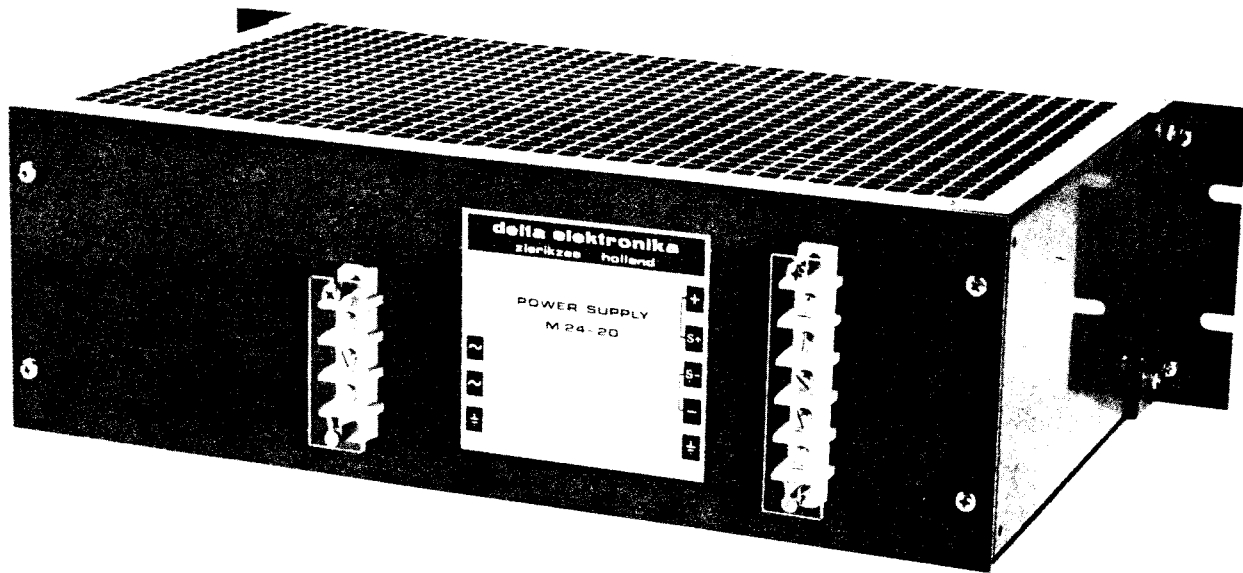




LINEAR MODULAR POWER SUPPLIES



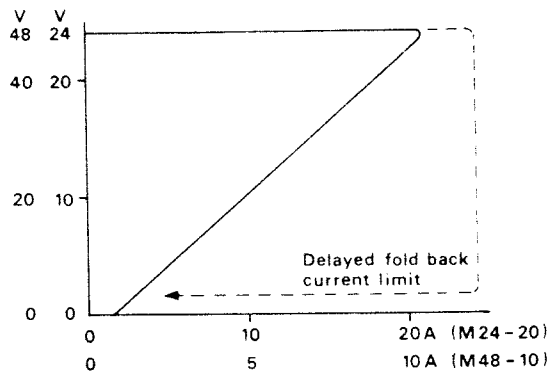
REGULATED POWER SUPPLIES

M 24 - 20	24 V	20 A
M 48 - 10	48 V	10 A

- Input voltage** : 110-117-220-234 V 50-60Hz. Input current 4.5 A RMS at 220 V and full load.
- Insulation** : 2.5 kV RMS for 1 minute, input to output and input to case. 500 V DC between output and case. Transformer according to VDE 0551.
- Output voltage** : M 24-20: 24 V, adjustable 23-28 V (see curve for max. current).
M 48-10: 48 V, adjustable 46-56 V (see curve for max. current).
- Voltage regulation** : 0.02% for a +10% to -10% line variation.
0.02% for a 0-100% load change.
- Temp. coeff.** : 0.01% per °C.
- Drift** : Less than 0.1% per 8 hours under constant ambient and load conditions, after 30 minutes warm up.
- Ripple** : 0.1 mV RMS, 0.5 mV p-p.
- Output impedance** : Less than 100 milli-ohms at 100 kHz load frequency.
- Recovery time** : 20 μs for recovery within 30mV after a step load change 10-100%.
- Ambient temp.** : Max. 50 °C at full load. Linear current derating to 20% at 85 °C.

