



# VMM1615 Controllers

Catalog MSG33-5008/US



ENGINEERING YOUR SUCCESS.

## Application

The VMM1615 is a general purpose controller for vehicle and other applications with steady state voltages less than or equal to 32 Vdc. It has 16 inputs and 15 outputs as well as two CAN/J1939 communication ports. This module is 100% compatible with other Parker Vansco multiplexing modules.

## Properties

### Features

The VMM1615 has Wake on CAN. It has 7 digital inputs; 5 of the inputs are used for reading active high/low signals, 1 input is used for reading active high signals, and 1 input is used for active high power control. In addition, it has 8 inputs capable of reading analog voltages, and 1 DC coupled frequency input. The VMM1615 has 12 high-side outputs with a max PWM frequency of 500 Hz, 4 of which are capable of accurate current sensing. It also has 1 low-side output that is capable of current sensing with a max PWM frequency of 1500 Hz, and 2 solid state relay outputs. These outputs can drive a variety of load types.

Built to meet and exceed SAE J1455 environmental standards, the system advances multiplexing technology through enhanced diagnostics and Windows-based ladder logic programming. The VMM1615 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 plug and play configurable, and have status LEDs that indicate the condition of inputs, outputs, power, and network activity.

### Reliability

The VMM1615 monitors its 15 outputs continuously for fault information. Detected faults include short circuits (to ground or power), over currents and open load. The VMM1615 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	IP66
Voltage supply	6 - 32 Vdc
Current (standby)	<1 mA

## Communication

SAE J1939	2
-----------	---

## Outputs

Digital out high	12
- Type	high-side switch
- Max load	6@10 A 4@5 A 2@2.5 A
- Max PWM frequency	500 Hz
Digital out low	1
- Type	low-side switch
- Max load	2.5 A
- Max PWM frequency	1500 Hz
Digital out	2
- Type	Solid state relay
- Max load	1 A

## Inputs

Voltage inputs	8
- Signal range	0 - 32 Vdc
- Resolution @ 5Vdc signal range	5 mV
Frequency inputs	1
- Signal range	0 - 10000 Hz
Digital inputs	6
- Signal high	3.82 Vdc - V <sub>BAT</sub>
- Signal low	0 - 1.56 Vdc

**Environmental protection**

**EMI**

EP455 (Feb 2003) Section 5.10.3, Reverse polarity  
 EP455 (Feb 2003) Section 5.10.4, Short circuit  
 ISO7637-2 (Jun 2004)/EP455 (Feb 2003) Section 5.11.X, Electrical transients  
 EP455 (Feb 2003) Section 5.16.3, EMC emissions  
 EP455 (Feb 2003) Section 5.16.1, EMC susceptibility

