MEGGITT

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

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## 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 $V_{DC}$.<br>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.<br>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:<br>• 1 × slot – module (card) position 01 – for a processing module (card) such as MPC4$^{Mk2}$, XMx16, MPC4 or AMC8.<br>Rear of rack:<br>• 1 × slot – module (card) position 01 – for an associated input/output module (card) such as IOC4$^{Mk2}$, XIO16T, IOC4T or IOC8T.<br>• 1 × slot – module (card) position 00 – for an associated relay module (card) such as RLC16$^{Mk2}$ or RLC16.<br>See also **Mechanical drawings on page 5**.<br>Notes<br>In general, associated input/output modules (cards) are required while relay modules (cards) are optional.<br>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).<br>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:<br>• 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$^{Mk2}$.<br>• Slot 01 = 3 (0011 binary) for an ABE056 rack configured for use by a VM600 system such as a VM600 MPC4 and IOC4T.<br>Notes<br>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).<br>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

| | |
|---|---|
| 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

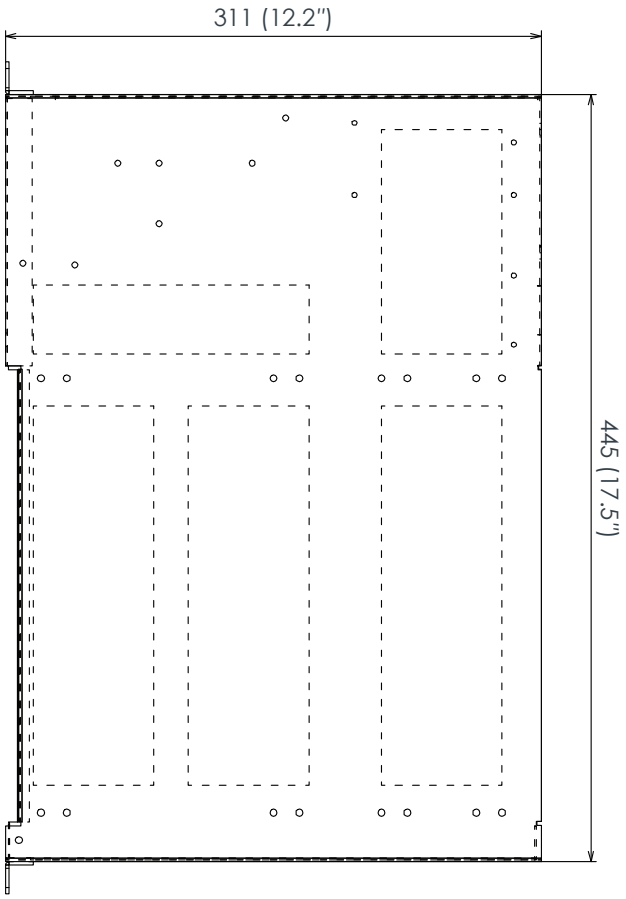
| | |
|---|---|
| Conformity | : European Union (EU) declaration of conformity (CE marking). EAC marking, Eurasian Customs Union (EACU) certificate/ declaration of conformity. |
| Electromagnetic compatibility | : IEC/EN 61000-6-2 and IEC/EN 61000-6-4. TR CU 020/2011. |
| Electrical safety | : IEC/EN 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

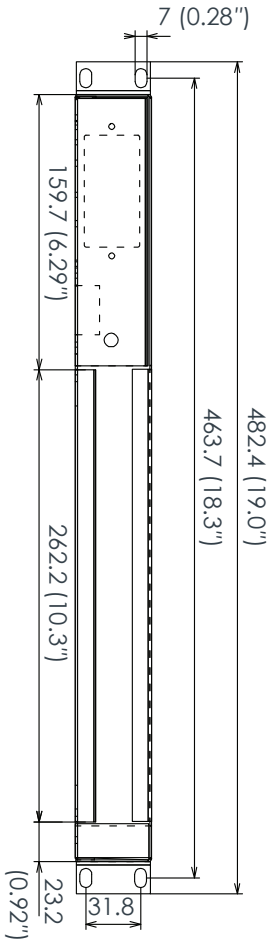
| | |
|---|---|
| Dimensions | : See **Mechanical drawings on page 5** |
| Weight | : 2.5 kg (5.5 lb) approx. with integrated power supply (RPS1U) and modules (cards) |

## MECHANICAL DRAWINGS

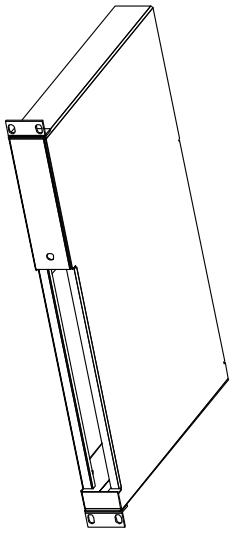
**Side view**



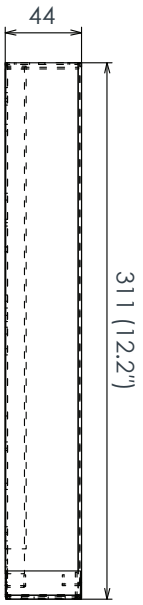

**Front view**




**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.<br>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.<br>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.<br>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 |

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