Current limit :

The M 24-20 and M 48-10 have a fold back current limit characteristic, but in spite of this they can be used with non-linear loads such as incandescent lamps, provided the current rating of the lamp is less than 80% of the power supply current rating. Even series connected units can be switched on into lamp loads.



Remote sensing : Is provided

Parallel and series connection :

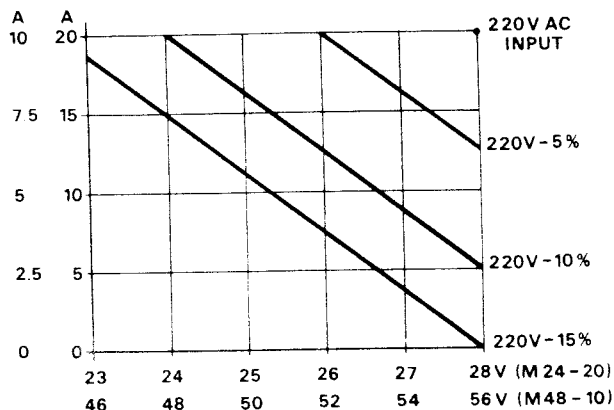
Parallel and series connection is permitted up to 250 V combined output. In case of parallel connection the current limit potentiometer, normally adjusted at about 22 A (11 A in M 48-10), must be turned down to 20 A (10 A) or less for better current sharing.

Static screens :

The input transformer has two screens. The first is connected to the case, the second to the output.

Maximum output current :

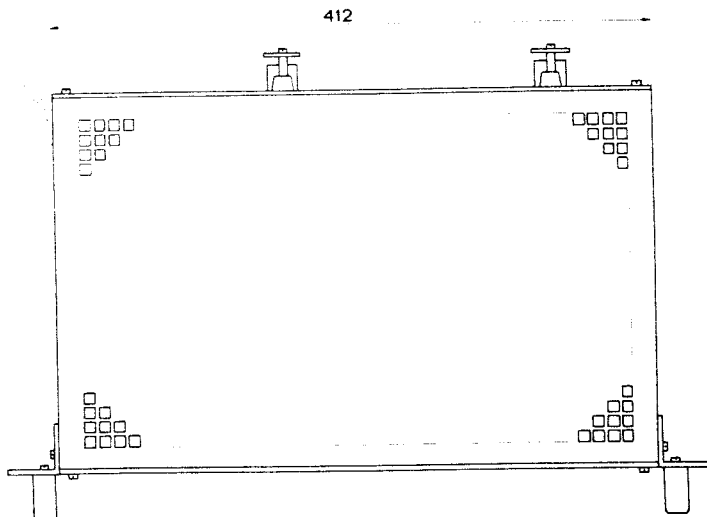
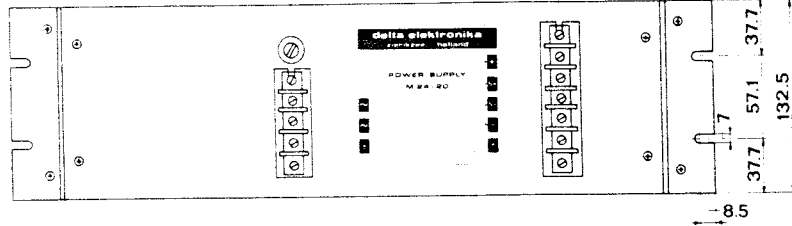
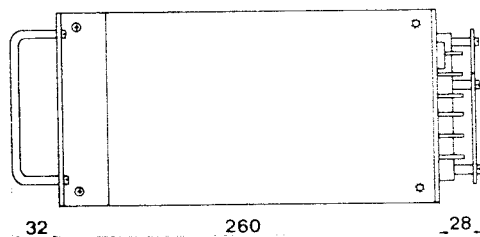
The M 24-20 (M 48-10) is designed to supply still 24 V 20 A (48 V 10 A) when the input drops 10% below normal. The maximum VA that can be supplied depends on the lowest expected AC line voltage (see curves).



