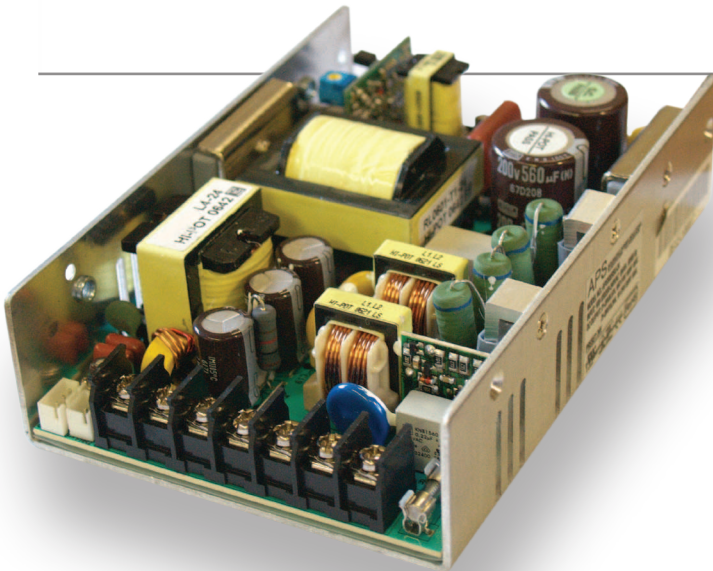


## APS300 / APS302Rx SERIES:



### 320 Watts Single Output Models

- 6.00 x 4.00 x 1.50" U-Frame Package
- 6.00 x 4.00 x 1.55" U-Frame with Perforated Cover Package
- 7.00 x 4.00 x 1.60" End-Mount Fan Package
- 6.00 x 4.00 x 2.00" Top-Mount Fan Package

### Features:

- Universal AC Input (90~264 VAC)
- Passive PFC (APS300) or Active PFC (APS302)
- Peak Loads up to 700 Watts for 500 $\mu$ s
- Low Profile for 1U High Applications
- Power Good & Fan Fail Functions
- 12V Aux Fan Output
- International Safety Approvals
- 2 Year Warranty

### INPUT:

Input Voltage	APS300 = Auto-Ranging 90-132 / 180-264 APS302 = Universal 90~264 VAC (Universal)
Input Frequency	47-63Hz
Inrush Current	35A @ 115 / 70A @ 230 VAC Cold Start
Input Current	8A @ 100 VAC / 4A @ 200 VAC (max)
Input Protection	Single Fuse - 8A / 250VAC
Hold-Up Time	20ms @ 80% Load
Leakage Current	<1500 $\mu$ A @ 240 VAC Max
Harmonics	EN61000-3-2 Class D Compliant * APS300=Passive PFC * APS302=Active PFC

### OUTPUT:

Adjustment Range	$\pm$ 5%
Minimum Load	1% to maintain Regulation
Regulation	$\pm$ 1% max
Ripple & Noise	$\pm$ 1% or 50mV typ. pk-pk @ 20MHz (whichever is greater)
Overload Protection	110-140% of max power (Hiccup Mode)
Over Voltage	Latching before 130% of nominal
Short Circuit Protection	Trip without damage & auto-recovery
Transient Response	recovers <500 $\mu$ s following a 50% load change
Overshoot	Turn-on & off overshoot < 5% over nominal voltage
Turn-On Delay	1 Second maximum at 120VAC

### STATUS & CONTROL:

Power Supply On	Green LED on PCB
Fan Output	12 VDC @ 300mA
Fan Fail	High = Failure (15V/5mA Sink Current)
Remote on/off	APS302 Models only

### GENERAL:

Efficiency	70~83% typical (230 VAC / Full Load)
Operating Temperature	0-70°C, derate linearly to 50% Load at 70°C
Storage Temperature	-20°C to +85°C
Over-Temp Protection	>85°C Shutdown (Ambient)
Cooling	18 cfm airflow required for full load (except 5V model requires 22 cfm for full load)
Operating Humidity	5-90% RH, Non-Condensing
Vibration	5 ~ 50 Hz, acceleration 7.35 m/s <sup>2</sup> on X,Y and Z Axis
MTBF	>100k Hrs (according to MIL-HBK-217F) at 30°C

### EMC:

Electrostatic Discharge	EN61000-4-2, $\pm$ 4KV Contact / $\pm$ 8KV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26-1000MHz, 10V/M, 80% AM
EFT / Bursts	EN61000-4-4, $\pm$ 2KV
Surges	EN61000-4-5, $\pm$ 2KV Line-Earth, $\pm$ 1KV Line-Line
Conducted Immunity	EN61000-4-6, 0.15-800MHz, 10V, 80% AM
Voltage Dips	EN61000-4-10, 95% Dip & 10ms, 30% Dip & 500ms
Voltage Interruptions	EN61000-4-11, 95% reduction, 5s
Fluctuations & Flicker	EN61000-3-3

