclusive Remedy

To the maximum extent permitted by law, this limited warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Electronics Inc. specifically disclaims any and all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Electronics Inc. cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering this product, including warranties of merchantability and fitness for a particular purpose, shall apply to this product as provided under applicable law.

Rights under State Law

This warranty defines specific legal rights relative to these products provided by Electronics Inc. Legal rights may also vary from state to state.