aerospace
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VMM1210 Controllers

Catalog HY33-5001/US

Parker VANSCO

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Application

The VMM1210 is a general purpose controller for vehicle and other applications with a steady voltage of less than or equal to 32 Vdc. It has 12 inputs and 10 outputs as well as a CAN/J1939 communication port. This module is 100% compatible with other Parker Vansco multiplexing modules.

Properties

Features

The VMM1210 has 8 programmable digital inputs, all of which are capable of doing power control, and reading active high, or active low inputs. In addition, it has 4 inputs capable of reading analog voltages, frequency values or digital active low inputs. The VMM1210 has 8 high current (10 A max) high-side outputs. It also has two low current (3 A max) outputs capable of driving either high-side or low-side loads, and that can also be arranged in an H-Bridge configuration. Outputs can drive any type of vehicle load including lights, relays, solenoids, fans, etc.

The VMM1210 processes ladder logic written using VMMS software. The ladder logic defines which inputs or arrangement of inputs turns on outputs on the module. The inputs and outputs in the ladder logic can be from one or more modules connected together in a system via the CAN/J1939 network.

The multiplexing system was designed to simplify and reduce electrical system troubleshooting, maintenance, and file management time. The modules have status LEDs that indicate the condition of inputs, outputs, power, and network activity.

Reliability

The VMM1210 monitors its 10 outputs continuously for fault information. Detected faults include short circuits (to ground or power), over currents and open load. The VMM1210 allows systems to reduce the number of fuses by allowing the outputs to protect themselves electronically. In the event of a fault, the unit will disable the output(s) that are faulted.

On-board documentation facilitates easier troubleshooting and modules that can be auto-programmed relieve time and maintenance costs by keeping module and program inventory to a minimum. VMM users appreciate the modules' robust design as well as its adherence to industry standards for the environment (SAE J1455/EP455) and communications (SAE J1939). All of this makes the Multiplexing Module easy to integrate into any on-highway or off-highway vehicle.

General

Weight	.64 kg
Temperature range	
Operating, ambient	-40 to +85 °C
Storage, ambient	-55 to +125 °C
Protection	IP6X
Voltage supply	7 - 32 Vdc
Current (sleep mode)	80 mA

Communication

SAE J1939	1

Outputs

Digital out high min/(max)	up to 10
Type	high side switch
Max load	10 A
Digital out low min/(max)	up to 2
Type	low side switch
Max load	3 A
Max PWM frequency	1000 Hz (for both high side and low side drivers)

Inputs

Voltage inputs min/(max)	up to 4
Signal range	0 - 32 Vdc
Resolution	5 mV
Frequency inputs min/(max)	up to 4
Signal range	0 - 10000 Hz
Digital inputs min/(max)	up to 12
Signal high	2.25 Vdc - V_{BAT}
Signal low	0 - 2 Vdc

Ordering part numbers

VMM1210	0736007ECD

Environmental protection

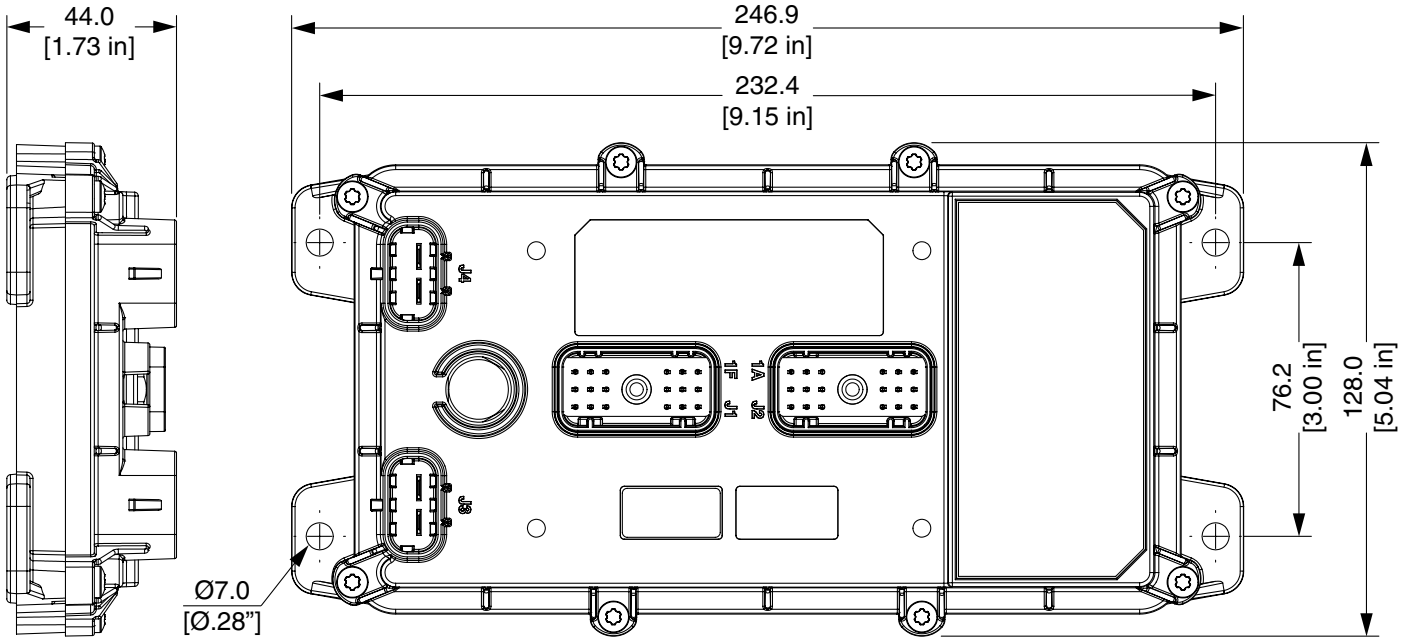
EMI
EP455 (Feb 03) Section 5.10.3, Reverse polarity
EP455 (Feb 03) Section 5.10.4, Short circuit
EP455 (Feb 03) Section 5.11.1, Transients
EP455 (Feb 03) Section 5.11.2, Transients
J1455 (Jun 2006) Section 4.13.2.2.1, Transients
J1455 (Jun 2006) Section 4.11.3.4.1, Emissions
J1455 (Jun 2006) Section 4.11.3.4.2, Susceptibility

ESD
J1455 (Jun 2006) Section 4.13.2.2.3.1, Handling
J1455 (Jun 2006) Section 4.13.2.2.3.2, Operation

Mechanical environment
J1455 (Jun 2006) Section 4.10.4.2, Random vibration
EP455 (Feb 03) Section 5.14.1, Bump

Climate environment
EP455 (Feb 03) Section 5.6 Level 1, Pressure wash
J1455 (Jun 2006) Section 4.2.3, 24 hr Humidity cycle
EP455 (Feb 03) Section 5.13.2, Humidity soak
J1455 (Jun 2006) Section 4.1.3.1, 24 hr Thermal cycle
J1455 (Jun 2006) Section 4.1.3.2, Thermal shock

Chemical environment
J1455 (Jun 2006) Section 4.3.3, Salt mist



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PB-VMM1210-201210-04

HY33-5001/US 10/2012

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