

Features:

- Universal Input: 90 – 264 VAC
- Power Density: 12.5 watts/cu in.
- 2 VDC – 60 VDC Output
- Over-Current Protection
- Over-Voltage Protection
- Peak Power 600W within 500uS Duty Duration
- 4 Mechanical Options
- RoHS Compliant



Input Voltage: 90-264 VAC full range, 47~63Hz.

Input Current: 5A at 90 VAC.

Inrush Current: Max. 70A @ 230 VAC & 35A @ 115 VAC; cold start.

PFC: Power Factor Correction pass EN61000-3-2 class D.

Transient Response: Returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not exceed 5%.

Overshoot: Turn-on & off overshoot < 5% over nominal voltage.

Efficiency: 75% to 89%

Turn On Delay: 1 second maximum at 230 VAC.

Hold Up Time: 16mS min. @ 120 VAC at 80% of full load.

Adjustability: Output user adjustable +/-5% minimum.

Fan Drive: 12VDC/300mA offering to drive an external fan.

Fan Fail (FF) Alarm: Designated as **FF** on pin 3 of CN3 is a open collector output rated for 28VDC/5mA sink current maximum, it will go high when a fan failure is detected.

Remote On-Off: Designated as **INH** on pin4 of CN3, requires a low signal to inhibit output.

Power Supply On: Green LED designated as **LED1** on the PCB.

Power Good: Designated as **PG** on CN3 and TTL high 100-500mS after DC regulation. It goes low at least 1mS before loss of regulation and has ability to sink 100mA.

Input Fusing Protection: One F5A/350V fuse inserted in primary.

Over-Power Protection: Fold back mode 110~140%; Auto-recovery.

Short Circuit Protection: Trip without damage and auto-recovery.

Over Voltage Protection: Unit latching down when output exceed 130% and recycle AC input to reset.

Over-Temperature Protection: Unit protected of excessive operating ambient 110°C ±5°C, and automatic recovery.

Operating Temperature: 0 to 70°C ambient, de-rating at 2.5% per degree from 50°C to 70°C.

Vibration: 5 ~ 50 Hz, acceleration @ ±7.35 m/s*s on X,Y and Z Axis.

Storage Temperature: -20 to 85°C.

Operating Humidity: 5% to 90% RH, Non-condensing.

Storage Humidity: 5% to 95% RH, Non-condensing.

EMC: EN55022 class B conducted / radiated, EN61000-3-2, EN61000-3-3; EN55024 (IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-11).

Safety Regulation: Approved to UL60950-1, EN60950-1, IEC60950-1.

Leakage Current: <1mA @ 264 VAC.

HI-POT Test: 1,500 VAC input line to chassis (10mA DC cut off current); Isolating 3,000VAC primary to secondary windings; Primary to core 1,500VAC. All for 3 sec.

Grounding Test: Apply 25A from ground pin of the three prong plug to the far most earth. Max allowable resistance 0.1 ohm.

MTBF: 100,000 Hrs (according to MIL-HBK-217F) at 30°C.

Cooling:

SDU300T2R1 & SDC300T2R1: U-Chassis (also with top cover option) @ 300W max. with 25CFM forced airflow, or 150W max. convection cooled.

SDE300T2R1: Enclosed with rear side built-in fan @ 300W max.

SDF300T2R1: Enclosed with top built-in fan @ 300W max.

Enclosure:

SDU300T2R1: 5(L) x 3.2(W) x 1.5(H) inches.

SDC300T2R1: 5(L) x 3.2(W) x 1.66(H) inches.

SDE300T2R1: 6.5(L) x 3.2(W) x 1.6(H) inches.

SDF300T2R1: 5(L) x 3.2(W) x 2(H) inches.

Burn in: 45°C ±5°C for 1 hour @ 230 VAC with full load.



