

Portable CMS Rack Type ABE 055

FEATURES

- Portable condition monitoring system (CMS) based on Vibro-Meter's field-proven VM600 Series technology
- Runs off AC or DC power supply
- Compact rack assembly with front and rear opening panels protecting the standard 6U high cards connected to the backplane
- Supports up to 32 data signal connections via screw terminals or banana connectors
- Robust aluminium inner rack, housed in a shock-absorbent, protective outer casing
- Modular concept allowing specific cards to be added to make a customized condition monitoring system
- Backplane supporting VME bus as well as raw signal bus, tacho bus and open collector relay bus



DESCRIPTION

The Portable CMS is intended for use in industrial environments where the portability and ruggedness of the system are essential, and when a permanent installation is not required.

The system is based around an ABE 055 aluminium rack and a power supply. These are fully enclosed within an outer casing which offers protection from mechanical shocks. The rack can be used either horizontally or vertically. It accepts the standard data acquisition and processing cards (height 6U) used in Vibro-Meter's well-established VM600 Series Condition Monitoring System (CMS).

The front of the rack has space for two sets of VM600 data acquisition and signal processing card pairs (CMC 16 / IOC 16T), in slots 3 and 4, as well as a CPU M / IOC N card pair in slot 0. The cards can be configured from a PC connected to one of the Ethernet or RS232/RS485 serial connectors on the CPU M or IOC N.

The rack has a built-in VME backplane which ensures the electrical interconnection between the power supply, signal processing cards, acquisition cards, input/output cards and CPU M card.

DESCRIPTION (Continued)

The rear of the rack provides access to the IOC input/output cards. These have screw terminal strips which allow the connection of transducers/conditioners, as well as the connection of input and output signals to and from an external control system. An adapter panel, which plugs onto the screw terminal strips, enables banana connectors to be used for data connections.

Front and rear lockable protective covers open fully and fasten into place at the side of the rack when it is in use.

Racks are delivered with a standard configuration. This can be adjusted on-site using the CMS software package (running under Windows).

