C&D TECHNOLOGIES

Product Data Sheet

350 WATT AC/DC POWER SUPPLY

NT350

DESCRIPTION

The NT350 is a family of compact, fully featured, multiple-output, 350W power supplies with a 3.3V main output. These high current 3.3V output platforms will support requirements in which the logic has largely migrated from 5V to 3.3V. With active Power Faction Correction (PFC) to EN61000-3-2, wide-range input of 90-264VAC, EMI compliance to FCC and VDE Class B, and "CE" Marking, the NT350 series is ideal for systems targeting worldwide markets. The complement of standard features includes remote sense compensation, output voltage adjustment, active current sharing, remote inhibit, power fail warning, and thermal shutdown. All outputs are fully isolated and regulated. A complete array of output voltage configurations is available to handle a broad range of applications. An optional cover with fan is offered for environments in which system airflow is not provided.

FEATURES

- **Active Power Factor Correction**
- **3.3V Main Output**
- **Fully Isolated Outputs**
- **Low Profile: 9" x 4.85" x 2.00"**
- **One, Two, Three and Four Output Models**
- **N+1 Current Sharing**
- **FCC/VDE Class B EMI Filter Standard**
- **Optional Fan Mounted On Cover**

AGENCY APPROVALS

TÜV Rheinland

Internet: http://www.cdpowerelectronics.com

Power Electronics Division, United States
3400 E Britannia Drive, Tucson, Arizona 85706
Phone: 800.547.2537 Fax: 520.770.9369

Power Electronics Division, Europe
C&D Technologies (Power Electronics) Ltd.
132 Shannon Industrial Estate, Shannon, Co. Clare, Ireland
Tel: +353.61.474.133 Fax:+353.61.474.141

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Operating Range	47-63Hz	90		264	VAC
Input Current	Nominal line, full load			6	A
Inrush Current	120VAC, 25^{0}C, cold start			37	Apk
	240VAC, 25^{0}C, cold start			70	Apk
Efficiency	Nominal line, full load		70		%
Holdup	Full load	35			msec
Power Factor (1)	Full load		0.99		

Notes: (1) Harmonic currents meet EN61000-3-2

Output Voltages and Maximum Rated Loads

	OUTPUT #1		OUTPUT #2		OUTPUT #3		OUTPUT #4	
MODEL NUMBER	V_{OUT}	I_{MAX}	V_{NOM}	I_{MAX}/I_{PK}	V_{NOM}	I_{MAX}/I_{PK}	V_{NOM}	I_{MAX}/I_{PK}
NT350-U1A	± 3.3V	50A						
NT350-U2A	± 3.3V	50A	± 12V	10A/12A				
NT350-U2B	± 3.3V	50A	± 15V	10A/12A				
NT350-U3A	± 3.3V	50A	± 12V	10A/12A	± 12V	8A/10A	-	-
NT350-U3B	± 3.3V	50A	± 15V	10A/12A	± 15V	8A/10A	-	-
NT350-U4C	± 3.3V	50A	± 5V	10A/12A	± 12V	8A/10A	± 12V	3.0A/4.0A
NT350-U4D	± 3.3V	50A	± 5V	10A/12A	± 12V	8A/10A	± 24V	1.5A/2.0A
NT350-U4E	± 3.3V	50A	± 12V	10A/12A	± 12V	8A/10A	± 5V	3.0A/4.0A
NT350-U4F	± 3.3V	50A	± 5V	10A/12A	± 15V	8A/10A	± 15V	3.0A/4.0A
NT350-U4G	± 3.3V	50A	± 5V	10A/12A	± 15V	8A/10A	± 24V	1.5A/2.0A
NT350-U4H	± 3.3V	50A	± 5V	10A/12A	± 15V	8A/10A	± 12V	3.0A/4.0A
NT-350-U4P	± 3.3V	50A	± 12V	8A/10A	± 15V	8A/10A	± 12V	3.0A/4.0A

Note: Peak current ratings are for 10sec maximum. Total power not to exceed 350 watts.

Output Specifications

Parameter	Conditions	Min	Typ	Max	Units
Output Power	All environmental and line conditions			350	Watts
Voltage Adjustment Range	Relative to nominal output voltage, all outputs		± 5		%
Output Regulation	Line			± 0.03	%
	Load			± 0.25	%
	Cross			± 0.05	%
Minimum Load	Output V1	3.0			A
	Auxiliaries	0.1			A
PARD	V1, at output terminals, 20MHz B/W			50	mVpk-pk
	Auxiliary Outputs			1	% pk-pk
Temperature Coefficient	0^0 to 50^{0}C		± 0.02		%/^{0}C

Environmental Specifications

Parameter	Conditions	Min	Typ	Max	Units
Ambient Temperature	Operating; output de-rated linearly to 50% of rated capacity between 50^{0}C and 70^{0}C	0		+70	^{0}C
	Non-operating	-20		+85	^{0}C
Altitude	Operating			+10,000	Feet
	Non-operating			+50,000	Feet
Shock	Per MIL-STD-810D, Method 516.3, Procedure I				
Vibration	Per MIL-STD-810D, Method 514.3, Procedure I				
Cooling	The NT350 is designed to operate with 30CFM airflow.				