Efficiency :

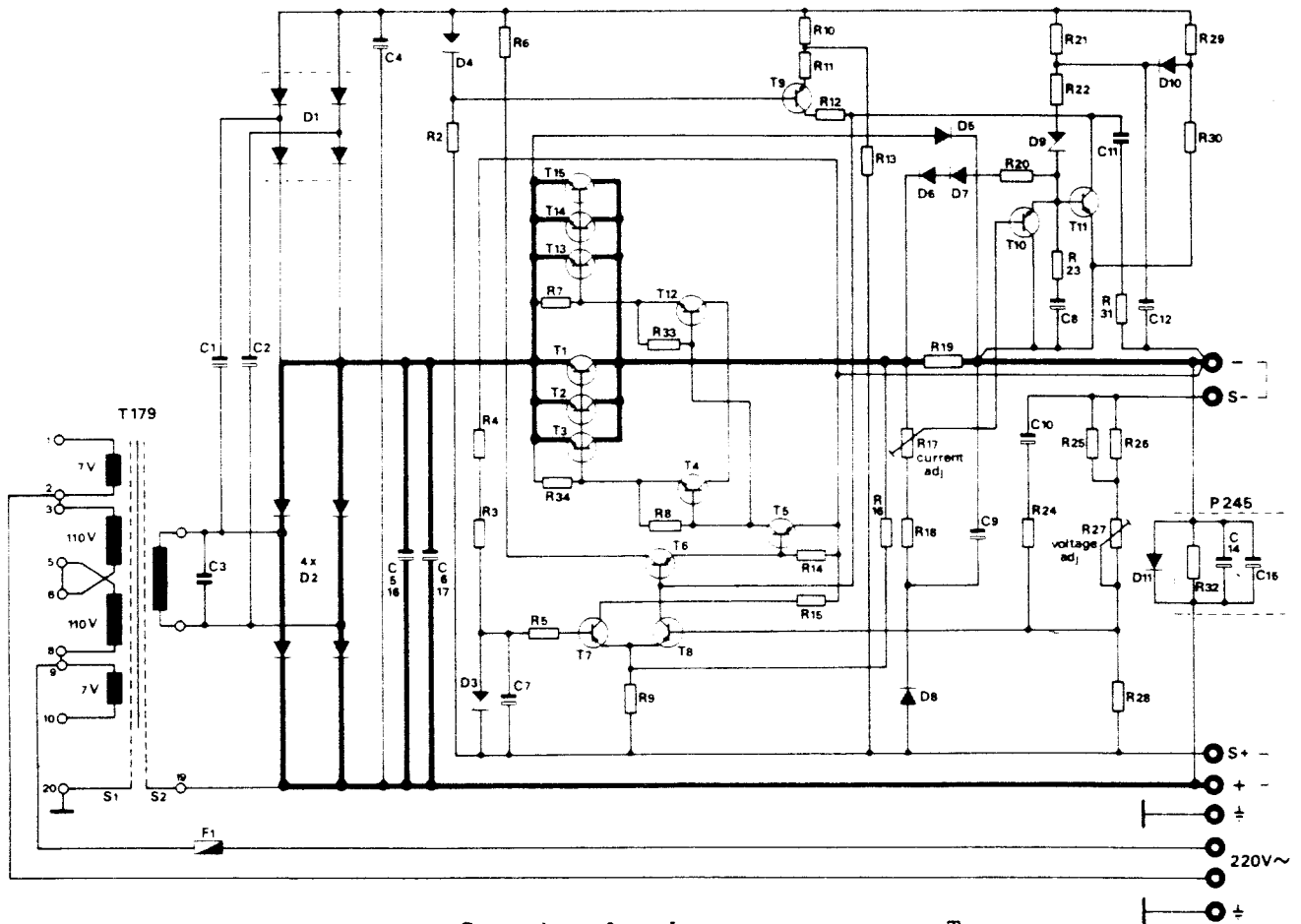
64% at full load and 220 V AC input.

Hold-up time : 15mS (full load).



