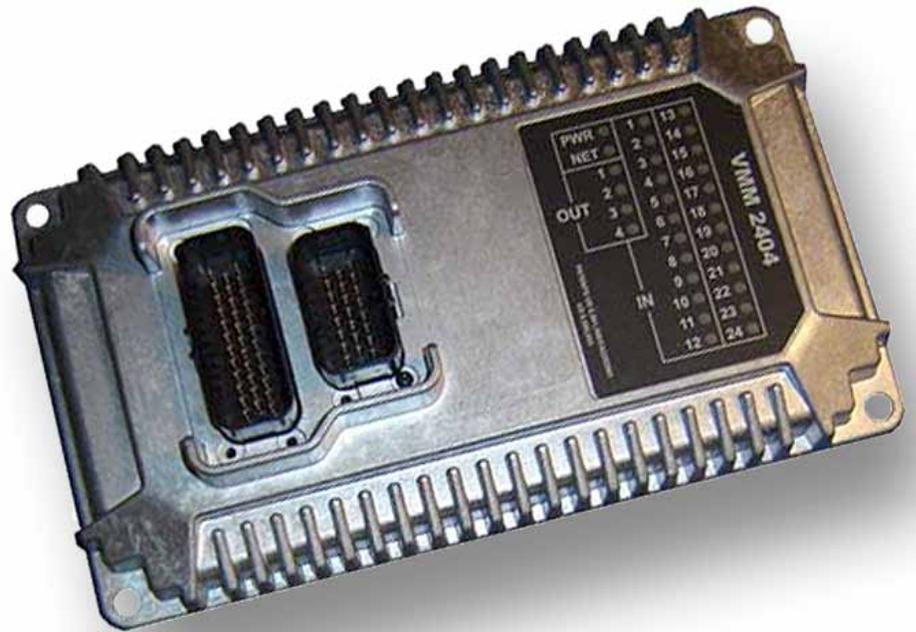




aerospace
 climate control
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VMM2404 Controllers

Catalog HY33-5011/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

The VMM2404 has 9 dedicated digital inputs, and 15 general purpose inputs capable of being configured for active high or active low signals. Additionally the general purpose inputs may be used for reading analog voltages, or as frequency inputs (2 AC coupled and 13 DC coupled). 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 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 VMM2404 monitors its 8 outputs continuously for fault information. Detected faults include short circuits (to ground or power), 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. 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	7 - 32 Vdc
Current (sleep mode)	<4 mA

Communication

SAE J1939	1
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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	0 - 32 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	0837002ECD
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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

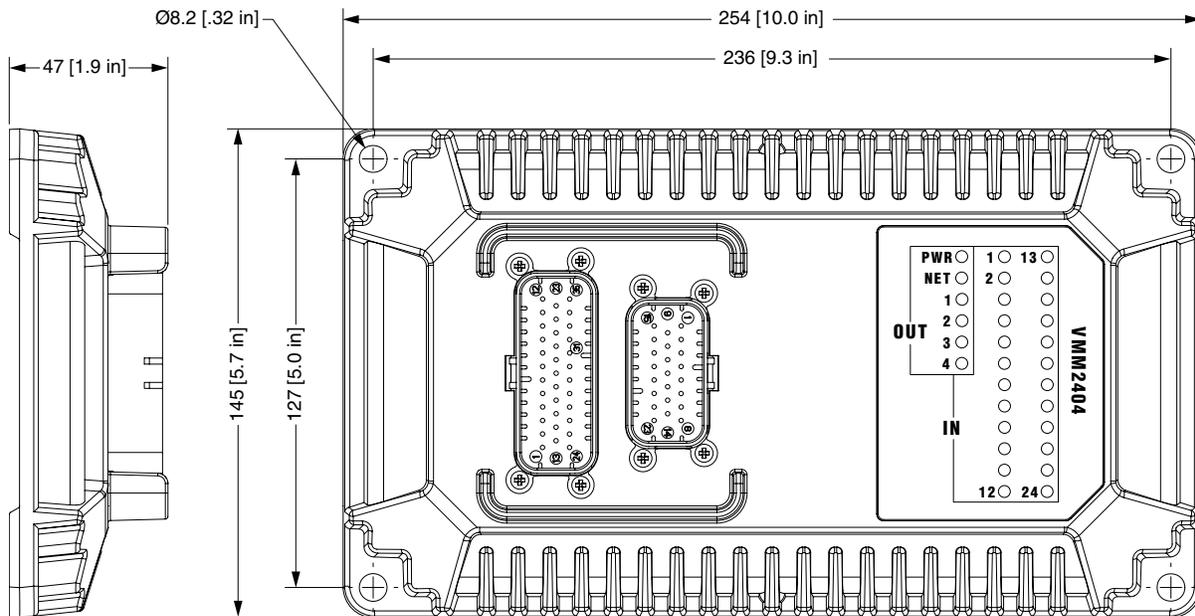
J1455 (Jun 2006) Section 4.9.4.2, Random vibration
 J1455 (Jun 2006) Section 4.11.3.1, Operational shock
 J1455 (Jun 2006) Section 4.11.3.1, Handling drop test