**ESD**

EP455 (Feb 2003)/ISO10605 (Jul 2008)/J1113-13 (Nov 2004), ESD

**Chemical environment**

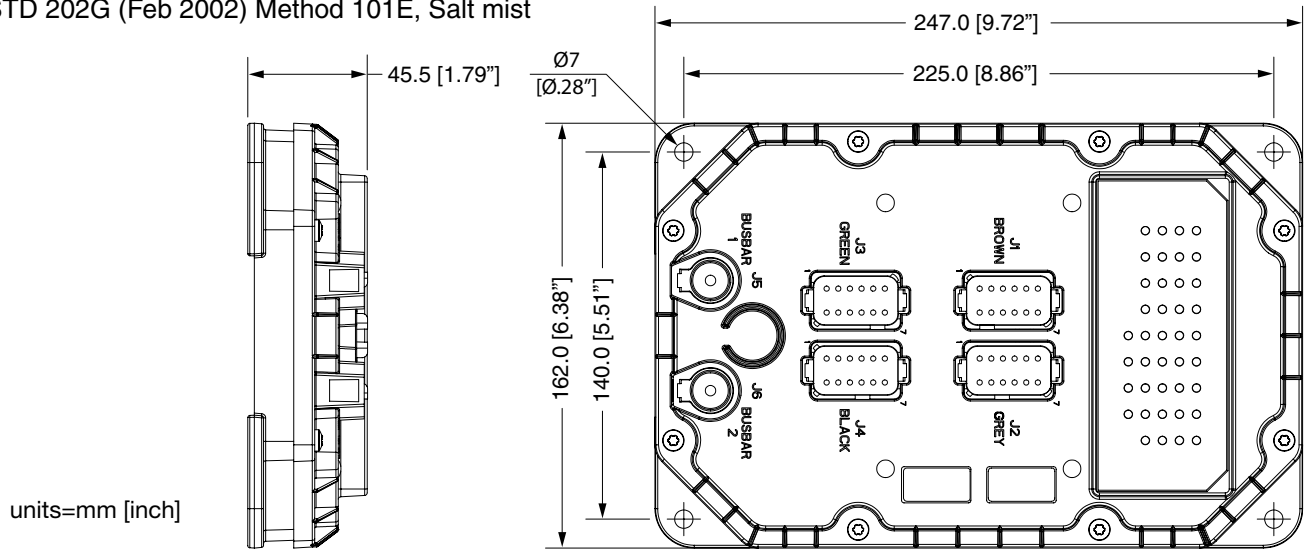
Mil STD 202G (Feb 2002) Method 101E, Salt mist

**Mechanical environment**

J1455 (Jun 2006) Section 4.10.4.2, Random vibration  
 EP455 (Feb 2003) Section 5.14.1, Mechanical shock  
 J1455 (Jun 2006) Section 4.10.3.1, Handling drop test

**Climate environment**

IEC60529 (Feb 2001) Section 13.6.1, IP6X Dust  
 IEC60529 (Feb 2001) Section 14.2.6, IPX6 Pres. wash  
 EP455 (Feb 2003) Section 5.13.1, Humidity cycle  
 EP455 (Feb 2003) Section 5.13.2, Humidity soak  
 EP455 (Feb 2003) Section 5.1.1, Thermal cycle  
 J1455 (Jun 2006) Section 4.1.3.2, Thermal shock



units=mm [inch]

**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.**

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

**OFFER OF SALE**

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the detailed "Offer of Sale" available from your Parker representative or at [www.parker.com](http://www.parker.com).

**WARNING - California Proposition 65**

This product can expose you to chemicals including NICKEL COMPOUNDS which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# Parker Motion Systems International Sales Offices

## North America

### Motion Systems Group

#### Headquarters

6035 Parkland Boulevard  
Cleveland, OH 44124-4141 USA  
Tel: 216-896-3000  
Fax: 216-896-4031

### Parker Canada Division

160 Chisholm Drive Milton  
Ontario Canada L9T 3G9  
Tel: 905-693-3000  
Fax: 905-876-1958

### Parker Hannifin de México

Industrial Hydraulic Sales  
Eje Uno Norte No.100  
Parque Industrial Toluca 2000  
Toluca, Edo, de Mexico CP 50100  
Tel: 52 722 275 4200  
Fax: 52 722 279 9308

### Parker Hannifin de México

Mobile Hydraulic Sales  
Via de FFCC a Matamoros 730  
Apodaca, NL, de Mexico CP 66600  
Tel: 52 81 8156 6000  
Fax: 52 81 8156 6068

## Europe

### Motion Systems Group

#### Headquarters

La Tuilière 6  
1163 Etoy - Switzerland  
Tel: 41 21 821 8500  
Fax: 41 21 821 8580

## South Africa

### Parker Hannifin Africa Pty Ltd

P.O. Box 1153  
ZA-Kempton Park 1620,  
Republic of South Africa  
Tel: 27 11 961 0700  
Fax: 27 11 392 7213

