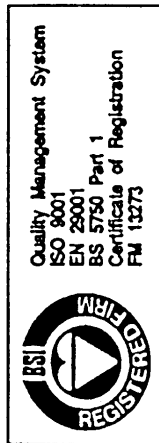


Information

the following Newport Components data books are also available

- ☐ Application Notes
- ☐ DC/DC Converters
- ☐ Delay Lines
- ☐ Inductors
- ☐ Interface Products
- ☐ Network Products
- ☐ Transformers

Please contact us for a copy of these data books



Data given is nominal unless otherwise stated. The manufacturer reserves the right to change this specification without prior notice.

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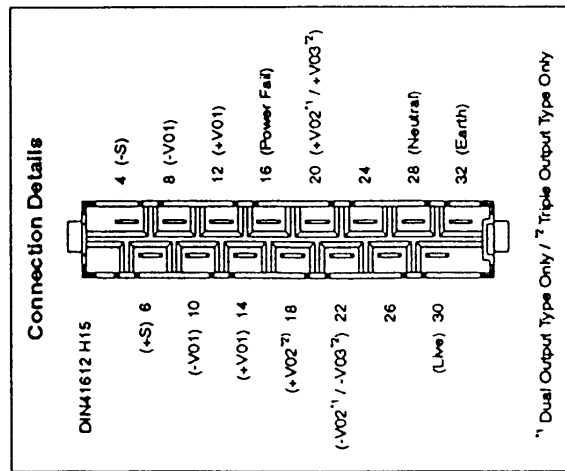
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C:\Ventura\Shed\Eurocard\CHP 9000\NCE100 Issue 1

newport components
Power 0865
Technology - 881800
Newport

- ☐ Single, dual & triple output versions.
- ☐ Dual & triple output versions with one output isolated for flexible configuration.
- ☐ User-selectable for 110/240V AC inputs (auto select option).
- ☐ Package size down to 8TE.
- ☐ High efficiency - 80% typical.
- ☐ Excellent line transient immunity.
- ☐ RFI to VDE0871 curve B.
- ☐ Units meet international safety standards.



description

User selectable 100W Eurocard power supply to operate from either 110V or 240V AC mains supplies, the NCE 100 range has fifteen standard versions including single, dual and triple output units to suit a wide range of applications. With a power density in excess of 2.5W per cubic inch the NCE 100 series is a perfect choice for applications where rack space is at a premium. The NCE 100 range has been designed to meet a number of international safety standards which include UL478, 1012, CSA22.2 Bulletin, 1402, EN60950 (BS7002), BS6301 and IEC950.

absolute maximum ratings

Operating free-air temperature range . . . 0C to 60C (see derating curve)
Isolation voltage 3750Vrms input to output
Output power total 100W

Electrical specifications over operating free-air temperature range

Input voltage ranges	90-132 or 180-264V AC
Frequency	47-440Hz
Output voltage range settings	Via link (auto-range and switch option)
Standby current	2.5kV 10μS (Line neutral), 1.5kV 150μS (Line earth)
Linearity at full load	80% typical
Standby current	25A max (cold start)
Output current	1.25A rms (220V), 2.5A rms (110V)
Output fuse	3.15AT anti-surge type
Hold up time	18mS min at 100W output from 99V or 198V input
(conducted)	Meets VDE0871 curve B

