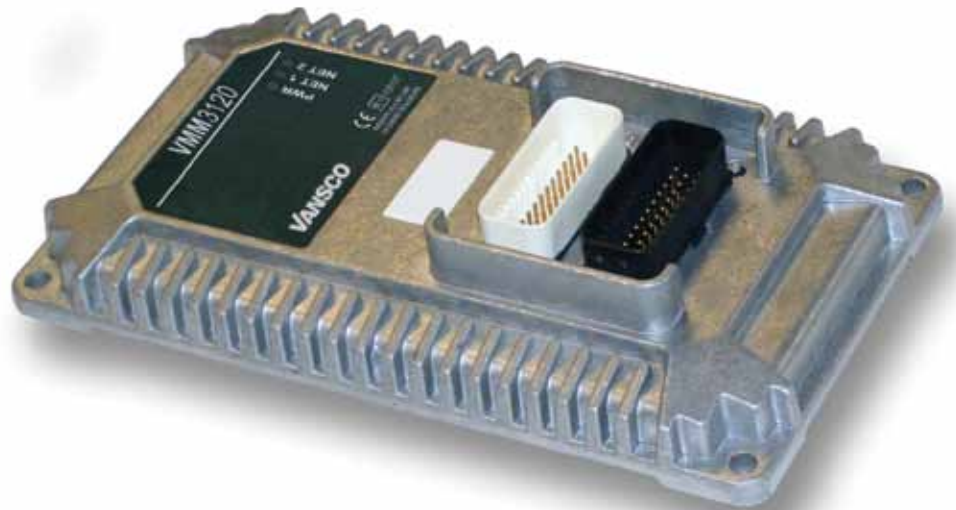




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VMM3120 Controllers

Catalog HY33-5004/US



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Application

The VMM3120 is a general purpose controller for vehicle and other applications with steady state voltages less than or equal to 32 Vdc. It has 31 inputs and 20 outputs as well as two CAN/J1939 communication ports. This module is 100% compatible with other Parker Vansco multiplexing modules.

Properties

Features

The VMM3120 has 17 digital inputs. The digital inputs are used for reading active high signals. Two of the inputs may be used for power control. In addition, it has 10 inputs capable of reading analog voltages, and 4 frequency inputs (2 AC coupled and 2 DC coupled). The VMM3120 has 16 high-side outputs with a max PWM frequency of 500 Hz, and 4 low-side outputs capable of current sensing. Outputs can drive any type of vehicle load including relays, solenoids, fans, etc.

Built to meet stringent SAE J1455 environmental standards, the system advances multiplexing technology through enhanced diagnostics and Windows-based ladder logic programming. The unit can be used alone or with other multiplexing modules. The multiplexing system was designed to simplify and reduce electrical system troubleshooting, maintenance, and file management time. The modules are self-programming and have status LEDs that indicate the condition of inputs, outputs, power, and network activity.

Reliability

The VMM3120 monitors its 20 outputs continuously for fault information. Detected faults include short circuits (to ground or power), over currents and open load. The VMM3120 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 diagnostics facilitate 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 module's robust design as well as its adherence to stringent industry environmental requirements and communications (SAE J1939) standards. All of these features make the controller easy to integrate into any on-highway or off-highway vehicle.

General

Weight	1.2 kg
Temperature range	
Operating, ambient	-40 to +85 °C
Storage, ambient	-55 to +125 °C
Protection	IPX6
Voltage supply	7 - 32 Vdc
Current (sleep mode)	<1 mA

Communication

SAE J1939	2
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Outputs

Digital out high	16
Type	high-side switch
Max load	2.5 A
Max PWM frequency	500 Hz
Digital out low	4
Type	low-side switch
Max load	2.5 A

Inputs

Voltage inputs	10
Signal range	0 - 5 Vdc
Resolution	5 mV
Frequency inputs	4
Signal range	0 - 10000 Hz
Digital inputs	17
Signal high	3.65 Vdc - V _{BAT}
Signal low	0 - 1.56 Vdc

Ordering part numbers

VMM3120	0916014ECD
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Environmental protection

EMI

J1455 (AUG 1994), Steady state reverse voltage
 EP455 (FEB 2003) Section 5.10.4, Short circuit
 EP455 (AUG 1994) Section 5.11, Electrical transients
 J1455 (AUG 1994) Section 4.11.3.3.1, EMC emissions
 J1455 (AUG 1994) Section 4.11.3.3.2, EMC susceptibility

ESD

J1455 (AUG 1994) Section 4.11.12.2.5, ESD

Mechanical environment

J1455 (AUG 1994) Section 4.9.4.2, Random vibration

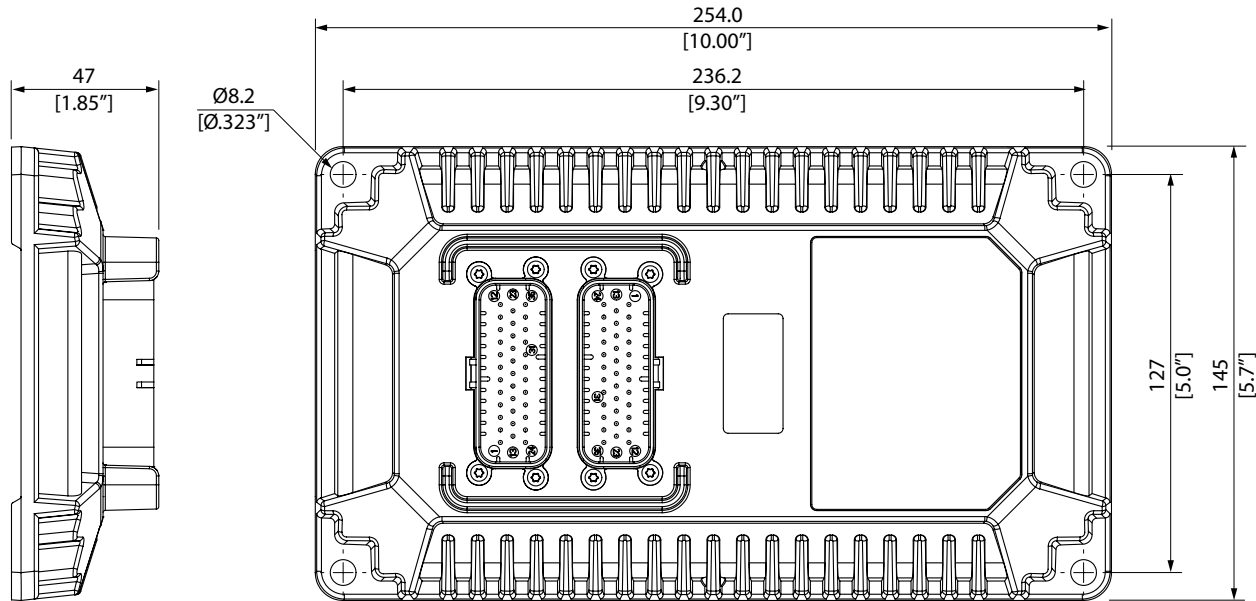
J1455 (AUG 1994) Section 4.10.3.1, Handling drop test

Climate environment

60529 IEC Edition 2.1 2001-02 Pressure wash IPX6
 J1455 (AUG 1994) Section 4.2.3, Humidity cycle
 EP455 (FEB 2003) Section 5.13.2, Humidity soak
 J1455 (AUG 1994) Section 4.1.3.1, Thermal cycle
 J1455 (AUG 1994) Section 4.1.3.2, Thermal shock

Chemical environment

J1455 (AUG 1994) Section 4.3.3, Salt spray atmosphere



WARNING - USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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