

VMM2404 Controllers

Catalog MSG33-5011/US



ENGINEERING YOUR SUCCESS.

Application

The VMM2404 is a general purpose controller for vehicle and other applications with a steady voltage of less than or equal to 32 Vdc. The unit has 24 inputs and 8 outputs as well as a CAN/J1939 communication port. This module is 100% compatible with other Parker Vansco multiplexing modules.

Properties

Features

There are 2 versions of the VMM2404. The controller has 9 dedicated digital inputs, and 15 general purpose inputs capable of being configured for active high or active low signals. The general purpose inputs may be used as frequency inputs (2 AC coupled and 13 DC coupled), or may also be used for reading analog voltages in 4 programmable ranges.

The 0837001 unit is capable of a 0-32 Vdc analog range and is for 12V or 24V systems. It can be used with 0-5 Vdc input signals, but will have low resolution. The 0837002 is capable of a 0-16 Vdc analog range and is mainly recommended for 12V systems. This unit provides high resolution of 0-5 Vdc input signals.

The VMM2404 has 4 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/EP455 environmental standards, the system advances multiplexing technology through enhanced diagnostics and Windows-based ladder logic programming. The VMM2404 can be used alone or with other multiplexing modules. The controllers are self-programming and have status LEDs that indicate the condition of inputs, outputs, power, and network activity.

Reliability

The VMM2404 monitors its 8 outputs continuously for fault information. Detected faults include short circuits, over currents and open load. The VMM2404 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. The VMM2404 has 30 red diagnostic LEDs that can be used to indicate the status of inputs, outputs, power and the Controller Area Network (CAN).

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.

General

Weight	1.2 kg
Temperature range	
Operating, ambient	-40 to +85 °C
Storage, ambient	-55 to +125 °C
Protection	IP66
Voltage supply	7 - 32 Vdc
Current (sleep mode)	<4 mA

Communication

SAE J1939	1
-----------	---

Outputs

Digital out high	4
Type	high side switch
Max load	3.0 A
Max PWM frequency	500 Hz
Digital out low	4
Type	low side switch
Max load	3.0 A

Inputs

Voltage inputs	up to 15
Signal range (max)	0 - 32 Vdc or 0 - 16 Vdc
Resolution @ 5 Vdc	5 mV
Frequency inputs	up to 15
Signal range	0 - 10000 Hz
Digital inputs	up to 24
Signal high	3.4 Vdc - V _{BAT}
Signal low	0 - 1.3 Vdc

Regulated supply

5 Vdc (sensor supply)	100 mA@14 Vdc
	50 mA@24 Vdc
	30 mA@32 Vdc

Ordering part numbers

VMM2404	0837001ECD
VMM2404	0837002ECD

Environmental protection

EMI

J1455 (Jun 2006) Section 4.11.1.1.1, Reverse polarity
 EP455 (Feb 2003) Section 5.10.4, Short circuit
 EP455 (Feb 2003) Section 5.11.X, Electrical transients
 J1455 (Jun 2006) Section 4.13.3, EMC emissions
 J1455 (Jun 2006) Section 4.13.3, EMC susceptibility

ESD

J1455 (Jun 2006) Section 4.13.2.2.3, Electrostatic discharge

Mechanical environment

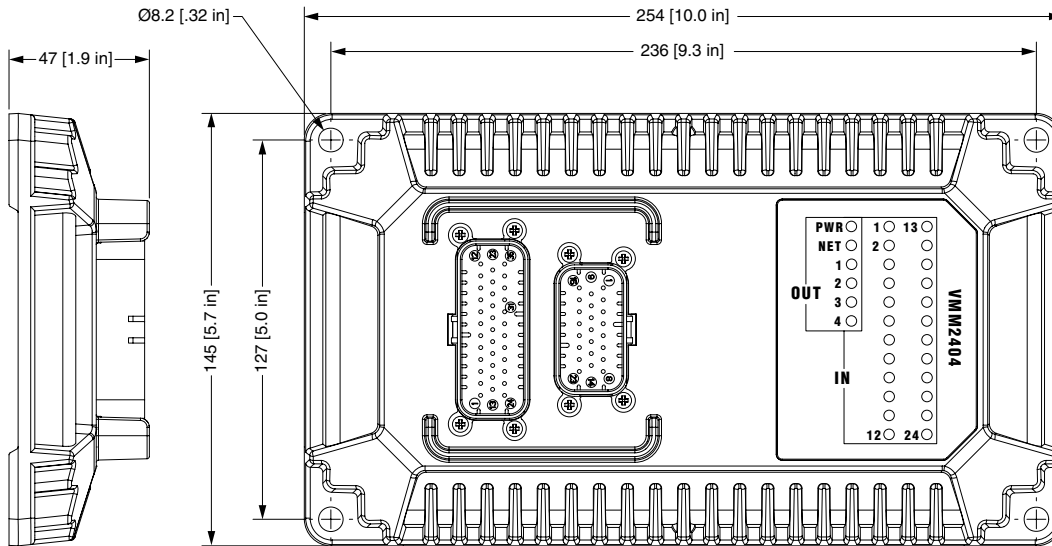
J1455 (Jun 2006) Section 4.9.4.2, Random vibration
 J1455 (Jun 2006) Section 4.11.3.1, Operational shock
 J1455 (Jun 2006) Section 4.11.3.1, Handling drop test

Climate environment

EP455 (Feb 2003) Section 5.6, Pressure Wash
 J1455 (Jun 2006) Section 4.2.3, Humidity cycle
 EP455 (Feb 2003) Section 5.13.2, Humidity soak
 J1455 (Jun 2006) Section 4.1.3.1, Thermal cycle
 J1455 (Jun 2006) Section 4.1.3.2, Thermal shock

Chemical environment

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



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.



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

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-VMM2404-202002-09

© 2010-2020 Parker Hannifin Corporation. All rights reserved.

MSG33-5011/US

02/2020



Parker Hannifin Corporation
Electronic Controls Division
850 Arthur Avenue
Elk Grove Village, IL, 60007 USA
phone 800 221 9257
ecdinfo@parker.com
www.parker.com/ecd

Your Local Authorized Parker Distributor