

SMALL INSTRUMENTATION POWER SUPPLIES

type AL25

LOREME

- **Universal input: 20....265 Vac**
SMPS version
- **Total protection**
short-circuits, overload, thermal
- **1 to 3 insulated output** (1 Watt per output)
3.3 V.....24 V up to 72 V by coupling
30 mA.....500 mA depending of output voltage
- **very small footprint**
62 x 63 x 23mm
- **Applications**
4..20 mA loop power supply, instrumentation.



The standard version of the AL25 is intended for separated power of 4 ... 20mA current loops. Very compact and fully protected, it is available in 1-3 isolated outputs, current limited to protect the sensor in case of a default on the loop. This power supply can be declined for any output voltage, single or symmetrical.

Description:

- SMPS allow high power density without heating due to its high efficiency.
- Power limitation of each channel to protect the equipment connected on the output, separate output in order to preserve the independence of loops allowing optimum safety operation.

specifications:

- 1, 2 or 3 isolated channels (model dependant) allowing coupling the outputs in series or parallel, thereby obtaining exotic or symmetric output voltages, or to increase the available output current.
- 24 Vdc output voltage up to 72 V by coupling,
- Permanent protection against short circuits,
- Overload protection.
- Thermal protection (output power limitation)
- Natural convection cooling,
- Embedded EMC filter in accordance with EN55022 class A,
- Regulated output voltage, stability better than 0.5%, ripple <100mV,
- Protection against output transient by 24V clipper.

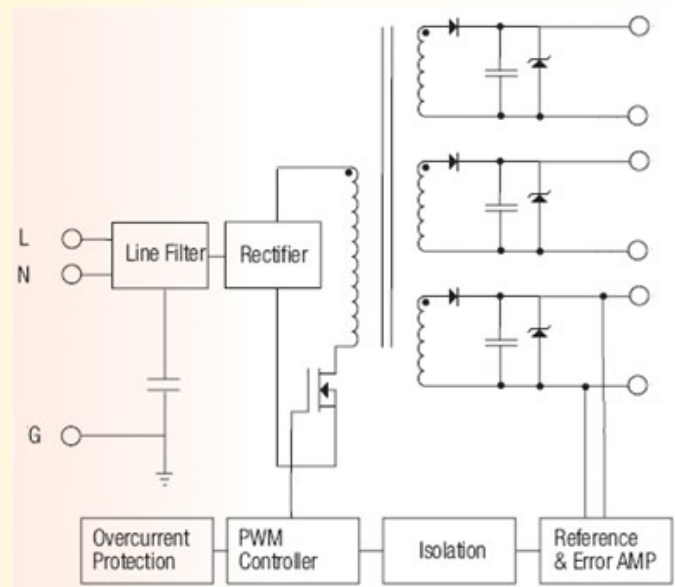
Realization:

- DIN rail mounting
- Protection IP20
- Conformal coating
- Green Led for power supply presence,
- Connection by screw terminals, wire section up to 2.5 mm²

Implementation and installation recommendations:

- primary protection with fuse (delayed 2A) recommended,
- maintain a spacing of 2 mm for natural ventilation.

Bloc diagram 1, 2, 3 output versions



Version and order code:

Standard 24 Volts output model:

- AL25-1 : 1 output version 24V 30mA
- AL25-2 : 2 outputs version 24V 30mA
- AL25-3 : 3 outputs version 24V 30mA

Specific output voltage model:

ALvv25 vv = required output voltage

The number of available outputs depends on the required voltage.
The total output power is 4 Watts.

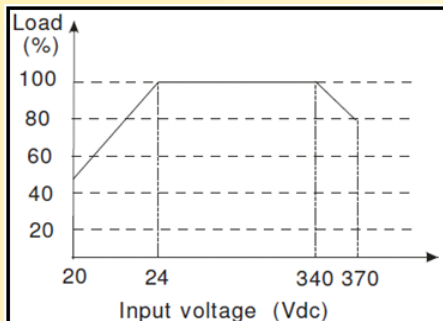
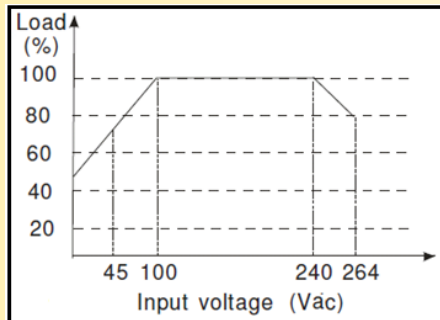
Power Supply

Input voltage 45....265VAC / 20...370VDC
 Input frequency 47....440Hz
 Typical efficiency 85%
 Inrush current 2A typical

Outputs

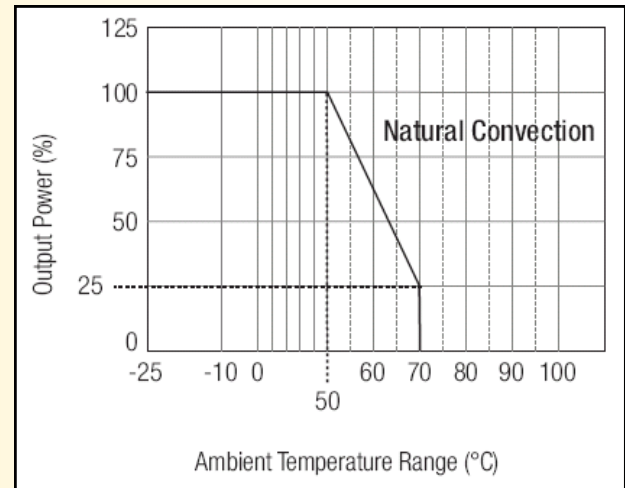
Accuracy ±2% max. (no load)
 Regulation -5% max. (full load)
 Ripple < 1% Vout max (limited to 20MHz)
 Continuous short circuit protection, automatic restart.
 Overload protection 110% typ.
 Switching frequency 100kHz typ.
 Output hold time Typical 50 ms.

Output power characteristics as a function of the input voltage

**ENVIRONMENT**

Operating temperature -10 °C to 60 °C (natural convection)
 Thermal protection 100°C internal
 Storage -20 °C to 105 °C
 Relative humidity 85 % (not condensed)
 Temperature coefficient ±0.02%/°C typical
 Insulation resistance 100 MΩ min.
 Dielectric strength 2000VAC (input / output)
 Weight 100 g
 MTBF (+25°C) > 4 000 000 hours

Output power characteristics vs ambient temperature



Electromagnetic compatibility 2004/108/CE / Low Voltage Directive 2006/95/EC

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011 group 1 class A
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	

**WIRING AND OUTLINE DIMENSIONS:**