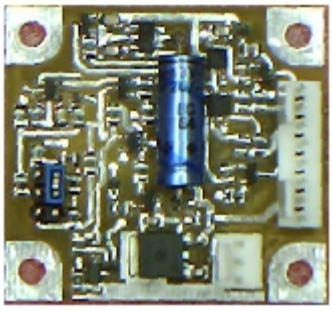
GET OPTIMUM PERFORMANCE FROM YOUR VALVES
WITH
HIGH-PERFORMANCE VALVE DRIVERS
FROM
WAYNE MILLER ASSOCIATES

- **FASTER PULL-IN TIMES**
- **FASTER DROP-OUT TIMES**
- **LESS VALVE HEATING**
- **LOWER SYSTEM POWER REQUIREMENTS**
- **CONTROL OF EMI EMISSIONS**



WMA-018-1B Analog Driver

BACKGROUND
For the past 30 years, Wayne Miller Associates (WMA) has been involved in high performance valve driver design and manufacture for valve manufacturers in the northeast. Capitalizing on the experience of numerous designs and thousands of units shipped, we have developed two new high-performance drivers using the latest technologies available.

TECHNICAL APPROACH
The WMA-018 series valve drivers utilize surface mount technology to permit advanced features in a small space. Analog designs produce the highest level of performance with the best control of EMI emissions.

Our approach permits over-voltage pull-in for faster pull-in times and feature reduced hold-in voltages for less valve heating and lower system power requirements. The analog designs feature a controlled fly-back network that permits faster drop-out times while controlling EMI emissions.

APPLICATIONS
The best source for high performance valve drivers is through engineers with links to valve manufacturers. This enables users to evaluate their valve products in the best possible environment without having to be involved with the details of driver design. This is particularly true for laboratory use or in the early stages of product development when quick set up is required. Product support from WMA is knowledgeable, confidential, and personal. We take each customer's requirements and business needs seriously.

For production quantities, the high performance and highly manufacturable technologies embodied in the WMA-018 series products can be adapted for specialized applications at competitive prices. The components and assembly methods can be either those of traditional materials or of RoHS compliant materials, where RoHS compliance is required.

These drivers are suitable for a wide range of valves and other solenoid-actuated products, including electromechanical switches. For valve or other applications that are beyond the specified capabilities of the present designs, we can expand our WMA-018 series to include new requirements. We have experience with pull-in voltages as high as 300 volts and reverse drop-out bursts of 75 volts. Additionally, we have produced drivers with higher dissipation capabilities for higher wattage solenoids.

PERFORMANCE SPECIFICATIONS

The accompanying Table lists the major parameters of an analog driver, comparing it to an industry standard driver. An additional column describes briefly the impact of the various parameters and the differences between the two products.

AVAILABILITY

Availability: Stock to 6 weeks.

These products are not certified for life-support systems.
Contact WMA for pricing.

All Drivers are designed, manufactured, and supported in the USA.

Wayne Miller Associates, LLC
4 Lenape Driver
Stanhope, NJ 07874
(973) 347-1406
wlm@waynemillerassociates.com
www.waynemillerassociates.com
wlm082172019-1

COMPARISON BETWEEN TWO VALVE DRIVER PRODUCTS
MODEL WMA-018-1B
AND
STANDARD "OEM VALVE DRIVER"

PARAMETER	WMA-018-1B DRIVER	"OEM VALVE DRIVER"	DISCUSSION
Supply Voltage Range (absolute)	+8 volts to +30 volts.	+8 volts to +30 volts.	No difference
Current load, max steady state (per channel)	1 amp.	1 amp.	No difference
Circuit Loss of Pull in Burst	0.4 volts, typical.	0.4 volts, typical.	No difference.
Duration of Pull-in Burst	20 +/- 4 milliseconds.	20 +/- 4 milliseconds.	No difference.
Supply Quiescent Current	7 ma, nominal.	7 ma, nominal.	No difference.
Power dissipation of assembly while driving one 24 volt, 48 ohm valve at 50% (12 volt) hold-in.	3.1 watts.	3.1 watts.	Dissipation may limit temperature range of driver.
Number of Individual Channels	1 valve driver.	1 valve driver.	No difference.
Logic Outputs	1 (POS logic).	1 (POS logic).	No difference.
Indicator	LED driver. (no LED on board)	LED driver. (no LED on board)	No difference
Logic Input Terminations	Pull-down resistor (POS input) Pull-up resistor (NEG input).	Pull-down resistor (POS input) Pull-up resistor (NEG input).	No difference
Hold-in Characteristics, Type:	Linear regulated.	Linear regulated.	No difference
Hold-in Characteristics, Selection:	Three position jumper block.	Five position jumper block.	WMA-018-1B has wider choice of hold-in options.
Hold-in Characteristics, Options:	Ranges (expressed as a percentage of the supply voltage, +/-5%) Linear regulation: 20%, 30%, 40%, 50%, 100%.	Three ranges: 9+/1V, 5.75+/-0.75V, or 3.5+/-0.5V.	With 5 hold-in levels, the WMA-018-1B can be more closely optimized to the specific application.
Turn-off Characteristics:	Zener/resistor network to control fly-back.	Zener/resistor network to control fly-back.	No difference

PARAMETER	WMA-018-1B DRIVER	"OEM VALVE DRIVER"	DISCUSSION
Board dimensions:	1.75" x 1.625"	1.75" x 1.625"	No difference in footprint or mounting holes.
Power/Logic Connector:	Single row, 8-pin Molex P/N 22-27-2081	Single row, 8-pin Molex P/N 22-27-2081	No difference in connector type or pinout.
Drive Connector (per channel)	Single row, 3-pin. Molex P/N 22-23-2031	Single row, 3-pin. Molex P/N 22-23-2031	No difference in connector type or pinout.
Operating temperature range	-20 to +85 deg C. (Upper temperature may be limited by dissipation in some applications.)	-20 to +85 deg C.	Design support is available to determine the maximum operating temperature for driver applications.
RoHS Compliance:	Yes, as an ordering option	Historically, both have been supplied.	Not recommended for harsh environments or long service duty.