

Rack Power Supply Unit Type RPS 6U

FEATURES

- Power supply unit for VM 600 series racks
- Fully VME compatible
- High performance
- Wide input voltage range
- Overvoltage protection
- Continuous short-circuit-proof
- Minimal derating within the temperature range
- Compact design
- Height 6U
- Supports redundancy
- Conforms to EC standards for EMC



DESCRIPTION

The RPS 6U rack power supply units are designed for use in Vibro-Meter's VM 600 series of machinery protection systems and condition and performance monitoring systems.

The RPS 6U is installed in the front of the ABE 04X rack and connects directly to the rack backplane via two connectors. The unit provides power (+5 V and ± 12 V) for all cards in the rack.

The rack may be powered by a single RPS 6U unit. Optionally, a second unit may be installed to provide redundancy.

Various versions of the RPS 6U exist, enabling the rack to be powered from an AC or a DC supply and allowing various supply voltages to be used.

SPECIFICATIONS

SUPPLY TYPE	DC VERSIONS				AC VERSION
Rated power	300 W				300 W
Rated supply voltage	24 V _{DC}	48 V _{DC}	72 V _{DC}	110 V _{DC}	110 / 230 V _{AC} See Note 1
Output					
Nominal output (U _o nom. / I _o max.)					
• DC output 1	+5 V _{DC} / +35 A				+5 V _{DC} / +35 A
• DC output 2	+12 V _{DC} / +6 A				+12 V _{DC} / +6 A
• DC output 3	-12 V _{DC} / -2 A				-12 V _{DC} / -2 A
Stability of output voltage U _o under full load conditions	≤ ±0.2%				
Ripple (bandwidth 20 MHz)	≤ 50 mVpp				
Output current limitation	35 A (built-in electronic current limitation)				
Output overvoltage protection	5.9 to 6.7 V (factory set)				
Power derating	1% / °C from 60°C to 70°C				
Input					
Input voltage range (U _i nom)	18 to 32 V _{DC}	38.4 to 57.6 V _{DC}	57.6 to 100 V _{DC}	80 to 145 V _{DC}	90 to 264 V _{AC}
Mains frequency variations	Not applicable				48 to 65 Hz
Efficiency	> 70%	> 70%	> 70%	> 70%	> 75%
Environmental conditions					
Operating temperature range	-25°C to +65°C (-13°F to +149°F)				
Storage temperature range	-40°C to +85°C (-40°F to +185°F)				
Humidity (IEC 68-2-3)	≤ 95% non-condensing				
Vibration (IEC 68-2-6)	10 to 2000 Hz, 5 g, 2 h in each direction				
Shock (IEC 68-2-27)	100 g, 6 ms, half-sine pulse				
Safety					
Applicable safety standards	UL 1950, CSA 22.2#234, IEC 950, EN 60950				
Marking	According to CE low voltage directive				
Physical characteristics					
Dimensions	6U / 12TE x 187 mm				
Weight	2.1 kg approx.				
Ordering information					
Ordering number	200-582-200-01h	200-582-300-01h	200-582-400-01h	200-582-600-01h	200-582-500-01h
Note : "Hh" represents the hardware version. "H" increments for major modifications that can affect product interchangeability. "h" increments for minor modifications that have no effect on interchangeability.					

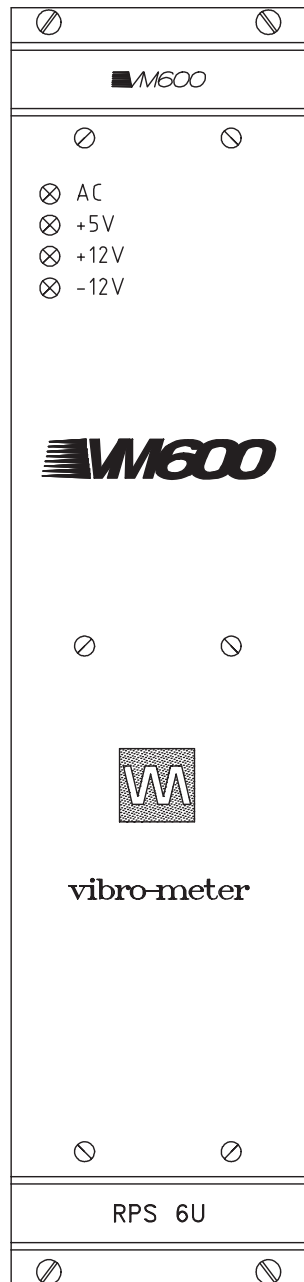
Note 1 : This AC version can also operate on a 178 V_{DC} to 264 V_{DC} supply.