Product Features

Features	Characteristic
Remote Sense	500mV compensation, Output V1
Active Current Sharing	Single Wire; 1.5% of max rated load
Cover w/Integral Fan	Optional on all models
OVP	4.3V ± 0.5V, Output V1, latching
Overcurrent Protection	All outputs individually current limited with automatic recovery
Thermal Shutdown	Automatic Restart
Output Isolation	All outputs are fully isolated
Power Fail Warning Signal (L)	Transition to Logic "0" at least 15msec before loss of output regulation
Remote Inhibit (L)	Logic "0" applied will inhibit output (referenced to Cntl Signal Rtn terminal)

Product Compliances

Approval	Characteristic
UL	UL1950 and UL1012, File No. 14675
CSA	C22.2 No. 234-M90, Level 6. File No. LR9070-154C
TUV	EN60950, License No. R9576031
FCC	Class B requirements for conducted emissions
CISPR 22	Class B requirements for conducted emissions
CE Mark	Low Voltage Directive

Ordering Information

Model Designation (1)

BASE MODEL **NT350**

Chassis: "U" = unfinned, "M" = modified

Number of Outputs (1,2,3 or 4)

Output Voltage: See chart on facing page

Input Filter: "B" designates Class B EMI filter (standard feature)

Cover: "C" = plain cover, "F" = fan cover, "N" = no cover (2)

Remote Inhibit: "L" designates that Logic "0" applied inhibits output (standard configuration)

Input: "P" designates Power Factor Corrected wide range (90-264VAC) input (standard feature)

Power Fail Warning: "L" designates transition to Logic "0" upon loss of AC (standard configuration)

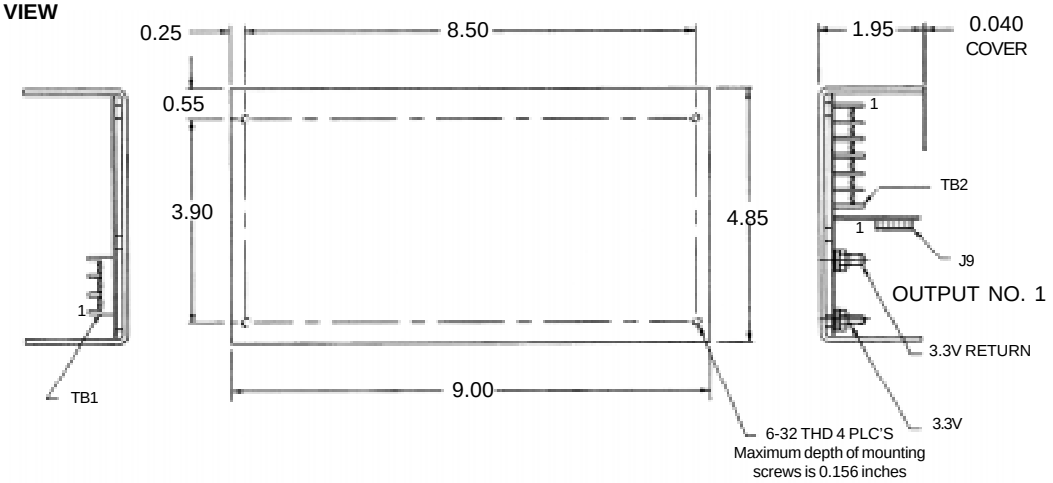
Current Share: "M" designates active current sharing on output V1 (std.) (standard configuration)

NOTES: (1) Standard configurations are shown; consult factory for other options

(2) Cover is required to meet EMI specifications

Mechanical

TOP VIEW



NOTES:

All dimensions are in inches

FAN MOUNTED ON COVER WILL ADD 1.30".

COOLING: The NT350 is designed to operate with 30 CM airflow.

SHOCK AND VIBRATION: The NT350 meets the requirements of MIL STD-810D. (Vibration-Method 514.3 Procedure I; Shock-Method 516.3 Procedure I.)

WEIGHT: Approximately 3 lbs.

Terminal Block 1		Terminal Block 2	
POS	**FUNCTION**	**POS**	**FUNCTION**
1	AC Line	1	-V2
2	AC Neutral	2	+V2
3	Ground	3	-V3
		4	+V3
		5	-V4
		6	+V4

J9 Connector		J9 Connector	
PIN	**FUNCTION**		**Molex No.**
1	+ Sense	Connector	22-28-1090
2	- Sense		
3	N/C		
4	N/C		
5	Start Up Sync.		
6	Power Fail		
7	Remote Inhibit		
8	Current Share		
9	Cntl Signal Rtn		