

LOW-VOLTAGE SYSTEM COMPONENT

LaminaHeat Multi Zone Power Supply

The control power supply for ComfortScrim low-voltage heating. It isolates ordinary mains through a toroidal transformer, steps it down to the element's voltage and runs each room as an independently controlled, protected zone.

ZONES PER UNIT 1 to 5	OUTPUT POWER Up to 6000 W	OUTPUT VOLTAGE 12 · 24 · 36 · 48 V
INPUT VOLTAGE 110–240 V AC · 50/60 Hz	DC INPUT OPTION PV / battery	EFFICIENCY (TYP.) 96%
CERTIFICATION CE (LVD, EMC)	WARRANTY 5 years	MOUNTING Wall-mounted enclosure



Transparent view: isolated toroidal transformer, MCU control board, output fuses, main breaker and spring-type terminals in a powder-coated steel enclosure.

— KEY FEATURES

- **Multi-zone control.** Up to five zones per unit, each with its own thermostat input and its own protected output. One thermostat can also drive several channels.
- **Sized to the project.** Rated from 800 W single-zone to 6000 W multi-zone. The unit is specified against the layout drawing, never off the shelf.
- **Universal input, matched output.** 110–240 V AC input. Output at 12, 24, 36 or 48 V to suit the element and run lengths. DC input from PV or battery available.
- **Safety extra-low voltage.** Isolated toroidal transformer, Class B, with thermistor. 4000 V AC input-to-output isolation.
- **Soft start and MCU control.** Integrated micro control unit with soft start, thermostat on/off delays and modular design.
- **Protection that shows and resets.** Over-voltage, over-temperature and overload each cut the output and light an indicator. Every output carries its own replaceable fuse.
- **Energy saving standby.** Switches off 30 minutes after all zone thermostats are satisfied and restarts when any thermostat calls.
- **Utility load control.** EVU-lock input for tariff or grid-operator switching.
- **Silent.** Free-air convection cooling, no fan. Connects to a standard 32 A MCB.

— TECHNICAL DATA

Zones	1 to 5 per unit, independently controlled
Output power	800 W to 6000 W, by model
Output voltage	12, 24, 36 or 48 V AC, specified per project
Input voltage	110–240 V AC, 50/60 Hz
DC input	PV / battery input, optional
Efficiency	96% typical
Transformer	Isolated toroidal, Class B, thermistor-monitored
Control	MCU with soft start and static switching
Output protection	Replaceable fuse per output; spring-type terminals
Isolation	4000 V AC / 5 mA / 1 min, input to output
Cooling	Free-air convection, no fan
Environment	–20 to +40 °C operating · 20–90% RH · IP20 indoor
Housing	Powder-coated sheet steel, RAL 7035, wall-mounted

— PROTECTION, DISPLAY AND CONTROL

FUNCTION	BEHAVIOUR
Power on	Green LED. Flashes on abnormal input or EVU lock.
Output on	Yellow LED while any element is heated.
Over-voltage	Output cut; auto-restart 10 s after input returns to range.
Over-temperature	Output cut above 130 ±5 °C at the transformer. Red LED. Manual restart.
Overload	Output cut after 3 s over the rated current; auto-restart after 30 min.
Output fuse	Red LED flashes; other zones keep running. Replace fuse, restart.
Thermostat delays	10 s on power-up; 3 s on call; 0.1 s on off.
Energy saving	Standby 30 min after all thermostats are off; restarts on any call.

— SYSTEM CONNECTION



— MODEL RANGE

MODEL	RATED OUTPUT	CONTROL
SLN800L	800 W	Single zone
SLN1000L	1000 W	Single zone
SLN2000L-M	2000 W	Multi-zone
SLN3000L-M	3000 W	Multi-zone
SLN4000L-M	4000 W	Multi-zone
SLN5000L-M	5000 W	Multi-zone
SLN6000L-M	6000 W	Multi-zone

Model suffix denotes output voltage (e.g. -48). Zone count, output voltage and DC input are specified with the layout drawing for each project.

— STANDARDS

CE marked. Designed and tested to the applicable Low Voltage Directive (2014/35/EU) and EMC Directive (2014/30/EU) standards. Isolation test 4000 V AC for 1 minute at 5 mA. Use with LaminaHeat ComfortScrim elements, which comply with EN 60335-2-17 and DIN EN 62233.

This information is offered as a guide to product selection. LaminaHeat believes it to be reliable but does not guarantee its applicability to any particular installation. Specifications may change without notice. Zone count, output voltage and rated power for a given project are confirmed on the layout drawing and quotation.

PART	ROLE	SUPPLIED BY
Heating element	ComfortScrim behind plaster or under the floor finish, on a 12–48 V circuit. One or more elements per zone.	Lamina Heat
Thermostat	One per zone. Room sensor, floor sensor or both. Load line "SK" to the power supply's thermostat terminal.	Lamina Heat
Multi Zone Power Supply	Wall-mounted in a utility space with free air around the enclosure. Mains in, one protected output per zone.	Lamina Heat
Consumer unit	Dedicated circuit with a 32 A B-characteristic MCB. PE, L and N to the mains terminal.	Installer

— INSTALLATION NOTES

- Install in a well-ventilated indoor location. Do not cover the enclosure. Leave at least 100 mm clear on every side for convection.
- Connect only the rated load. Overloading the power supply is prohibited.
- Connect the film overheat-protection contact for each zone where fitted. If not used, bridge the terminal.
- Thermostats operate on the power supply's own extra-low-voltage supply. Observe polarity on DC thermostat inputs.
- Record resistance and insulation tests for every zone before elements are covered.
- Only qualified electricians may open the enclosure or carry out maintenance.