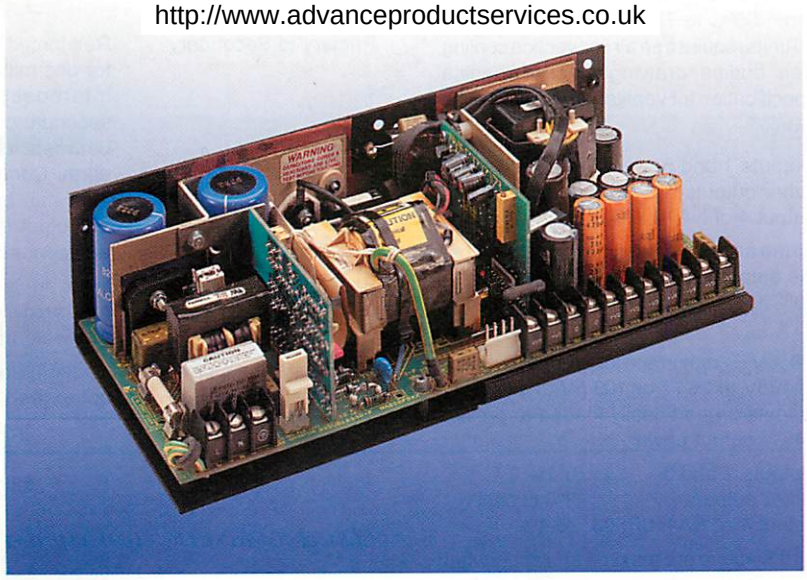


SUMMARY SPECIFICATION

Model Number	Input Voltage	Output Number	Nominal Voltage	Adjustment Range	Output Current	Total Power	Dimensions
NA140P300	92 – 132V a.c. 176 – 264V a.c. 249 – 373V d.c. Auto-ranging input available as option 'U'	1 2 3	+5V +12V F12V	None	2 – 17A 0 – 7A [9A] 0 – 3A [4A]	140W	Chassis Form: 247.5 x 127 x 58.8 mm 9.74 x 5.00 x 2.31 in. Enclosed Form: 247.5 x 127 x 60 mm 9.74 x 5.00 x 2.36 in.
NA140P401		1 2 3 5	+5V +12V F12V F5V	None	2 – 17A 0 – 7A [9A] 0 – 3A [4A] 0 – 1A	140W	
NA140P500		1 2 3 4 5	+5V +12V F12V F24V F5V	None	2 – 17A 0 – 5A [6.5A] 0 – 3A [4A] 0 – 3A [4A] 0 – 1A	140W	
NA140P501		1 2 3 4 5	+5V +12V F12V F12V F5V	None	2 – 17A 0 – 5A [6.5A] 0 – 3A [4A] 0 – 1.5A [4A] 0 – 1A	140W	

Figures in brackets [ ] denote surge ratings. F – Floating output.

INPUT SPECIFICATION

Input Voltage	92 – 132V a.c. on 115V tap. 176 – 264V a.c. or 249 – 373V d.c. on 230V tap. An auto-ranging input facility is available by specifying option 'U'.
Frequency	45 – 440Hz.
Supply Type	Single phase TN-S systems (as defined in IEC364).
Efficiency	Minimum 74% when loaded to maximum rated output power.

OUTPUT SPECIFICATION

Voltage	Nominal output voltages and polarity are shown in the summary specification above.
Current	Recommended minimum operating current and maximum continuous current ratings (I_{MAX}) are shown in the summary specification above. Values in brackets [ ] are surge current ratings only. It may not be possible to draw the full rated current from all outputs simultaneously due to the total power rating of the unit. All maximum current ratings are applicable up to 50°C. From 50°C to 70°C, derate by 2.5%/°C.

Power	140W continuous up to 50°C ambient. From 50°C to 70°C derate by 2.5%/°C. All units require free air convection cooling. See outline drawing and mechanical specification for ventilation requirements.
Surge Power	165W.
Load Regulation	Outputs 1 and 5 ±1%. Other outputs ±3% except output 4 of NA140P501, ±1%. All the above are maxima and apply when the output load is varied ±40% I_{MAX} from 60% I_{MAX} with other outputs loaded to 25% I_{MAX}.
Line Regulation	0.4% V_{NOM} maximum for an input variation of 198V to 264V or 103.5V to 132V. All outputs proportionally loaded to provide 140W output power.
Cross Regulation	Outputs 1 and 5 ±0.1% Other outputs ±3% except output 4 of NA140P503, ±0.1%. All the above are maxima and apply when any output load is varied ±25% I_{MAX} from 75% I_{MAX}.
Ripple and Noise	50mV pk-pk maximum over 100kHz bandwidth. 100mV over 30MHz bandwidth. All outputs proportionally loaded to provide 140W output power.

PROTECTION

Input Overvoltage	Units are protected by gas discharge devices which, under severe input overvoltage conditions, will break down and may cause the input fuse to rupture.
Hold Up	All units have sufficient energy storage to ride through a missing mains cycle when supplying full rated output power at nominal mains input. At low mains input, 198V or 103.5V hold up >18ms; at nominal input, 240V or 115V hold up >28ms.
Output Overvoltage	Output 1 is protected against overvoltage. Unit shutdown will occur at between 5.8V and 7.0V.

AUXILIARY FUNCTIONS

External Inhibit	The output currents of all units may be inhibited by a logic signal.
Power Fail Signal	Available when option A or B is specified. A logic output providing warning of failure due to loss of input.
DC OK Signal	Available when option B is specified. A logic output providing an indication of output presence.

