

# HiTRON

## **AUTO-RANGING INPUT AC TO DC EXTERNAL DESKTOP ADAPTER MULTIPLE OUTPUT 100-120 WATTS SWITCHING POWER SUPPLIES HES100 SERIES**



### **FEATURES:**

- **AUTO-RANGING ACCOMMODATE AC SOURCES IN THE WORLD**
- **IMPACT RESISTANT THERMO-PLASTIC LOW-PROFILE ENCLOSURE**
- **MEET UNIVERSAL SAFETY STANDARDS**
- **CONDUCTED EMI MEET EN55022 / FCC CLASS B, RADIATED EMI MEET CLASS A**
- **CE MARKING COMPLIANCE**

### **SPECIFICATION**

#### **INPUT SPECIFICATION**

**Input Voltage:** Auto-ranging 115Vac for range 90-132Vac and 230Vac for range 180-264Vac.  
Transient threshold 150Vac typical.

**Input Connector:** IEC320 3P AC Inlet/Outlet receptacle, with AC On/Off switch.

**Input Frequency:** 47-63Hz.

**Inrush Current:** 20A peak. @115Vac, 40A @230Vac.

**Input Current:** 2.5A @115Vac, 1.1A @ 230Vac.

**Dielectric Withstand:** Meet IEC950.

**EMI:** Conducted EMI meet EN55022 / FCC Class B.  
Radiated EMI meet Class A,

**Hold-up Time:** 22mS @115Vac./ 27mS @230Vac.

**Power Fail Signal:** Option in all series.

**Logic Inhibit:** Optional in single & dual output series.

**Remote Sensing:** Optional for single & dual output series.

#### **OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Output Wattage:** Typ.100-120 Watts.

**Output Connector & Cable:** Optional.  
Cord length typ. 3 ft.(1 meter).

**Line Regulation:** VO1, VO3 & VO4  $\pm 0.1\%$  typ.  
Aux.VO2  $\pm 0.5\%$  typ.

**Load Regulation:** At strain relief end.  
Main O/P VO1  $\pm 1.0\%$  typ.  
Aux. O/P VO2  $\pm 2.0\%$  typ. with Mag. Amp. or  $\pm 5.0\%$  typ. with Stacked on.  
Aux. O/P VO3 & VO4  $\pm 1.5\%$  typ. with PR.

**Noise & Ripple:** Typ.1.0% peak to peak.

**OVP:** Main O/P only set @124%  $\pm 8\%$  VO1.

**Overload Protection:** 125-150% of max. power overrange or short circuit, power foldback & self-recovering.

#### **GENERAL SPECIFICATION**

**Efficiency:** Typ. 75%.

**Switching Frequency:** Fixed Frequency at 100K Hz.

**Circuit Topology:** Fixed Frequency Forward circuit.

**Transient Response:** Output voltage returns in less than 3mS following a 25% load change.

**Safety Standard:** UL1950/EN60950 Class I.

**Construction:** Desktop enclosure plastic box.

**Power Density:** 0.88Watts / Cubic Inch.

**Operating Temperature:** 0 to +40°C.

**Storage Temperature:** -20 to +85°C.

**Temperature Coefficient:** 0.04% /°C.

**Cooling:** Built-in 6.5CFM 40mm fan cooling.

**Long Term Stability:** After 20 minutes warm-up, 0.1% for 8 hours.

**Industrial or Commercial Grade Option:**  
" Industrial" higher MTBF, " Commercial" lower cost.

Note: (1) At least 20% of typical main output current is required to maintain stated regulation.  
(2) Cord length typical 3 ft. (or 1 meter).