SDY300T2R1 Series

Single Output, Switch Mode Power Supply
Active PFC, RoHS Compliant

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Output Voltage and Current Chart

Model Number**	Preset Voltage	Output Voltage Range	Max. Output Power/Current		Efficiency (Typical)	Ripple & Noise
			Type <u>U</u> & <u>C</u> (Forced Air) Type <u>E</u> & <u>F</u>	Type <u>U</u> & <u>C</u> (Convection)		
SDY300T2R1XXR	5 VDC	2 - 5 VDC	42 A	20 A	75%	±1%
SDY300T2R1XXR	9 VDC	7 - 11 VDC	27.27 A	13.64 A	80%	±1%
SDY300T2R1XXR	12 VDC	12 - 13.8 VDC	300W	150W	80%	±1%
SDY300T2R1XXR	15 VDC	14 - 16 VDC	300W	150W	80%	±1%
SDY300T2R1XXR	18 VDC	17 - 22 VDC	300W	150W	80%	±1%
SDY300T2R1XXR	24 VDC	23 - 28 VDC	300W	150W	80%	±1%
SDY300T2R1XXR	30 VDC	29 - 34 VDC	300W	150W	80%	±1%
SDY300T2R1XXR	36 VDC	35 - 43 VDC	300W	150W	80%	±1%
SDY300T2R1XXR	48 VDC	44 - 52 VDC	300W	150W	80%	±1%
SDY300T2R1XXR	54 VDC	53 - 60 VDC	300W	150W	80%	±1%

** To Determine Part Number:

- Replace "XX" with Required Output Voltage (5VDC = "05", 12VDC = "12", 48VDC = "48", ect.)
 - Replace "Y" with Desired Case Code:
 - Type U: U-Chassis @ 300 Watts Max. Output Power with 25CFM Airflow Cooling, or 150 Watts Convection.
 - Type C: U-Chassis with Cover @ 300 Watts Max. Output Power with 25CFM Airflow Cooling or 150 Watts Convection.
 - Type E: Enclosed with Side Built-In Fan @ 300 Watts Max. Output Power
 - Type F: Enclosed with Top Built-In Fan @ 300 Watts Max. Output Power
 - Conformal Coating (Optional): Order as SDY300T2R1XXCR
 - Input Connector: For Enclosure w. Side Fan (SDE300T2R1XXR): IEC320-C14 Inlet or 3-Position Barrier Strip.
For U-Channel (SDU300T2R1XXR), Cover (SDC300T2R1XXR) & Enclosure w. Top Fan (SDF300T2R1XXR): Crimp Style PCB Header (5-Pin, 3 Used) or 3-Position Barrier Strip.
 - Output Connector: 6-Pin Crimp Style PCB Header or 2-Position Barrier Strip.
For Crimp Style PCB Header, Order as: SDY300T2R1XXR (Unchanged)
For 2-Position Barrier Strip, Order as: SDY300T2R1XXAR
- Example: SDF300T2R124R indicates a 24VDC Unit with an Enclosed, Top Fan Case and 6-Pin Crimp Style PCB Header.
- SDU300T2R148ACR indicates a 48VDC Unit with U-Chassis Case, 2-Position Barrier Strip, and Conformal Coating.



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Pin Connection: SDY300T2R1XXR

Pin	Input: 5-Pin Crimp Terminal
1	Ground
2	No Pin
3	Neutral
4	No Pin
5	Line
Output: 6-Pin Crimp Terminal	
1 - 3	Return (-)
4 - 6	V Output (+)

Pin Connection: SDY300T2R1XXAR

Pin	Input: 3-Position Barrier Strip
1	Ground
2	Neutral
3	Line
Output: 4-Position Barrier Strip	
1	Return (-)
2	V Output (+)

Input Connector (CN1):

For SDU, SDC, & SDF Models: Mating Molex Part No. 035977-0590 or equivalent (5-pin, 3 used), or Terminal block-Howder Part No. HD-601-3P, M3 screws.
For SDE Model: IEC-320 snap-in mounting type or Terminal block-Howder Part No. HD-602-3P.
PCB is Labeled: L=Line; N=Neutral; G=Chassis Ground.

Output Connector (CN2):

Mating Molex Part No. 035977-0690.
Terminal block-Dinkle P830N, M5 screws.

Output Pin Assignment:

(See table above).

Mounting Inserts:

6Paces M3. Maximum Penetration 3.8mm sees outline drawing for location.

Logic signal connector (CN3):

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 (FAN1):

Mating connector is JST P/N XHP-3 (3 pins 0.98 pitch) or equivalent (CHYAO SHIUNN JS-2001-03).