MECHANICAL DRAWING

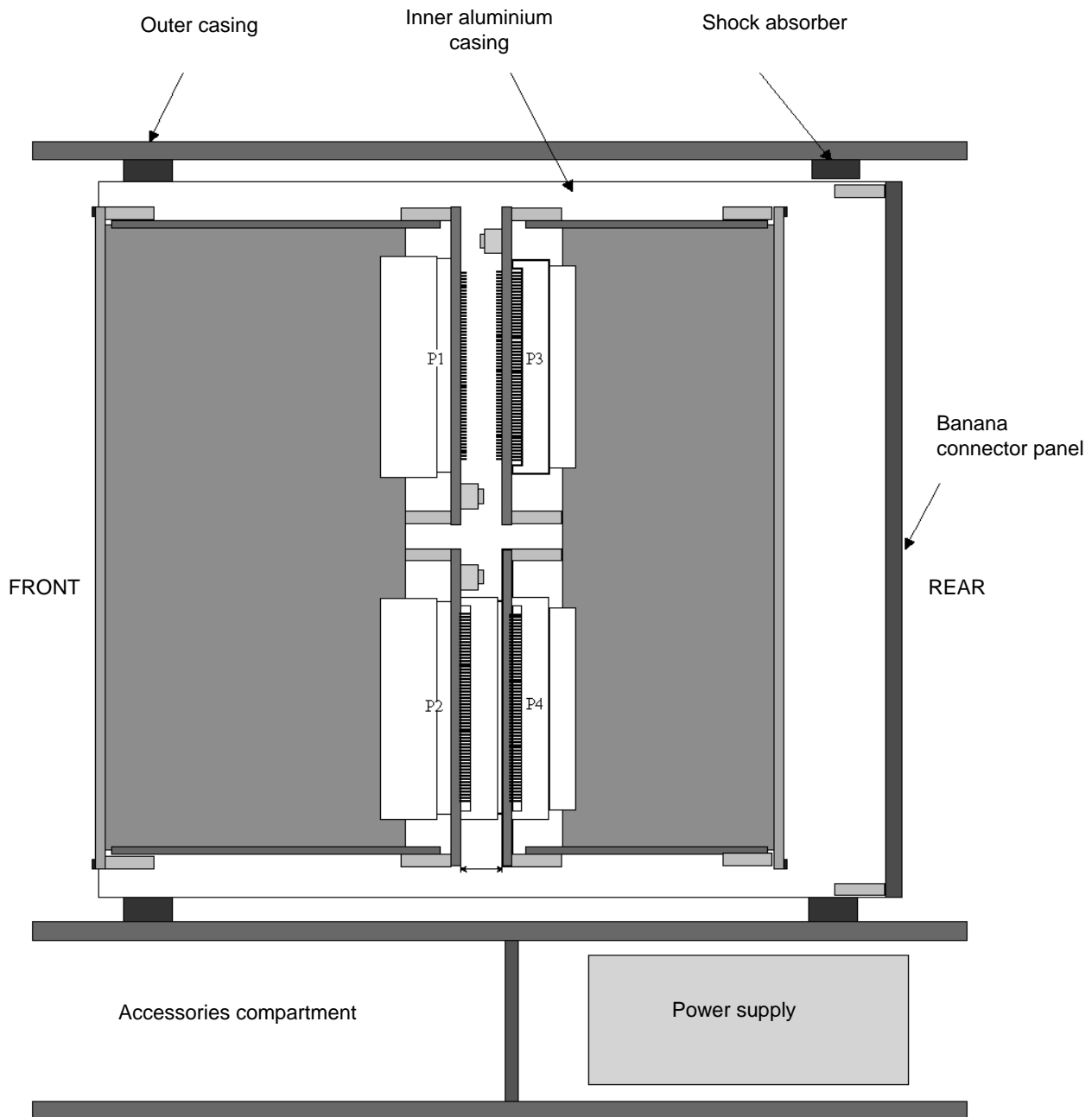


Fig. 1 : Cross-sectional view of Portable CMS

OPERATIONAL VIEWS



(a) With protective case closed for carrying the system



(b) Front view with panel open



(c) Cards installed in the rear cage



(d) Rear view showing installation of panel for banana connectors



(e) Banana connector panels installed in the rear cage



(f) Rack operating on its side with laptop to run CMS software

Fig. 2 : Various views of Portable CMS

BACKPLANE

Note: All dimensions in millimetres unless otherwise specified

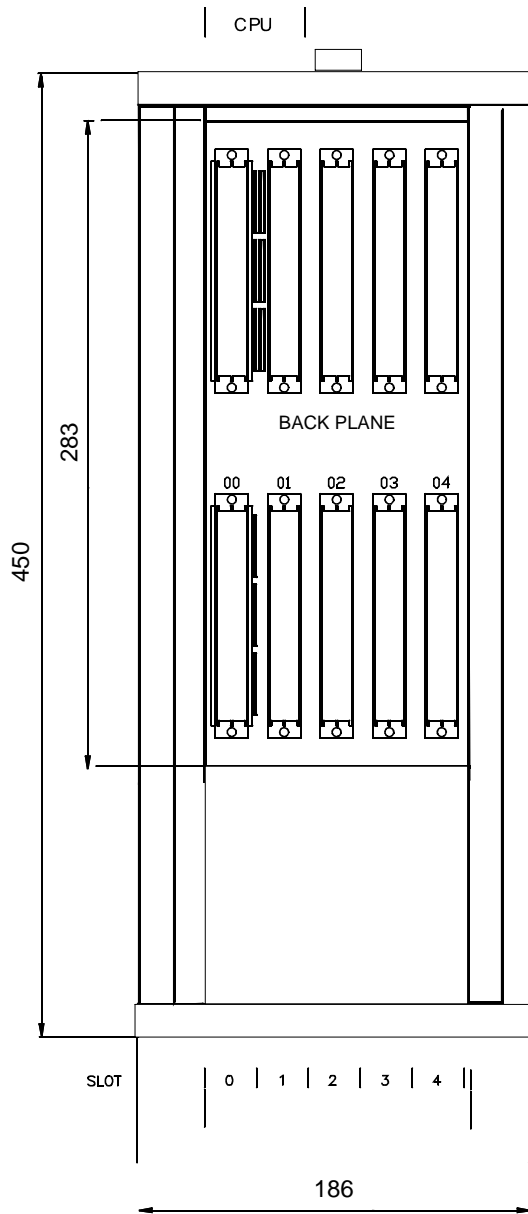


Fig. 3 : Front view of Portable CMS

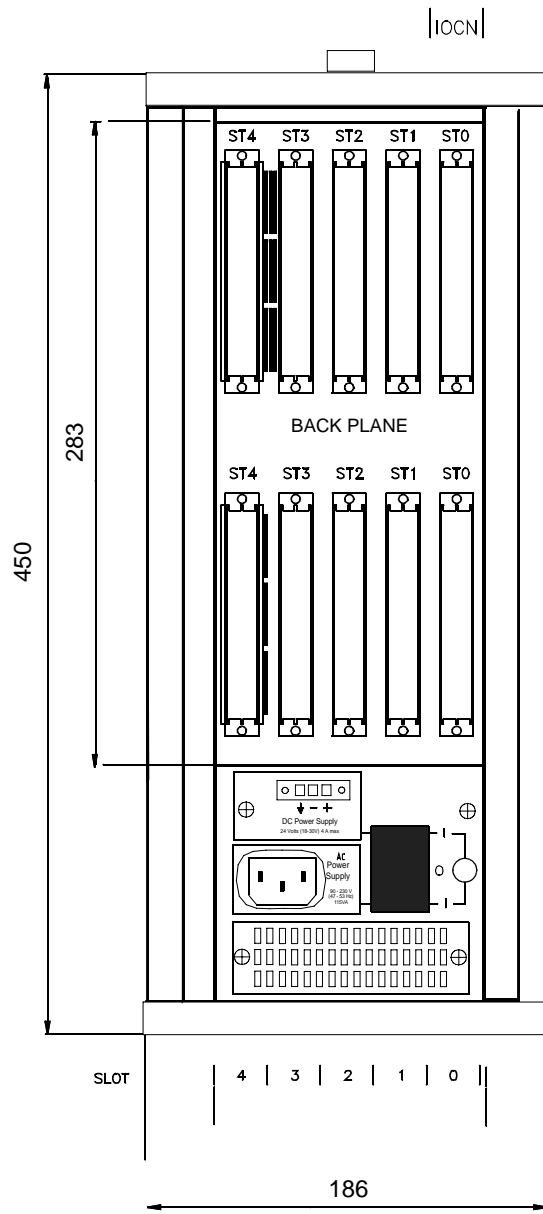


Fig. 4 : Rear view of Portable CMS

GENERAL SPECIFICATIONS

Construction	: Extruded aluminium frame and solid aluminium structural parts. Top and bottom plastic guide strips for plug-in cards. Robust outer casing with hinged front and rear panels for protection in transit. Rubber finish to prevent sliding on smooth surfaces and to protect against mechanical shocks.
Rack weight	: 8 kg (including power supply but without cards)
Mains input	: Rack has a built-in power supply unit. This unit has an AC mains socket and screw terminals for a DC supply.
Power supply (user selectable AC or DC)	
• AC	: 90 to 250 V _{AC} , 45 to 65 Hz
• DC	: 18 to 30 V _{DC}
Power consumption	
• AC	: Max. 125 VA
• DC	: Max. 100 VA Typically 2 A at 24 V _{DC} with 2 card pairs installed
Backplane	: Uses VME bus and dedicated bus for communication between cards. Unused slot positions must be covered with blank panels.
Galvanic separation	: Galvanic separation units (GSI types), if required for accelerometer and proximity systems mounted in explosive atmospheres. These units cannot be supplied by the rack and require an external power supply. They must be mounted outside the rack in a remote housing or in a cubicle.