TOLERANCE TO MICRO-CUTS IN POWER SUPPLY

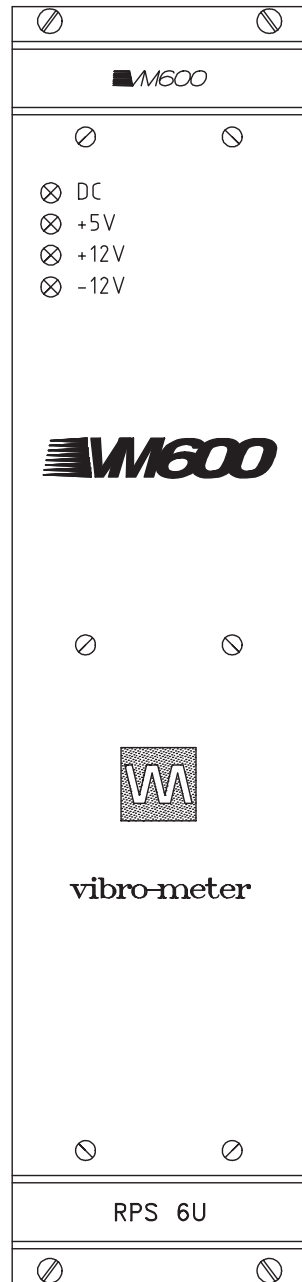
The table below shows the maximum permissible duration of a power cut which will not cause the MPC 4 cards to be reset. This value depends on the number of MPC 4 cards and RPS 6U units installed in the VM 600 rack.

Number of MPC 4 cards in rack	Number of RPS 6U units in VM 600 rack	
	1 unit	2 units
2 cards	190 ms	250 ms
12 cards	10 ms	20 ms

