

SINGLE PHASE ENERGY REGULATOR

power controller / power dimmer

VPL73

LOREME

- **2 modulation type are available**
Burst fired **VPL73-TR**
Phase angle variation **VPL73-PH**
- **Output power maxi: 6Kw**
Current range from 0.2A to 25A
Integrated high speed fuse
- **Internal proportional setpoint**
Control by potentiometer
- **Application :**
plastic processing,
ovens, dryers,
Climatic chambers,
Test bench,
Heating tape
(not suitable for inductive load)



autonomous and compact AC energy regulator for proportional linear control of resistive load using burst fire control (load with high inertia) or using phase angle variation (load with low inertia). Can be used with most resistance heaters.

Description:

Energy regulator with proportional control command for resistive load up to 6KW.
High robustness due to absence of mobile mechanical parts, ensuring greater longevity and maintenance costs reduction (insensible to shocks and vibrations)

Flexibility of applications:

- Burst fired (zero-crossing) for high inertia system (adjustable duty cycle range: 1 - 30s)
- Phase angle control for fast applications or application needed thin regulation.
- Operating frequency 50 - 60 Hz self adaptive.
- Setpoint adjustment with mono turn potentiometer (0...100% graduated)
- Panel mounting or DIN rail mounting. Natural convection cooling . designed for nominal current capacity at 40°C room temperature
- Connection of power supply and output on screw terminal blocks (2.5mm²)
- Self powered, build in protection with RC circuit and fast fuse

Primarily designed 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.

Protection against short circuits is done by an internal fast fuse
(Fast fuse 30A 600V HS (type SCR) 10 x 38 mm)

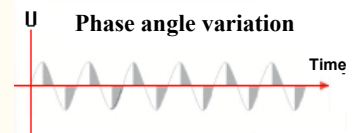
Note:

Semiconductor relays do not provide galvanic isolation between network and load, so it is necessary to switch off main supply before any intervention on the load.

Modulation type:

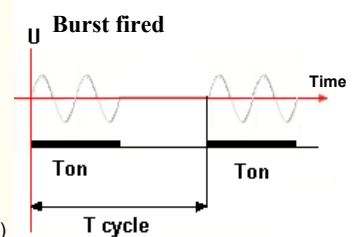
Phase angle variation

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 1 seconde cycle at 50Hz)



Version and order code:

VPL72-TR : full wave burst fired mode
VPL72-PH : phase angle variation mode

Setpoint

3/4 turn potentiometer 0.....100%

Output

Full wave burst fire
 Burst fire period : 1 sec. at 50 Hz
 Output current : 25 A
 Permissive overload 40 A 2 seconds
 Non repetitive overload current : 250 A peak
 I^2t (<10ms) (for fuse determination) 250 A²s (30A)
 Min load current: 200 mA
 Off state leakage current: < 2.5mA
 Voltage drop: 1.4V
 Power dissipation : 1.4 x Is (watts)
 Temperature rising: 1.3°C/Watt

Power supply

230V +/-10% 50 - 60Hz

Environment

Operating temperature -10 °C to 55 °C
 Storage temperature -20 °C to 85 °C
 Humidity 85 % (not condensed)
 Dielectric strength 2500 Vrms continuously
 Weight 750 g
 Protection rating IP40
 Offstate dv/dt 500V/us
 For optimum performance and dissipation, the unit must be mounted vertically

