

3310F Series DC Electronic Load



Features

- 5 digital V/A/W Meter.
- High-speed measurement and communication transmission.
- V.A.W. values can be displayed simultaneously.
- Large LCD Display \ setting values can be adjusted by rotary knob or push button.
- OCP \ OPP test function.
- Can be configured in 3302F [single channel mainframe] \ 3305F [two channels mainframe] or 3300F [four channels mainframe] and the mainframe with 150 sets Store / Recall memory.
- Power ON status value can be set.
- Flexible CC, CR, CV, CP, Dynamic and Short operation modes.
- SHORT time setting and SHORT_VH, SHORT_VL setting function.
- Protections against V, I, W, and °C.
- Voltage meter display the polarity positive (" + ") or negative (" - ") is selectable.
- SYNC. Load ON function.
- Optional Interface : GPIB \ RS232 \ USB \ LAN.

Descriptions

- Each 3310F Series module has its own control and display panel, CC/CR/CV/CP/ Dynamic modes, plug in 3300F with 150 sets Store/Recall memory which provides load set-up more efficiently \ also can be controlled intranet via RS232 \ Ethernet \ USB and GPIB interface.
- SHORT time setting and SHORT_VH, SHORT_VL setting function \ also can measure Short Voltage and Current.
- Dynamic can be simulated under CC, CP mode. The current Rise/Fall slew rate can be adjusted individually and there is an external signal input so that load can have a simulated Arbitrary Waveform.
- The additional OCP \ OPP test function operated by both mainframe and module that will be more efficiency and accuracy on OCP, OPP testing.
- Programmable Load ON/OFF voltage, GO/NG meter check, Voltage meter display " + " or " - " is selectable and 150 sets Store/Recall larger memory is much advance feature for each different application.
- 150 sets test parameter and status storage function can call the storage memory real time in accordance with the auto sequence requirement.

Applications

- Voltage / Current source
- SMPS transient response
- Current limit testing and battery emulation
- Battery charger
- Battery discharge
- R&D, Quality Control
- ATE system
- Production testing

