

Specifications

| Model | | PMX18-2A | PMX18-5A | PMX35-1A | PMX35-3A | PMX70-1A | PMX110-0.6A | PMX250-0.25A | PMX350-0.2A | PMX500-0.1A | |
|--|--|---|---|-----------------|-----------------|--------------------|-----------------------------|--------------------|--------------------|--------------------|----------------|
| AC input | | | | | | | | | | | |
| Nominal input rating | | 100 Vac *1, 50 Hz / 60 Hz, single phase | | | | | | | | | |
| Input voltage range | | ± 10 % | | | | | | | | | |
| Input frequency range | | 47 Hz to 63 Hz | | | | | | | | | |
| Inrush current (MAX) *2 | | 50 Amax or less | 60 Amax or less | 45 Amax or less | 60 Amax or less | 65 Amax or less | 55 Amax or less | 40 Amax or less | 55 Amax or less | 40 Amax or less | |
| Power (MAX) *3 | | 150 VA | 310 VA | 150 VA | 310 VA | 230 VA | 210 VA | 210 VA | 230 VA | 170 VA | |
| Output | | | | | | | | | | | |
| Rating | Output voltage | 18.00 V | 18.00 V | 35.00 V | 35.00 V | 70.00 V | 110.0 V | 250.0 V | 350.0 V | 500.0 V | |
| | Output current | 2.000 A | 5.000 A | 1.000 A | 3.000 A | 1.000 A | 0.600 A | 0.250 A | 0.200A | 0.100 A | |
| | Output power | 36 W | 90 W | 35 W | 105 W | 70 W | 66 W | 62.5 W | 70 W | 50 W | |
| Voltage | Setting range | 0 V to 18.90 V | 0 V to 18.90 V | 0 V to 36.75 V | 0 V to 36.75 V | 0 V to 73.5 V | 0 V to 115.5 V | 0 V to 262.5 V | 0 V to 367.5 V | 0 V to 525.0 V | |
| | Setting resolution *4 | 1 mV | | | | 2 mV | | 10mV | | | |
| | Setting accuracy | ± (0.2 % of setting +0.1 % of rating) | | | | | | | | | |
| | Line regulation *5 | ±1 mV | ±1 mV | ±3 mV | ±3 mV | ±5 mV | ±7 mV | ±15 mV | ±25 mV | ±30 mV | |
| | Load regulation *6 | ±2 mV | ±5 mV | ±3 mV | ±4 mV | ±5 mV | ±7 mV | ±15 mV | ±25 mV | ±30 mV | |
| | Transient response *7 | 50 μs | | | | | 100 μs | | | | |
| | Ripple noise (rms) *8 | 0.5 mV | | | | | 1 mV | 2 mV | 3 mV | 5 mV | 10 mV |
| | Rise time *9 | Rated load | 120 ms or less | | | | 150 ms or less | 120 ms or less | 120 ms or less | 150 ms or less | 120 ms or less |
| | | No load | 120 ms or less | | | | 150 ms or less | 120 ms or less | 120 ms or less | 150 ms or less | 120 ms or less |
| | Fall time *10 | Rated load | 50 ms or less | | | | 50 ms or less | 50 ms or less | 50 ms or less | 80 ms or less | 50 ms or less |
| | | No load | 270 ms or less | 320 ms or less | 270 ms or less | 270 ms or less | 270 ms or less | 120 ms or less | 120 ms or less | 220 ms or less | 60 ms or less |
| | Maximum remote sensing compensation voltage(single line) | | 0.6 V | | | | | — | | | |
| Temperature coefficient (TYP) | | 100 ppm /°C | | | | | | | | | |
| Current | Setting range | 0 A to 2.1 A | 0 A to 5.25 A | 0 A to 1.05 A | 0 A to 3.15 A | 0 A to 1.050 A | 0 A to 0.630 A | 0 A to 0.263 A | 0 A to 0.210 A | 0 A to 0.105 A | |
| | Setting resolution *4 | 0.1 mA | | | | | | | | | |
| | Setting accuracy | ± (0.3 % of setting +0.1 % of rating) | | | | | | | | | |
| | Line regulation | ±5 mA | | | | ±2 mA | ±2 mA | ±1 mA | ±1 mA | ±1 mA | |
| | Load regulation | ±5 mA | | | | ±5 mA | ±5 mA | ±5 mA | ±5 mA | ±3 mA | |
| | Ripple noise (rms) *8 | 1 mA | 2 mA | 1 mA | 1 mA | 1 mA | | | | | |
| Temperature coefficient (TYP) | | 200 ppm /°C | | | | | | | | | |
| Display function | | | | | | | | | | | |
| Voltage display | Maximum display | 99.99 (fixed decimal point) | | | | | 999.9 (fixed decimal point) | | | | |
| | Display accuracy *11 | ± (0.5 % of reading +2 digits) | | | | | | | | | |
| Current display | Maximum display | 9.999 (fixed decimal point) | | | | | | | | | |
| | Display accuracy *11 | ± (1 % of reading +5 digits) | | | | | | | | | |
| Operation display | OUTPUT ON / OFF | Output on: OUTPUT LED lights in green.Output off: OUTPUT LED turns off. | | | | | | | | | |
| | CV operation | CV LED lights in green. | | | | | | | | | |
| | CC operation | CC LED lights in red. | | | | | | | | | |
