DATA SHEET

vibro-meter®

VM600^{Mk2}/ VM600 ABE056 slimline rack

VM600 ABE056 slimline rack (housing a MPC4 machinery protection card)

KEY FEATURES AND BENEFITS

- From the vibro-meter® product line
- 19" slimline rack with a standard height of 1U
- Robust metal construction
- Modular concept allows specific modules (cards) to be added for machinery protection or condition monitoring
- Cabinet or panel mounting
- Backplane supporting the VM600^{Mk2}/VM600 system's Open collector (OC) bus, and power supply distribution
- Integrated AC-input or DC-input power supply
- Power supply check relay

APPLICATIONS

- VM600^{Mk2}/VM600 machinery protection and/ or condition monitoring systems

DESCRIPTION

The VM600^{Mk2}/VM600 ABE056 slimline rack is used to house hardware for the VM600^{Mk2}/VM600 series of machinery protection and/or condition monitoring systems, from Meggitt's vibro-meter® product line.

The VM600^{Mk2}/VM600 ABE056 slimline rack has a standard height of 1U and provides mounting space (rack slots) for one single-width VM600^{Mk2}/ VM600 processing module (card pair) and a relay module (card). This rack is particularly suitable for industrial environments, where equipment must be permanently installed in 19" cabinets or panels.

Different versions of the integrated RPS1U power supply enable a VM600^{Mk2}/VM600 ABE056 slimline rack to be powered using either an external AC or DC mains supply. Both the power supplies support a wide input voltage range.

The rack has an integrated backplane that provides the electrical interconnections between the integrated power supply (RPS1U) and the installed VM600^{Mk2}/VM600 modules (cards). It also includes a power supply check relay, available at the rear of the rack, which indicates

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

Tel: +41 26 407 11 11
Fax: +41 26 407 13 01
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

DESCRIPTION *(continued)*

that the integrated power supply is operating normally.

VM600^{Mk2}/VM600 processing modules (cards) are installed in the front of the rack and the associated input/output modules (cards) are installed in the rear. The input/output modules (cards) provide connectors for the connection of sensors/measurement chains and for the sharing of various signals with external systems such as a DCS or PLC.

In general, VM600^{Mk2}/VM600 ABE056 slimline racks are configured in the factory before delivery so they are supplied ready-to-use. Optionally, each module (card) can be reconfigured to meet the needs of a particular machinery monitoring application using the appropriate software package from Meggitt Vibro-Meter: VibroSight® or VM600 MPSx.

For further information, contact your local Meggitt representative.

SPECIFICATIONS

General

Housing	: Zinc-plated painted sheet steel
Colour	: Grey white (RAL 9002)
Power supply	: An integrated RPS1U power supply provides the VM600^{Mk2}/VM600 rack itself and all installed modules (cards) with +5 V_{DC} and ±12 V_{DC}. See also **AC-input power supply on page 3** and **DC-input power supply on page 3**.
Power supply input	: The power supply input has an AC or DC connector (with an RFI filter) and an on/off switch. See **Ordering information on page 6** for information on mains power supply leads (power cords).
Backplane	: Proprietary VM600^{Mk2}/VM600 rack bus (Open collector (OC) bus) for data/signal sharing between modules (cards)
Rack slots (module (card) positions)	: Front of rack: • 1 × slot – module (card) position 01 – for a processing module (card) such as MPC4^{Mk2}, XMx16, MPC4 or AMC8. Rear of rack: • 1 × slot – module (card) position 01 – for an associated input/output module (card) such as IOC4^{Mk2}, XIO16T, IOC4T or IOC8T. • 1 × slot – module (card) position 00 – for an associated relay module (card) such as RLC16^{Mk2} or RLC16. See also **Mechanical drawings on page 5**. Notes In general, associated input/output modules (cards) are required while relay modules (cards) are optional. For safety reasons, any VM600^{Mk2}/VM600 rack slot not populated by a module (card) must be covered by a blank panel.

