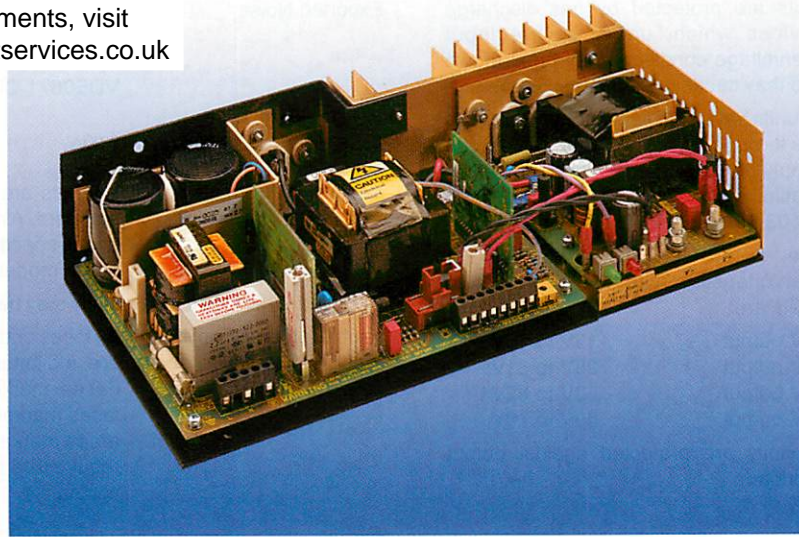


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### SUMMARY SPECIFICATION

Model Number	Input Voltage	Nominal Voltage	Adjustment Range	Output Current	Cooling	Dimensions
NS360012	92 – 132V a.c.	12V	9.6 – 12.25V	0 – 30A	Convection	300 x 150 x 66.2 mm 11.81 x 5.91 x 2.61 in.
NS360024	176 – 264V a.c.	24V	19.2 – 24.5V	0 – 15A	Convection	
NS360048	249 – 373V d.c.	48V	38.4 – 49V	0 – 7.5A	Convection	
NS360056		56V	48 – 57V	0 – 6.5A	Convection	

### 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 to 80%, 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.
Current	Recommended maximum continuous current ratings ( $I_{MAX}$ ) are shown in the summary specification. All maximum current ratings are applicable up to 50°C. From 50°C to 70°C derate maximum current by 2.5%/°C. Units require free air convection cooling. See outline drawing and mechanical specification for ventilation requirements.
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.

SINGLE OUTPUT AC-DC

## 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 input. At low mains input, 198V or 103.5V hold up >18ms.								
Output Overvoltage	The output is protected against overvoltage. Overvoltage protection levels are: <table border="0" style="margin-left: 20px;"> <tr> <td>12V output</td> <td>13V to 16V;</td> </tr> <tr> <td>24V output</td> <td>26V to 31V;</td> </tr> <tr> <td>48V output</td> <td>52V to 62V;</td> </tr> <tr> <td>56V output</td> <td>60V to 70V.</td> </tr> </table>	12V output	13V to 16V;	24V output	26V to 31V;	48V output	52V to 62V;	56V output	60V to 70V.
12V output	13V to 16V;								
24V output	26V to 31V;								
48V output	52V to 62V;								
56V output	60V to 70V.								
Output Overcurrent	All units are protected against output overload.								

## AUXILIARY FUNCTIONS

Remote Sense	Available on all units.
Parallel Operation	All units shown 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 of all units may be inhibited by a logic signal.
Indicators	LED indicators are provided for 'Unit Healthy' and 'Out of Regulation'.

## 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 2.1kV d.c. between input and output with all output terminals connected together and connected to earth			
Secondary to Earth	Units are tested to 700V d.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>1mA at 50Hz;</td> </tr> <tr> <td>1.1mA at 60Hz;</td> </tr> <tr> <td>8mA at 440Hz.</td> </tr> </table>	1mA at 50Hz;	1.1mA at 60Hz;	8mA at 440Hz.
1mA at 50Hz;				
1.1mA at 60Hz;				
8mA at 440Hz.				

## ELECTROMAGNETIC COMPATIBILITY

Exported Noise	All units meet the requirements of EN55022 Curve B (conducted); FCC Rules Part 15 Subpart J Class B; VDE0871 Class B.
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## 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 and areas requiring free air flow are indicated on the outline drawing. Faces marked 'A' are fully ventilated; faces marked 'B' are partially ventilated; areas marked 'D' contain heatsinks and require free air flow. Units are convection cooled.

## 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.

## INTERNATIONAL SAFETY SPECIFICATIONS

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.

UL	UL1950.
VDE	EN60950.

