

# HiTRON

## AC/DC EXTERNAL WALLMOUNT & DESKTOP ADAPTER UNIVERSAL INPUT MULTIPLE OUTPUT 15-16 WATTS SWITCHING POWER SUPPLIES HES15 SERIES



### FEATURES:

- SINGLE, DUAL, TRIPLE & QUAD OUTPUT
- WALLMOUNT OR DESKTOP ADAPTER
- DIVERSE AC PLUGS AVAILABLE
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET EN 55022/FCC CLASS B
- CE MARKING COMPLIANCE

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** 90-264Vac typical.

**Input Connector:**

Wallmount Format:

WM1,2(USA/JAPAN), WM3( Euro-stecker),

WM4(Schuko-stecker), WM5(UK), WM6 (Australia).

Desktop Format: IEC320-3P Type DT7.

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

**Inrush Current:** 20.0-50.0A typical.

**Input Current:** 0.3-0.5A @ 115Vac typical.

0.14-0.3A @ 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 Connection:** Optional.

**Line Regulation:** 0.1% typical.

**Load Regulation:** Main O/P VO1  $\pm 1.5-3.0\%$  typical.

Aux. O/P VO2  $\pm 2.0-4.0\%$  typical. (Stacked on VO1)

Aux. O/P VO3  $\pm 1.0-2.0\%$  typical. (P.R. installed)

Aux. O/P VO4  $\pm 1.0-2.0\%$  typical. (P.R. installed)

**Noise & Ripple:** Typical 1%peak to peak.

**OVP:** Built-in, Zener diode clamping.

**Adjustability:** Factory set.

**Overload Protection:**

Typical 125-150% of max. power overrange or short circuit, power foldback & self-recovering.

#### GENERAL SPECIFICATION

**Efficiency:** 65-75% typical.

**Switching Frequency:** Approximate 33K Hz.

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

**Transient Response:** Output voltage returns in less than 0.5mS following a 25% load change.

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

**Power Density:** 0.68Watts /Cubic inch.

**Operating Temperature:** 0 °C to room temperature.

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

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

**Cooling:** Free air convection.

**Construction:** Impact resistant thermo- plastic enclosure case.

**Wallmount or 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 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.

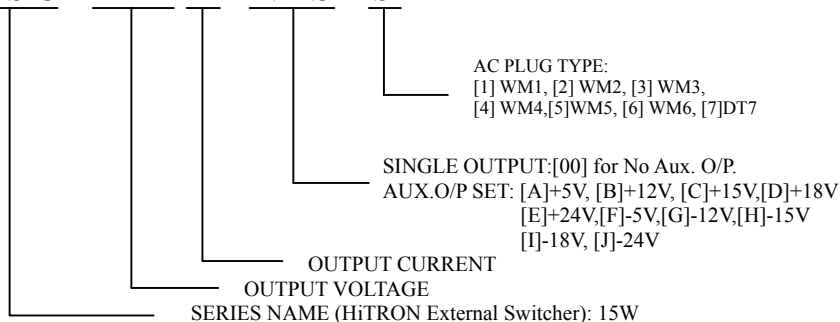
(3) The exact obtainable load regulation depends upon the output cord selected and load current. Upper data are for 6 ft. (2 meters) cord AWG#18 wires.

(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: HES15 – X X X YY – N2N3 – S**



