



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



A multi-output system in a simple way with TP-BUS

Dual-Tracking Multi-Output DC Power Supply PMR Series



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.

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.

Features

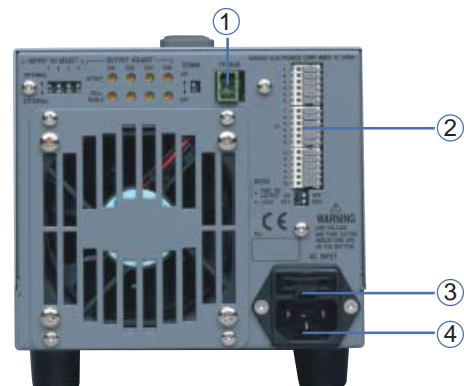
- Dual-tracking function capable of varying positive and negative voltages simultaneously
- Uncluttered, easy-to-use operation panel
- Preset memory function (three memories) for ease of use and convenience, even in manual operation.
- High-resolution voltage/current display (4-digit display)
- TP-BUS (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

Rear panel

Items Common to All Models



- ① TP-BUS Terminal
- ② Analog remote control terminal
- ③ AC INPUT Fuse Holder
- ④ AC INPUT Terminal

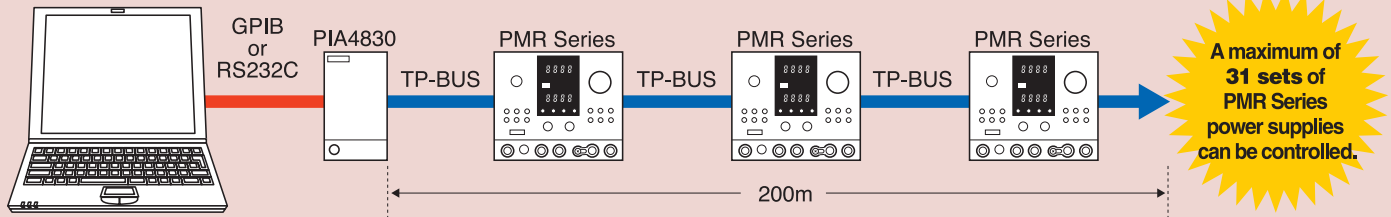
Computer Control

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

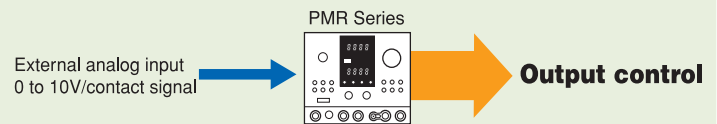
The use of one PIA4830 allows a maximum of 31 sets of PMR series power supplies to be controlled.



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		Output		Ripple		Line Regulation		Load Regulation		Power Source	Power Consumption	Weight
		CV	CC	CV	CC	CV	CC	CV	CC	AC	Approx.	Approx.
Model		V	A	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	90V-110V(1φ) 106V-125V(1φ) 180V-220V(1φ) 211V-250V(1φ) 50/60Hz	280	6.5
	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			
	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			
	OUTPUT CH3	0 to +6	0 to +5	0.5 or less	4 or less	Within ±2	Within ±4	Within ±5	Within ±10			
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			
	OUTPUT CH2	0 to -25	0 to -1	0.5 or less	1.5 or less	Within ±2	Within ±2	Within ±2	Within ±5			
	OUTPUT CH3	0 to +6	0 to +5	0.5 or less	4 or less	Within ±2	Within ±4	Within ±5	Within ±10			
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			
	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			