| | Alarm operation | ALARM LED lights in red when a protection function has been activated. | | | | | | | | | |
| | Remote operation | | REMOTE LED lights in green during remote control. | | | | | | | | |
| | | LAN operation | LAN LED lights or blinks depending on the LAN communication status. No fault status: Lights in green.Fault status: Lights in red.Standby status: Lights in orange.WEB identify status: Blinks green. | | | | | | | | |
| Key lock operation | | LOCK LED lights in green when the keys are locked. | | | | | | | | | |
| Preset memory | | When a preset memory entry is being used, the PRESET A, B, or C LED lights in green. | | | | | | | | | |
| Protection functions | | | | | | | | | | | |
| Overvoltage protection (OVP) | Operation | Turns the output off, displays OVP, and lights ALARM | | | | | | | | | |
| | Setting range | 1.8 V to 19.8 V | 1.8 V to 19.8 V | 3.5 V to 38.5 V | 3.5 V to 38.5 V | 7 V to 77.00 V | 11 V to 121.0 V | 25 V to 275.0 V | 35 V to 385.0 V | 50 V to 550.0 V | |
| | Setting accuracy | 10 % to 110 % of the rated output voltage ± (1 % of rating) | | | | | | | | | |
| Overcurrent protection (OCP) | Operation *12 | Turns the output off, displays OCP, and lights ALARM | | | | | | | | | |
| | Setting range | 0.2 A to 2.2 A | 0.5 A to 5.5 A | 0.1 A to 1.1 A | 0.3 A to 3.3 A | 0.100 A to 1.100 A | 0.060 A to 0.660 A | 0.025 A to 0.275 A | 0.020 A to 0.220 A | 0.010 A to 0.110 A | |
| | Setting accuracy | 10 % to 110 % of the rated output current ± (1 % of rating) | | | | | | | | | |
| Overheat protection (OHP) | | Turns the output off, displays OHP, and lights ALARM | | | | | | | | | |
| External Control • Signal output | | | | | | | | | | | |
| Monitor signal output *13, *14 | Voltage monitor (VMON) | At rated voltage output | 10.00 V ±0.1 V | | | | | | | | |
| | | At 0 V output | 0.00 V ±0.1 V | | | | | | | | |
| | Current monitor (IMON) | At rated current output | 10.00 V ±0.1 V | | | | | | | | |
| | | At 0 A output | 0.00 V ±0.1 V | | | | | | | | |
| Status signal output *14, *15 | OUTON STATUS | | Turns on when the output is on | | | | | | | | |
| | CV STATUS | | Turns on during CV operation | | | | | | | | |
| | CC STATUS | | Turns on during CC operation | | | | | | | | |
| | ALM STATUS | | Turns on when an alarm has been activated | | | | | | | | |
| | PWR ON STATUS | | Turns on when the power is turned on | | | | | | | | |
| External control *16 | EXT-V CV CONT (CV external voltage control) | Accuracy | 1 % of rating +10 mV | | | | 1 % of rating | | | | |
| | | | 0 % to 100 % of the rated output voltage in the range of 0 Ω to 10 kΩ. | | | | | | | | |
| | EXT-R CV CONT (CV external resistance control) | Accuracy | 1 % of rating +10 mV | | | | 1 % of rating | | | | |
| | | | 0 % to 100 % of the rated output current in the range of 0 V to 10 V. | | | | | | | | |
| | EXT-V CC CONT (CV external voltage control) | Accuracy | 1 % of rating +5 mV | | | | 1 % of rating | | | | |
| | | | 0 % to 100 % of the rated output current in the range of 0 Ω to 10 kΩ. | | | | | | | | |
| EXT-R CC CONT (CV external resistance control) | Accuracy | 1 % of rating +5 mV | | | | 1 % of rating | | | | | |
| | | Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0 V to 0.5 V) or shortcircuit. | | | | | | | | | |
| Other features | | | | | | | | | | | |
| Preset memory | | Save up to 3 combinations of the voltage and current setting value. | | | | | | | | | |
| Key lock | | Select from the following three modes. Loc1: Locks the operation of all keys except the OUTPUT key and the preset memory A, B, and C keys. Loc2: Locks the operation of all keys except than the OUTPUT key. Loc3: Locks the operation of all keys and the rotary knob. | | | | | | | | | |

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|---|--|--|--------------------------------|--------------------------------|--------------------------------|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|