**OUTPUT VOLTAGE/CURRENT RATINGS CHART**

**SINGLE OUTPUT V/A CHART**

DEFINED OUTPUT VOLTAGE (Vdc)	OUTPUT VOLTAGE (Vdc) / CURRENT (A)
<b>3.3 Vdc ≤ Any Voltage ≤ 10.0 Vdc</b>	3.3V/3.5A, 3.4-3.6V/3.4A, 3.7-3.9V/3.3A, 4.0-4.2V/3.2A, 4.3-4.6V/3.1A, 4.7-5.0V/3.0A, 5.1V/2.9A, 5.2-5.3V/2.8A, 5.4-5.5V/2.7A, 5.6-5.7V/2.6A, 5.8-6.0V/2.5A, 6.1-6.2V/2.4A, 6.3-6.5V/2.3A, 6.6-6.8V/2.2A, 6.9-7.1V/2.1A, 7.2-7.5V/2.0A, 7.6-7.8V/1.9A, 7.9-8.3V/1.8A, 8.4-8.8V/1.7A, 8.9-9.3V/1.6A, 9.4-10.0V/1.5A.
<b>10.0Vdc &lt; Any Voltage ≤ 24.0 Vdc</b>	10.1-10.7V/1.4A, 10.8-11.5V/1.3A, 11.6-12.5V/1.2A, 12.6-13.6V/1.1A, 13.7-15.0V/1.0A, 15.1-16.6V/0.9A, 16.7-18.7V/0.8A, 18.8-21.4V/0.7A, 21.5-24.0V/0.6A

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 examples.)**

MODEL NO.	AC INPUT	AC PLUG	O/P VOLTAGE	O/P CURRENT	FORMAT
HES15-03335-00-1	90-264Vac	WM1	3.3Vdc	3.5 A	Wallmount
HES15-05030-00-2	90-264Vac	WM2	5.0Vdc	3.0 A	Wallmount
HES15-09216-00-3	90-264Vac	WM3	9.2Vdc	1.6 A	Wallmount
HES15-12112-00-4	90-264Vac	WM4	12.1Vdc	1.2 A	Wallmount
HES15-15209-00-5	90-264Vac	WM5	15.2Vdc	0.9 A	Wallmount
HES15-18508-00-6	90-264Vac	WM6	18.5Vdc	0.8 A	Wallmount
HES15-20007-00-7	90-264Vac	DT7	20.0Vdc	0.7 A	Desktop
HES15-22306-00-7	90-264Vac	DT7	22.3Vdc	0.6 A	Desktop
HES15-24006-00-7	90-264Vac	DT7	24.0Vdc	0.6 A	Desktop

**DUAL OUTPUT V/A CHART**

OUTPUT RAIL	OUTPUT VOLTAGE (Vdc) /CURRENT (A)
<b>Main O/P VO1 ★</b>	3.3V/2.5A, 5.0V/2.0A, 5.1-5.5V/1.9-1.8A, 5.6-6.2V/1.7-1.6A, 6.3-7.1V/1.5-1.4A, 7.2-8.3V//1.3-1.2A, 8.4-10.0V/1.1-1.0A, 10.1-11.1V/0.9A, 11.2-12.5V/0.8A, 12.6-14.2V/0.7A, 14.3-15.0V/0.6A.
<b>Aux. O/P ±VO2 †</b>	5V/1.0A, 12V/0.4A, 15V/0.3A, 18V/0.25A, 24V/0.2A.

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

### DUAL OUTPUT *(Model No. for examples.)*

MODEL NO.	AC INPUT	AC PLUG	MAIN O/P VO1 ★		AUX. O/P VO2 †		FORMAT
			VOLT.	TYP.	VOLT.	TYP.	
HES15-03325-A0-1	90-264Vac	WM1	+3.3Vdc	2.5A	+5Vdc	1.00A	Wallmount
HES15-05020-B0-2	90-264Vac	WM2	+5.0Vdc	2.0A	+12Vdc	0.40A	Wallmount
HES15-06615-C0-3	90-264Vac	WM3	+6.6Vdc	1.5A	+15Vdc	0.30A	Wallmount
HES15-07712-D0-4	90-264Vac	WM4	+7.7Vdc	1.2A	+18Vdc	0.25A	Wallmount
HES15-09011-E0-5	90-264Vac	WM5	+9.0Vdc	1.1A	+24Vdc	0.20A	Wallmount
HES15-05020-F0-6	90-264Vac	WM6	+5.0Vdc	2.0A	-5Vdc	1.00A	Wallmount
HES15-10010-G0-7	90-264Vac	DT7	+10.0Vdc	1.0A	-12Vdc	0.40A	Desktop
HES15-11009-H0-1	90-264Vac	WM1	+11.0Vdc	0.9A	-15Vdc	0.30A	Wallmount
HES15-12008-I0-2	90-264Vac	WM2	+12.0Vdc	0.8A	-18Vdc	0.25A	Wallmount
HES15-15006-J0-7	90-264Vac	DT7	+15.0Vdc	0.6A	-24Vdc	0.20A	Desktop

Symbol: "★" OVP built-in, "†" Stacked on main output.

