

DELTA ELEKTRONIKA BV



REGULATED POWER SUPPLIES

LABORATORY POWER SUPPLIES 300 W AND 500 W

E 015-20	0-15 V, 0-20 A
E 030-10	0-30 V, 0-10 A
E 060-6	0-60 V, 0- 6 A
D 050-10	0-50 V, 0-10 A

- SCR pre-regulation followed by transistor series regulation
- Constant voltage / constant current
- 10 turn voltage control
- Remote sensing and programming



	CV	CC
Line regulation ± 10 %	3 mV	3 mA
Load regulation 0-100 %	10 mV	5 mA
Temp. coeff. per °C	0.01 %	0.1 %
Ripple r.m.s.	0.1 mV	1 mA
Recovery time	25 μ S	
Dimensions and weight	418 x 140 x 325 mm, 20 kg	
except D 050-10	432 x 177 x 330 mm, 26 kg	

20 kHz SWITCHED MODE POWER SUPPLIES



MODULES

MS 015-20	0-15 V, 0-20 A
MS 030-10	0-30 V, 0-10 A
MS 060-5	0-60 V, 0- 5 A

BENCH MODELS

MST 015-20 etc.

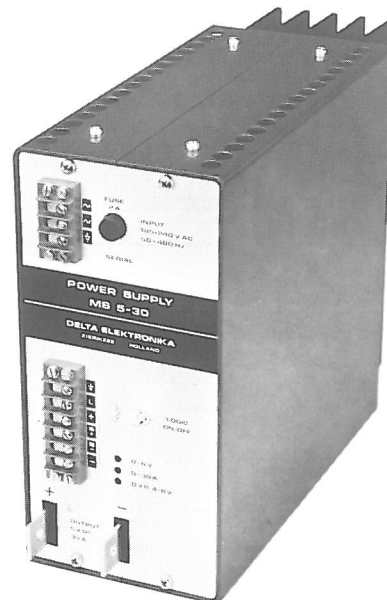
	CV	CC
Line regulation - 15 to + 10 %	0.03 %	0.25 %
Load regulation 0-100 %	0.03 %	0.1 %
Temp. coeff per °C	0.01 %	0.05 %
Ripple r.m.s./p-p	10/50 mV	0.2/1 %
Recovery time	0.5 mS	
Dimensions and weight	215 x 89 x 270 mm, 5.5 kg	
bench model	215 x 89 x 350 mm, 6.3 kg	

- Very small dimensions, light weight
- High efficiency, up to 80 % at 300 W output
- Constant voltage / constant current
- Built-in adjustable over voltage protection
- Very low RFI by optimized filtering

MS 5-30 0-6 V, 0-30 A

- Adjustable constant current limit
- Logic on/off input
- Built-in OVP, adjustable 4-8 V
- Very low RFI by optimized filtering

Line regulation - 15 to + 10 %	10 mV
Load regulation 0-100 %	10 mV
Temp. coeff. per °C	0.01 %
Ripple r.m.s./p-p	10 mV/50 mV
Recovery time	1 mS
Dimensions and weight	89 x 178 x 235 mm, 3 kg



LABORATORY POWER SUPPLIES 30 W AND 90 W



E 015-2	0-15 V, 0-2 A
E 030-1	0-30 V, 0-1 A
E 060-0.6	0-60 V, 0-0.6 A
E 0300-0.1	0-300 V, 0-0.1 A
E 030-3	0-30 V, 0-3 A

E 018-0.6 D Dual $\pm$ 0-18 V, 0.6 A
 Specially designed for operational amplifiers
 Voltage ratio variable $\frac{1}{2}$ to 2
 Fixed constant current overload
 Coupled overload protection pos. and neg.

- Constant voltage / constant current operation
- 10 turn potentiometer voltage control

	CV	CC
Line regulation $\pm$ 10 %	5 mV	0.3 mA
Load regulation 0-100 %	10 mV	2 mA
Temp. coeff. per °C	0.02 %	0.05 %
Ripple r.m.s.	0.1 mV	0.1 mA
Recovery time	15 μ S	—
Dimensions and weight	219 x 93 x 154 mm, 2.7 kg	
except E 030-3	219 x 93 x 222 mm, 5.7 kg	

