ET5410A+ / ET5420A+ / ET5411A+ / ET5409A+ / ET5408A+

ET54A+ Series Programmable DC Electronic Load



OVERVIEW

The ET54A+ series programmable DC electronic loads provide 1 mV / 1 mA high resolution and precision with superior performance. The series is widely utilized in chargers, switching power supplies, linear power supplies, batteries, and R&D testing environments. Five models cover the common bench requirements: the single-channel ET5410A+ (400 W, 0–150 V / 0–40 A), the dual-channel ET5420A+ (400 W, 0–150 V / 0–20 A × 2), the high-voltage ET5411A+ (400 W, 0–500 V / 0–15 A), and the 150 W ET5409A+ (0–500 V / 0–15 A) and ET5408A+ (0–150 V / 0–30 A). All models provide CV, CC, CR and CP operating modes and a battery test function.

FEATURES

- 2.8-inch TFT LCD (320 × 240) with rich display content and a highly visual interface
- Dual-language support: full Chinese and English operation
- Key lock function prevents accidental misoperation
- Remote compensation: hardware and software remote sense eliminates voltage drops across test leads
- Built-in USB interface as standard; optional RS-232 or RS-485 interfaces for remote operation and industrial networking
- External trigger input via a dedicated DB9 interface
- Built-in buzzer alarm for real-time fault or status notification
- Non-volatile storage keeps system data and profiles even through a sudden power failure
- CV, CC, CR and CP operating modes; CR range 0.05 Ω–4.5 kΩ
- Battery test function: discharge in CC / CR modes, discharge capacity measured up to 9,999 Ah
- Multiple protections: over-current, over-voltage, over-power and over-temperature protection, plus a reverse-polarity prompt
- Intelligent fan speed control effectively reduces operating noise

SPECIFICATIONS

Item	ET5410A+	ET5420A+	ET5411A+	ET5409A+	ET5408A+
Channels	Single channel	Dual channel	Single channel	Single channel	Single channel
Rated input power	400 W	400 W (200 W × 2)	400 W	150 W	150 W
Input voltage	0–150 V	0–150 V	0–500 V	0–500 V	0–150 V
Input current	0–40 A	0–20 A × 2	0–15 A	0–15 A	0–30 A
CV mode range	0.1–19.999 V / 0.1–150.00 V	0.1–19.999 V / 0.1–150.00 V	0.1–19.999 V / 0.1–500.00 V	0.1–19.999 V / 0.1–500.00 V	0.1–19.999 V / 0.1–150.00 V
CV resolution	1 mV / 10 mV				
CV accuracy	±(0.05 % + 0.02 % FS)				
CC mode range	0–3.000 A / 0–40.00 A	0–3.000 A / 0–20.00 A	0–3.000 A / 0–15.00 A	0–3.000 A / 0–15.00 A	0–3.000 A / 0–30.00 A
CC resolution	1 mA / 10 mA				
CC accuracy	±(0.05 % + 0.05 % FS)				
CR mode range	0.05 Ω–1 kΩ / 1 kΩ–4.5 kΩ				
CR resolution	10 mΩ / 100 mΩ				
CR accuracy	±(0.1 % + 0.5 % FS)				
CP mode range	0–400 W	0–200 W	0–400 W	0–150 W	0–150 W
CP resolution	10 mW				
CP accuracy	±(0.1 % + 0.5 % FS)				
Battery test	Discharge in CC / CR modes · max. discharge capacity 9,999 Ah · resolution 1 mA / 10 mA / 10 mΩ / 100 mΩ				
Voltage readback range	0–19.999 V / 0–150.00 V	0–19.999 V / 0–150.00 V	0–19.999 V / 0–500.00 V	0–19.999 V / 0–500.00 V	0–19.999 V / 0–150.00 V
Current readback range	0–3.000 A / 0–40.00 A	0–3.000 A / 0–20.00 A	0–3.000 A / 0–15.00 A	0–3.000 A / 0–15.00 A	0–3.000 A / 0–30.00 A
Power readback range	0–400 W	0–200 W	0–400 W	150 W	150 W
Readback resolution	Voltage 1 mV / 10 mV · Current 1 mA / 10 mA · Power 10 mW				
Readback accuracy	Voltage ±(0.05 % + 0.1 % FS) · Current ±(0.05 % + 0.1 % FS) · Power ±(0.1 % + 0.5 % FS)				
Over-voltage protection	> 155 V, cut off	> 155 V, cut off	> 510 V, cut off	> 510 V, cut off	> 155 V, cut off
Over-current protection	> 42 A, cut off	> 22 A, cut off	> 16 A, cut off	> 16 A, cut off	> 31 A, cut off

Item	ET5410A+	ET5420A+	ET5411A+	ET5409A+	ET5408A+
Over-power protection	420 W	220 W	420 W	155 W	155 W
Over-temperature protection	85 ℃				
Short circuit	CC ≦ 3 A / ≦ 40 A · CV 0 V · CR ≦ 40 mΩ	CC ≦ 3 A / ≦ 20 A · CV 0 V · CR ≦ 40 mΩ	CC ≦ 3 A / ≦ 15 A · CV 0 V · CR ≦ 40 mΩ	CC ≦ 3 A / ≦ 15 A · CV 0 V · CR ≦ 40 mΩ	CC ≦ 3 A / ≦ 30 A · CV 0 V · CR ≦ 40 mΩ
Display	2.8-inch TFT LCD, 320 × 240 · Chinese / English interface · key lock				
Interfaces	USB built in (standard) · RS-232 / RS-485 optional · DB9 external trigger input				

GENERAL SPECIFICATIONS

Power supply	110 Vac ±10 % / 220 Vac ±10 %, 50/60 Hz
Operating temperature	0 ℃ to 40 ℃
Storage temperature	−10 ℃ to 70 ℃
Dimensions	90 mm × 190 mm × 300 mm (W × H × D)

ACCESSORIES

- **Standard:** Power cord × 1, Power fuse × 2, User manual × 1
- **Optional:** PC software disc, USB communication cable, RS-232 / RS-485 communication cable

Specifications are as published in the ET54A+ series technical data sheet. Instruments are quoted per enquiry — contact VEROMET with your voltage and current range for pricing and availability.