

Dual-Tracking Multi-Output DC Power Supplies PMR Series

Possible to change positive and negative voltage at the same ratio. Five models are available for Dual,Triple,Quadruple output. Remote control function Memory function





The PMR Series is a multi-output, constant voltage/constant current regulated DC power supply with a dual-tracking function. It uses a series regulator system to generate stable outputs with low noise. Moreover, it is compatible with various external controls.

Features

- Dual-tracking function capable of varying positive and negative voltages simultaneously
- Uncluttered, easy-to-use operation panel
- Preset memory function (three memories) for ease of use and convenience, even in manual operation.
- High-resolution voltage/current display (4-digit display)
- TP-BUS (serial communications), maximum control distance: 200 m
- External analog remote control
- Five models with 2, 3, or 4 outputs

Model Name

| PMR18-2.5DU | Dual Output |
|-------------|------------------|
| PMR35-1.2DU | Dual Output |
| PMR18-1.3TR | Triple Output |
| PMR25-1TR | Triple Output |
| PMR24-1QU | Quadruple Output |
| | |

For GPIB control (in combination with an optionally available PIA4830), it is provided with the TP-BUS that allows a system to be built by simple connections. It can be widely used as a power supply for testing LCDs, PDPs, and other devices.

Rear panel

Items Common to All Models



1 TP-BUS Terminal 2 Analog remote control terminal ③AC INPUT Fuse Holder④AC INPUT Terminal

Computer Control

The PMR Series power supplies can be controlled using an optional PIA4800 Series power supply controller. Connecting a PIA4800 Series power supply controller via TP-BUS allows easy remote control at a maximum distance of 200 m. This allows you to control the following.

- Setting output voltage/current of each channel
- Reading back output voltage/current of each channel
- Turning outputs on/off
- Specifying output channel number/query
- Specifying displayed output channel number
- Panel lock on/off

Example of connection

The use of one PIA4830 allows a maximum of 31 sets of PMR series power supplies to be controlled.



For more information on the PIA4800 Series, see the separate catalog for PIA4800 Series Power Supply Controllers.

External Analog Control

The PMR Series is equipped with external analog input as standard, allowing the outputs to be directly controlled from a test jig or other devices.



Specifications

| Specifications | | Οι | ıtput | Rij | pple | Line Re | gulation | Load Re | gulation | Power Source | Power Consumption | Weight |
|----------------|------------|----------|-----------|-------------|-------------|-----------|-----------|-----------|------------|----------------------|-------------------|---------|
| | | CV | CC | CV | CC | CV | CC | CV | CC | AC | Approx. | Approx. |
| Model | | V | А | mVrms | mArms | mV | mA | mV | mA | V±10% | VA | kg |
| PMR18-2.5DU | OUTPUT CH1 | 0 to +18 | 0 to +2.5 | 0.5 or less | 1.5 or less | Within ±1 | Within ±2 | Within ±2 | Within ±5 | | | |
| | OUTPUT CH2 | 0 to -18 | 0 to -2.5 | 0.5 or less | 1.5 or less | Within ±1 | Within ±2 | Within ±2 | Within ±5 | | | |
| PMR35-1.2DU | OUTPUT CH1 | 0 to +35 | 0 to +1.2 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | | | |
| | OUTPUT CH2 | 0 to -35 | 0 to -1.2 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | | | |
| PMR18-1.3TR | OUTPUT CH1 | 0 to +18 | 0 to +1.3 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | 90V-110V(1¢) | | |
| | OUTPUT CH2 | 0 to -18 | 0 to -1.3 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | 106V-125V(1¢) | | |
| | OUTPUT CH3 | 0 to +6 | 0 to +5 | 0.5 or less | 4 or less | Within ±2 | Within ±4 | Within ±5 | Within ±10 | 180V-220V(1¢) | 280 | 6.5 |
| PMR25-1TR | OUTPUT CH1 | 0 to +25 | 0 to +1 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | 211V-250V(1¢) | | |
| | OUTPUT CH2 | 0 to -25 | 0 to -1 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | Selectable using the | | |
| | OUTPUT CH3 | 0 to +6 | 0 to +5 | 0.5 or less | 4 or less | Within ±2 | Within ±4 | Within ±5 | Within ±10 | switch at the bottom | | |
| PMR24-1QU | OUTPUT CH1 | 0 to +24 | 0 to +1 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | 50/60Hz | | |
| | OUTPUT CH2 | 0 to -24 | 0 to -1 | 0.5 or less | 1.5 or less | Within ±2 | Within ±2 | Within ±2 | Within ±5 | | | |
| | OUTPUT CH3 | 0 to +12 | 0 to +1.5 | 0.5 or less | 1.5 or less | Within ±1 | Within ±2 | Within ±2 | Within ±5 | | | |
| | OUTPUT CH4 | 0 to -12 | 0 to -1.5 | 0.5 or less | 1.5 or less | Within ±1 | Within ±2 | Within ±2 | Within ±5 | | | |

Unless otherwise specified, the specifications are based on the following conditions: pure resistive load, measurement at the output terminals, COM grounding (output 3 of PMR-TR is negative grounded), and use of the unit after a 30-minute warm-up.

