



Datasheet

Fanless Multi-Range D.C. Power Supply

Stock number : 180-4806 **RSFR-100L** 180-4808 **RSFR-100M**
180-4807 **RSFR-100L+(LAN/GPIB)** 180-4809 **RSFR-100M+(LAN/GPIB)**

EN



FEATURES

- Constant Power Output for Fivefold Multi-Range(V&I) Operation
- Natural Convection Cooling Design (Fanless Structure)
- Preset Memory Function
- Output ON/OFF Delay Function
- CV, CC Priority Mode
- Adjustable Slew Rate For Voltage and Current
- Bleeder Circuit Control
- Protection : OVP, OCP, AC FAIL and OTP
- Support Front Panel and Rear Panel Output
- Built-in USB and RS-232/485 Interface Optional LAN+GPIB
- Web Server Monitoring and Control
- External Analog Control and Monitor Function
- Remote Sensing Function

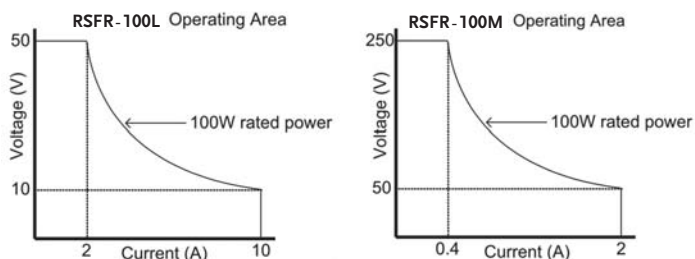
The RSFR-100 series, a small and high-performance programmable D.C. power supply, adopts natural convection design to dissipate heat. The fanless structure allows users to focus on their experiments and tests in a quiet environment. Fanless power supply will not suck in dust and foreign objects, therefore, RSFR-100 series has a longer life cycle compared with that of power supplies with fan.

The RSFR-100 series is a power supply with a five-fold rated power that allows users to self-define voltage and current under rated power conditions so as to satisfy them with wider voltage and current operational ranges. RSFR-100 series, with rated 100 W, provides two models: RSFR-100L- maximum output voltage of 50 V (at 2 A) or maximum output current of 10 A (at 10 V); RSFR- 100M- maximum output voltage of 250 V (at 0.4 A) or maximum output current of 2 A (at 50 V).

The RSFR-100 series provides front and rear panel output terminals. The front panel output terminal helps users shorten test lead replacement time while conducting adjustment on front panel's function keys. The rear panel output terminal facilitates an easy wiring operation for rackmount assembly. 3U height, 70 mm width and 2.5 KG in weight have greatly elevated RSFR-100 series portability. Furthermore, the multi-drop mode allows users to control up to 31 RSFR-100 series without using switch/Hub that help users save the equipment cost.

The LAN interface for RSFR-100 is Ethernet port. RSFR-100 also has a built-in web server and intuitive user interface. Users, via general browsers including Internet Explorer, Mozilla Firefox or Android cellular phones, can monitor RSFR-100's test and measurement anywhere. Users not only can remotely monitor RSFR-100 via internet, but also remotely observe and adjust their operating RSFR-100s in the lab from your home. The outputs of RSFR-100 series can be monitored including OVP, OCP, UVL; and the system information can be checked such as unit's serial number, firmware edition and internet setting. Users can remotely adjust RSFR-100 settings, including output voltage/current, the slew rate for voltage/current, Bleeder circuit control, OCP, delayed time for output voltage and Buzzer settings.

The RSFR-100 series provides special functionalities to meet test requirements for different load's characteristics. The CC priority mode can be applied for DUTs with diode characteristics to prevent DUT from being damaged by inrush current. A slow rise time for voltage can also protect DUT from inrush current, especially for tests on capacitive load. When power is off or load is disconnected, the activation of Bleeder circuit control will allow the bleeder resistor to consume filter capacitor's electricity. Without the bleed resistor, power supply's filter capacitor may still have electricity that is a potential hazard. For automatic testing equipment systems, the bleeder resistor allows RSFR-100 series to rapidly discharge to prepare itself for the next operation.



