

Instruction Manual

PLEASE READ THIS INSTRUCTION MANUAL CAREFULLY BEFORE INSTALLATION OR USE OF THIS PRODUCT, AND KEEP IT IN A SAFE PLACE FOR FUTURE REFERENCE. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE PRODUCT.

HIGH VOLTAGE WARNING!

Dangerous voltages are present within these power supplies. These products should only be worked on by qualified personnel.

	XS1000-24N-000	24V/42A
	XS500-24N-000	24V/21A
XS Base	XS1000-36N-000	36V/28A
Models	XS500-36N-000	36V/14A
	XS1000-48N-000	48V/21A
	XS500-48N-000	48V/10.5A

XS Series products are designed for use within other equipment or enclosures, which restricts access to **AUTHORISED COMPETENT PERSONNEL ONLY.** The unit covers are designed only to protect skilled personnel from hazards. They must not be used as part of the external covers of any equipment where they may be accessible to operators, since, under full load conditions, part or parts of the unit may reach temperatures in excess of those considered safe for operator access.

The **XS** series power supply should be supplied only by a power source of the type indicated on its label. The unit should only be used with suitably rated cables and appropriate connectors, sourced by the end user. If in doubt, contact Excelsys Applications Department for assistance. For installations in accordance with EN60601-1, UL2601-1, the Neutral input supply lead must be provided with a suitable fuse protection device. See the Fuse table below for details.

When securing the product, do not use screws which infringe the maximum penetration depth of 6mm for Base mounting and 2mm for Side mounting. Customer fixings are provided on the base and side of the chassis. The XS1000 power supply models have integral fans and may be mounted in any orientation provided that the air intake and air outlet areas are not impeded with particular regard paid to provide ventilation holes in any chassis on which or near which the unit is mounted. For the XS500 models mounting instructions please contact Excelsys Applications Department for assistance. **AFTER DISCONNECTING THE AC SOURCE, ALLOW 4 MINUTES BEFORE DISASSEMBLY TO ALLOW CAPACITORS WITHIN THE UNIT TO DISCHARGE.**

INPUT SPECIFICATIONS

Input Voltage Range:	100 to 240Volts AC
Input Frequency:	50/60Hz
Earth Leakage Current:	300µA – Standard Options 00,01,02,03 150µA - Low Leakage Options 04,05,06,07

Input Fusing

Warning! To protect against risk of Fire, replace only with same rating and type. Fuses must be replaced by qualified service personnel only.

Model	Reference	Fuse Rating	Type	Voltage	Size
XS1000-24, XS1000-36 & XS1000-48	FS1	12A	F	250V	6.25X32mm
XS500-24, XS500-36 & XS500-48	FS1	8A	F	250V	6.25X32mm

OUTPUT SPECIFICATIONS

See Output table below, with more detail in Designers' Manual. Each Model may be adjusted over the full voltage range shown in the table subject to not exceeding the maximum rated Voltage and Power shown in the table⁽¹⁾.

Model	Vmin	Vnom	Vmax	I _{max}	Watts
XS1000-24	14	24	28	42	1008
XS500-24	14	24	28	21	504
XS1000-36	19	36	40	28	1008
XS500-36	19	36	40	14	504
XS1000-48	29	48	58	21	1008
XS500-48	29	48	58	10.5	504

SAFETY

The XS models when correctly installed in a limited access environment are designed to comply with the following requirements:

EN60950, UL1950, CSA 22.2 No.234 and IEC61010
EN60601-1, UL2601-1 and CSA 22.2-601-1 and
EN61010

For current approval status, please contact Excelsys Sales. Equipment manufacturers must protect service personnel against inadvertent contact with the output terminals.

ENVIRONMENTAL PARAMETERS

The products are designed for the following parameters:

- Pollution Degree 2
- Installation Category 2
- Class I
- For use as part of another piece of equipment such that unit is accessible to service engineers only.
- Altitude: -155 metres to +3000 metres from sea level.
- Humidity: 10 to 95% non-condensing.
- Operating temperature -25°C to +70°C
- Derate at 1.67% per °C above 40°C and up to 70°C.

Approval Limitations

Use In North America

When this product is used on 180 to 253 Volts AC mains with no neutral, connect one live wire to L (live) terminal and the other live wire to N (neutral) terminal on the input connector. For installation in accordance with EN60601-1, UL2601-1 and IEC60950-1, UL60950-1 the wires connected to the Neutral terminal must be provided with a suitable fuse protection device. See Fuse Table.

The attachment plug shall be rated to a current not less than 125% of the rated current of the equipment.

LEVELS OF INSULATION

Subject to the limitations above

Dielectric strength testing is carried out as follows:

- Primary mains circuits to chassis: 1500V AC
- Primary mains circuits to secondary: 4000V AC.
- Secondary to chassis: 1500V DC.

EARTH TERMINAL MARKING IMPORTANT

If in the end use equipment the incoming mains cable earth wire connects directly to the "GND" connection without being interrupted or junctioned on its way to that connection, then this connection forms the main protective earth of the system.

To comply with IEC60950, EN60950, UL1950 requirements and to comply with EN60601-1, UL2601-1, CSA22.2-601-1 requirements then this must be marked with the symbol defined in the IEC417 No. 5019a. The customer should therefore affix an adhesive label which will pass the 15 Second rub test (IEC60950 section 1.7.15) showing the symbol here adjacent to the earth connection. This symbol must only be used at the first interruption / connection of the incoming earth wire.

HEALTH AND SAFETY AT WORK ACT (UK ONLY)

To protect service personnel and users and to comply with section 6 of the Health And Safety Acts, a clearly visible label should be fitted warning that surfaces of these units may be hot and must not be touched when the units are in operation.

