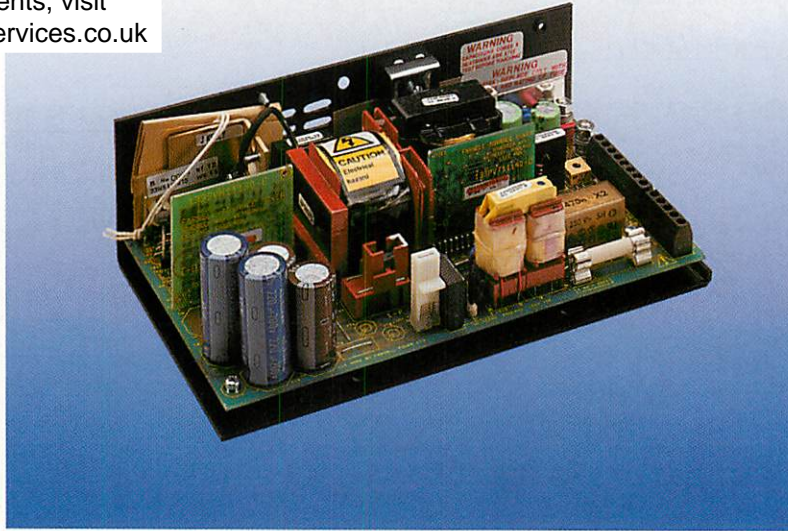


Downloaded from

Advance Product Services Ltd.

For repairs and replacements, visit

<http://www.advanceproductservices.co.uk>



76

SINGLE OUTPUT AC-DC

SUMMARY SPECIFICATION

Model Number	Input Voltage	Nominal Voltage	Adjustment Range	Output Current	Cooling	Dimensions
NS110005	92 – 132V a.c. 176 – 264V a.c. 249 – 373V d.c.	5V	4.0 – 5.1V	0 – 22A 0 – 30A	Convection Forced Air	210 x 115 x 60mm 8.27 x 4.53 x 2.36 in.
NS110012		12V	9.6 – 12.25V	0 – 9.2A 0 – 12.5A	Convection Forced Air	
NS110015		15V	12 – 15.3V	0 – 7.5A 0 – 10A	Convection Forced Air	
NS110024		24V	19.2 – 24.5V	0 – 4.6A 0 – 6.25A	Convection Forced Air	
NS110056		56V	45 – 57V	0 – 2.0A 0 – 2.7A	Convection Forced Air	

INPUT SPECIFICATION

Input Voltage	92 – 132V a.c. on 115V tap. 176 – 264V a.c. or 249 – 373V d.c. on 230V tap.
Frequency	45 – 440Hz.
Supply Type	Single phase TN-S systems (as defined in IEC364).
Efficiency	Minimum 70 – 75% dependant on model, when loaded to maximum rated output power.

OUTPUT SPECIFICATION

Voltage	Nominal output voltages and adjustment ranges are shown in the summary specification above.
Current	Recommended continuous current ratings (I_{MAX}) are shown in the summary specification above. All maximum current ratings are applicable up to 50°C and must be derated by 2.5%/°C from 50°C to 70°C.
Load Regulation	0.4% V_{NOM} maximum for an output load variation of 0 to I_{MAX} .
Line Regulation	0.2% V_{NOM} maximum for an input variation of 198V to 264V or 103.5V to 132V with the output loaded to maximum rated output current.
Ripple and Noise	50mV pk-pk maximum over 100kHz bandwidth. 100mV pk-pk maximum over 30MHz bandwidth for output voltages below 35V, 150mV for output voltages above 35V. Measurements are made differentially with the output loaded to maximum rated output current.

PROTECTION

Hold Up	All units have sufficient energy storage to ride through a missing mains cycle when supplying full rated output power at nominal input. At low mains input, 198V or 103.5V hold up >18ms; at nominal input, 240V or 115V hold up >28ms.										
Output Overvoltage	The output is protected against overvoltage. Overvoltage protection levels are: <table border="0" style="margin-left: 20px;"> <tr> <td>5V output</td> <td>5.8V to 7.0V;</td> </tr> <tr> <td>12V output</td> <td>13V to 16V;</td> </tr> <tr> <td>15V output</td> <td>16V to 19V;</td> </tr> <tr> <td>24V output</td> <td>26V to 31V;</td> </tr> <tr> <td>56V output</td> <td>60V to 75V.</td> </tr> </table>	5V output	5.8V to 7.0V;	12V output	13V to 16V;	15V output	16V to 19V;	24V output	26V to 31V;	56V output	60V to 75V.
5V output	5.8V to 7.0V;										
12V output	13V to 16V;										
15V output	16V to 19V;										
24V output	26V to 31V;										
56V output	60V to 75V.										
Output Overcurrent	All units have protection against output overload.										