Model	RSFR-100L	RSFR-100M
Output Channel	1	1
Output Voltage	0~ 50 V	0~ 250 V
Output Current	0~ 10 A	0~ 2 A
Rated Power	100 W	100 W



SPECIFICATIONS

	Model	RSFR-100L	RSFR-100M
OUTPUT RATING	Rated Output Voltage	50 V	250 V
	Rated Output Current	10 A	2 A
	Rated Output Power	100 W	100 W
REGULATION(CV)	Load Regulation (*2)	10 mV	33 mV
	Line Regulation (*1)	3 mV	5 mV
REGULATION(CC)	Load Regulation (*9)	10 mA	3.2 mA
	Line Regulation (*1)	8 mA	1.2 mA
RIPPLE & NOISE (*3)	Vp-p (*4)	50 mV	150 mV
	Vr.m.s. (*5)	4 mV	15 mV
	A r.m.s.	10 mA	2 mA
PROGRAMMING ACCURACY	Voltage	0.1% of setting +	40 mV
	Current	0.2% of setting +	20 mA
MEASUREMENT ACCURACY	Voltage	0.1% of reading +	40 mV
	Current	0.2% of reading +	20 mA
RESPONSE TIME	Rise Time (*6)	Rated load	50 ms
	Fall Time (*7)	Rated load	100 ms
		No load	500 ms
	Transient Response Time (*8)		1.5 ms
PROGRAMMING RESOLUTION	Voltage	2 mV	10 mV
	Current	1 mA	0.1 mA
MEASUREMENT RESOLUTION	Voltage	2 mV	10 mV
	Current	1 mA	0.1 mA
PROTECTION FUNCTION	Over Voltage Protection (OVP)	Setting range	5~55 V
	Over Current Protection (OCP)	Setting range	1~11 A
	Under Voltage Limit (UVL)	Setting range	0~52.5 V
	Over Temperature Protection (OTP)	Operation	Turn the output off.
	Low AC Input Protection (AC-Fail)	Operation	Turn the output off.
	Power Limit (Power Limit)	Operation	Turn the output off.
FRONT PANEL DISPLAY ACCURACY, 4 DIGITS	Voltage	0.1% of reading +	40 mV
	Current	0.2% of reading +	20 mA
ENVIRONMENT CONDITION	Operating Temperature	0 °C to 40 °C	
	Storage Temperature	-20 °C to 70 °C	
	Operating Humidity	20% to 80% RH; No condensation	
	Storage Humidity	20% to 85% RH; No condensation	
REARBACK TEMP. COEFFICIENT (After A 30 Minute Warm-up)	Voltage	100ppm/°C	
	Current	200ppm/°C	
OTHER	Analog Control	Yes	
	Interface	USB, RS-232/RS-485; Factory option: LAN/GPIB	
	AC Input	85~265VAC, 47~63Hz, single phase	
DIMENSIONS & WEIGHT	70(W)x124(H)x300(D)mm; Approx. 2.5 kg		

- Notes: *1: At 85 ~ 132Vac or 170 ~ 265Vac, constant load.
 *2: From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.
 *3: Measure with JEITA RC-9131B (1:1) probe
 *4: Measurement frequency bandwidth is 10Hz to 20MHz.
 *5: Measurement frequency bandwidth is 5Hz to 1MHz.
 *6: From 10%~90% of rated output voltage, with rated resistive load.
 *7: From 90%~10% of rated output voltage, with rated resistive load.
 *8: Time for output voltage to recover within 0.1% + 10mV of its rated output for a load change from 50 to 100% of its rated output current.
 *9: For load voltage change, equal to the unit voltage rating, constant input voltage.

RSFR-100 Series Fanless Multi-Range D.C. Power Supply

RSFR-100□ - GL - GTL-258

Model: L : 0-50V/10A/100W
M : 0-250V/2A/100W

Cable Options: GTL-258 : A GPIB cable including 25 pins Micro-D connector
PSU-232 : An RS-232 cable including RJ-45 connector
PSU-485 : An RS-485 cable including RJ-45 connector
GTL-246 : A USB cable for TypeA-TypeB connectors
None

Interface Options: □ : USB (Type B) & RS-232/RS-485 (RJ-45 connector) as default
GL : LAN & GPIB (25 pins Micro-D connector)

ORDERING INFORMATION

RSFR-100L Fanless Multi-Range D.C. Power Supply
RSFR-100M Fanless Multi-Range D.C. Power Supply

ACCESSORIES

CD (User Manual, Programming manual) x 1, Power cord, GTL-134 test lead, Accessory Packages, GTL-104A test lead (for RSFR-100L only), GTL-105A test lead (for RSFR-100M only)

OPTIONAL ASSESSORIES

GTL-258 GPIB Cable, 2000mm
 PSU-232 RS-232 Cable with DB9 Connector Kit
 PSU-485 RS-485 Cable with DB9 Connector Kit
 GTL-246 USB Cable (USB 2.0 Type A-Type B Cable)
 GRA-431-J-100/200 Rack mount adapter (JIS) with AC 100V/200V
 GRA-431-E-100/200 Rack mount adapter (EIA) with AC 100V/200V
 PFR-GL LAN+GPIB interface



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