Size and weight :

19" rack mount, 3 units height
412 x 132.5 x 260 mm, 18 kgs



R = Ohm

C = microfarad

T

- 1 = -
- 2 = 56 k
- 3 = 6,8 k
- 4 = 330
- 5 = 1 k
- 6 = 120 k 1W
- 7 = 10
- 8 = 120
- 9 = 3,9 k
- 10 = 680
- 11 = 10 k
- 12 = 82 k
- 13 = CR
- 14 = 3,3 k
- 15 = 15 k
- 16 = CR
- 17 = 1 k 20 trn. potm.
- 18 = 47 k
- 19 = 0,1 50W WW
- 20 = 820
- 21 = 100 k
- 22 = 100 k
- 23 = 1,5 k
- 24 = 2,7 k
- 25 = 82 k
- 26 = 27 k
- 27 = 5 k 20 trn. potm.
- 28 = 3,3 k
- 29 = 15 k
- 30 = 10 k
- 31 = 180
- 32 = 4,7 k 1W
- 33 = 120
- 34 = 10

- 1 = 10 100 V
- 2 = 10 100 V
- 3 = 1 250 V
- 4 = 47 160 V
- 5 = 3000 100 V
- 6 = 3000 100 V
- 7 = 10 40 V
- 8 = 2,2 100 V
- 9 = 10 100 V
- 10 = 1 63 V
- 11 = 0,22 63 V
- 12 = 22 63 V
- 13 = -
- 14 = 470 100 V
- 15 = 470 100 V
- 16 = 3000 100 V
- 17 = 3000 100 V

- D1 = KB-10-B250C-1000 Herm.
- 2 = 4x 40 HF 20 IR
- 3 = 1 N 825 A Thom.
- 4 = ZPD 6,8 ITT
- 5 = MR 751 Mot.
- 6 = 1N4148 TI
- 7 = 1N4148 TI
- 8 = 1N4004G Ph.
- 9 = ZPY 18 ITT
- 10 = 1N4148 TI
- 11 = 40 HF 20 IR

- 1 = 2N3773 RCA
- 2 = 2N3773 RCA
- 3 = 2N3773 RCA
- 4 = 2N3773 RCA
- 5 = 2N5415 RCA
- 6 = ESM 693 Thom.
- 7 = ESM 693 Thom.
- 8 = ESM 693 Thom.
- 9 = ESM 642 Thom.
- 10 = BC 546 A Siemens
- 11 = BC 556 A Siemens
- 12 = 2N3773 RCA
- 13 = 2N3773 RCA
- 14 = 2N3773 RCA
- 15 = 2N3773 RCA

