

# HiTRON

## AC/DC EXTERNAL DESKTOP ADAPTER UNIVERSAL INPUT SINGLE & MULTIPLE OUTPUT 24-26 WATTS SWITCHING POWER SUPPLIES HES24 SERIES



### FEATURES:

- UNIVERSAL INPUT
- DESKTOP IEC320 AC RECEPTACLE
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET EN 55022/ FCC CLASS B
- CE MARKING COMPLIANCE

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** 90-264Vac typical.  
**Input Connector:** IEC320-3P DT7 type  
AC inlet receptacle.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** 25A @230Vac typical.  
**Input Current:** 0.34A @115Vac typical.  
0.17A @230Vac typical.  
**Dielectric Withstand:** Meet IEC60950.  
**EMI:** Meet EN 55022 / FCC Class B.  
**Hold-up Time:** 15mS @115Vac typical.  
60mS @230Vac typical.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Wattage:** 24-26 Watts typical.  
**Output Connector & Cord:** Optional.  
**Line Regulation:** 0.1-0.2% typical.  
**Load Regulation:** Main O/P VO1  $\pm 1.5-3.0\%$  typical.  
Aux. O/P VO2  $\pm 2.5-4.0\%$  typical.  
Aux. O/P VO3  $\pm 3.0-6.0\%$  typical.  
**Noise & Ripple:** 1.0% typical peak to peak.  
**OVP:** Built-in at main VO1 only Zener diode clamping.  
**Overload Protection (OLP):**  
Fully protected against output overload and short circuit.  
OLP set at about 125-150% rating output wattage.  
Consult the factory for OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** 78% typical.  
**Switching Frequency:** Approximate 60K Hz.  
**Circuit Topology:** Fixed Frequency Flyback circuit.  
**Transient Response:** Output voltage returns in less than  
3mS following a 25% load change.  
**Safety Standard:** Meet UL1950/EN60950 Class I.  
**Power Density:** 1.89 Watts / Cubic inch.

**Operating Temperature:** 0 to +25/35/40°C  
without derating. (various with output voltage)  
**Storage Temperature:** -20 to +85°C.  
**Temperature Coefficient:** 0.04%/°C typical.  
**Cooling:** Free air convection.  
**Construction:** Impact resistant thermo-plastic  
enclosure case.  
**Desktop Format.**

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.

(2) Load regulation is measured at 115Vac or 230Vac in percentage to indicate the change in output voltage as the load is varied from half load to full load (unit  $\pm\%$ ).  
For the multi-output, the main output remains 50% load and other aux. output remains 20% load.

(3) The exact obtainable load regulation depends upon the output load current & cord selected. Upper data are for 6 ft. (2 m) cord AWG#18 wires.

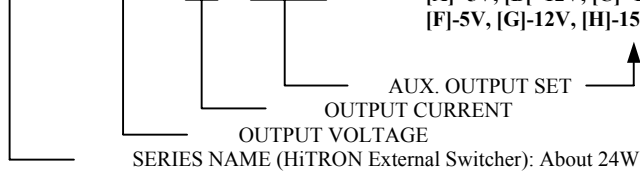
(4) Due to requests in market and advances in technology, specifications subject to change without notice



For the details of safety approval, please consult the factory.

**MODEL NO. DESCRIPTION: HES24 - XXX YY - N2N3**

[NULL] FOR SINGLE OUTPUT  
 [A]+5V, [B]+12V, [C]+15V, [D]+18V, [E]+24V,  
 [F]-5V, [G]-12V, [H]-15V, [I] -18V, [J] -24V



**OUTPUT VOLTAGE/CURRENT RATINGS CHART**

**SINGLE OUTPUT**

DEFINED OUTPUT VOLTAGE (Vdc)	OUTPUT VOLTAGE(Vdc)/CURRENT (A)
5.0Vdc ≤ Any Voltage ≤ 15.0Vdc	5.0V/4.0A, 5.5V/3.7A, 6.0V/3.5A, 6.5V/3.2A, 7.0V/3.0A, 7.5V/2.7A, 8.0V/2.5A, 8.5V/2.4A, 9.0V/2.3A, 9.5V/2.2A, 10.0-11.0V/2.1A, 11.5-12.0V/2.0A, 13.0V/1.8A, 13.5-14.0V/1.7A, 14.5-15.0V/1.6A.
15.0Vdc < Any Voltage ≤ 30.0Vdc	15.5-16.0V/1.5A, 16.5-17.0V/1.4A, 17.5-18.0V/1.3A, 18.5-20.0V/1.2A, 20.5-22.0V/1.1A, 22.5-24.0V/1.0A, 24.5-26.5V/0.9A, 27.0-30.0V/0.8A.

Note: Refer to the upper Chart, or specify the V/A ratings and consult factory for the exact Model No.

**SINGLE OUTPUT (Model No. for example)**

MODEL NO.	O/P VOLTAGE	O/P CURRENT
HES24-05040	5.0Vdc	4.0A
HES24-07527	7.5Vdc	2.7A
HES24-12020	12.0Vdc	2.0A
HES24-15016	15.0Vdc	1.6A
HES24-18013	18.0Vdc	1.3A
HES24-24010	24.0Vdc	1.0A
HES24-30008	30.0Vdc	0.8A

**DUAL OUTPUT**

OUTPUT RAIL	OUTPUT VOLT.(Vdc)/ AMP.(A)
Main O/P VO1 ★	5-24V/2.0-0.5A. <i>Max.Watts.10 ~12W</i>
Aux. O/P ±VO2	±5,12,15,18,24V/2.0-0.5A. <i>Max.Watts.12 ~18W</i>

**DUAL OUTPUT (Model No. for example)**

MODEL NO.	MAIN O/P VO1★		AUX. O/P VO2	
	VOLT.	TYP.	VOLT.	TYP.
HES24-05015-B	+5Vdc	1.5A	+12Vdc	1.5A
HES24-12010-G	+12Vdc	1.0A	-12Vdc	1.0A
HES24-15008-H	+15Vdc	0.8A	-15Vdc	1.2A
HES24-24005-G	+24Vdc	0.5A	-12Vdc	1.0A

Symbol: "★" OVP built-in. " || " Double feedback

**TRIPLE OUTPUT**

OUTPUT RAIL	OUTPUT VOLT. (Vdc)/ AMP.(A)
Main O/P VO1 ★	+5-20V/3.0-0.60A. <i>Max. Watts:12- 15.0W</i>
Aux. O/P +VO2	+5,12,15,18,24V/1.2-0.25A. <i>Max. Watts: 6.0W</i>
Aux. O/P -VO3	-5,12,15,18,24V/0.6-0.125A. <i>Max. Watts: 3.0W</i>

**TRIPLE OUTPUT (Model No. for example)**

MODEL NO.	MAIN O/P VO1★		AUX. O/P VO2		AUX. O/P VO3	
	VOLT.	TYP.	VOLT.	TYP.	VOLT.	TYP.
HES24-05030-BG	+5Vdc	3.0A	+12Vdc	0.50A	-12Vdc	0.250A
HES24-05030-BH	+5Vdc	3.0A	+12Vdc	0.50A	-15Vdc	0.200A
HES24-05030-EJ	+5Vdc	3.0A	+24Vdc	0.25A	-24Vdc	0.125A

Symbol: "★" OVP built-in. " || " Double feedback.

**MECHANICAL DIMENSIONS: MM [INCHES]**

**WEIGHT: 330.0g (11.6 Oz.)**