Electrical parameters over operating free-air temperature range

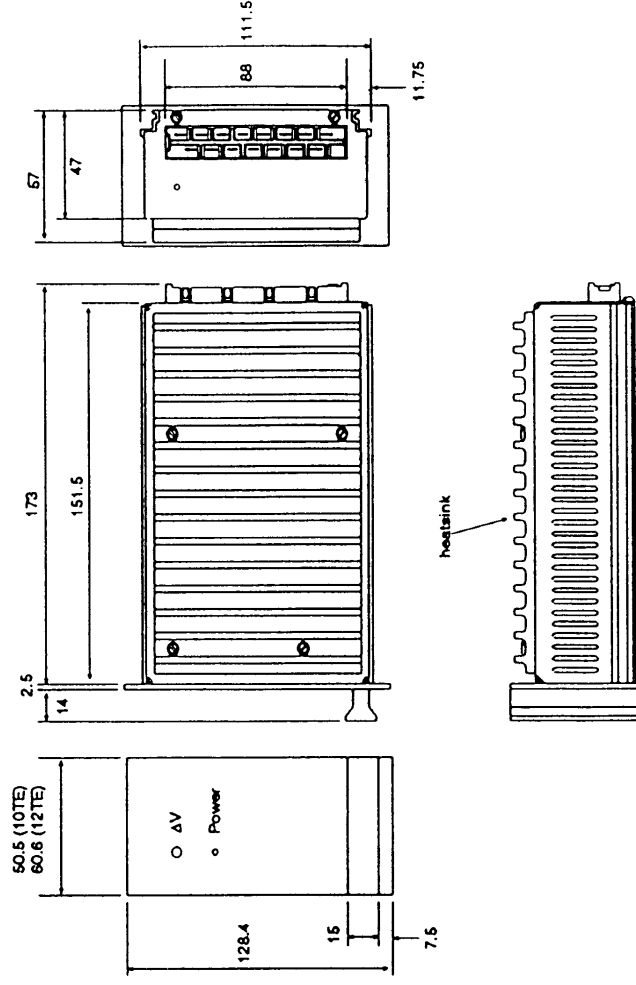
Parameter	Test Conditions	V01	V02	V03
Voltage Setting Accuracy	100W load, V01 at nominal	±1%	±4%	±2%
Voltage Adjustment	V02 tracks V01	±10%	-	-
Line Regulation	Over input range	±0.2%	±0.2%	±0.1%
Load Regulation	10 to 100% load	±0.5%	±3%	±1%
Cross Regulation	Other outputs 10 to 100% load	±0.2%	±4%	±0.5%
Output Ripple & Noise	30MHz bandwidth	100mV pp	1% pp	1% pp
Envelope Voltage Threshold	-	6.0-6.8V	-	-
Remote Sense	V02 tracks V01	0.5V	-	-
Temperature Drift	Per degree C	0.02%	0.02%	0.02%
Current Limit	Unit power-limited at 120W nom	-	-	2.2A

For dual output units V02 is V03 specification.
The PSU will operate on no load, but requires 10% load on V01 and V02 to meet the above specification

Outline dimensions

2

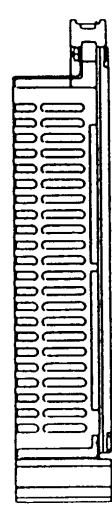
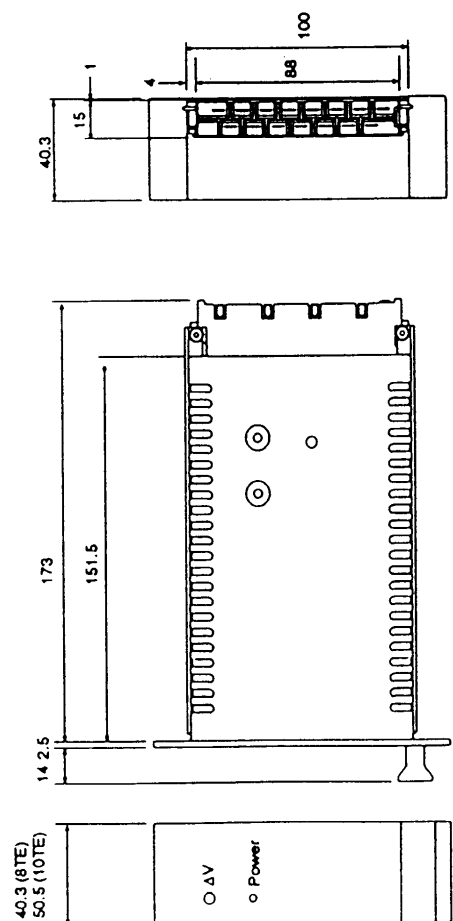
FRONT VIEW



Millimetres ±0.25
Power : Green LED
ΔV : Output Volts Adjustment
Note : The 10TE model comes without a heatsink
The 12TE model comes with a fitted heatsink

Outline dimensions

FRONT VIEW



Millimetres ± 0.25
Power : Green LED
 ΔV : Output Volts Adjustment
Note : The 8TE model comes without a heatsink
The 10TE model comes with a fitted heatsink

