

- **Selectable firing mode**
Phase angle variation or Burst fired
- **Wide input range available**
24Vac, 48Vac, 115Vac, 230Vac, 400Vac
- **Output power**
VPL72 - 115 : 5 kW, 115 Volts version
VPL72 - 230 : 9 kW, 230 Volts version
VPL72 - 400 : 16 kW, 400 Volts version
Current range: 0.1A to 40A
also available in 24 Vac and 48 Vac,
- **Selectable proportional setpoint**
 - Internal by potentiometer
 - External (4...20mA or 0...10V)
- **Application : Plastics processing**
Small oven, environmental chamber, test bench, lighting, IR light, band heaters, dryers, ...



Power controller with analog command. The output modulation can be phase angle variation or burst fired (zero-cross) , allows extremely fine and fast modulation of resistive loads even with low thermal inertia as infrared.

Description:

Burst fired or phase angle controller for resistive loads used in single or three phase (by coupling the setpoint input circuits).
High robustness due to absence of mobile mechanical parts, ensuring greater longevity and maintenance costs reduction (shocks and vibrations insensitivity)
Flexibility of applications:
- Burst fired (zero-crossing) for high inertia system (cycle time: 1.2s)
- Phase angle control for fast applications and fine regulations.
« linear soft start » enabling limitation of load inrush current (low inertia load preheat like «infrared»)
Input transfer function proportional to phase angle in phase angle modulation.
Operating frequency 50 - 60 Hz self adaptive.

Selectable setpoint by Dip switches:

- Internal: mono turn potentiometer (0...100% graduated)
- External: analog input (4...20mA or 0...10Volts)

panel mounting or DIN rail mounting. Natural convection cooling .
designed for nominal current capacity at 45°C room temperature
Connection:

- Setpoint input on pluggable screw connectors (1.5mm²)
- Power supply and output on fixed screw connectors (0.5mm² to 16 mm²)

Self powered, isolated internal power supply

(Green LED: supply voltage presence)

Build in protection with RC circuit

The VPL72 was primarily conceived for resistive load It is therefore necessary to ensure of inrush current compatibility at power up.

Inrush current of incandescent lamps is usually 10 x greater than rated current for some tens of milliseconds.

(See Table "Acceptable overload current " of technical specifications at the back of the page)

Protection against short circuits must be done by a fast fuse

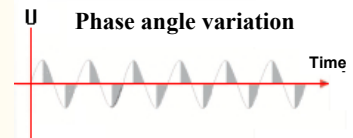
(1/2 of switching device $i^2t \Rightarrow 1500A^2s/2$ to ensure effective protection)

Note: semiconductor relays do not provide galvanic isolation between network and load.

Modulation type:

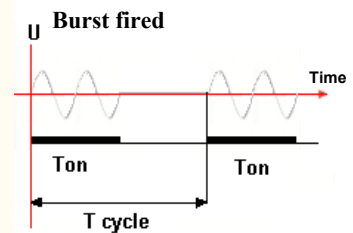
Phase angle variation

Advantage:
Allows precise load control.
Suitable for low inertia loads.
Disadvantage: generates more disturbance.



Burst fired

Advantage:
"clean" switching, no disturbance generated.
Disadvantage: not appropriate for low inertia loads, accuracy limitation of load control due to cycle time.
(1% for a 1seconde cycle at 50Hz)



Version and order code:

VPL72-vvv	Power controller with selectable modulation mode and input type by DIP switch
-vvv	Power supply to be defined 24Vac , 48Vac , 115Vac , 230Vac , 400Vac other voltage on request

INPUT (external setting)

Selectable by dip switches

Current input: 4 ... 20 mA

Input impedance 250 ohms

Voltage input : 0 ... 10 Volts

Input impedance 50 Kohms

OUTPUT

Phase angle or burst fired

Selectable by dip switches

Burst fire period: 1.2 sec. at 50 Hz

Output current: 35 A

Current, minimal load: 100mA

Off state leakage current: < 2.5mA

On state voltage drop: 1.4V

Power dissipation: 1.4 x Is (watts)

Temperature rising: 0.98 x Is (°C)

Non repetitive overload current: 500A peak

I²t (<10ms) 1500 A²s**POWER SUPPLY (model dependent)**

115V +/-15% 50 - 60Hz or

230V +/-15% 50 - 60Hz or 400V +/-15% 50 - 60Hz

Other voltage available (24Vac, 48Vac,.....)

ENVIRONMENT

Operating temperature

-10 °C to 45 °C

Storage temperature

-20 °C to 85 °C

Humidity

85 % (not condensed)

Dielectric strength

4000 Vrms permanent

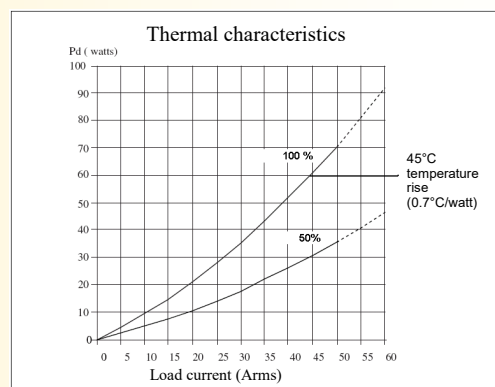
Weight

1200 g

Protection rating

IP20

Vertical mounting recommended for optimum dissipation.

**Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE**Immunity standard for industrial environments
EN 61000-6-2Emission standard for industrial environments
EN 61000-6-4

EN 61000-4-2 ESD

EN 61000-4-8 AC MF

EN 55011

EN 61000-4-3 RF

EN 61000-4-9 pulse MF

group 1

EN 61000-4-4 EFT

EN 61000-4-11 AC dips

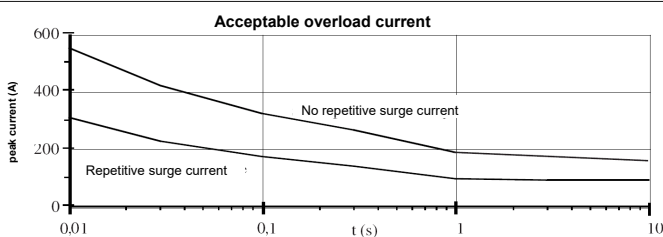
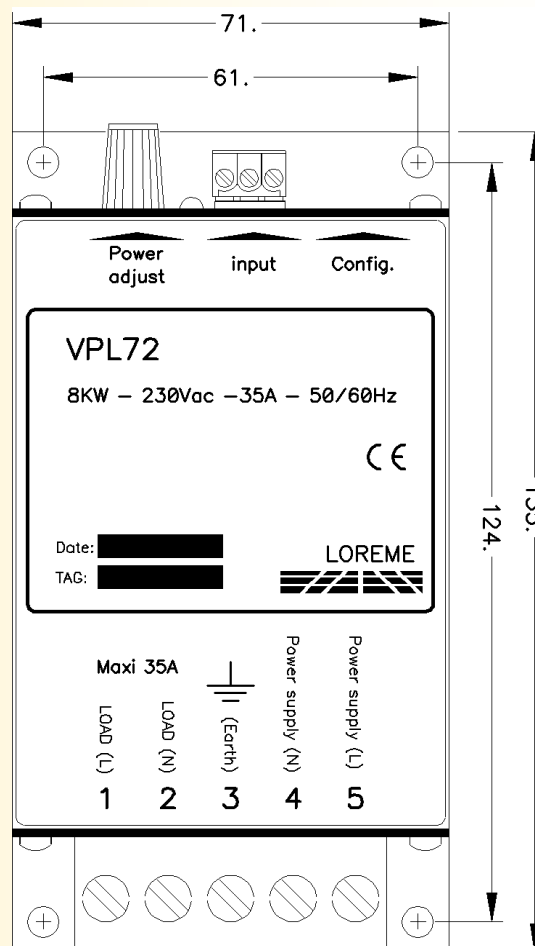
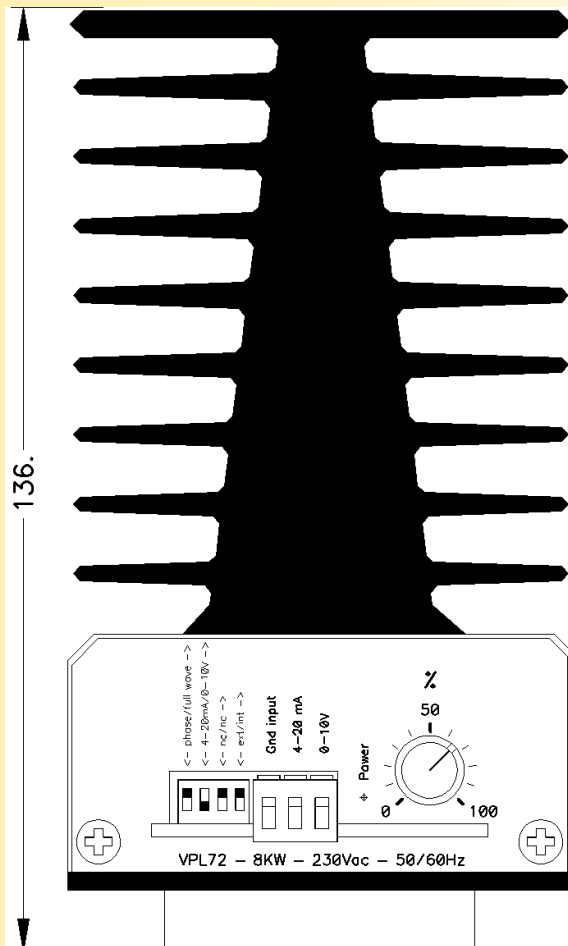
class A

EN 61000-4-5 CWG

EN 61000-4-12 ring wave

EN 61000-4-6 RF

EN 61000-4-29 DC dips

**WIRING AND OUTLINE DIMENSIONS:**

In order to secure their technical features, we recommend at least a 25 mm spacing between each devices.