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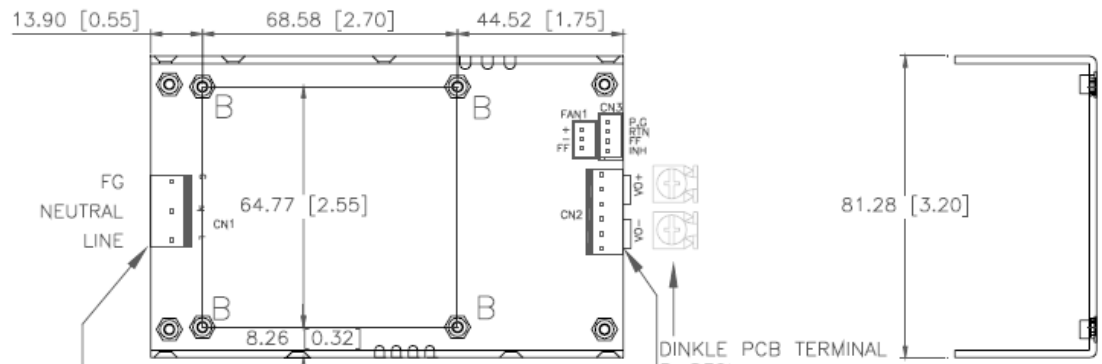
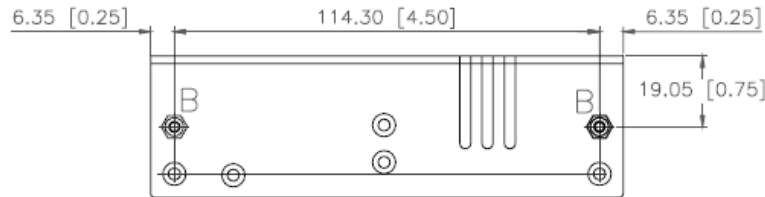
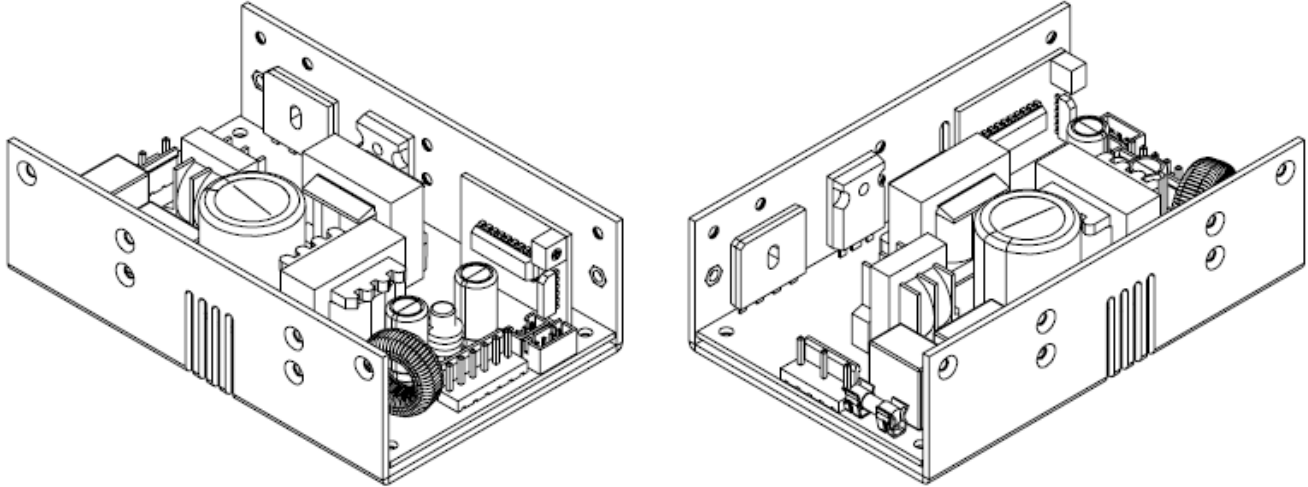
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Type U: U-Chassis Case
Order as: SDU300T2R1XXR

