DELTA ELEKTRONIKA BV

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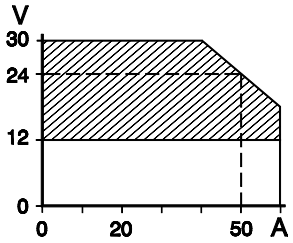
1200 W SWITCHED MODE DC POWER SUPPLIES

1200 S 24 24 V 50 A

ADJUSTABLE 12 - 30 V

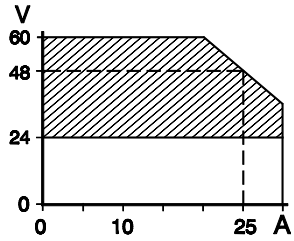
Max. current: 40 A at 30 V
50 A at 24 V
60 A at 12 - 15 V



1200 S 48 48 V 25 A

ADJUSTABLE 24 - 60 V

Max. current: 20 A at 60 V
25 A at 48 V
30 A at 24 - 30 V



Features:

- Very high reliability, MTBF 500 000 hrs
- Natural convection cooling
- Built-in diode for redundant parallel operation
- Under-voltage alarm contact
- Low output ripple, 7 mV rms
- No RFI problems, RFI filters in input and output
- Low inrush current
- High efficiency 89%
- Short circuit protected
- Analog programmable

Specifications:

Input voltage : AC 198-264 V 48-62 Hz
8.2 Arms, fuse 15 A T
crest factor 2.2

AC 99-132 V48-62 Hz
16.4 Arms, fuse 25 A T

DC contact factory

Insulation
Input / output : 3750 V rms (1 min.)
Input / case : 2500 V rms (1 min.)
Output / case : 500 V DC

Inrush current : Limited by 39 Ohm (shorted after start up).

Line distortion : Kept low by large low frequency choke input.

Power factor : 0.72 at 230 V AC input and full load.

Safety : EN 60950 EN 61010
SELV / PELV (for 1200S24 only)

EMC : EN 61204-3 Power Supply Standard
EN 61000-6-3 Emission (EN 55022**B**)
EN 61000-6-2 Immunity

VDE0160 impulse test : Input withstands non periodic impulse 2.3 $\hat{U}_N$ 0.3 ms of VDE0160 class 1

Output voltage : Screwdriver adjustable with 10-turn potmeter at the rear side.
Also analog programmable by 2 - 5 V.

Efficiency : 89% at 230 V AC input.

Temp. coeff. : 5.10^{-5} per °C.

Stability : 3.10^{-4} during 8 hrs under constant conditions, after 1 hr warm up.

Regulation
Load 0 - 100% : Better than 10 mV.
Line 198 - 264 V : Better than 5 mV.

Ripple + noise : Max. 7 mV rms, 20 mV p-p.

Output imp. : Less than 0.05 Ohm up to 100 kHz.

Recovery time : 0.3 milliseconds to recover to within 100 mV after a 50 to 100% load step. Max. deviation 300 mV.

Hold-up time : 15 ms at 115 or 230 V AC input and full load. 30 ms at half load.

Series operation : Up to 500 V total voltage.

Parallel operation : For safe parallel operation put current limit switch at 'LO' (max. 1100 W).

Redundant parallel operation : Use R+ connection via built-in Schottky diode to separate the outputs. Put current limit at 'LO'. Do not use remote sensing.

Under voltage alarm contact : Changes over when output voltage drops to 10% below the set value. Contact rating 100 mA/30 V.

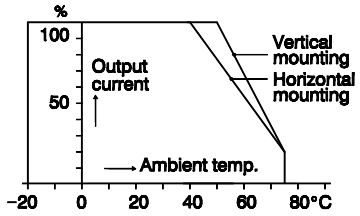
Remote control : Is possible with a 10 kΩ potmeter.

Remote progr. : Output voltage is programmable with 2 - 5 V, corresponding with 12 - 30 V (24 - 60 V). Programming speed is 100 ms from 12 - 30 V (24 - 60 V) at max. current. Programming input is not isolated (connected to – output).

Remote sensing : Max. 3 V per load lead. However the sum of voltage across load + leads cannot exceed 30 V (60 V). With parallel operation remote sensing is not recommended.

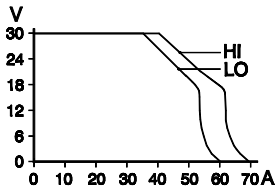
Remote on/off : By 5 V, optocoupler isolated.

