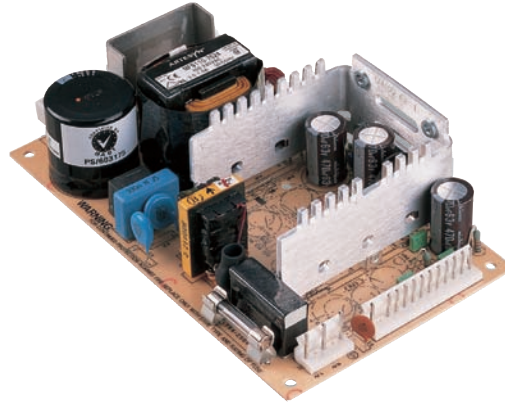


NFS110 Series

Single & Quad output

Total Power: 80 - 110 W
Input Voltage: 85 - 264 Vac
120 - 370 Vdc
of Outputs: Single, quad



Rev. 11.2.09_69
NFS110 Series
1 of 5



Special Features

- 7.0 x 4.25 x 1.8 inch package
- Overvoltage and short circuit protection
- 110 W with 20 CFM
- Adjustable outputs
- EN55022, EN55011 conducted emissions level B
- UL, VDE and CSA safety approvals
- CE mark
- Available RoHS compliant
- 2 year warranty

Safety

- VDE0805/EN60950/
IEC950/IEC1010
File No. 10401-3336-0213
- Licence No. 4001467 7
- UL1950 File No. E132002
- CSA C22.2 No. 950
File No. LR41062C

Electrical Specifications

Output		
Voltage adjustability:	+5.1 V o/p on multi's 5.1 V single output 12 V single output 15 V single output 24 V single output	3.0% 3.0% 12 - 14 V 15 - 18 V 24 - 30 V
Line regulation:	LL to HL, FL All outputs on all units	±0.1% max.
Overshoot/undershoot:	At turn-on	0%
Temperature coefficient:	All outputs	±0.02%/°C
Overvoltage protection:	Multi o/p 5.1 V only 5.1 V single output 12 V single output 15 V single output 24 V single output	6.25 V ± 0.75 V 6.25 V ± 0.75 V 15.75 V ± 1.0 V 22 V ± 1.5 V 33 V ± 2.5 V
Output power limit:	Primary power limited	Pin max. 160 W Pout min. 110 W
Minimum output current:	(See Note 13)	0 A
Short circuit protection:	Burst mode operation	
Input		
Input voltage range:		85 - 264 Vac 120 - 370 Vdc
Input frequency range:		47 - 440 Hz
Input surge current:	230 Vac	35 A
Safety ground leakage current:	110 Vac, 50 Hz 230 Vac, 50 Hz	0.2 mA, max. 0.4 mA, max.

All specifications are typical at nominal input, full load at 25 °C unless otherwise stated

EMC Characteristics

Conducted emissions:	EN55022, FCC part 15	Level B
Radiated emissions:	EN55022, FCC part 15	Level A
ESD air:	EN61000-4-2, level 3	Perf. criteria 1
ESD contact:	EN61000-4-2, level 4	Perf. criteria 1
Surge:	EN61000-4-3, level 3	Perf. criteria 1
Fast transients:	EN61000-4-4, level 3	Perf. criteria 1
Radiated immunity:	EN61000-4-5, level 3	Perf. criteria 2
Conducted immunity:	EN61000-4-6, level 3	Perf. criteria 1

General Specifications

Hold-up time:	110 Vac @ 80 W 110 Vac @ 110 W 230 Vac @ 80 W 230 Vac @ 100 W	35 ms 17 ms 140 ms 100 ms
Efficiency:	Multiple outputs +5.1 V single 12 V and 15 V singles 24 V single	70% typical 70% typical 72% typical 75% typical
Isolation voltage:	Input/output Input/chassis	3000 Vac 1500 Vac
Approvals and standards: (see note 12)	VDE0805, EN60950, IEC950, IEC1010, UL1950, CSA C22.2 No. 950	
Weight:	Singles Multiple outputs	550 g (19.4 oz) 600 g (21.2 oz)
MTBF (@25 °C):	MIL-HDBK-217E	125,000 hours min.

Environmental Specifications

Thermal performance:	Operating ambient	0 °C to +70 °C
(See notes 9, 10)	Non-operating	-40 °C to +85 °C
	0 °C to 50 °C convection cooled	80 W
	+50 °C to +70 °C, convection cooled	Derate 2 W/°C
	0 °C to +50 °C, 20 CFM forced air	110 W
	+50 °C to +70 °C, 20CFM forced air	Derate 2.75 W/°C
	Peak, 0 °C to +50 °C, max. 60 seconds	110W
Relative humidity:	Non-condensing	5 to 95% RH
Altitude:	Operating	10,000 feet max.
	Non-operating	40,000 feet max.
Vibration: (See Note 11)	5 - 500 Hz	2.4 G rms peak