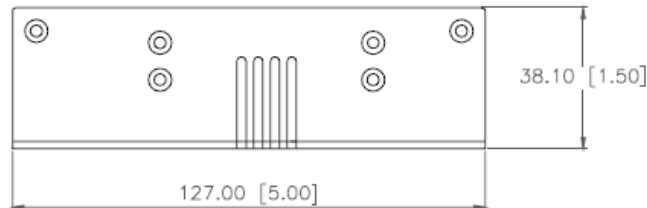
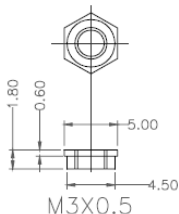


TERMINAL BLOCK
3PINS 6.35mm CENTER
HD-601-3P

MATING MOLEX PART NO. 035977-0500
OR EQUIVALENT (5 PIN, 3 USED)

MATING MOLEX PART NO. 035977-0600(6 PINS)
OR EQUIVALENT

B 4:1(6 PL)





SDY300T2R1 Series

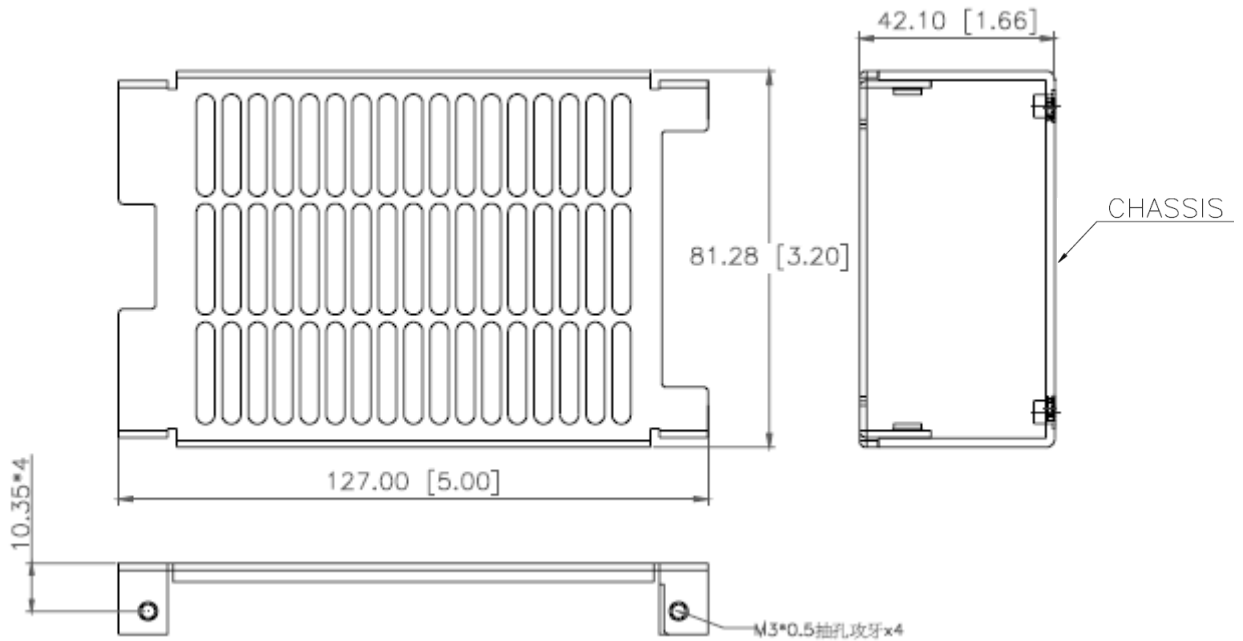
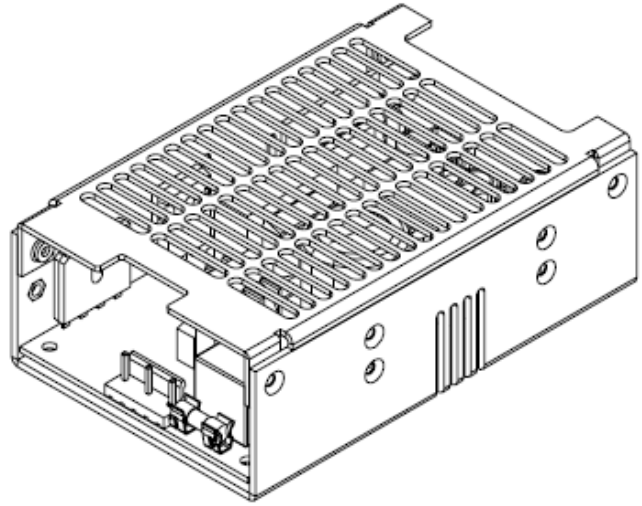
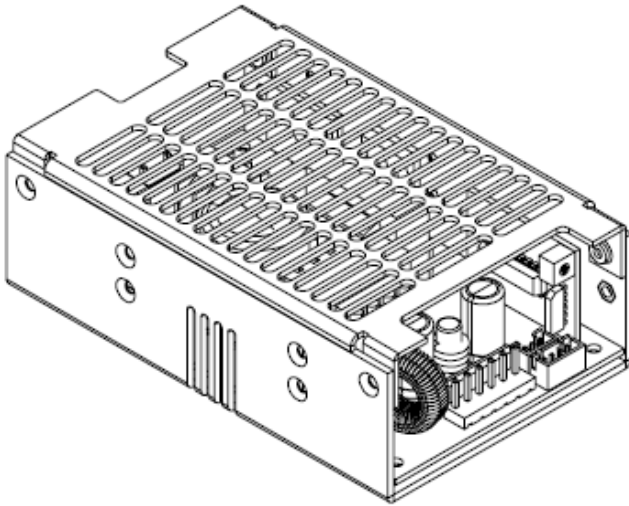
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Type **C**: U-Chassis Case w/ Cover
Order as: SD**C**300T2R1XXR