ENVIRONMENTAL SPECIFICATIONS

According to IEC 68.2 recommendations

Ambient temperature

- *Operation* : -10°C to +65°C
- *Storage* : -20°C to +70°C

Humidity : 90%, non-condensing

Altitude : Max. 3000 m

Vibration (during transportation) : 10 Hz to 150 Hz, 0.15 mm peak, 2 g peak, 6 hours in each direction

Shock (during transportation) : 15 g peak, 11 ms, half-sine pulse

Ingress protection rating : IP 20 in operating mode,
IP 64 in transit or storage mode, i.e. panels closed

ORDERING INFORMATION

Ordering details should be supplied in the following format:

Part Number = VM600P / Code 1 / Code 2 / Code 3 / Code 4

Please specify all codes. A zero (0) should be inserted for options that are not used.

Code Number	Definition	Possible Settings	Meaning
1	Rack type	055	Rack type = ABE 055 (P/N 204-055-000-xxx)
2	CPU M configuration	11X	Standard CPU containing one embedded Ethernet controller. RS-232 or isolated RS-485 serial link available.
		31X	As for "1XX" but with an additional Ethernet submodule (providing redundancy)
		41X	As for "1XX" but with an additional RS-485/422/232 submodule (providing redundancy)
3	Quantity of IOC N cards	0	No IOC N card
		1	One IOC N card
4	Quantity of pairs of CMC 16 + IOC 16T cards (including banana connector panels)	1	One pair of cards
		2	Two pairs of cards

Ordering example:

Part Number = VM600P / 055 / 11X / 1 / 2

In this example, the Portable CMS system uses an ABE 055 type rack. This contains the following:

- a standard CPU M card (with embedded Ethernet controller)
- an IOC N card
- two pairs of CMC 16 + IOC 16T cards

Customized configurations:

The Portable CMS is delivered with a standard configuration (switch settings, etc.). Please contact your local sales office if you require a customized configuration for your particular application.



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