### APPROVALS:

Emissions	EN55022 "B", FCC Part 15 Subject J Class B
Safety Approvals	UL/cUL 60950-1 CSA22.2 No. 60950-1 TUV EN60950-1 CB IEC60950-1 CE Mark (LVD)

## APS300 / APS302Rx SERIES:

### Output Specifications:

Passive PFC	Active PFC	With Vout	Airflow	Convection U-Frame	Convection Covered *	Factory Setpoint Range
APS300Rx-05	APS302Rx-05	5 VDC	45.00A	26.00A	25.00A	2 ~ 6.0 VDC
APS300Rx-09	APS302Rx-09	9 VDC	35.5A	20.00A	13.64A	7~9VDC
APS300Rx-12	APS302Rx-12	12 VDC	26.66A	15.00A	14.16A	10~13.8 VDC
APS300Rx-15	APS302Rx-15	15 VDC	21.33A	12.00A	11.33A	14~15.5 VDC
APS300Rx-18	APS302Rx-18	18 VDC	17.78A	10.00A	9.44A	16~20 VDC
APS300Rx-24	APS302Rx-24	24 VDC	13.33A	7.50A	7.08A	21~26 VDC
APS300Rx-28	APS302Rx-28	28 VDC	11.43A	6.43A	6.07A	27~34 VDC
APS300Rx-36	APS302Rx-36	36 VDC	8.89A	5.00A	4.72A	35~42 VDC
APS300Rx-48	APS302Rx-48	48 VDC	6.67A	3.75A	3.54A	43~50 VDC
APS300Rx-54	APS302Rx-54	54 VDC	5.92A	3.33A	3.15A	51~60 VDC

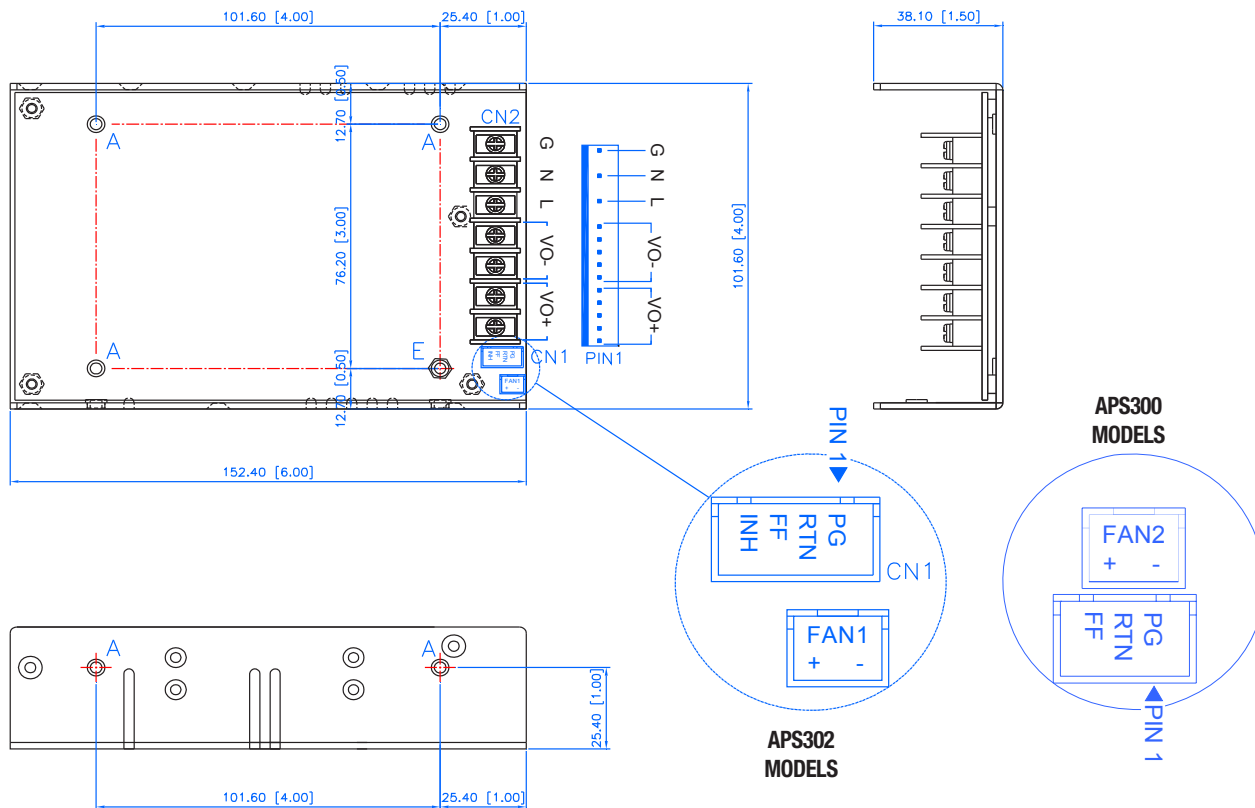
\* For convection cooled operation in covered packages, APS300 Models are rated for 170W / APS302 models are rated for 180W max continuous power.