## OUTPUT VOLTAGE/CURRENT RATINGS CHART

## SINGLE OUTPUT

| MODEL NO. | MAIN O/P VO1 ★# |       |       |
|-----------|-----------------|-------|-------|
|           | Typ.            | Volt. | Peak  |
| HES100-11 | 8.3A            | 12.0V | 10.0A |
| HES100-12 | 6.7A            | 15.0V | 8.0A  |
| HES100-13 | 4.2A            | 24.0V | 5.0A  |

## DUAL OUTPUT

| MODEL NO. | MAIN O/P VO1 ★◇ |       |       | AUX. O/P VO2 ▲◇ |       |      |
|-----------|-----------------|-------|-------|-----------------|-------|------|
|           | Typ.            | Volt. | Max.  | Typ.            | Volt. | Max. |
| HES100-21 | 10.0A           | 5.0V  | 15.0A | 4.0A            | 5.0V  | 3.5A |
| HES100-22 | 10.0A           | 5.0V  | 15.0A | 3.0A            | 12.0V | 3.0A |
| HES100-23 | 6.0A            | 5.0V  | 12.0A | 3.0A            | 24.0V | 3.0A |
| HES100-24 | 4.5A            | 12.0V | 5.0A  | 4.5A            | 12.0V | 5.0A |
| HES100-25 | 3.5A            | 15.0V | 5.0A  | 3.4A            | 15.0V | 4.0A |

## TRIPLE OUTPUT

| MODEL NO. | MAIN O/P VO1 ★ |       |       | AUX. O/P VO2 † |        |      | AUX. O/P ±VO3 ● |       |      |
|-----------|----------------|-------|-------|----------------|--------|------|-----------------|-------|------|
|           | Typ.           | Volt. | Max.  | Typ.           | Volt.  | Max. | Typ.            | Volt. | Max. |
| HES100-30 | 12.0A          | +5.0V | 13.0A | 3.0A           | +12.0V | 3.5A | 0.8A            | 12.0V | 1.0A |
| HES100-31 | 12.0A          | +5.0V | 13.0A | 3.0A           | +12.0V | 3.5A | 0.8A            | 5.0V  | 1.0A |
| HES100-32 | 12.0A          | +5.0V | 13.0A | 1.5A           | +24.0V | 2.0A | 0.8A            | 12.0V | 1.0A |
| HES100-33 | 12.0A          | +5.0V | 13.0A | 3.0A           | +15.0V | 3.3A | 0.3A            | 15.0V | 1.0A |

## QUAD OUTPUT

| MODEL NO. | MAIN O/P VO1 ★ |       |       | AUX. O/P VO2 † |        |      | AUX. O/P ± VO3 ● |       |      | AUX. O/P ± VO4 ● |       |      |
|-----------|----------------|-------|-------|----------------|--------|------|------------------|-------|------|------------------|-------|------|
|           | Typ.           | Volt. | Max.  | Typ.           | Volt.  | Max. | Typ.             | Volt. | Max. | Typ.             | Volt. | Max. |
| HES100-40 | 12.0A          | +5.0V | 13.0A | 2.5A           | +12.0V | 3.0A | 0.8A             | 12.0V | 1.0A | 0.5A             | 12.0V | 1.0A |
| HES100-41 | 12.0A          | +5.0V | 13.0A | 2.5A           | +12.0V | 3.0A | 0.8A             | 5.0V  | 1.0A | 0.6A             | 5.0V  | 1.0A |
| HES100-42 | 12.0A          | +5.0V | 13.0A | 1.0A           | +24.0V | 1.5A | 0.8A             | 12.0V | 1.0A | 0.5A             | 12.0V | 1.0A |
| HES100-43 | 12.0A          | +5.0V | 13.0A | 2.2A           | +15.0V | 2.7A | 0.6A             | 12.0V | 1.0A | 0.4A             | 15.0V | 1.0A |

**Symbols:** ★"OVP built-in. "@Adjustable. "◇" Floating(or isolated) output. "●" Installed with Post Regulator (PR). "†" Stacked on main output.  
"#" Remote sensing. "▲" Installed with magnetic amplifier. "± " Positive or Negative selectable (factory set).

### MECHANICAL DIMENSIONS: MM [INCHES]

**WEIGHT:** 1,242.0g (43.8 Oz.)