Specifications

| MODEL | 3310F | 3311F | 3312F | 3314F | 3315F | | | | | |
|-----------------------------------|---------------------------------|-----------------|---------------|-----------------|----------------|---------------|----------------|-----------------|------------------|------------------|
| Max Power | 150 W | 300 W | 300 W | 300 W | 75 W | | | | | |
| Max Current | 30 A | 60 A | 12 A | 12 A | 15 A | | | | | |
| Operation Voltage | 60 V | 60 V | 250 V | 500 V | 60 V | | | | | |
| Over Power Protection | ≒157.5 W | ≒ 315 W | ≒ 315 W | ≒ 315 W | ≒ 78.75 W | | | | | |
| Over Current Protection | ≒ 31.5A | ≒ 63 A | ≒ 12.6 A | ≒ 12.6 A | ≒ 15.75 A | | | | | |
| Over Voltage Protection | ≒ 63 V | ≒ 63 V | ≒ 262.5 V | ≒ 525 V | ≒ 63 V | | | | | |
| Over Temp. Protection | ≒ 85 °C | ≒ 85 °C | ≒ 85 °C | ≒ 85 °C | ≒ 85 °C | | | | | |
| CC MODE | | | | | | | | | | |
| Range | 0~3 A | 0~30A | 0~6A | 0~60 A | 0~1.2A | 0~12A | 0~1.2A | 0~12 A | 0~1.5 A | 0~15A |
| Resolution | 0.05 mA | 0.5 mA | 0.1 mA | 1mA | 0.02 mA | 0.2mA | 0.02 mA | 0.2 mA | 0.0254 mA | 0.25 mA |
| Accuracy | ± 0.1% OF (SETTING + RANGE) | | | | | | | | | |
| CR MODE | | | | | | | | | | |
| Range | 2~120KΩ | 0.02~2Ω | 1~60KΩ | 0.00833~1Ω | 25~1500KΩ | 0.08~25Ω | 50~3000KΩ | 0.5~50Ω | 4~240KΩ | 0.02~4Ω |
| Resolution | 0.00833mS | 33.334μΩ | 0.01666mS | 16.667μΩ | 0.000666mS | 416.667μΩ | 0.000333mS | 833.334μΩ | 0.04166mS | 66.667μΩ |
| Accuracy | ± 0.2% OF (SETTING + RANGE) | | | | | | | | | |
| CV MODE | | | | | | | | | | |
| Range | 0~6 V | 0~60 V | 0~6V | 0~60V | 0~30V | 0~250 V | 0~60 V | 0~500 V | 0~6 V | 0~60 V |
| Resolution | 0.1 mV | 1 mV | 0.1 mV | 1 mV | 1 mV | 10 mV | 0.001 V | 0.01 V | 0.0001V | 0.001V |
| Accuracy | ± 0.05% OF (SETTING + RANGE) | | | | | | | | | |
| CP MODE | | | | | | | | | | |
| Range | 0~15 W | 0~150 W | 0~30 W | 0~300 W | 0~30 W | 0~300 W | 0~30 W | 0~300 W | 0~7.5 W | 0~75 W |
| Resolution | 0.25 mW | 2.5 mW | 1 mW | 10 mW | 1 mW | 10 mW | 0.001 W | 0.01 W | 0.000125 W | 0.00125 W |
| Accuracy | ± 0.5% OF (SETTING + RANGE) | | | | | | | | | |
| DYNAMIC OPERATION | | | | | | | | | | |
| Thigh & Tlow | 50% μSec TO 9.999 Sec | | | | | | | | | |
| Slew Rate | 2.0~125 mA/μSec | 20~1250 mA/μSec | 4~250 mA/μSec | 40~2500 mA/μSec | 0.8~50 mA/μSec | 8~500 mA/μSec | 0.8~50 mA/μSec | 8.0~500 mA/μSec | 1.0~62.5 mA/μSec | 10.0~625 mA/μSec |
| Accuracy | ± (5% OF SETTING) ±10μS | | | | | | | | | |
| VOLTAGE READBACK (V METER) | | | | | | | | | | |
| Range | 6.0 V | 60.0 V | 6.0 V | 60.0 V | 30.0 V | 250.0 V | 60.0 V | 500.0 V | 6.0 V | 60.0 V |
| Resolution | 0.0001V | 0.001V | 0.0001V | 0.001V | 0.001V | 0.01V | 0.001V | 0.01V | 0.0001V | 0.001V |
| Accuracy | ± 0.025% OF (READING + RANGE) | | | | | | | | | |
| CURRENT READBACK (A METER) | | | | | | | | | | |
| Range | 3.0 A | 30.0 A | 6.0 A | 60.0 A | 1.2 A | 12.0 A | 1.2 A | 12.0 A | 1.5 A | 15.0 A |
| Resolution | 0.0001 A | 0.001 A | 0.0001 A | 0.001 A | 0.00002A | 0.0002A | 0.00002A | 0.0002A | 0.000025A | 0.00025A |
| Accuracy | ± 0.1% OF (READING + RANGE) | | | | | | | | | |
| Current Monitor | FULL SCALE 10V | | | | | | | | | |
| Accuracy | 0.5% OF (SETTING + RANGE) | | | | | | | | | |
| Current Program Input | FULL SCALE 10V | | | | | | | | | |
| Programmable Short | BUILT - IN | | | | | | | | | |
| Load On Voltage | 0.1 ~ 25 V | 0.1 ~ 25 V | 0.1 ~ 25 V | 0.1 ~ 25 V | 0.2 ~ 50 V | 0.2 ~ 50 V | 0.2 ~ 50 V | 0.2 ~ 50 V | 0.4 ~ 100V | 0.1 ~ 25 V |
| Accuracy | 1% of (Setting + Range) | | | | | | | | | |
| Load Off Voltage | 0 ~ 25 V | 0 ~ 25 V | 0 ~ 25 V | 0 ~ 25 V | 0 ~ 50 V | 0 ~ 50 V | 0 ~ 50 V | 0 ~ 50 V | 0 ~ 100V | 0 ~ 25 V |
| Accuracy | 0.025% of (Setting + Range) | | | | | | | | | |
| Typical Short Resistance | 0.02 Ω | 0.0083 Ω | 0.0083 Ω | 0.0083 Ω | 0.08 Ω | 0.08 Ω | 0.08 Ω | 0.08 Ω | 0.5 Ω | 0.02 Ω |
| Max.short Current | 30 A | 60 A | 60 A | 60 A | 12 A | 12 A | 12 A | 12 A | 12 A | 15 A |

Order Information

DC Electronic Load

- ▶ 3310F 60V, 30A, 150W
- ▶ 3311F 60V, 60A, 300W
- ▶ 3312F 250V, 12A, 300W
- ▶ 3314F 500V, 12A, 300W
- ▶ 3315F 60V, 15A, 75W



3.7kg
W=108mm
H=143mm
D=412mm

DC Electronic Load Mainframe

Optional interface : ① GPIB Card ② RS232 Card ③ USB Card ④ LAN Card

3302F (single channel mainframe)



5.5kg
W=160mm
H=177mm
D=452mm

3305F (two channels mainframe)



7.5kg
W=269mm
H=177mm
D=452mm

3300F (four channels mainframe)



9.3kg
W=440mm
H=177mm
D=445mm