selection guide
single output types

Part Number	Output	Output Adjust Range	Package Style 1	Package Style 2
NCE100-S01-1	5V, 20A	4.5 - 5.5V	10TE	-
NCE100-S01-2	5V, 20A	4.5 - 5.5V	-	12TE
NCE100-S02-1	12V, 8.4A	10.8 - 13.2V	8TE	-
NCE100-S02-2	12V, 8.4A	10.8 - 13.2V	-	10TE
NCE100-S03-1	15V, 6.7A	13.5 - 16.5V	8TE	-
NCE100-S03-2	15V, 6.7A	13.5 - 16.5V	-	10TE
NCE100-S04-1	24V, 4.2A	21.6 - 27.6V	8TE	-
NCE100-S04-2	24V, 4.2A	21.6 - 27.6V	-	10TE
NCE100-S05-1	48V, 2.1A	43.2 - 55.2V	8TE	-
NCE100-S05-2	48V, 2.1A	43.2 - 55.2V	-	10TE

dual output types

Part Number	Output 1	Output 2	Package Style 1	Package Style 2
NCE100-D01-1	+5V, 12A	5V, 3A	10TE	-
NCE100-D01-2	+5V, 12A	5V, 3A	-	12TE
NCE100-D02-1	+12V, 6A	12V, 2A	10TE	-
NCE100-D02-2	+12V, 6A	12V, 2A	-	12TE
NCE100-D03-1	+15V, 5A	15V, 2A	10TE	-
NCE100-D03-2	+15V, 5A	15V, 2A	-	12TE
NCE100-D04-1	+24V, 3A	24V, 1.5A	10TE	-
NCE100-D04-2	+24V, 3A	24V, 1.5A	-	12TE

output 2 isolated to allow for +ve or -ve connection

selection guide continued multiple output types

Part Number	Output 1	Output 2	Output 3	Package Style 1	Package Style 2
NCE100-T01-1	+5V, 12A	+12V, 5A	12V, 1.5A	10TE	-
NCE100-T01-2	+5V, 12A	+12V, 5A	12V, 1.5A	-	12TE
NCE100-T02-1	+5V, 12A	+12V, 5A	5V, 1.5A	10TE	-
NCE100-T02-2	+5V, 12A	+12V, 5A	5V, 1.5A	-	12TE
NCE100-T03-1	+5V, 12A	+15V, 4A	15V, 1.5A	10TE	-
NCE100-T03-2	+5V, 12A	+15V, 4A	15V, 1.5A	-	12TE
NCE100-T04-1	+5V, 12A	+24V, 2.5A	24V, 1.0A	10TE	-
NCE100-T04-2	+5V, 12A	+24V, 2.5A	24V, 1.0A	-	12TE
NCE100-T05-1	+5V, 12A	+12V, 5A	24V, 1.0A	10TE	-
NCE100-T05-2	+5V, 12A	+12V, 5A	24V, 1.0A	-	12TE
NCE100-T06-1	+5V, 12A	+24V, 2.5A	12V, 1.5A	10TE	-
NCE100-T06-2	+5V, 12A	+24V, 2.5A	12V, 1.5A	-	12TE

Output 3 isolated to allow for +ve or -ve operation

Options

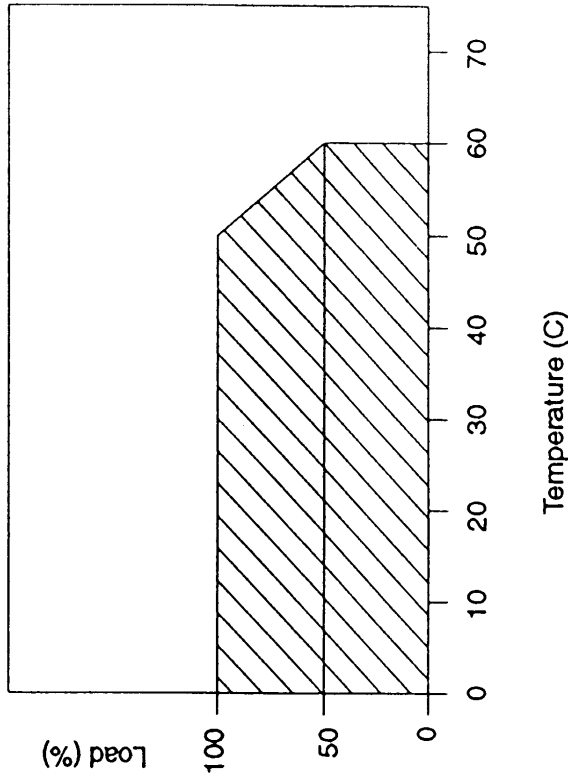
- Power fail signal 5mS warning of output failure via TTL signal
- OC OK signal TTL indication of V01 falling by 5%
- Fourth output Additional output rated at 0.25A
- Current sharing Active current sharing for single output units
- Auto ranging Automatic input ranging between 110/240V
- Battery backup UPS input for simple and cost effective - battery back-up via NCE-UPS Eurocard