SPECIFICATIONS *(continued)*

Rack slot number coding	: For modules (cards) installed in the rear of the ABE056 rack, an electronic keying mechanism known as slot number coding is used to help ensure that the module (card) is installed in the correct slot, as defined by the configuration (that is, by the VibroSight® or VM600 MPSx software). For ABE056 racks, the rack's slot number is configurable by DIP switch and slot number coding requires that the rack's slot number is set to match the slot number used by the module (card).
Slot number coding range	: 0 to 12
Slot number coding defaults	: Factory assigned default values as follows: • Slot 01 = 1 (0001 binary) for an ABE056 rack configured for use by a VM600^{Mk2} system such as a VM600^{Mk2} MPC4^{Mk2} + IOC4^{Mk2}. • Slot 01 = 3 (0011 binary) for an ABE056 rack configured for use by a VM600 system such as a VM600 MPC4 and IOC4T. Notes For a VibroSight / VM600^{Mk2} MPC4^{Mk2} + IOC4^{Mk2} system, the ABE056 rack DIP switch must be set to 01, as this is the default slot number used by the VibroSight Protect configuration software for an ABE056 rack (VM600 – 1U). For a VM600 MPSx / VM600 MPC4 and IOC4T system, the ABE056 rack DIP switch is typically set to 03, as this is the default slot number used by the VM600 MPSx configuration software for the ABE056 rack (VM600 – 1U).

AC-input power supply

Input voltage range	: 90 to 264 V_{AC}
Input frequency range	: 47 to 63 Hz
Input current	: 2.5 A / 115 V_{AC} or 1.5 A / 230 V_{AC}
Output voltages	: +5 V_{DC} and ±12 V_{DC}

DC-input power supply

Nominal input (line) voltage	: 24 V_{DC}
Input voltage range	: 18 to 58 V_{DC}
Input current	: 3.0 A / 24 V_{DC}
Output voltages	: +5 V_{DC} and ±12 V_{DC}

Power supply check relay

Nominal input (line) voltage	: 110/220 V_{AC}
Nominal switching capacity (resistive load)	: 0.5 A / 125 V_{AC}, 0.3 A / 110 V_{DC}, 1 A / 30 V_{DC}
Maximum switching voltage	: ±30 V_{RMS} / ±42.4 $V_{AC(PEAK)}$ or 60 V_{DC}
Maximum switching current	: 1 A

SPECIFICATIONS *(continued)*

Environmental

According to IEC 60068-2 recommendations

Temperature	
• Operating	: 0 to 65°C (32 to 149°F)
• Storage	: −40 to 85°C (−40 to 185°F)
Humidity	
• Operating	: 0 to 90%, non-condensing
• Storage	: 0 to 95%, non-condensing
Flammability class	: UL 94 HB
Indoor use	: Limited to indoor use only

Approvals

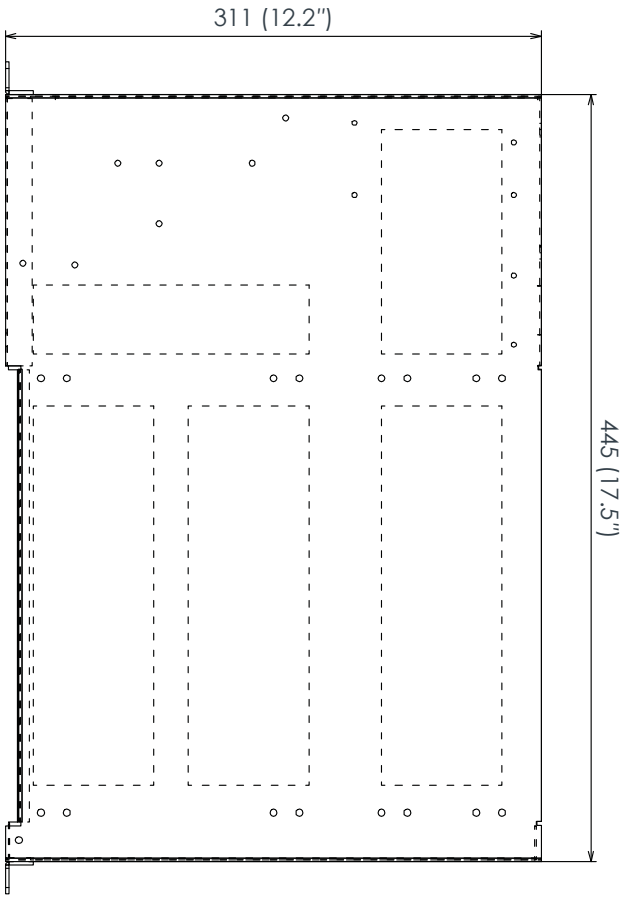
Conformity	: European Union (EU) declaration of conformity (CE marking). EAC marking, Eurasian Customs Union (EACU) certificate/ declaration of conformity.
Electromagnetic compatibility	: IEC/EN 61000-6-2 and IEC/EN 61000-6-4. TR CU 020/2011.
Electrical safety	: IEC/EN 61010-1. TR CU 004/2011.
Vibration	: IEC 60255-21-1 (Class 2)
Environmental management	: RoHS compliant
Russian federal agency for technical regulation and metrology (Rosstandart)	: Pattern approval certificate OC.C.28.004.A N° 60224