RPS 6U POWER SUPPLY FRONT PANELS

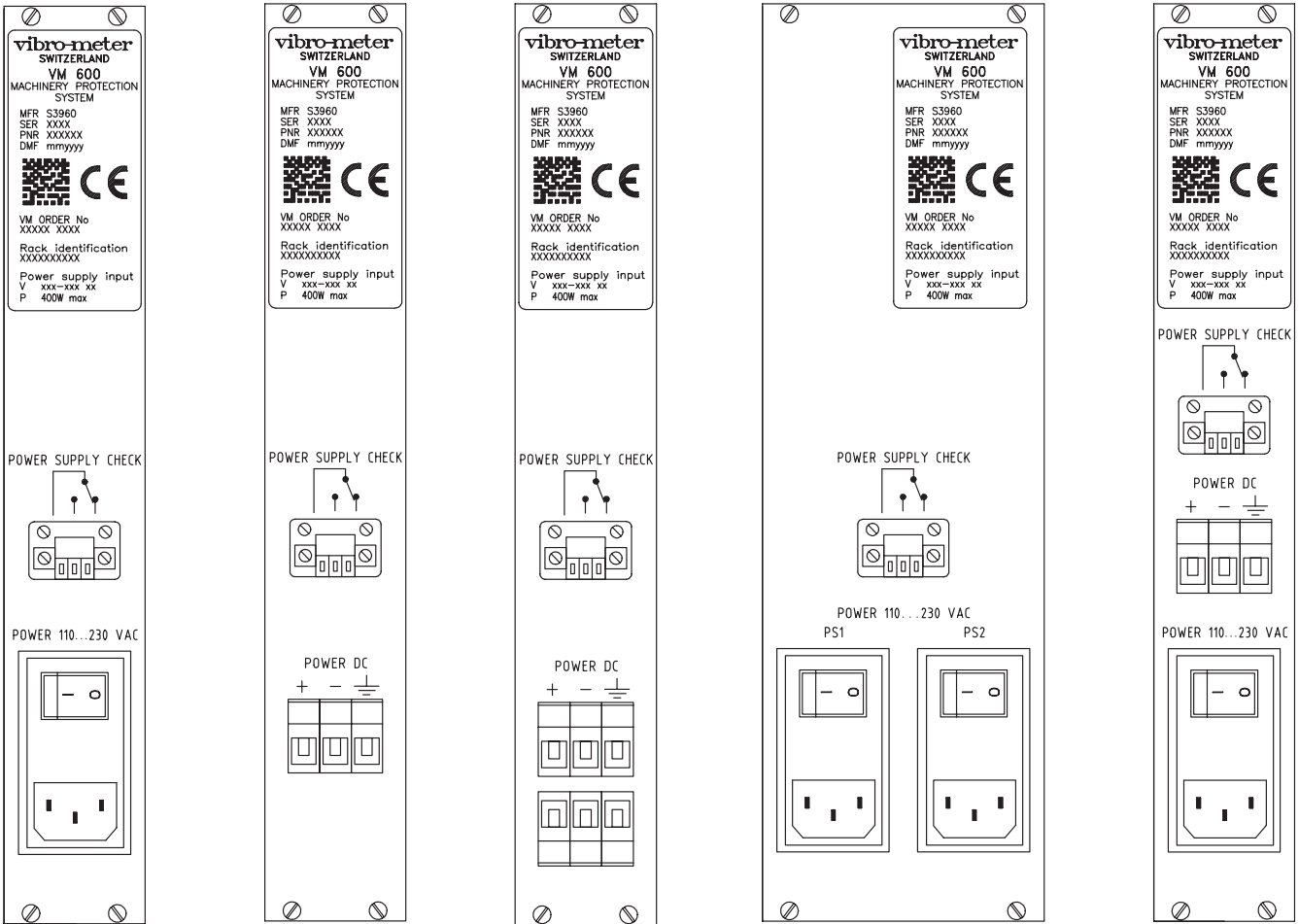


Version for
AC mains supply



Version for
DC mains supply

ASSOCIATED REAR PANELS



(a)
Standard AC version

(b)
Standard DC version

(c)
Special DC version (see Note 2)

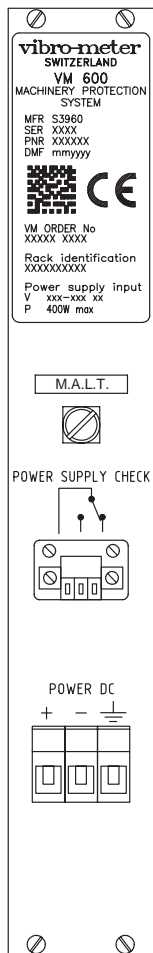
(d)
Special AC version (see Note 3)

(e)
Special AC and DC version (see Note 4)

Notes :

- (1) The "Power Supply Check" output consists of a change-over relay contact.
- (2) This version has two DC screw terminal strips, intended for the connection of two independent DC mains supplies. Both strips are wired to the same points on the rack backplane. This allows the rack to continue operating even if one of the DC mains supplies is defective.
- (3) This version has two AC sockets, intended for the connection of two independent AC mains supplies. Both sockets are independently wired to a switching circuit on the rack backplane. The rack is normally powered by the PS1 AC mains supply. If this supply is defective, the switching circuit allows operation to continue with the PS2 AC mains supply.
- (4) This version has an AC socket and a DC screw terminal strip, intended for the connection of two independent mains supplies. These are wired separately to the backplane's AC and DC inputs, respectively. This allows the rack to continue operating even if one of the mains supplies is defective.

ASSOCIATED REAR PANELS (Cont.)



(f)
DC version
with earth
terminal
(see Note 5)

Notes :

- (5) This version has a standard DC screw terminal strip and a special earth terminal (marked M.A.L.T.).

ORDERING INFORMATION

Rack Power Supply Units

To order please specify the type, designation and ordering number :
(refer to drawings on page 3)

Type	Designation	Ordering Number
RPS 6U AC	Rack power supply unit (auto-ranging), 110 / 230 V _{AC} , 300 W	200-582-500-01h
RPS 6U 24 DC	Rack power supply unit, 24 V _{DC} , 300 W	200-582-200-01h
RPS 6U 48 DC	Rack power supply unit, 48 V _{DC} , 300 W	200-582-300-01h
RPS 6U 72 DC	Rack power supply unit (wide input) Input voltage 57.6 to 100 V _{DC} , 300 W	200-582-400-01h
RPS 6U 110 DC	Rack power supply unit (wide input) Input voltage 80 to 145 V _{DC} , 300 W	200-582-600-01h

Rear Panels

To order please specify the type, designation and ordering number :
(refer to drawings on page 4, references (a) to (e))

Drawing Ref.	Designation	Ordering Number
(a)	Rear panel for AC rack power supply units (110 / 230 V _{AC}), fully equipped with cables	200-582-910-01h
(b)	Rear panel for DC rack power supply units (24 V _{DC} , 48 V _{DC} , 72 V _{DC} , 110 V _{DC}), fully equipped with cables	200-582-920-01h
(c)	Rear panel for DC rack power supply units (24 V _{DC} , 48 V _{DC} , 72 V _{DC} , 110 V _{DC}), having two DC inputs for independent mains supplies, fully equipped with cables	200-582-990-01h
(d)	Rear panel for AC rack power supply units (110 / 230 V _{AC}), having two AC inputs for independent mains supplies, fully equipped with cables and switching circuit	200-582-960-01h
(e)	Rear panel for rack having an AC and a DC rack power supply unit (110 / 230 V _{AC} and 24 V _{DC} , 48 V _{DC} , 72 V _{DC} , 110 V _{DC} respectively), having an AC and a DC input for independent mains supplies, fully equipped with cables	200-582-970-01h
(f)	Rear panel for DC rack power supply units (24 V _{DC} , 48 V _{DC} , 72 V _{DC} , 110 V _{DC}), with special earth terminal (marked M.A.L.T.), fully equipped with cables	200-582-922-01h



In this publication, a dot (.) is used as the decimal separator and thousands are separated by spaces. Example : 12 345.678 90
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