Ambient temp.
Storage : – 40 to + 85 °C
Operating : – 20 to + 50 °C mounted vertically.
– 20 to + 40 °C mounted horizontally.
Derate current to 20% at 75 °C

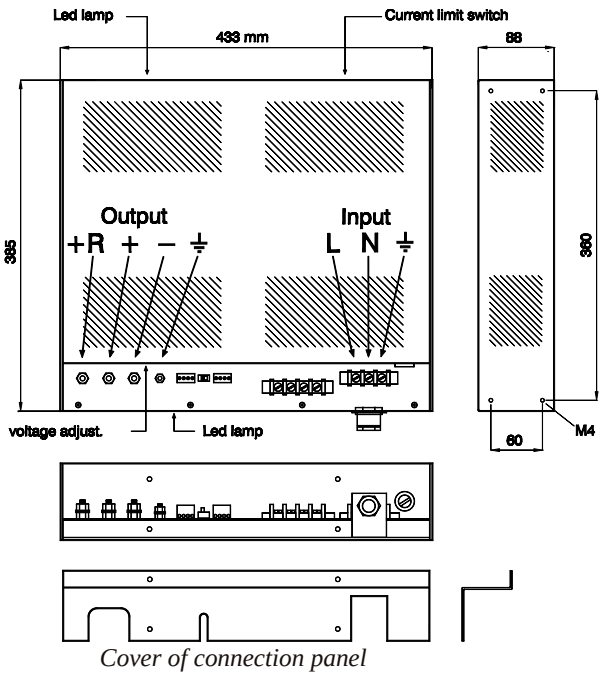


Temperature derating

Current limit : Can be put on HI or LO with a switch on the front panel.
From 30 to 18 V (60 to 36 V) the current limit follows more or less a constant power curve. Below 18 V (36 V) it resembles a constant current curve.



Current limit 1200S24



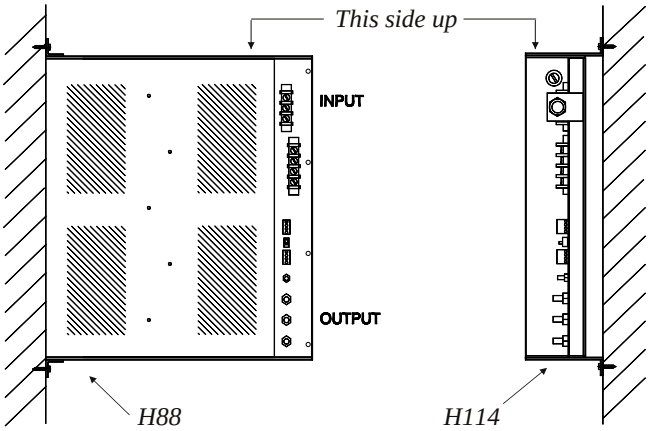
Cover of connection panel

Overload protection : Continuous overload and short circuit does not harm the unit. At short circuit the power supply produces an audible bleep.

Voltage limit : For safety an extra regulation circuit limits the output voltage to about 31 V (62 V) in case of malfunction of the normal regulation. This limit is internally adjustable 20 - 31 V (40 - 62 V) (R111).

Led lamps : Green leds on front and rear panel indicate output voltage.

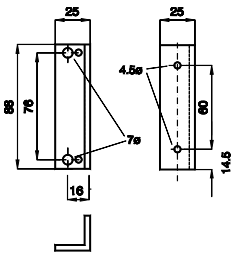
Wall mounting : The natural convection cooling functions best when the unit is mounted vertically as drawn (input at upper side). The covers are used as heat sinks, so some space between cover and wall is necessary.



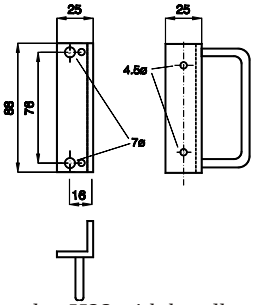
Two ways of vertical wall mounting

19 inch rack mounting : Although vertical mounting is preferred for optimal cooling, the unit can also be mounted horizontally in a 19 inch rack (2 U). The current limit switch has to be put on 'LO' (max. 1100 W). When forced air cooling is used, the full 1200 W can be taken continuously (limit on 'HI').

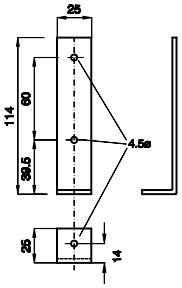
Dim. and weight : 88 x 433 x 385 mm (h x w x d), 11 kg.



Bracket H88
for vertical wall mounting
(2 pcs required)



Bracket H88 with handle
for 19" rack mounting
(2 pcs required)



Bracket H114
for vertical wall mounting
(4 pcs required)