Note: Power fail, DC ok and the fourth output use the same connection pin, therefore only one may be specified

ordering information

Two NCE100 package styles are available. Style 1 has a plastic cover to one side of the unit and gives minimum width, 8TE, it is also available with a fitted heatsink and gives a width of 10TE. Style 2 has a full metallic casing, 10TE, which again is available with a fitted heatsink to give a width of 12TE. When ordering please refer to the part number as specified in the selection guide.

temperature derating graph

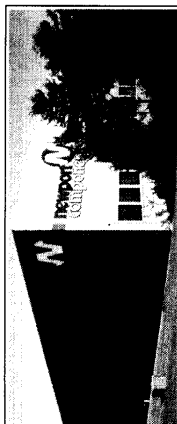


description

The NCE100 series of AC/DC eurocassette switching power supplies comprises single and multiple output devices offering high reliability, high performance and a power density in excess of 2.5 watts per cubic inch. The NCE100 series is the perfect choice for applications where rack space is at a premium. The NCE100 series is ideal for computer, telecommunications, test and measurement, industrial, medical and business machine applications.

features

- ☐ Built in EMI Filter to EN55022
- ☐ Designed to EN60950
- ☐ CE Marked to LVD
- ☐ DC Inputs Available to Special Order
- ☐ Non-Standard and Custom Available
- ☐ Optional PF: Signal and Current Share (Single Output Units Only)
- ☐ 1 and 3 Output Versions
- ☐ Package Size Down to 8TE
- ☐ High Reliability
- ☐ High Efficiency - Typically 80%
- ☐ OVP and Overload Protection
- ☐ Adjustable Main Output



state overview

In 1982, with a history stretching back years, Newport has established sales manufacturing bases in Europe, USA and facilitating a global presence for a market-range of power-related products.

Investment in products and processes enabled the organisation to continue to at the leading edge of technology.

As fundamental to the Newport philosophy plays a key role in all aspects of the Newport Components was awarded D1 for design and manufacturing in d ISO 9002 followed for the European sales operations. These approvals are awarded as a platform for developing a appreciation of the quality needs of our rs.

ing the demands facing today's design-port continues to make advances in key gy areas including reduced footprints, d power density, higher isolation and packaging technology. This continual progress has led to a number of 'world

ing commitment to customer service satisfaction is the reason Newport main-market-leading position in Europe. The tion recognises the need to provide a el of service at all times to support rs in achieving their business goals.

Quality Management System
ISO 9001
EN 29001
Certificate of Registration
FM 37143



electrical specifications* (input)

Input voltage range 90-132 or 180-264VAC
Switch selectable (autoselect available as an option)
Frequency 47-440Hz
Transients 2.5kV 10µs (line-neutral)
1.5kV 150µs (line-earth)
Input current . 1.25A rms @ 220VAC : 2.5A rms @ 110VAC
Inrush current 25A peak @ 110VAC cold start @ 25°C
Input fuse 3.15AT anti-surge type
Efficiency at full load 80% typical
Hold up time 18ms MIN at 100 watts load
99VAC or 198VAC input
EMI/RFI Complies with EN55022
Safety Designed to meet EN60950

electrical specifications* (output)

Maximum output power 100Watts
Single output units V01
Triple output units V02 V03
Voltage setting accuracy ±1% ±4% ±5%
Voltage adjustment ±10%¹
Line regulation (over input range) ±0.2% ±0.2% ±0.1%
Load regulation (10%, 100% load) ±0.5% ±6% ±1.0%
Cross regulation ±0.2% ±6% ±0.5%
Over voltage threshold 115-125% V01
Remote sense on V01 0.5V MAX¹
Ripple and noise (30MHz b/w) p-p 1% 1% 1%
Current limit Power limited to 120 watts

¹ On triple output units V02 tracks V01

Power supply will operate with no load but requires a minimum load of 20% on V01 to meet above specification.

electrical specifications* (environmental)

Operating free air temperature range 0°C to 60°C
(derate each output by 5% per°C from 50°C to 60°C)
Temperature coefficient 0.02% per °C
Storage -40°C to 85°C
Isolation voltage (input to output) 3750Vrms

* All values are typical at 25°C.

ordering information

Part Number	Output 1	Output 2	Output 3	Case Style 1	Case Style 2
NCE100-S01-H	5V, 20A	-	-	*10TE	*12TE
NCE100-S02	12V, 8.4A	-	-	8TE	10TE
NCE100-S04	24V, 4.2A	-	-	8TE	10TE
NCE100-T01-H	+5V, 12A	+12V, 5A	F12V, 1.5A	*10TE	*12TE

Other voltage and current options are available. Please consult sales office for details.