RECEIPT AND UNPACKING

On receipt a unit should be unpacked carefully and checked for transit damage. If the unit is damaged, do not apply power or install the unit. SEEK SPECIALIST ADVICE!

WARRANTY

Warranty conditions are contained in our standard terms and conditions. Contact your authorised outlet for repair.

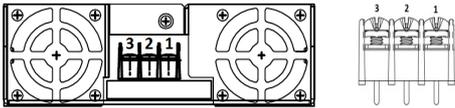
OPTIONS

Thermal Signals, Temperature Alarm & Fan Fail are Open Collector signal indicators.

Notes:

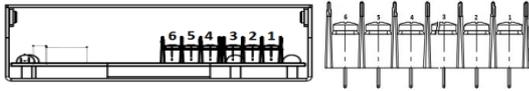
1. Contact sales@excelsys.com for details including MOQs on alternative preset output voltages.
2. A French translation of this Instruction Manual is also available; document number 40112. Contact sales@excelsys.com for a copy of this.

Input Connector J7



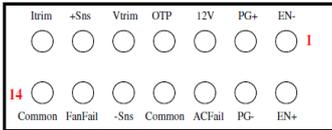
Connector: Barrier Terminal Block,
Vertical, 3 Position, Pitch 0.375in.
Manufacturer: Molex
Manufacturer P/N: 38720-750

Output Connectors J10 & J12



Connector: 2x Barrier Terminal Block,
Vertical, 3 Position, Pitch 0.325in.
Manufacturer: Tyco
Manufacturer P/N: 2-1437667-5

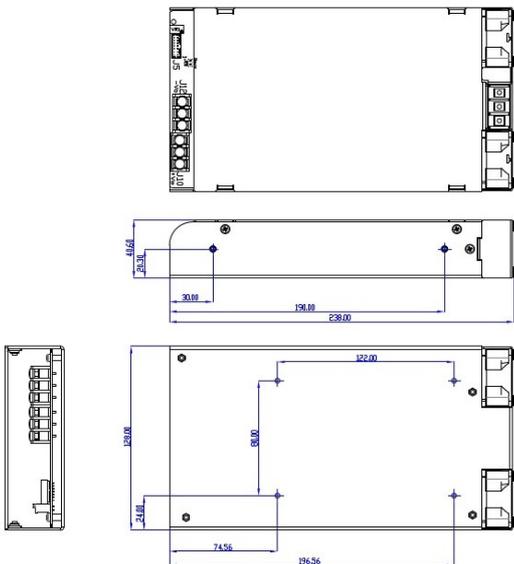
Output Signal Connector J5



Connector: Header, Shrouded, Vertical,
2 x 7 Contacts, Pitch 2.0mm
Manufacturer: Molex
Manufacturer P/N: 87831-1420

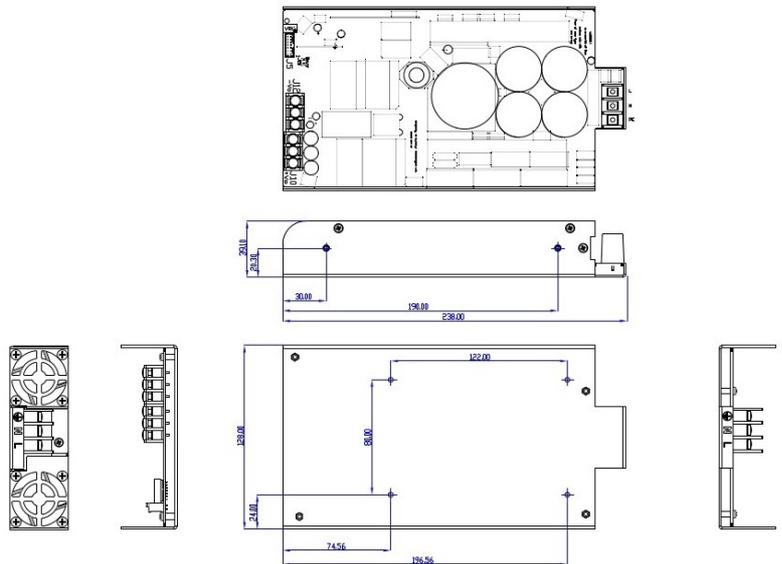
Connector Details			
Pin	Input	Output	Signal
1	L	+Vo	EN-
2	N	+Vo	EN+
3	E	+Vo	PG+
4		-Vo	PG-
5		-Vo	12VDC
6		-Vo	ACFail
7			OTP
8			Common
9			Vtrim
10			-Sns
11			+Sns
12			FanFail
13			Itrim
14			Common

XS1000 Model Mechanical Specifications (All dimensions in mm)



Mounting Holes:
4 M3 threaded PEMs on Base. Max Screw Penetration is 6mm from Base.
2 M3 threaded PEMs on each Side. Max Screw Penetration is 2mm from Side.

XS500 Model Mechanical Specifications (All dimensions in mm)



Mounting Holes:
4 M3 threaded PEMs on Base. Max Screw Penetration is 6mm from Base.
2 M3 threaded PEMs on each Side. Max Screw Penetration is 2mm from Side.

XS Model Labels Contain:

Input Freq,
Input Voltage,
Fuse Rating,
Max Power Rating,
Serial Number,
Maximum Line Current under rated conditions.

Warning Symbol (**Danger High Voltage**)

Warning Symbol (**Caution Hot Surface**)

Model Configuration as defined by the diagram to the right of this text.

Notes:
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Part Numbering System