Physical

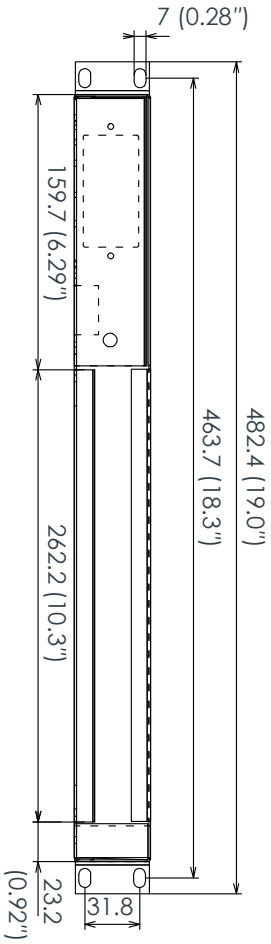
Dimensions	: See **Mechanical drawings on page 5**
Weight	: 2.5 kg (5.5 lb) approx. with integrated power supply (RPS1U) and modules (cards)

MECHANICAL DRAWINGS

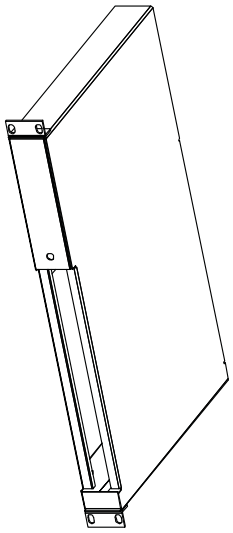
Side view



Front view



3D view



Rear view

Note: All dimensions are in mm (in) unless otherwise stated.

ORDERING INFORMATION

To order please specify

Type	Designation	Ordering number (PNR)
ABE056	Different versions of the VM600^{Mk2} ABE056 slimline rack:	
	– Version with integrated AC-input power supply	VM600SYSMK2/B0/C56S/D5/Hxx
	– Version with integrated DC-input power supply	VM600SYSMK2/B0/C56S/D2/H00
ABE056	Different versions of the VM600^{Mk2}/VM600 ABE056 slimline rack:	
	– Version with integrated AC-input power supply	VM600SYS/B0/C56S/D5/Hxx
	– Version with integrated DC-input power supply	VM600SYS/B0/C56S/D2/H00

Notes

Versions of the VM600^{Mk2} ABE056 slimline rack (PNR VM600SYSMK2/…) and versions of the VM600^{Mk2}/VM600 ABE056 system rack (PNR VM600SYS/…) are currently the same, that is, the same artwork/branding/painted finish. However, when ordering a ABE056 slimline rack with other system components as part of a complete VM600Mk2/ VM600 machinery monitoring system, then the appropriate VM600SYS-based ordering number should be used. For example, PNR VM600SYSMK2/… should be used for VM600^{Mk2} systems containing modules such as the MPC4^{Mk2} + IOC4^{Mk2}, whereas PNR VM600SYS/… should be used for VM600 systems containing cards such as the MPC4/IOC4T. See also **Ordering guidelines on page 7**.

For the AC-input version of the VM600^{Mk2}/VM600 ABE056 slimline rack (order option code D5), order option code Hxx is used to specify a mains power supply lead (power cord) in accordance with the table below.

For the DC-input version of the VM600^{Mk2}/VM600 ABE056 slimline rack (order option code D2), no mains power supply lead (power cord) is supplied, so order option code H00 must be used. That is, "None – no mains cable" in accordance with the table below.