F₁ = Fuse 6,3 A-6x32 mm

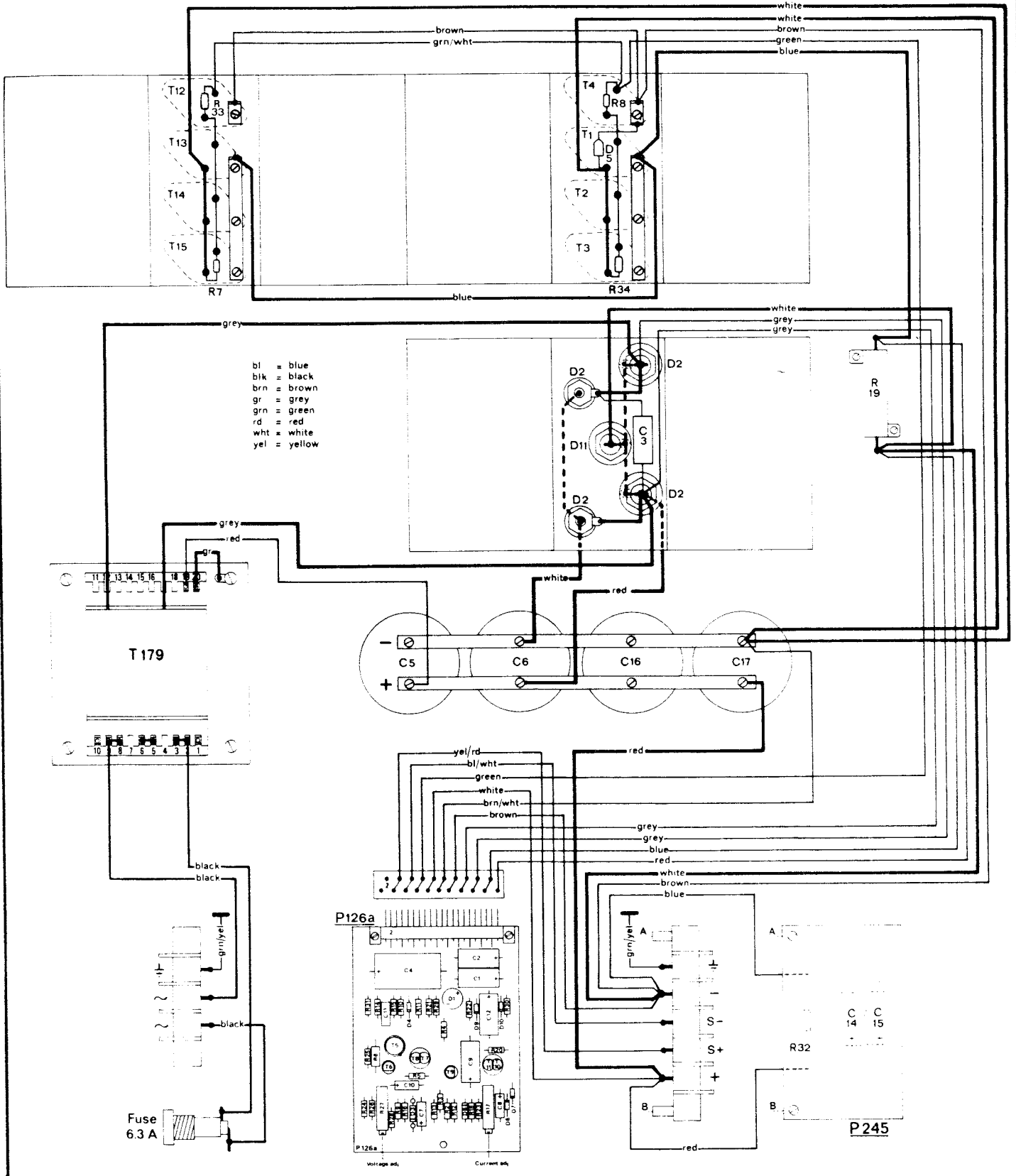
WW = Wire wound resistor

CR = Calibration resistor

All other resistors metal-film 0,4 W 2%.

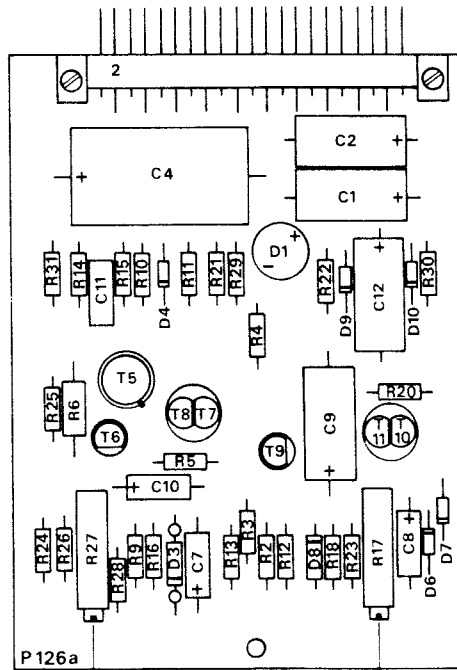
		Title: M 48-10	
		Circuit diagram / part list	
R33, 34	4-84 Ur	Date: 6-82	
Modifications	Date	App.	delta elektronika bv

delta



21

		Title: M48-10	δ
		Wiring diagram	
R33,34	4-'84	Ur	Date: 6-'82
Modifications	Date	App.	delta elektronika bv