SDY300T2R1 Series

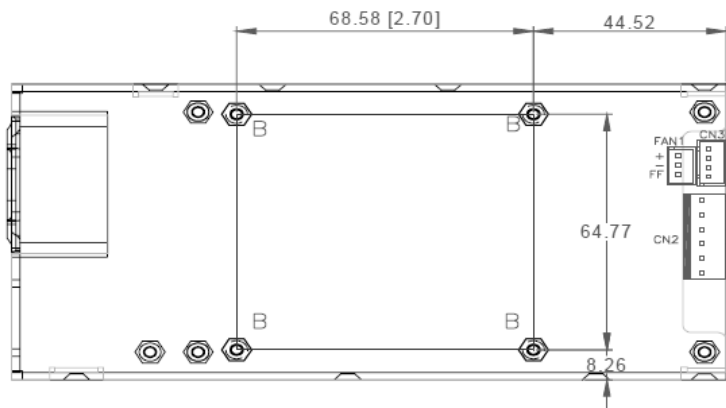
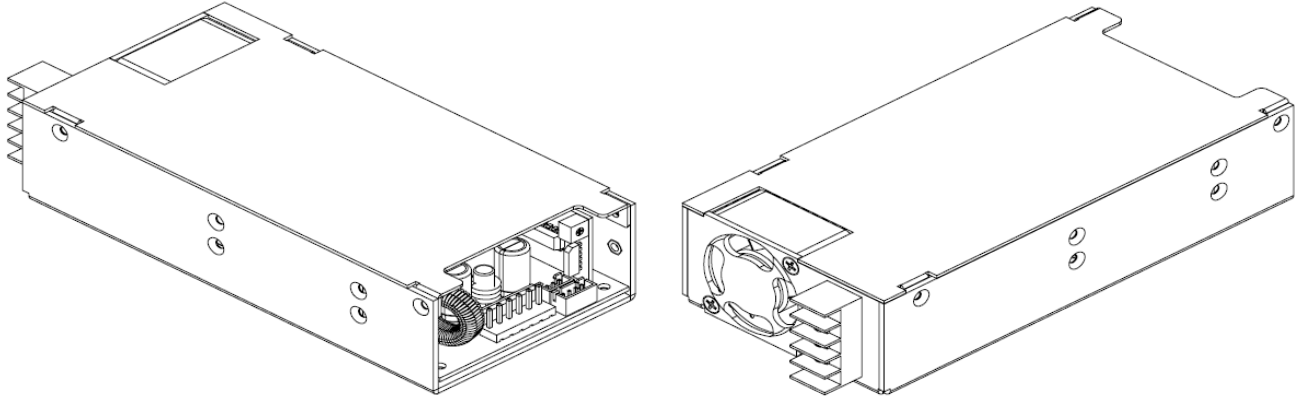
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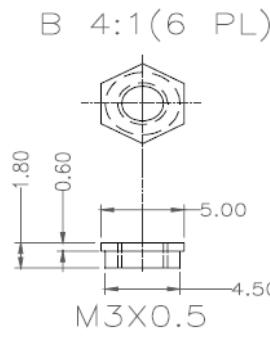
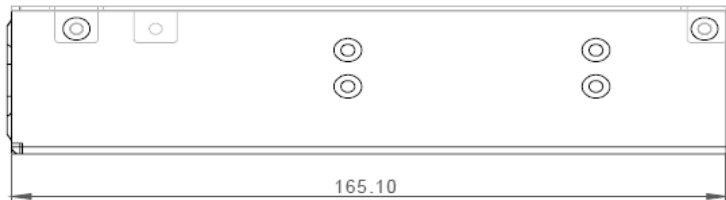
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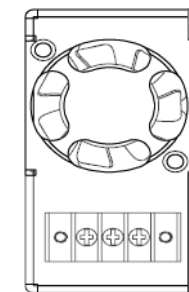
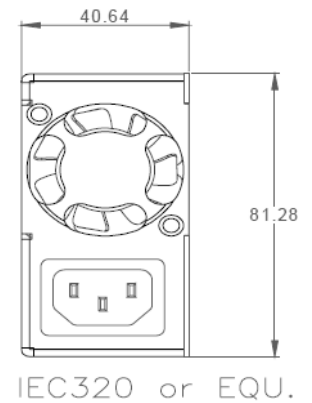
Type **E**: Enclosed Case w/ Side Fan
Order as: SDE300T2R1XXR



