

FEATURES:



- **CHASSIS-MOUNT AC/DC MODULAR POWER SUPPLIES**
- **UNIVERSAL AC INPUT RANGE**
- **GREEN POWER DESIGN**
- **MEET UNIVERSAL SAFETY STANDARDS**
- **EMI MEETS CISPR PUB.22/FCC CLASS B**
- **CE MARKING COMPLIANCE**

SPECIFICATION

Input Voltage: 90-264Vac typical.

Input Frequency: 47-63 Hz. (Nominal 50/60Hz.).

Input Current: 0.16A @115Vac./0.1A @230Vac typical.

Inrush Current: 4.2Arms@230Vac typical.

Input Fuse: Use external fuse.

Dielectric Withstand: Meet IEC60950-1.
3,000Vac-Output/Input.
1,500Vac-Input/GND.
500Vac-Output/GND.

EMI: Meet CISPR PUB. 22/FCC Class B.

Hold-up time: Typ. 22.4 mS @115Vac, 130mS @230Vac.

Green Power: 0.25W@132Vac, 0.51W@230Vac for single.

Earth Leakage: Less than 0.16mA @230Vac.

Remote ON/OFF:
ON(Enable)=Open.
OFF(Disable)=Short.

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: 10 Watts typical.
Line Regulation: Various with output voltage. Typ. $\pm 0.1\%$.
Load Regulation: Various with output voltage.
 Main VO1 ± 0.1 -2.0% typical.
 Aux.VO2 ± 0.7 -1.2% typical.
 Aux.VO3 $\pm 0.1\%$ typical.
Total Regulation: 0.1-1.9% typical.
Noise & ripple: 1.0% typical peak to peak.
 Typ. 100mV for 3.3V/5v.
OVP: Built-in on main output VO1.
Adjustability: Available at main output VO1.
Overload Protection (OLP):
 Fully protected against output overload and short circuit.
 Typical 125-150% of rating output load.
 Consult the factory for special OLP setting.

Efficiency: 70-80% typical various with output voltage.
Switching Frequency: 80K Hz.
Circuit Topology: Fixed Frequency Flyback circuit.
Transient Response: Peak deviation on 70mV,
Recovery time <0.2mSec.@ 25%step load change.
Case: Impact resistant thermo-plastic enclosure.
Safety Standard: EN60950-1/ UL60950-1 Class I.
Power Density: 1.22 Watts. / Cubic inch.

Operating Temperature: 0°C to +50°C range. @ full load without derating.
From +50°C derating linearly to half load @ +70°C (Refer to the Derating Chart).

Storage Temperature: -20°C to +85°C.

Temperature Coefficient: $\pm 0.03\% / ^\circ\text{C}$.

Cooling: Convection cooling for +50°C @ full load.

Commercial Grade only.

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.
(2) Load Regulation measured from Full-Load (F-L) to Half-Load (H-L) at nominal input and others loaded at half load.
(3) Due to requests in market and advances in technology, specifications subject to change without notice.

OUTPUT VOLTAGE/ CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	VO1 ★@ TYP. VOLT.
HAS10G-S033250	2.50A +3.3V
HAS10G-S050200	2.00A +5.0V
HAS10G-S090111	1.11A +9.0V
HAS10G-S120085	0.85A +12.0V
HAS10G-S150067	0.67A +15.0V
HAS10G-S240041	0.41A +24.0V

DUAL OUTPUT

MODEL NO.	VO1 ★@ TYP. VOLT.	VO2● TYP. VOLT.
HAS10-D050E	1.00A +5V	1.00A -5V
HAS10-D050I	1.00A +5V	0.42A +12V
HAS10-D120I	0.42A +12V	0.42A -12V
HAS10-D150K	0.34A +15V	0.34A -15V
HAS10-D033E	1.51A +3.3V	1.00A -5V

TRIPLE OUTPUT

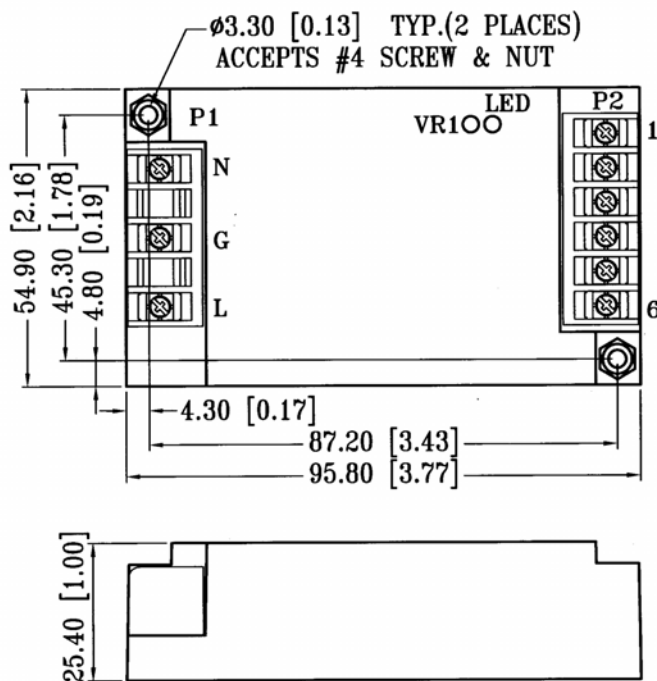
MODEL NO.	VO1 @ ★ TYP. VOLT.	VO2 ● TYP. VOLT.	VO3 ● TYP. VOLT.
HAS10-T033II	1.51A +3.3V	0.10A +12V	0.10A -12V
HAS10-T050II	1.50A +5.0V	0.10A +12V	0.10A -12V
HAS10-T050KK	1.40A +5.0V	0.10A +15V	0.10A -15V

Symbols: "★" OVP built-in. "@" Adjustable. "●" Installed with Post Regulator (P.R.).

Note: (1) Max. (maximum load) is the continuous operating load of each rail,
but the max. load of each rail can not be drawn from all outputs at the same time.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 177.5g (6.26 Oz.)



PIN ASSIGNMENT

PIN NO.	SINGLE O/P	DUAL O/P(-VO2)	DUAL O/P(+VO2)	TRIPLE O/P
P1-1	L	L	L	L
P1-3	N	N	N	N
P1-2	G	G	G	G
P2-1	REMOTE ON/OFF	REMOTE ON/OFF	REMOTE ON/OFF	REMOTE ON/OFF
P2-2	DC COM	VO2	DC COM	+VO1RET
P2-3	DC COM	DC COM	DC COM	+VO1
P2-4	VO1	DC COM	VO1	+VO3
P2-5	VO1	VO1	VO2	DC COM
P2-6	NC	NC	NC	VO2

DERATING CHART