AUXILIARY FUNCTIONS

Remote Sense	Available on all units.
Parallel Operation	Units are suitable for operation in parallel with other units of the same model number.
Series Operation	Units may be connected in series to provide higher output voltages.
External Inhibit	The output current may be inhibited by a logic signal.
Power Fail Signal	Available on 5V units when A or B option is specified. A logic output providing warning of failure due to loss of input.
DC OK Signal	Available on 5V units 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. between input and output with all output terminals connected together and connected to earth			
Secondary to Earth	Units are tested to 500V a.c. r.m.s. from output to earth, with all output terminals connected together.			
Earth Leakage Current	Under full load the leakage current does not exceed: <table border="0" style="margin-left: 20px;"> <tr> <td>0.5mA at 50Hz</td> </tr> <tr> <td>0.6mA at 60Hz;</td> </tr> <tr> <td>4.3mA at 440Hz.</td> </tr> </table>	0.5mA at 50Hz	0.6mA at 60Hz;	4.3mA at 440Hz.
0.5mA at 50Hz				
0.6mA at 60Hz;				
4.3mA at 440Hz.				

ELECTROMAGNETIC COMPATIBILITY

Exported Noise	Units meet the requirements of EN55022 Curve A (conducted); FCC Rules Part 15 Subpart J Class A; VDE0871 Class A.
----------------	---

MECHANICAL SPECIFICATION

Mechanical Format	The NS110 range of 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 except for the NS110 range which may be convection cooled or forced air cooled at 1ms ⁻¹ .

ENVIRONMENTAL CONDITIONS

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

RELIABILITY

MTBF	In excess of 100,000 hrs. when calculated in accordance with MIL HBK 217D.
------	--

INTERNATIONAL SAFETY STANDARDS

Units 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.

CE marked to the Low Voltage Directive.

BABT	BS6301.
CSA	C22.2 #234 Level 3.
TUV	EN60950.
UL	UL1950.

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

ORDERING INFORMATION

The order code consists of 5 fields:

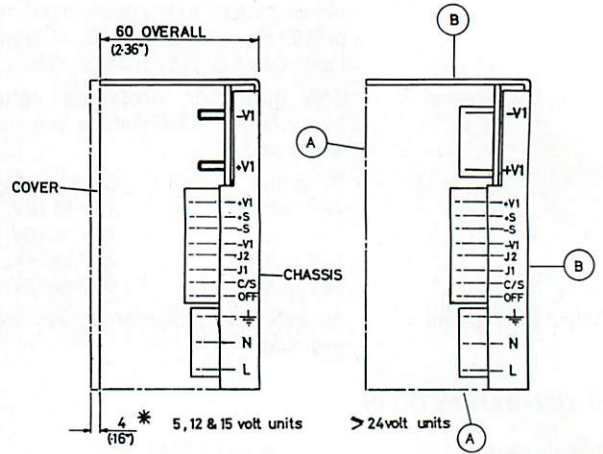
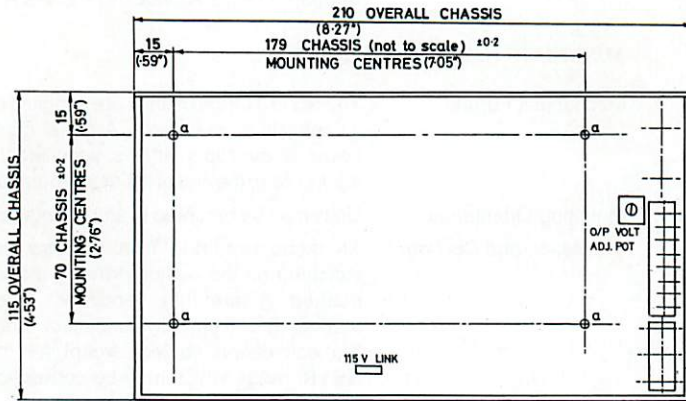
1. Source code: 13
2. Series: NS
3. Range: 110
4. Version: From summary specification
5. Options (as required)
 - a) Signals options (005 versions only):
 - A Power Fail
 - B Power Fail + DC OK
 - b) Mechanical options: M

Note that fields 2, 3 and 4 comprise the basic model number of the unit. e.g. to order model NS110005 with power fail warning and with chassis and cover, the order code is:

13 NS 110 005 AM

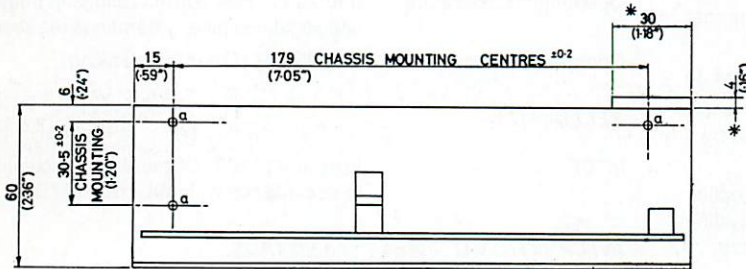
OUTLINE DRAWING

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



78

SINGLE OUTPUT AC-DC



External Dimensions and Mass

Chassis Form: 210(8.27) x 115(4.53) x 60(2.36).
 Enclosed form: 210(8.27) x 115(4.53) x 60(2.36).
 1.2kg (2.7lb).

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 Metway ref. 972/03 DS
 Output 005, 012 and 015 versions have 2 x M5 ISO standard studs.
 024 and 056 versions have Beau 70000 series, ref. 70502C.

Input Voltage Selector Tap selector link provided.

Auxiliary Functions Metway ref. 970/08DS.