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

## ORDERING INFORMATION

The order code consists of 5 fields:

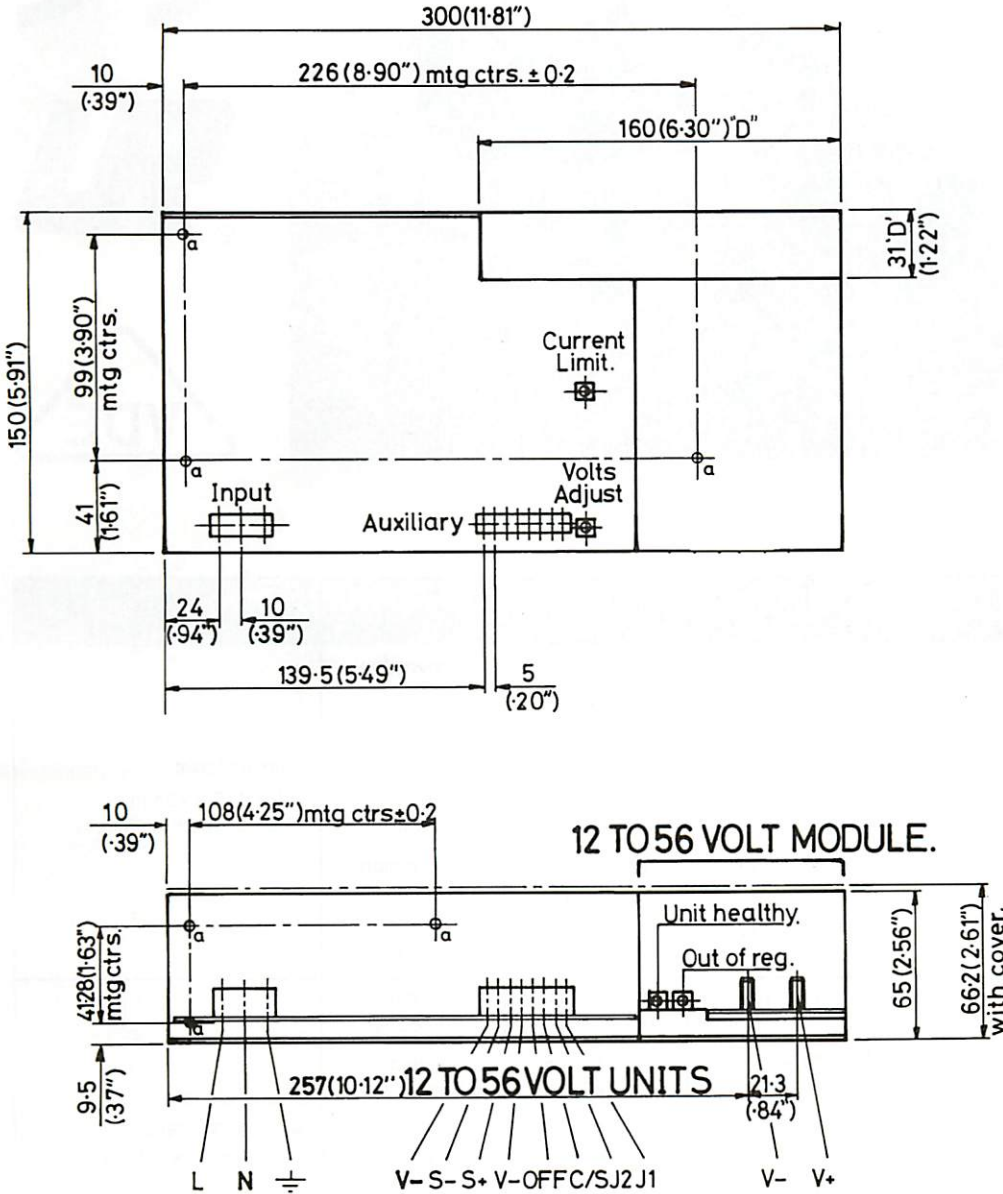
1. Source Code: 13
2. Series: NS
3. Range: 360
4. Version: See summary specification
5. Cover option M (if required)

Note that fields 2, 3 and 4 comprise the basic model number of the unit. e.g. to order model NS360024 with mesh cover the order code is:

13 NS 360 024 M

## OUTLINE DRAWING

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



### External Dimensions and Mass

Chassis form:	300(11.81) x 150(5.91) x 65(2.56)
Enclosed form:	300(11.81) x 150(5.91) x 66.2(2.61).
Mass	2.48kg (5.5lb)
Fixings	6 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 972 series, ref. 972/03DS
Output	2 x M5 ISO standard studs
Input Voltage Selector	Tap changer link provided.
Auxiliary Functions	Metway 970 series, ref. 970/08DS