

# product specification

## DC power supply unregulated: PSU1K212

input: 3 x 400Vac - output: 12Vdc / 100.0Amp.



- Smoothed output voltage
- Output separated according to VDE0551
- Extra low safety potential  
PELV (EN 50178) SELV (EN 60950)
- Parallel connection possible
- Operating status shown by LED
- Simple wall mounting with screws
- Vibration proof, suitable for the tropics - epoxy resin casted
- Conforms to EMC and low voltage directive  $\text{C}\text{E}$
- Safety according to VDE, EN, UL, CSA

### Application

The power supplies of the PSU1K2 series are powerful and robust devices to power electrical loads, like contactors, magnetic switches, magnetic valves, relays or something like that. Power supplies of this type are suitable as well for the most PLC-applications.

By using only few components the uncomplex circuit arrangement guarantees the advantage of a long life span and a high degree of efficiency (>80%).

This power supply is optimally suited for loads requiring high starting current. Because of its robust design, casted in a rugged aluminium housing, it is particularly suitable for being used in rough industrial environment, e.g. in shipbuilding. Furthermore it is quite insensitive to surge voltages.

### Functional principle

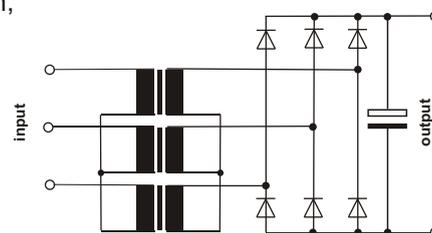
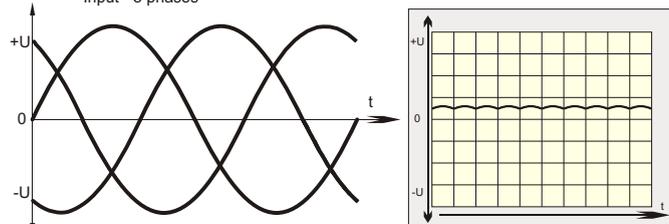
In the unregulated power supply PSU1K2 AC voltage is transferred through a 50-Hz transformer. Afterwards the voltage is rectified by a bridge rectifier and the resulting pulsing DC voltage is smoothed with capacitors.

Because this type of power supply has no output voltage stabilization, the output voltage will also float accordingly to the transformation rate, depending on line-voltage fluctuations and consumer load.



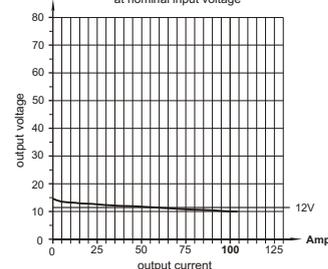
#### Effect of smoothing by electrolytic capacitors

Input - 3 phases



#### load diagram

PSU1K212  
at nominal input voltage



### Design

Completely embedded with resin in an aluminium housing for wall mounting with screws.



Please read the data sheets and the user manual for further information.

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