F prefix denotes a floating output for +ve or -ve connection.

* prefix denotes that a heatsink is fitted as standard. In restricted airflow applications a factory fitted optional heatsink is available. Please add -H to the end of the part number. Optional heatsink will increase unit width by 2TE.

options

Power fail signal 5ms TTL signal warning of output failure
DC OK signal TTL indication of V01 falling by 5%
Current sharing Active current sharing for single output units
Autoselect Automatic input selection between 110/240V

Note : Power fail and DC OK use the AUX connection pin 16. Only one of these options may be specified.

additional notes

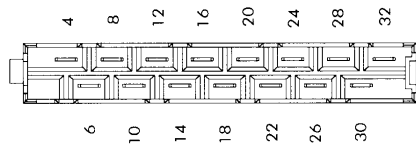
Two basic NCE case styles are available.

Case style 1 comprises a non-metallic cover to one side of the unit with a metal cover to the other. This gives a minimum 8TE width. To order please add -1 after the part number.

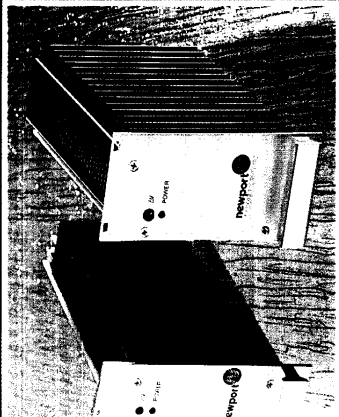
Case style 2 has a full metal casing. This gives a minimum 10TE width. To order please add -2 after the part number.

connections - (Din 41612 H15 connector)

Pin No.	Single O/P	Triple O/P
4	-S	-S
6	+S	+S
8	-V01	-V01/-V02
10	-V01	-V01/-V02
12, 14	+V01	+V01
16	AUX	AUX
18	CS*	+V02
20	-	+V03
22	-	-V03
24, 26	-	-
28	Neutral (N)	Neutral (N)
30	Live (L)	Live (L)
32	Earth (E)	Earth (E)



* Option



NCE100 Series

Product overview

Watt 3U Eurocassette
Input Power Supplies

1 and 3 Output Versions

Package Size Down to 8TE

High Reliability

gh Efficiency - Typically 80%

VVP and Overload Protection

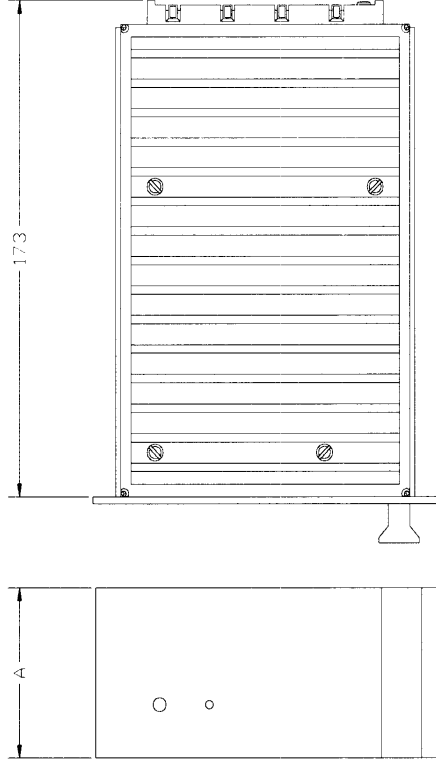
Adjustable Main Output



NCE100 Series

Outline dimensions (with heatsink)

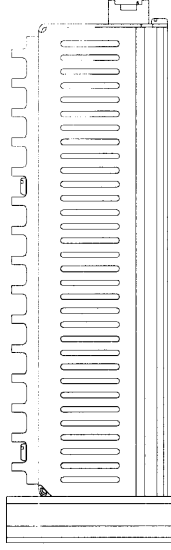
Case Style	1	2
Dimension A	50.5 (10TE)	60.6 (12TE)
Weight (kg)	0.75	0.85



(without heatsink)

Case Style	1	2
Dimension A	40.3 (8TE)	50.5 (10TE)
Weight (kg)	0.55	0.65

All dimensions in mm



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