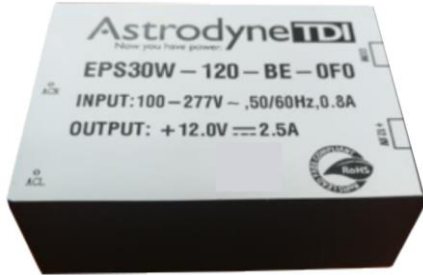


## 30 Watt Encapsulated Switching Power Supply

## EPS30W



- ✓ Universal AC Input with Wide Operation Range of 80 to 305VAC, 50/60 Hz
- ✓ Industrial Temperature Range: -40 to +85°C
- ✓ IEC61010 Safety Certification
- ✓ Fully Encapsulated Plastic Case
- ✓ High Power Density, up to 7.0 W/in<sup>3</sup> in Miniature 2.52" x 1.77" x 0.96" Case
- ✓ DoE Efficiency Level VI, RoHS-compliant



### PRODUCT DESCRIPTION

The Astrodyne TDI EPS30W series of Encapsulated Switching Power Supplies are designed for applications that require wide operating temperature and wide AC input voltage ranges. These products operate over the input voltage range of 80 to 305 VAC and 50/60Hz frequency, and produce up to 30 Watts of regulated DC output. They are certified to IEC61010 safety standards, meet stringent EMC standards and are compliant to DoE Efficiency Level VI.

Models	Output Power	Output Voltage	Output Current
EPS30W-120-BE-0F0	30W	12VDC	2.5A

**INPUT SPECIFICATIONS**

Input Voltage Range	100-277VAC rated 80-305VAC tested
Input Frequency	47-63 Hz (50/60 Hz nom.)
Input Current (rated)	0.8A max at 100VAC 0.4A max at 277VAC
Leakage Current	100uA max at 275VAC 50Hz

**MAIN OUTPUT SPECIFICATIONS**

Output Voltage	12VDC
Output Power	30W max
No Load Power	100mW max
Load Regulation	±3% max
Line Regulation	±0.5% max
Efficiency	> 87.5% typ
Over Voltage Protection*	112-132% Vout, hiccup mode
Over Load Protection*	100 to 200% x Rated Power, Auto Recovery
Short Circuit Protection	Auto Recovery
Temperature Coefficient	±0.04%/°C
Turn-on Time	2s max, -40 to +85°C, no load to full (derated) load
Hold-up Time, full load	80ms typ, 230VAC 15ms typ, 115VAC
Ripple/Noise	100mV Pk-Pk max, -40 to +85°C, no load to full (derated) load

**ISOLATION SPECIFICATIONS**

Input to Output	3000 VAC
Isolation Resistance	50 MΩ

**MECHANICAL SPECIFICATIONS**

Size	2.52" x 1.77" x 0.96" 64 x 45 x 24.5 mm
Weight	136g / 4.8oz
Package Type	Encapsulated PCB Mount Plastic Case

All Specifications are typical at nominal input, full load, 25°C unless specified otherwise.

**SAFETY AND COMPLIANCE CERTIFICATIONS (Pending)**

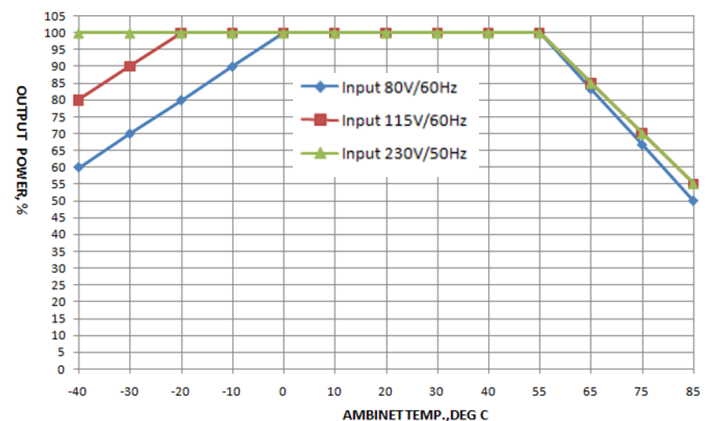
Safety Approvals	IEC 61010-1, 3 <sup>rd</sup> Ed., cTUVus, CB Scheme
Conducted and Radiated Emissions	EN 55011 (CISPR11), Class B
Harmonic Current	EN 61000-3-2, Class A
Voltage Fluctuations	EN 61000-3-3
ESD Immunity	EN 61000-4-2, Level 4
RF Field Immunity	EN 61000-4-3, Level 3
EFT Burst Immunity	EN 61000-4-4, Level 3
Surge Immunity	EN 61000-4-5, Level 2
Conducted Immunity	EN 61000-4-6, Level 2
Magnet Field Immunity	EN 61000-4-8, Level 4
Voltage Dips and Interruptions	EN 61000-4-11