### TRIPLE OUTPUT V/A CHART

OUTPUT RAIL	OUTPUT VOLTAGE (Vdc) / CURRENT (A)	
Main O/P +VO1 ★	+5.0-15.0V/1.5-0.5A.	Max. output power: 7.5W.
Aux. O/P ±VO2 †	12V, 15V, 18V, 24V/0.25-0.1A	Max. output power: 3.0W.
Aux. O/P -VO3 ●	5, 12, 15, 18, 24Vdc/0.5-0.1A.	Max. output power: 3.0W.

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

### TRIPLE OUTPUT *(Model No. for examples.)*

MODEL NO.	AC PLUG	MAIN O/P VO1 ★		AUX. O/P VO2 †		AUX. O/P VO3 ●		FORMAT
		VOLT.	TYP.	VOLT.	TYP.	VOLT.	TYP.	
HES15-05015-BF-1	WM1	+5.0Vdc	1.5A	+12Vdc	0.25A	-5Vdc	0.50A	Wallmount
HES15-07510-BG-2	WM2	+7.5Vdc	1.0A	+12Vdc	0.25A	-12Vdc	0.25A	Wallmount
HES15-08309-CH-3	WM3	+8.3Vdc	0.9A	+15Vdc	0.2 A	-15Vdc	0.20A	Wallmount
HES15-09308-CI-4	WM4	+9.3Vdc	0.8A	+15Vdc	0.2 A	-18Vdc	0.15A	Wallmount
HES15-10707-DI-5	WM5	+10.7Vdc	0.7A	+18Vdc	0.15A	-18Vdc	0.15A	Wallmount
HES15-12506-DJ-6	WM6	+12.5Vdc	0.6A	+18Vdc	0.15A	-24Vdc	0.10A	Wallmount
HES15-15005-EJ-7	DT7	+15.0Vdc	0.5A	+24Vdc	0.10A	-24Vdc	0.10A	Desktop

Symbol: "★" OVP built-in, "†" Stacked on main output, "●" Installed with Post Regulator (P.R.).

