



NFC15 SERIES

Single and dual output

- 4:1 input voltage range
- Low profile 0.46 inch
- · 10.2 Watts/cubic inch
- · 80% efficiency
- UL, CSA and VDE safety approvals
- Inhibit/sync function
- Overvoltage protection
- · Fixed frequency operation

The NFC15 series of DC/DC converters are economical 15 Watt, hybrid DC/DC converters that accept input voltages ranging from 20VDC to 72VDC. A constant efficiency of 80% is maintained over the entire input voltage range. The isolated floating output can be referenced as either positive or negative, or stacked in series for higher output voltages. All models include current limited outputs, overvoltage protection and remote on/off. Packaged in a low profile 2.0 x 1.6 x 0.46 inch case, the NFC15 is ideal for space critical applications in telecommunications, data communications and distributed power networks.

[2 YEAR WARRANTY]







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

OUTPUT SPECIFICATION	ONS		
Voltage accuracy	Single output Dual output		±1.0% ±1.5%
Voltage adjustability	All outputs		±10%
Line regulation	LL to HL at FL, si LL to HL at FL, d		±0.5% max. ±0.5% max.
Load regulation	FL to NL, single of FL to NL, dual or		±1.0% max. ±5.0% max.
Ripple and noise	5Hz to 20MHz	75m	nV pk-pk max. 15mV rms
Temperature coefficient		±0.	02%/°C, max.
Overvoltage protection	See table		Clamp
Short circuit protection (See Note 8)		autor	Continuous natic recovery
INPUT SPECIFICATION	IS		
Input voltage range	48VDC nominal		20 to 72VDC
Immust filter (Coo Note T)			
Input filter (See Note 5)		Exte	rnal capacitor
Input current	No load Full load	Exte	rnal capacitor 15mA 400mA
		Logic	 15mA
Input current Remote ON/OFF Logic compatibility Logic on		Logic	15mA 400mA CMOS/TTL c high or open ow or Jumper pin 2 and 4
Input current Remote ON/OFF Logic compatibility Logic on Logic off Frequency		Logic Logic Switch	15mA 400mA CMOS/TTL c high or open ow or Jumper

GENERAL SPECIFICA	TIONS			
Efficiency		80% typical		
Isolation voltage	Input/output	500VDC		
Switching frequency	Fixed	200kHz ±5.0%		
Approvals and standards		VDE0805, EN60950 IEC950, UL1950 CSA C22.2 No. 950		
Case material	A b	luminum alloy, hard lack anodized finish		
Cover material	10 polyeth	0% glass reinforced nerimide GE ULTEM #2110 or equivalent		
Material flammability		UL94V-0		
Weight		45g (1.6oz)		
MTBF	MIL-HDBK-217F Bellcore 332	>436,000 hours >950,000 hours		
ENVIRONMENTAL SPECIFICATIONS				
Thermal performance	Operating ambient, (See Graph 2) Option (See Note 6) Non-operating amb Max. case temperat (See Note 7) Derating Cooling Free air	-40°C to +60°C 55°C to +125°C		

International Safety Standard Approvals



VDE0805/EN60950/IEC950 File No. 10401-3336-1075 Licence No. 1629



UL1950 File No. E136005



CSA C22.2 No. 950 File No. LR41062C

15 Watt Wide input DC/DC converters

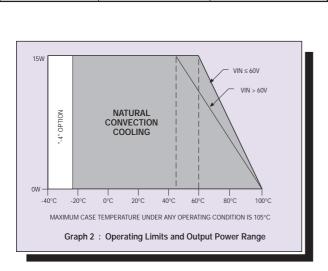
INPUT	OUTPUT	01/15	OUTPUT	INPUT	TYPICAL	REGU	ILATION	MODEL
VOLTAGE (1)	VOLTAGE	OVP	CURRENT	CURRENT (2)	EFFICIENCY	LINE (3)	LOAD (4)	NUMBER
20-72VDC	5VDC	6.2VDC	3000mA	400mA	79%	±0.5%	±1%	NFC15-48S05
20-72VDC	12VDC	15VDC	1250mA	400mA	81%	±0.5%	±1%	NFC15-48S12
20-72VDC	15VDC	18VDC	1000mA	400mA	81%	±0.5%	±1%	NFC15-48S15 ⁽⁶⁾
20-72VDC	±12VDC	30VDC	±625mA	400mA	80%	±0.5%	±5%	NFC15-48D12
20-72VDC	±15VDC	36VDC	±500mA	400mA	80%	±0.5%	±5%	NFC15-48D15

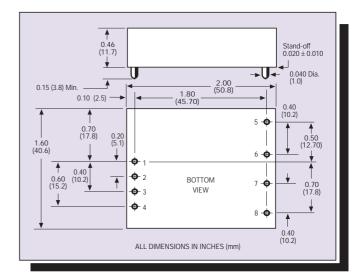
Notes

- Nominal input voltage is 48VDC.
- 2 Maximum figure, at full load.
- 3 Measured from low line to high line at full load.
- 4 Measured from full load to no load.
- 5 An external filter capacitor, connected across the inputs, is required for normal operation. Capacitor should be capable of handling 600mA ripple current. Suitable capacitor: Nippon Chemi-Con SXE series, 56μF, 100V.
- 6 As a factory added option, the NFC15-48S15 can be operated down to -40°C. The suffix '-4' should be added to the model number when ordering, e.g. NFC15-48S15-4.
- 7 Maximum case temperature must not be exceeded. Derating curve may be extended or restricted depending on cooling.
- 3 Long term continuous operation into a short circuit will compromise the reliability of the unit.

EXTERNAL OUTPUT TRIMMING				
Output can be externally trimmed by ±10% using either method shown below.				
TRIM DOWN RTD RTD RTD RTD RTU RTU	10 K TRIMPOT 8 10K			

PIN CONNECTIONS				
PIN NUMBER	SINGLE OUTPUT	DUAL OUTPUT		
1	+ Input	+ Input		
2	– Input	– Input		
3	No Pin	No Pin		
4	Control	Control		
5	No Pin	+ Output		
6	+ Output	Common		
7	- Output	– Output		
8	Trim	Trim		





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