| Interface | | | | | | | | | | | |
| Common specifications | Software protocol | IEEE Std 488.2-1992 | | | | | | | | | |
| | Command language | Complies with SCPI Specification 1999.0 | | | | | | | | | |
| RS232C | Hardware | Complies with the EIA232D specifications D-SUB9 pin connector (male) *17 Baud rate: 19200 bps fixed, Data length: 8 bits, Stop bits: 1 bit, Parity bit: None, No flow control. | | | | | | | | | |
| | Program message terminator | LF during reception, LF during transmission | | | | | | | | | |
| USB | Hardware | Complies with the USB 2.0 specifications. Baud rate:12 Mbps (full speed), Standard Type B socket | | | | | | | | | |
| | Program message terminator | LF or EOM during reception, LF + EOM during transmission | | | | | | | | | |
| | Device class | Complies with the USBTMC-USB488 device class specifications | | | | | | | | | |
| LAN | Hardware | IEEE 802.3 100Base-TX / 10Base-T Ethernet Complies with LXI Device Core Specification 2011 Rev 1.4 | | | | | | | | | |
| | Communication protocol | IPV4, RJ-45 connector *18 VXI-11, HiSLIP, or SCPI-RAW | | | | | | | | | |
| | Program message terminator | VXI-11 and HiSLIP: LF or END during reception, LF + END during transmission SCPI-RAW: LF during reception, LF during transmission | | | | | | | | | |
| General specifications | | | | | | | | | | | |
| Weight (main unit only) | | Approximately 5 kg (11.02 lbs) | Approximately 6 kg (13.23 lbs) | Approximately 5 kg (11.02 lbs) | Approximately 6 kg (13.23 lbs) | Approximately 6 kg (13.23 lbs) | Approximately 6 kg (13.23 lbs) | Approximately 6 kg (13.23 lbs) | Approximately 6 kg (13.23 lbs) | Approximately 6 kg (13.23 lbs) | |
| Dimensions (mm(inch))(maximum dimensions) | | 107 (4.21") W×124 (4.88")(150 (5.91")) H×315 (12.40")(355 (13.98")) Dmm | | | | | | | | | |
| Environmental conditions | Operating environment | Indoor use, overvoltage category II | | | | | | | | | |
| | Operating temperature / Operating humidity | 0 °C to +40 °C / 20 %rh to 85 %rh (no condensation) (32 °F to +104 °F) | | | | | | | | | |
| | Storage temperature / Storage humidity | -25 °C to +70 °C / 90 %rh or less (no condensation) (-13 °F to +158 °F) | | | | | | | | | |
| Cooling method | | Up to 2000 m | | | | | | | | | |
| Grounding polarity | | Forced air cooling using fan | | | | | | | | | |
| Isolation voltage | | ±70 Vdc | | | | ±550 Vdc | | | | | |
| Withstand voltage | Between input and FG | No abnormalities at 1500 Vac for 1 minute | | | | | | | | | |
| | Between input and output | No abnormalities at 2100 Vac for 1 minute | | | | | | | | | |
| | Between output and FG | No abnormalities at 1600 Vac for 1 minute | | | | No abnormalities at 2000 Vac for 1 minute | | | | | |
| Insulation resistance | Between input and FG | 500 Vdc, 30 MΩ or more | | | | 1000 Vdc, 30 MΩ or more | | | | | |
| | Between input and output | | | | | | | | | | |
| | Between output and FG | | | | | | | | | | |
| Safety *19 | | Complies with the requirements of the following directive and standard. Low Voltage Directive 2014/35/EU EN 61010-1 (Class I *20, Pollution degree 2) | | | | | | | | | |
| Electromagnetic compatibility *19 | | Complies with the requirements of the following directive and standards. EMC Directive 2014/30/EU EN 61326-1 (Class A *21), EN 55011 (Class A *21, Group 1 *22), EN 61000-3-2, EN 61000-3-3 Applicable under the following conditions The maximum length of all cabling and wiring connected to the PMX-A must be less than 3 m. | | | | | | | | | |
| Accessories | | Power cord: 1 pc (Approximately 2.5 m). Packing list: 1 copy. Quick reference: Japanese:1 copy, English: 1 copy, Chinese: 1 copy. Safety precautions: 1 copy. CD-ROM: 1 disc. | | | | | | | | | |

Unless specified otherwise, the specifications are for the following settings and conditions.