## Mobile Sales

### Mobile Sales Organization and Global Sales

850 Arthur Avenue  
Elk Grove Village, IL 60007 USA  
Tel: 847-258-6200  
Fax: 847-258-6299

## Industrial Sales

### Central Region

1042 Maple Avenue  
Unit 331  
Lisle, IL 60532 USA  
Tel: 630-964-0796

### Great Lakes Region

6035 Parkland Boulevard  
Cleveland, OH 44124-4141 USA  
Tel: 216-896-2740  
Fax: 866-498-7507

### Gulf Region

20002 Standing Cypress Drive  
Spring, TX 77379 USA  
Tel: 817-473-4431  
Fax: 888-227-9454

### Southwest Region

700 S. 4th Avenue  
Mansfield, TX 76063 USA  
Tel: 817-473-9341  
Fax: 817-473-2680

### Mid Atlantic and Southeast Regions

1225 Old Alpharetta Road  
Suite 290  
Alpharetta, GA 30005 USA  
Tel: 770-619-9767  
Fax: 770-619-9806

### Midwest Region

8145 Lewis Road  
Minneapolis, MN 55427 USA  
Tel: 763-513-3535  
Fax: 763-544-3418

### Northeast Region

P.O. Box 396  
Pine Brook, NJ 07058 USA  
Tel: 973-227-2565  
Fax: 973-227-2467

### Northwest Region

6458 North Basin Avenue  
Portland, OR 97217 USA  
Tel: 503-283-1020  
Fax: 866-611-7308

### Pacific Region

8460 Kass Drive  
Buena Park, CA 90621  
Tel: 714-228-2510  
Fax: 714-228-2511

## Asia Pacific

### Parker Hannifin Shanghai Ltd

280 Yunqiao Road,  
Jin Qiao Export Processing Zone  
Shanghai 201206, China  
Tel: 86 21 2899 5000  
Fax: 86 21 6445 9917

### Parker Hannifin Hong Kong Ltd

8/F, Kin Yip Plaza  
9 Cheung Yee Street  
Cheung Sha Wan, Hong Kong  
Tel: 852 2428 8008  
Fax: 852 2425 6896

### Parker Hannifin Korea Ltd

9F KAMCO Yangjae Tower  
949-3 Dogok1-dong, Gangnam-gu  
Seoul, 135-860, Korea  
Tel: 82 2 559 0400  
Fax: 82 2 556 8187

### Parker Hannifin India Pvt Ltd

Plot No. EL-26, MIDC  
TTC Industrial Area  
Mahape, Navi Mumbai, 400 709 India  
Tel: 91 22 6513 7081  
Fax: 91 22 2768 6841

### Parker Hannifin Australia

Parker Hannifin Pty Ltd.  
9 Carrington Road  
Castle Hill, NSW 2154, Australia  
Tel: 612 9634 7777  
Fax: 612 9842 5111

## Latin America

### Parker Hannifin Ind. e Com. Ltda Hydraulics Division

Av. FredericoRitter, 1100  
94930-000 Cachoeirinha RS, Brazil  
Tel: 55 51 3470 6090  
Fax: 55 51 3470 9281

### Parker Hannifin Argentina S.A.I.C.

Stephenson 2711  
1667-Tortuguitas-Malvinas Argentinas  
Pcia. de Buenos Aires, Argentina  
Tel: 54 3327 44 4129  
Fax: 54 3327 44 4199

### Pan American Division

7400 NW 19th Street, Suite A  
Miami, FL 33126 USA  
Tel: 305-470-8800  
Fax: 305-470-8808

PB-VMM1615-202002-06

© 2023 Parker Hannifin Corporation. All rights reserved.

MSG33-5008/US

10/2023

## Parker Hannifin Corporation Electronic Motion & Controls Division

850 Arthur Avenue  
Elk Grove Village, IL, 60007 USA  
phone 800 221 9257  
ecinfo@parker.com  
www.parker.com/emc



Your Local Authorized Parker Distributor