MATING MOLEX PART NO. 035977-0600(6 PINS)
OR EQUIVALENT



DINKLE PCB TERMINAL
P-830N
2PINS M5 SCREW



TERMINAL BLOCK
3PINS 6.35mm CENTER
HD-602-3P



SDY300T2R1 Series

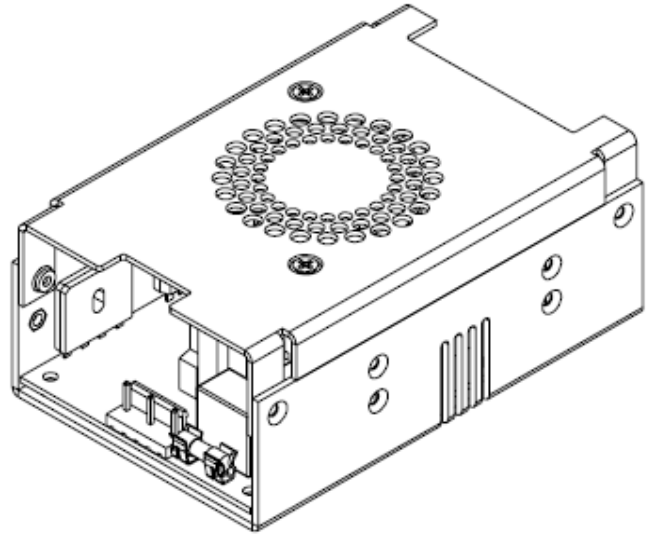
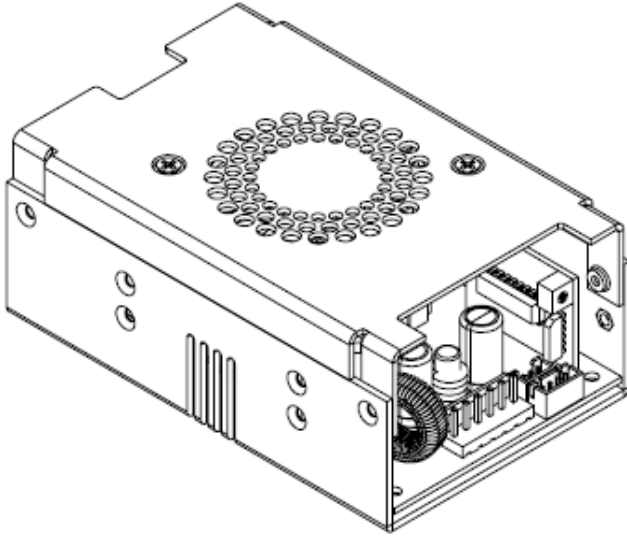
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Type **E**: Enclosed Case w/ Top Fan
Order as: SDE300T2R1XXR



COVER WITH
BUILT-IN DC FAN