ISOLATION

Primary to Secondary	Reinforced insulation to 3kV a.c. r.m.s. for one minute. Where a safety earth is interposed between primary and secondary, this potential is split equally between input to earth and output to earth. Complete units are tested to 1.5kV a.c. r.m.s. between input and output, with all output terminals connected together and connected to earth.
Secondary to Earth	Units are tested to 500V a.c. from output to earth, with all output terminals connected together.
Earth Leakage Current	Under full load, the leakage current does not exceed: 1mA at 50Hz; 1.2mA at 60Hz; 8.8mA at 440Hz.

ELECTROMAGNETIC COMPATIBILITY

Exported Noise	All units meet the requirements of BS800; BS6527 Class B; EEC Directive 82/499/EEC; FCC Rules Part 15 Subpart J Class B; VDE0871 Class B

MECHANICAL SPECIFICATION

Mechanical Format	All units are supplied on 'L' chassis as standard. A metal mesh cover is available and is specified by adding 'M' to the end of the model number.
Mounting Orientation	Units may be mounted in any orientation.
Ventilation and Cooling	All faces requiring free air flow are indicated on the outline drawing. Faces marked 'A' are fully ventilated; faces marked 'B' are partially ventilated. Units are convection cooled.

ENVIRONMENTAL CONDITIONS

Operating Temperature	0 to 70°C. See current and power ratings in output specifications for any deratings required.
Operating Humidity	0 to 95% R.H. non-condensing.

INTERNATIONAL SAFETY STANDARDS

Units indicated below have been tested by the following approval bodies to the standards listed and have been approved as being compliant with those standards or with the relevant sections of those standards.

For CSA, UL and VDE approval, the maximum power is reduced to 120W when the unit is fitted with a cover.

These units are CE marked to the Low Voltage Directive.

BABT	EN41003.
CSA	C22.2 #234.
UL	UL1950.
VDE	VDE0805., EN60950

For more detailed information on the units, please contact your local sales office or agent.

ORDERING INFORMATION

The order code consists of 5 fields:

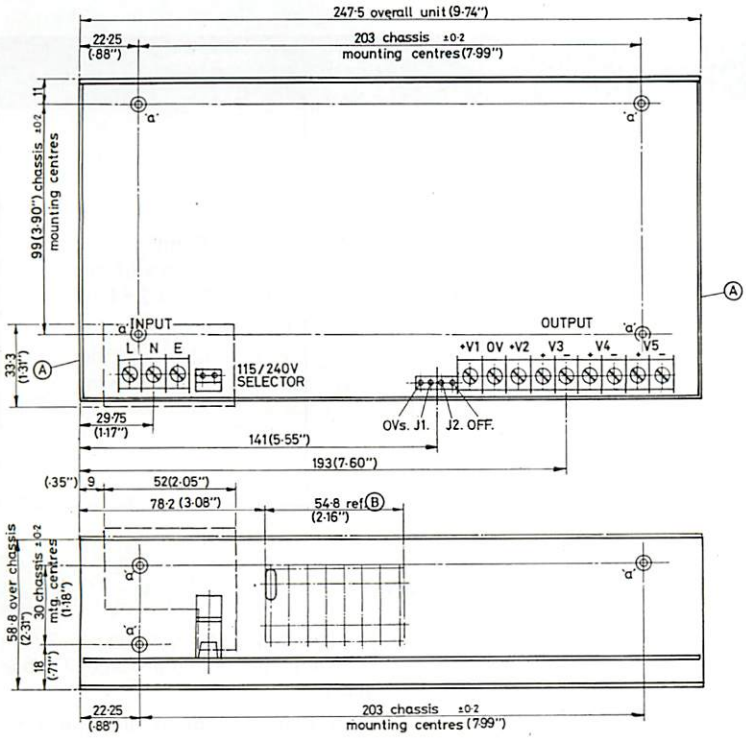
1. Source code: 13
2. Series: NA
3. Range: 140P
4. Version: From summary specification
5. Options (as required) a) Auto-ranging input: U
   b) Signals option: A or B
   c) Mechanical options: M

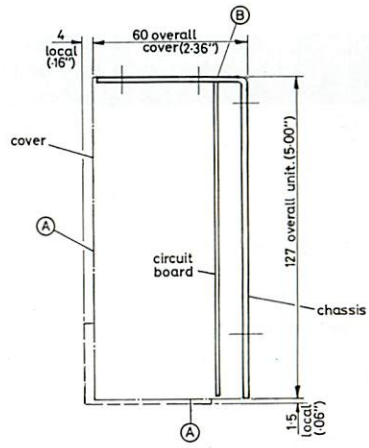
Note that fields 2, 3 and 4 comprise the basic model number of the unit. e.g. to order model NA140P500 with power fail warning and with mesh cover fitted, the order code is:

13 NA 140P 500 AM

NA140P RANGE OUTLINE DRAWING

All dimensions are nominal and are in mm (inches).





External Dimensions and Mass

Chassis form:	247.5(9.74) x 127(5.00) x 58.8(2.31).
Enclosed form:	247.5(9.74) x 127(5.00) x 60 (2.36). 1.36kg (3.0lb).
Fixings	7 x M3 ISO standard threaded inserts are provided on the chassis and are marked 'a' on the outline drawing.
Connectors	The following connectors are provided on the power supply:
Input	Beau 72000 series, ref. 72503CV.
Output	Beau 72000 series, ref. 72509C.
Input Voltage Selector	Tap changer link supplied.
Auxiliary Functions	AMP ref. 640445-4.