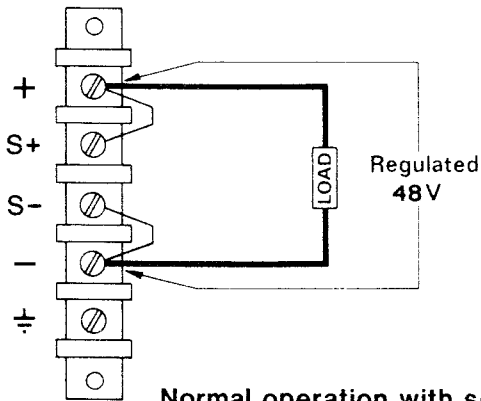
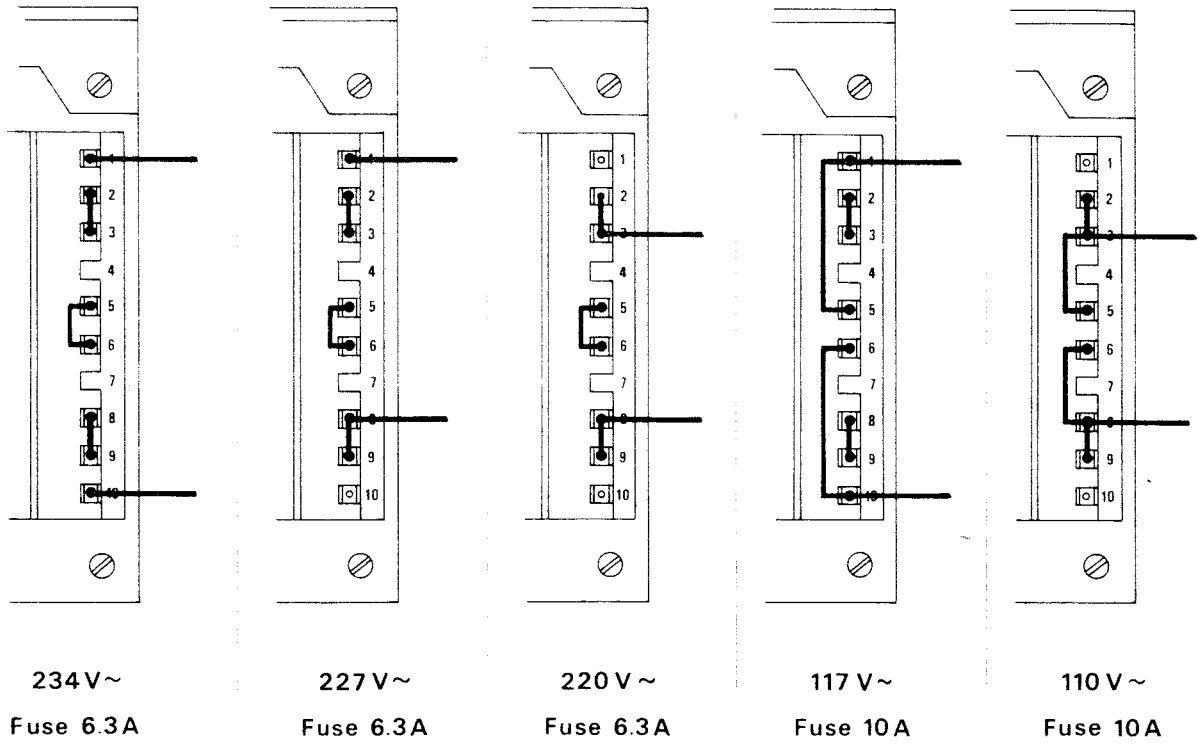
Voltage adj

Current adj

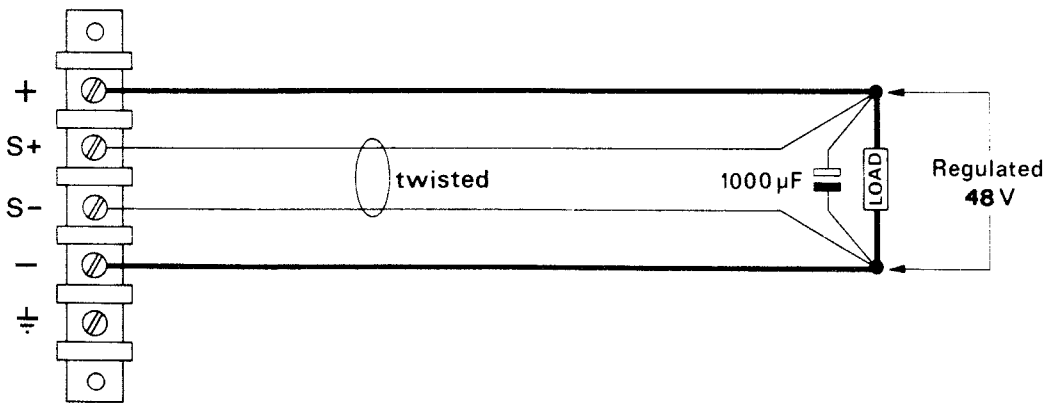
			Title: M48-10 PC board.
			Date: 6-'82
Modifications	Date	App.	delta elektronika bv



Transformer connections T179



Normal operation with sense points connected to the + and - output terminals



Remote sensing to compensate voltage drop over load line

		Title: M 48 - 10
		Date: 6 - '82
Modifications	Date	App. delta elektronika bv