Mains power supply lead (power cord) order option codes (Hxx):

Order option code	Designation	Equivalent ordering number (PNR)
H00	None – no mains cable	---
H01	No plug – flying lead with wire-end ferrules	957.18.13.0020
HCH	J plug as per SEV 1011 (Switzerland)	957.18.13.0021
HEU	E+F plug as per CEE7/VII (Europe, Russia, Ukraine)	957.18.13.0022
HUK	G plug as per BS 1363 (UK, Hong Kong, Malaysia, Singapore)	957.18.13.0023
HJP	B plug as per JIS 8303 (Japan)	957.18.13.0024
HUS	B plug as per NEMA 5-15 (United States, Canada)	957.18.13.0025

Notes

The mains cables (power cords) are for use with the AC-input version of the integrated RPS1U power supply only. No cables are available for the DC-input version of the integrated RPS1U power supply.

ORDERING GUIDELINES

The ordering numbers (PNRs) given in **Ordering information on page 6** of this data sheet should be used when ordering a VM600^{Mk2}/VM600 ABE056 slimline rack as an individual system component for use as a replacement or spare part.
However, when ordering this component with other system components as part of a complete VM600^{Mk2}/VM600 machinery monitoring system, then a VM600SYS-based ordering number should be used. Contact your local Meggitt representative for further information.

RELATED PRODUCTS

VM600^{Mk2} (second generation)

ABE04x	VM600^{Mk2}/VM600 system racks	: Refer to corresponding data sheet
ASPS	VM600^{Mk2}/VM600 auxiliary sensor power supply	: Refer to corresponding data sheet
CPUM^{Mk2} + IOCN^{Mk2}	VM600^{Mk2} rack controller and communications interface module	: Refer to corresponding data sheet
MPC4^{Mk2} + IOC4^{Mk2}	VM600^{Mk2} machinery protection and condition monitoring module	: Refer to corresponding data sheet
RLC16^{Mk2}	VM600^{Mk2} relay module	: Refer to corresponding data sheet
RPS6U	VM600^{Mk2}/VM600 rack power supplies	: Refer to corresponding data sheet
XMx16 + XIO16T	VM600^{Mk2}/VM600 condition monitoring modules	: Refer to corresponding data sheet
VibroSight	VibroSight® machinery monitoring system software	: Refer to corresponding data sheet

VM600 (first generation)

ABE04x	VM600^{Mk2}/VM600 system racks	: Refer to corresponding data sheet
AMC8 and IOC8T	VM600 analog monitoring card pair	: Refer to corresponding data sheet
ASPS	VM600^{Mk2}/VM600 auxiliary sensor power supply	: Refer to corresponding data sheet
CPUM and IOCN	VM600 modular CPU card and input/output card. Note: With a front-panel display and support for Modbus RTU/TCP or PROFINET.	: Refer to corresponding data sheet
CPUR and IOCR	VM600 rack controller and communications interface card pair. Note: With rack controller redundancy and support for Modbus RTU/TCP.	: Refer to corresponding data sheet
CPUR2 and IOCR2	VM600 rack controller and communications interface card pair. Note: With mathematical processing of fieldbus data and support for Modbus TCP and PROFIBUS.	: Refer to corresponding data sheet
IRC4	VM600 intelligent relay card	: Refer to corresponding data sheet
MPC4 and IOC4T	VM600 machinery protection card pair	: Refer to corresponding data sheets
RLC16	VM600 relay card	: Refer to corresponding data sheet
RPS6U	VM600^{Mk2}/VM600 rack power supplies	: Refer to corresponding data sheet
XMx16 + XIO16T	VM600^{Mk2}/VM600 condition monitoring modules	: Refer to corresponding data sheet

Meggitt (Meggitt PLC) is a leading international engineering company, headquartered in England, that designs and delivers high-performance components and subsystems for aerospace, defence and selected energy markets. Meggitt comprises four customer-aligned divisions: Airframe Systems, Engine Systems, Energy & Equipment and Services & Support.

The Energy & Equipment division includes the Energy Sensing and Controls product group that specialises in sensing and monitoring solutions for a broad range of energy infrastructure, and control valves for industrial gas turbines, primarily for the Power Generation, Oil & Gas and Services markets. Energy & Equipment is headquartered in Switzerland (Meggitt SA) and incorporates the vibro-meter® product line, which has over 65 years of sensor and systems expertise and is trusted by original equipment manufacturers (OEMs) globally.

Sales offices

Meggitt has offices in more than 30 countries. For a complete list, please visit our website.

Local representative

Head office

Meggitt SA
Route de Moncor 4
Case postale
1701 Fribourg
Switzerland

Tel: +41 26 407 11 11
Fax: +41 26 407 13 01
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com