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

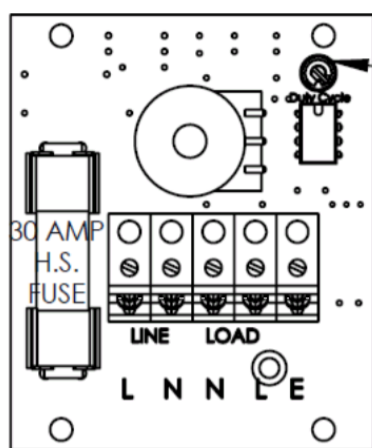
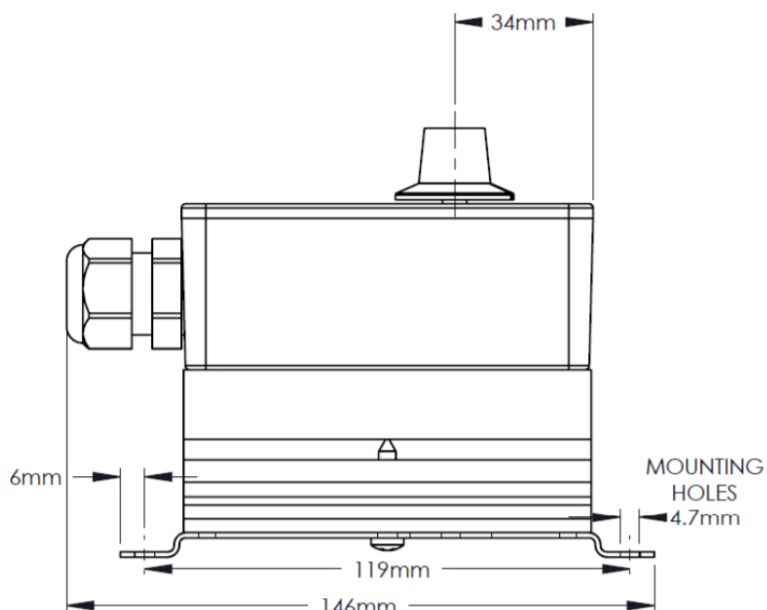
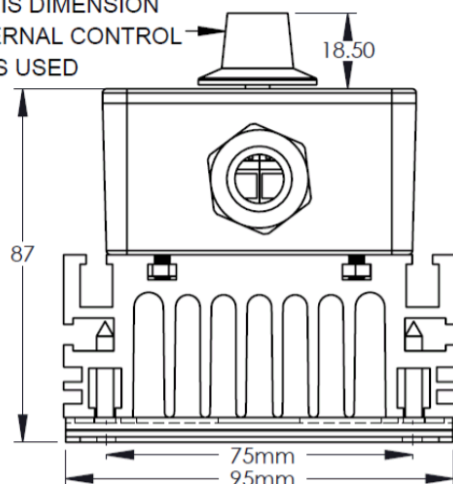
EN 61000-4-2 ESD	EN 61000-4-8 AC MF
EN 61000-4-3 RF	EN 61000-4-9 pulse MF
EN 61000-4-4 EFT	EN 61000-4-11 AC dips
EN 61000-4-5 CWG	EN 61000-4-12 ring wave
EN 61000-4-6 RF	EN 61000-4-29 DC dips

**Emission standard for industrial environments
EN 61000-6-4**

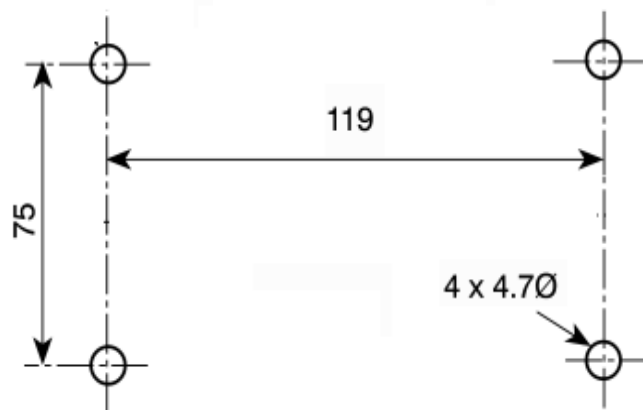
EN 55011
 group 1
 class A

**WIRING AND OUTLINE DIMENSIONS:**

ADD THIS DIMENSION
 IF EXTERNAL CONTROL
 KNOB IS USED



CAUTION: Use insulated trimmer to adjust cermet for required duty cycle.

FIXING TEMPLATE

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