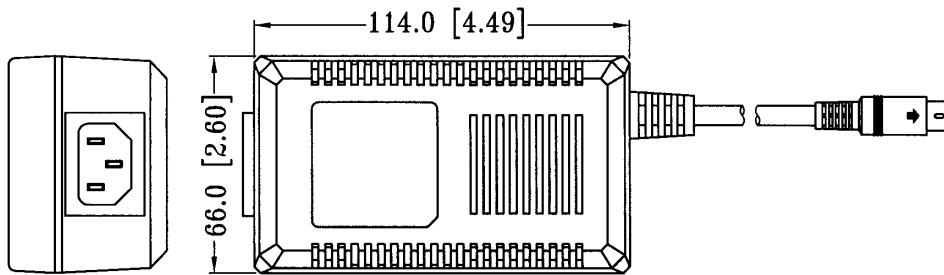
### QUAD OUTPUT V/A CHART

MODEL NO.	AC PLUG	MAIN O/P VO1 ★		AUX. O/P VO2 †		AUX. O/P VO3 ●		AUX. O/P VO4 ●	
		VOLT.	TYP.	VOLT.	TYP.	VOLT.	TYP.	VOLT.	TYP.
HES15-490	DT7	+3.3Vdc	1.5A	+5Vdc	1.5A	+12Vdc	0.10A	-12Vdc	0.10A
HES15-491	DT7	+3.3Vdc	1.5A	+5Vdc	1.5A	+15Vdc	0.10A	-15Vdc	0.10A
HES15-492	DT7	+3.3Vdc	1.5A	+5Vdc	1.5A	+24Vdc	0.05A	-12Vdc	0.10A
HES15-493	DT7	+3.3Vdc	1.5A	+5Vdc	1.5A	+24Vdc	0.05A	-15Vdc	0.10A
HES15-494	DT7	+3.3Vdc	1.5A	+5Vdc	1.5A	+24Vdc	0.05A	-24Vdc	0.05A
HES15-495	DT7	+3.3Vdc	1.5A	+5Vdc	1.5A	+15Vdc	0.10A	-12Vdc	0.10A
HES15-496	DT7	+3.3Vdc	1.5A	+5Vdc	1.5A	+12Vdc	0.10A	-15Vdc	0.10A

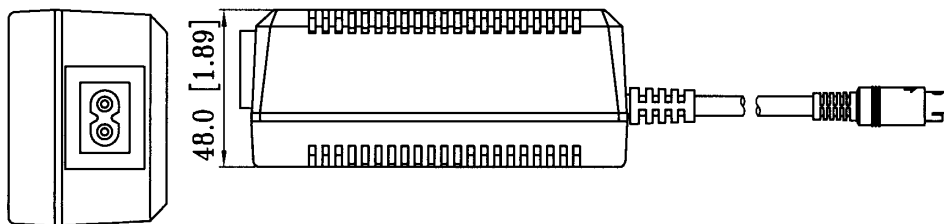
Symbol: "★" OVP built-in, "†" Stacked on main output, "●" Installed with Post Regulator (P.R.).

**MECHANICAL DIMENSIONS: MM [INCHES]**

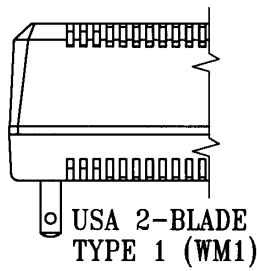
**WEIGHT:** 270.0g (9.52 Oz).  
443.0g for HES15-4X-WM3



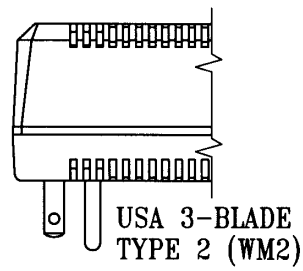
DESKTOP IEC320  
TYPE 7 (DT7)



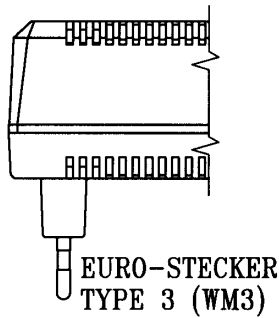
DESKTOP IEC320  
TYPE 8 (DT8)



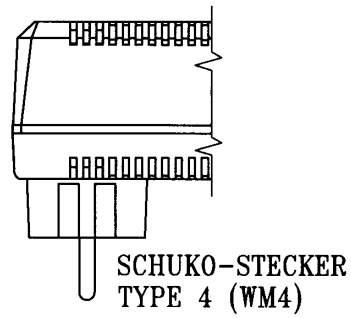
USA 2-BLADE  
TYPE 1 (WM1)



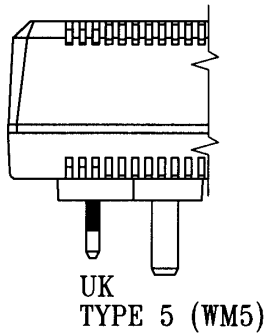
USA 3-BLADE  
TYPE 2 (WM2)



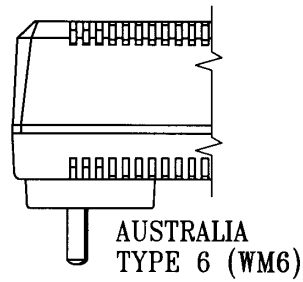
EURO-STECKER  
TYPE 3 (WM3)



SCHUKO-STECKER  
TYPE 4 (WM4)



UK  
TYPE 5 (WM5)



AUSTRALIA  
TYPE 6 (WM6)