- Replace "x" with the options below to designate preferred mechanical package:

U = U-Frame Package    C = Perforated Cover (Convection Cooled Only)    F = Top-Mount Fan    E = End Mount Fan

- Consult APS for any Output Voltage within the specified Factory Setpoint Ranges above (All safety approvals are maintained)
- Standard Connections are Terminal Block. Add the Suffix "M" to designate Molex type connectors.
- Input and Output Connector (CN2): Howder Terminal block Part No. HB-95-7P or Mating Molex Part No. 09-91-1600 (16 pin).
- Mounting Inserts:
  - APS300 Models = 8 Places / #8-32 / Maximum Penetration 4mm sees outline drawing for location.
  - APS302 Models = 8 Places / M4X0.7 / Maximum Penetration 4mm sees outline drawing for location.
- Logic connector
  - APS300 Models = Mating JST XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03); Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 26.
  - APS302 Models = Mating JST XHP-4 or equivalent (CHYAO SHIUNN JS-2001-04); Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 26.
- Fan driver connector (FAN2): Mating connector is a P/N JST XHP-2 or equiv (JS-2001-02).

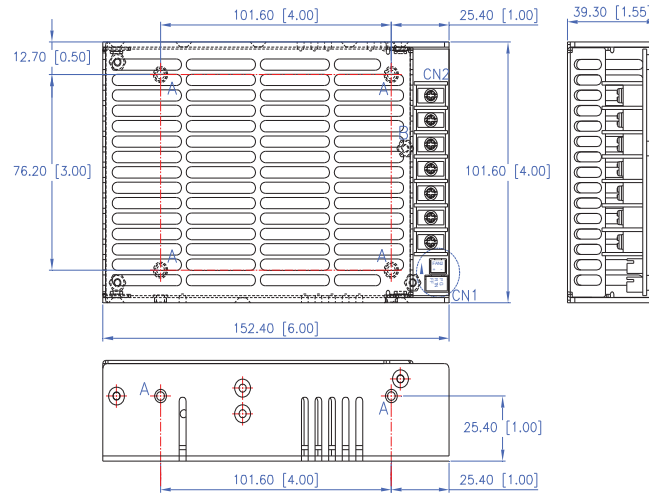
### U-FRAME PACKAGE (OPTION "U"):



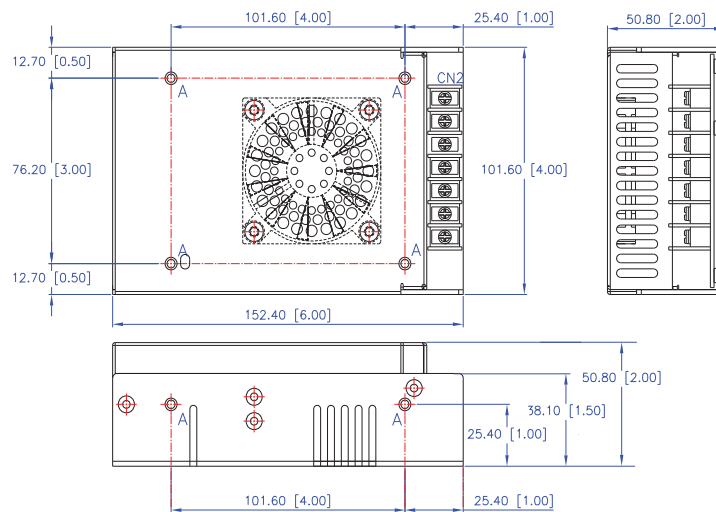
## APS300 / APS302Rx SERIES:

SEE U-FRAME PACKAGE FOR PIN ASSIGNMENTS:

**PERFORATED COVER PACKAGE  
(OPTION "C"):**



**TOP-MOUNT FAN PACKAGE  
(OPTION "F"):**



**END-MOUNT FAN PACKAGE  
(OPTION "E"):**