Specifications

| Constant-voltage temperature coefficient | 100 ppm/°C or less | 1.5 k |
|--|---|---|
| Constant-current temperature coefficient | 300 ppm/°C or less | ■ EMC (Complied with the following standards) |
| Transient response | 50 µs, typical | |
| Meter indication | Four-digit display for both voltage and | IEC61326-1:1997-03 / A1:1998-05 Electr |
| | current, maximum indication: 99.99 | Measu |
| Voltmeter | Accuracy: | Use - |
| _ | ±(0.15% rdg + 20 mV)(OUTPUT CH1.2.4 | |
| | | Radiated EmissionsClass |
| | CH3 of PMR24-1OU) | Conducted Emissions |
| | +(0.2% rdg + 5mV)(OUTPUT CH3) | IEC61000-4-2:1995-01 / A1:1998-01 Electr |
| | Perclution: | IEC61000-4-3:1905-02 Radia |
| | 10 mV (OUTDUT CH1 2 4 CH2 of | electro |
| | DMD24 10U) | IEC61000 4 4:1005 01 Electr |
| | PMR24-IQU) | IEC01000-4-4:1993-01Electr |
| | Imv (OUTPUT CH3) | IEC61000-4-5:1995-02Surge |
| Ammeter | Accuracy: | IEC61000-4-6:1996-04 Condu |
| | ±(0.3% rdg.+ 5 mA)(OUTPUT CH1,2,4) | IEC61000-4-11:1994-06 Voltag |
| | $\pm (0.3\% \text{ rdg.} + 2 \text{ mA})(\text{OUTPUT CH1 of})$ | voltag |
| | PMR24-1QU) | ■ Safety (Complied with the following standards |
| | ±(0.4% rdg.+ 5 mA)(OUTPUT CH3) | |
| | ±(0.3% rdg.+ 5 mA)(OUTPUT CH3 of | IEC61010-1:1990-09 / A2:1995-07 Safety |
| | PMR24-1QU) | Eauip |
| | Resolution: 1 mA | and La |
| Protective circuits | Output fuse: provided for each output | PMR |
| Totocive circuits | Input fuse: 4 A 250 V | conne |
| | Thermal fuse: 126°C | overv |
| | (inside the newer transformer) | Class |
| | (Inside the power transformer) | Class |
| | Thermal culout: 95°C | |
| | (on pass-transistor heat sink) | • Operating ambient temperature/numidity 0 to + |
| Output ON/OFF | All outputs are turned ON/OFF | |
| | Simultaneously. | Cooling system |
| Tracking control | Outputs 1 and 2 | Dimensions 142.5V |
| Tracking operation ON/OFF | Operable | |
| Memory function | Three memories (for storing setup | |
| | voltage and current values of all | |
| | outputs) | |
| Lock function | The front panel switches and dial, or | Rack Mount Options |
| | the dial function is inactivated. | |
| OHP alarm signal output | Output with a photocoupler | 142.5 MAX20 |
| Grounding | Positive, COM, or negative | |
| | grounding possible | |
| Common | Common to all output | |
| common | (Note that output 3 of the PMP TP | |
| | (Note that output 5 of the FMR-1R | |
| T 1 / X7 1/ / 1 | type is independent.) | |
| Isolation Voltage to ground | ±250 VDC | I |
| Insulation resistance | Between the primary input and the chassis | |
| | $30 \text{ M}\Omega$ or more at 500VDC | |
| | Between the primary input and each | |
| | output | |
| | $30 \text{ M}\Omega$ or more at 500 VDC | |
| | Between each output and the chassis | |
| | 20 M Ω or more at 500 VDC | |
| Withstand voltage | Between the primary input and the chassis | |
| | 1.5 kV AC No abnormality | |
| | for one minute | |
| | Between the primary input and each output | Blank panel KBP3-3 Rack adapter KRA150 Blan |
| | between the primary input and each output | |

..... Electrical Equipment for Measurement, Control and Laboratory Use - EMC requirementsClass A Class A Electrostatic discharge Radiated, radio-frequency, electromagnetic field Electrical fast transient/Burst Surge Conducted disturbances Voltage dips, short interruptions and voltage variations standards) Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use PMR is designed so that it is connected to a power supply of overvoltage category I and II as Class I equipment in environment of pollution degree 2. ty ..0 to +40°C, 10 to 80% R.H. (no condensation) Forced air cooling 142.5W × 124 (160)H × 350 (380) mmD

1.5 kV AC,No abnormality for one minute



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