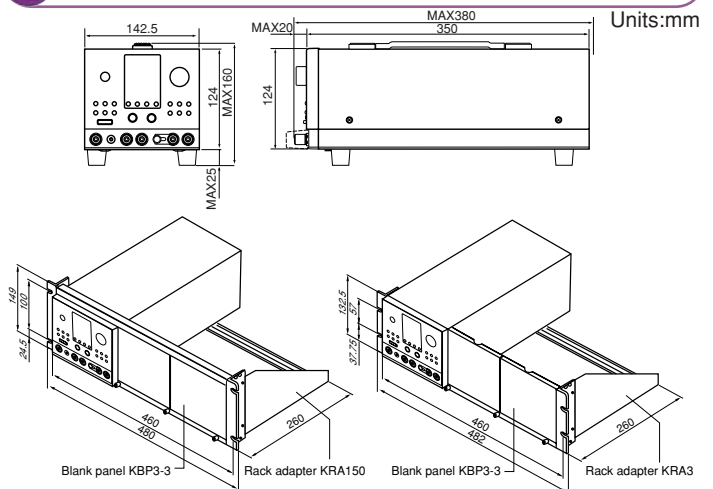
Unless otherwise specified, the specifications are based on the following conditions: pure resistive load, measurement at the output terminals, COM grounding (output 3 of PMR-TR is negative grounded), and use of the unit after a 30-minute warm-up.

Specifications

- Constant-voltage temperature coefficient .. 100 ppm/°C or less
- Constant-current temperature coefficient .. 300 ppm/°C or less
- Transient response 50 μs, typical
- Meter indication Four-digit display for both voltage and current, maximum indication: 99.99
- Voltmeter..... Accuracy: ±(0.15% rdg + 20 mV)(OUTPUT CH1,2,4 CH3 of PMR24-1QU) ±(0.2% rdg.+ 5mV)(OUTPUT CH3) Resolution: 10 mV (OUTPUT CH1,2,4,CH3 of PMR24-1QU) 1mV (OUTPUT CH3)
- Ammeter Accuracy: ±(0.3% rdg.+ 5 mA)(OUTPUT CH1,2,4) ±(0.3% rdg.+ 2 mA)(OUTPUT CH1 of PMR24-1QU) ±(0.4% rdg.+ 5 mA)(OUTPUT CH3) ±(0.3% rdg.+ 5 mA)(OUTPUT CH3 of PMR24-1QU) Resolution: 1 mA
- Protective circuits Output fuse: provided for each output Input fuse: 4 A, 250 V Thermal fuse: 126°C (inside the power transformer) Thermal cutout: 95°C (on pass-transistor heat sink)
- Output ON/OFF All outputs are turned ON/OFF Simultaneously.
- Tracking control Outputs 1 and 2
- 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 the dial function is inactivated.
- OHP alarm signal output Output with a photocoupler
- Grounding Positive, COM, or negative grounding possible.
- Common Common to all output (Note that output 3 of the PMR-TR type is independent.)
- Isolation Voltage to ground ±250 VDC
- Insulation resistance Between the primary input and the chassis 30 MΩ or more at 500VDC Between the primary input and each output 30 MΩ or more at 500 VDC Between each output and the chassis 20 MΩ 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

- 1.5 kV AC, No abnormality for one minute
- EMC (Complied with the following standards)
 - IEC61326-1:1997-03 / A1:1998-05 Electrical Equipment for Measurement, Control and Laboratory Use - EMC requirements
 - Radiated Emissions Class A
 - Conducted Emissions Class A
 - IEC61000-4-2:1995-01 / A1:1998-01 Electrostatic discharge
 - IEC61000-4-3:1995-02 Radiated, radio-frequency, electromagnetic field
 - IEC61000-4-4:1995-01 Electrical fast transient/Burst
 - IEC61000-4-5:1995-02 Surge
 - IEC61000-4-6:1996-04 Conducted disturbances
 - IEC61000-4-11:1994-06 Voltage dips, short interruptions and voltage variations
- Safety (Complied with the following standards)
 - IEC61010-1:1990-09 / A2:1995-07 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.
- Operating ambient temperature/humidity .. 0 to +40°C, 10 to 80% R.H. (no condensation)
- Cooling system Forced air cooling
- Dimensions 142.5W × 124 (160)H × 350 (380) mmD

Rack Mount Options



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