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	0 to +55°C at Full Load, -40 to 0°C and +55 to +85°C with Derating (see chart)
Cooling	Free Air Convection
Storage Temperature*	-40 to +85°C
Operating Humidity*	0% to 95%, non-condensing
Operating Altitude	3000m max

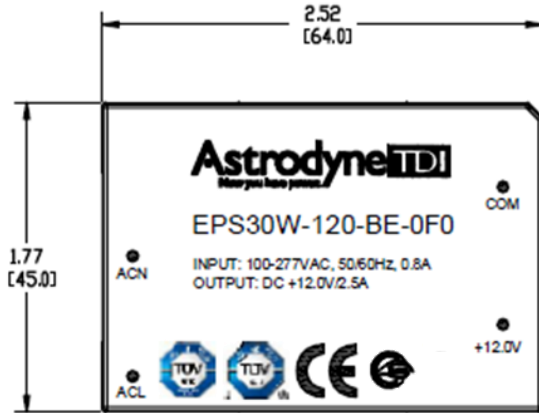
\* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Operation under conditions other than the standard operating conditions is neither warranted nor implied.

**TEMPERATURE DERATING**

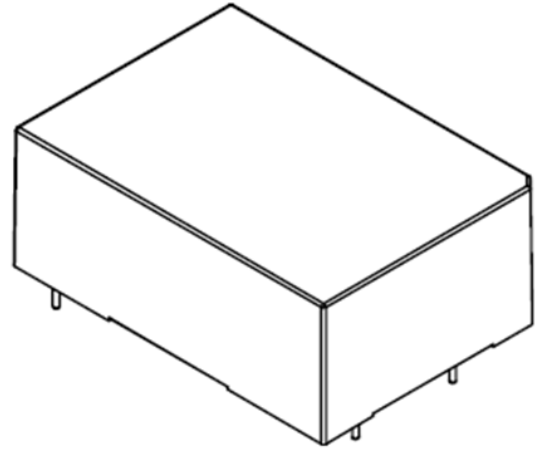


**OUTLINE DRAWING**

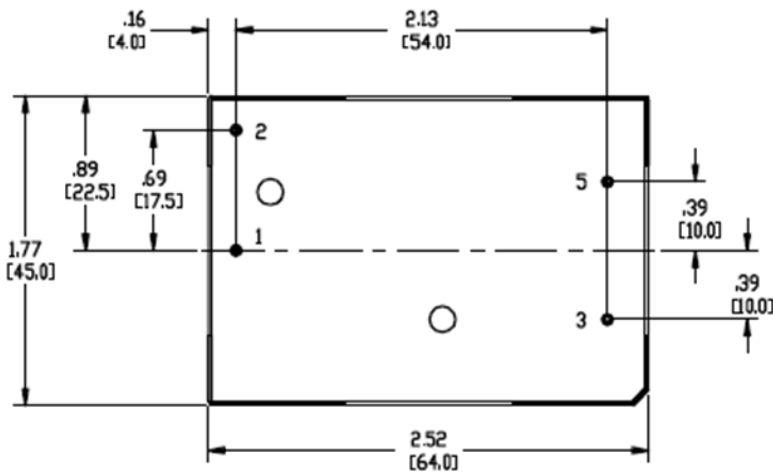
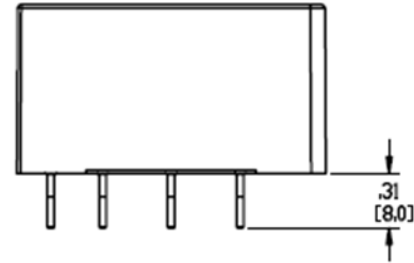
**Encapsulated PCB Mount**



SCALE 2.000



SCALE 2.000



PIN ASSIGNMENT	
PIN #	SINGLE
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
5	+DC OUT