- Loads are pure resistive loads.
- The warm-up time is 30 minutes (with current flowing).
- Negative output is connected to the chassis terminal using the short bar.
- Values indicated by "TYP" are typical values. They are not guaranteed performance values.
- Values indicated by "rating" are rated values.
- Values indicated by "setting" are setting values.
- Values indicated by "reading" are readout values.
- Rated load and no load are defined as follows:
In constant-voltage mode (when the output current is set to a value greater than or equal to the maximum output current with rated output voltage)
Rated load: Refers to a resistive load that, when the rated output voltage is applied, makes the flowing current 95 % to 100 % of the maximum output current with rated output voltage.
No load: Refers to a load through which no output current flows. In other words, refers to an open load (no load being connected).
In constant-current mode (when the output voltage is set to a value greater than or equal to the maximum output voltage with rated output current)
Rated load: Refers to a resistive load that, when the rated output current flows, makes the voltage drop to 95 % to 100 % of the maximum output voltage with rated output current.
Including the voltage drop in the load cables, the PMX-A output voltage must not exceed the maximum output voltage with rated output current.
No load: Refers to a resistive load that, when the rated output current flows, makes the voltage drop to 10 % of the maximum output voltage with rated output current or 1 V whichever is higher.

- *1. 117 Vac, 200 Vac, 217 Vac and 234 Vac are factory options.
- *2. Excludes the charge current component that flows through the capacitor of the internal EMC filter circuit immediately after the POWER switch is turned on (for approximately 1 ms).
- *3. With the rated load.
- *4. When the output is on, hold down SHIFT and turn the VOLTAGE or CURRENT knob to change the value at 1/10th the resolution of the minimum digit.
When the output is off, hold down SHIFT and turn the VOLTAGE or CURRENT knob to change the value at increments of 1 in the minimum digit.
If you are setting the value through the communication interface, you can set the value at 1/10th the resolution of the minimum digit, regardless of whether the output is on.
- *5. 100 Vac to 90 Vac or 100 Vac to 110 Vac, rated load.
- *6. The amount of change that occurs when the load is changed from no load to rated load with rated output voltage. The value is measured at the sensing point.
- *7. The amount of time required for the output voltage to return to a value within "rated output voltage±(0.05 % + 10 mV)." When the load current is changed from 10 % to 100 % of the rated output current
- *8. When the measurement frequency bandwidth is 5 Hz to 1 MHz.
- *9. The time it takes for the output voltage to rise from 10 % to 90 % of the rating when the output is turned on.
- *10. The time it takes for the output voltage to fall from 90 % to 10 % of the rating when the output is turned off.
- *11. Ambient temperature at 23 °C ±5 °C.
- *12. This does not protect against the discharge current peak that is generated from the capacitors inside the PMX-A output section when the load is changed suddenly.
- *13. When remote sensing is used, connect the monitor signal's common line to the negative S terminal of the sensing terminal. When remote sensing is not used, connect it to the negative output terminal.
- *14. J1 connector on the rear panel.
- *15. Photocoupler open collector output; maximum voltage 30 V, maximum current (sink) 8 mA; isolated from the output and control circuits; status commons are floating (isolation voltage or less); and status signals are not mutually isolated.
- *16. J1 connector on the rear panel.
- *17. Use a cross cable (null modem cable).
- *18. Category 5; use a straight cable.
- *19. Limited to products that have the CE mark on their panels. Does not apply to specially ordered or modified PMX-As.
- *20. This is a Class I equipment. Be sure to ground this product's protective conductor terminal. The safety of this product is only guaranteed when the product is properly grounded.
- *21. This is a Class A equipment. This product is intended for use in an industrial environment. This product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.
- *22. This is a Group 1 equipment. This product does not generate and/or use intentionally radio-frequency energy, in the form of electromagnetic radiation, inductive and/or capacitive coupling, for the treatment of material or inspection/analysis purpose.