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.

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Sales Offices Worldwide

North America

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

Parker Hannifin Canada

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

Mexico

Parker Hannifin de México
Av eje uno norte num 100
Parque Industrial Toluca 2000
Toluca, Mex C.P. 50100
Tel: 52 722 2754200
Fax: 52 722 2799308

Europe

**Europe Hydraulics Group
Parker Hannifin Corporation**
Parker House
55 Maylands Avenue
Hemel Hempstead, Herts
HP2 4SJ England
Tel: 44 1442 458000
Fax: 44 1442 458085

Latin America

Brazil

**Hydraulics Division
Parker Hannifin Ind. e Com. Ltda**
Av. Frederico Ritter, 1100
Cachoeirinha RS, 94930-000 Brazil
Tel: 55 51 3470 9144
Fax: 55 51 3470 3100

Chile

Parker Hannifin Chile Ltd.a
Av. Americo Vespucio 2760-E,
Conchali - Santiago, Chile
Tel: 56 2 623 1216
Fax: 56 2 623 1421

Pan American Division

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

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

Great Lakes Region
3700 Embassy Parkway
Suite 260
Fairlawn, OH 44333 USA
Tel: 330-670-2680
Fax: 330-670-2681

Southern Region

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

Chicago Region

1163 E. Ogden Avenue
Suite 705, #358
Naperville, IL 60563 USA
Tel: 630-964-0796
Fax: 866-473-9274

Pacific Region

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

Eastern Region

100 Corporate Drive
Lebanon, NJ 08833 USA
Tel: 908-236-4121
Fax: 908-236-4146

Gulf Region

20002 Standing Cypress Drive
Spring, TX 77379 USA
Tel: 317-519-8490
Fax: 866-390-4986

Asia Pacific

**Asia Pacific Headquarters
Parker Hannifin Hong Kong Ltd**
8/F, Kin Yip Plaza
9 Cheung Yee Street
HK-Cheung Sha Wan, Hong Kong
Tel: 852 2428 8008
Fax: 852 2425 6896

Australia Headquarters

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

China Headquarters

**Parker Hannifin Motion & Control
(Shanghai) Co., Ltd**
280 Yunqiao Road,
Jin Qiao Export Processing Zone
CN-Shanghai 201206, China
Tel: 86 21 5031 2525
Fax: 86 21 5834 3714

Korea Headquarters

Parker Hannifin Korea Ltd
6F Daehwa Plaza
169 Samsung-dong, Gangnam-gu
KR-Seoul, 135-090, Korea
Tel: 82 2 559 0400
Fax: 82 2 556 8187

South Africa

**Parker Hannifin Africa Pty Ltd
Parker Place**
10 Berne Avenue Airport
P.O. Box 1153
ZA-Kempton Park 1620,
Republic of South Africa
Tel: 27 11 961 0700
Fax: 27 11 392 7213

Middle East

**Egypt
Parker Hannifin Corporation**
8B Zahraa Maadi
Region 17F
Cairo, Egypt
Tel: 20 2 519 4018
Fax: 20 2 519 0605



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HY33-5011/US

PB-VMM2404-201210-06

10/2012

Parker Hannifin Corporation
Electronic Controls Division
1305 Clarence Avenue
Winnipeg, MB, Canada R3T 1T4
phone 204 452 6776
fax 204 478 1740