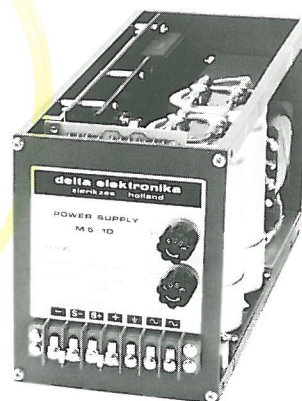
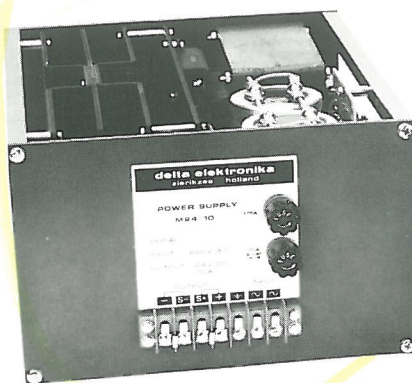
Exception E 0300-0.1

CV	CC
10 mV	0.05 mA
60 mV	0.5 mA
0.02 %	0.05 %
0.05 mV	0.2 mA
30 μ S	—

MODULAR POWER SUPPLIES

M 24-10	24 V	10 A
M 60-4	60 V	4 A
MV 15-10	6-15 V	10 A
MV 30-6	15-30 V	6 A

M 5-10	5 V	10 A
M 12-5	12 V	5 A
M 15-5	15 V	5 A
MD 12-2.5	24 V	2.5 A
	or ± 12 V	2.5 A
MD 15-2.5	30 V	2.5 A
	or ± 15 V	2.5 A

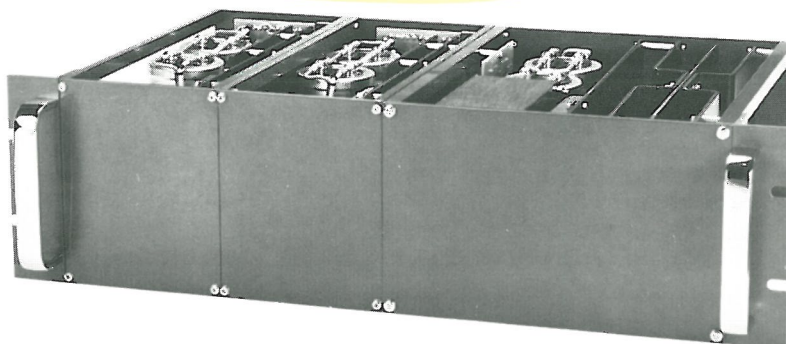


- In spite of the fold back current limit, all units except M 5-10, MD 12-2.5 and MD 15-2.5, can be used with non linear loads like lamps.

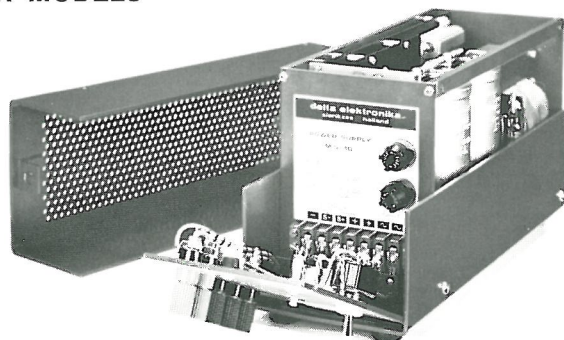
Line regulation ± 10 %	0.02 %
Load regulation 0-100 %	0.02 % + 1 mV
Temp. coeff per $^{\circ}\text{C}$	0.01 %
Ripple	0.1 mV r.m.s., 0.5 mV p-p
Recovery time	20 μs
Dimensions	206 x 132.5 x 260 mm M 24-10 etc. 103 x 132.5 x 260 mm M 5-10 etc.
Weight	8.8 kg M 24-10 etc., 5 kg M 5-10 etc.

RACK MOUNTING

Several units can be mounted together and are, with the help of two brackets H 7, suitable for 19 inch rack mounting

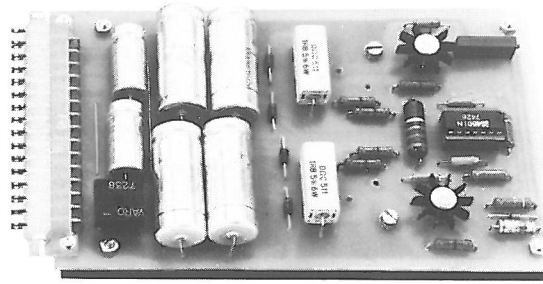
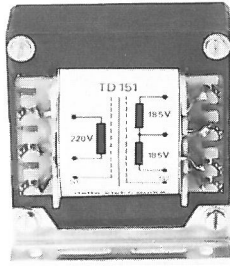


BENCH MODELS



Unique construction enables conversion of basic unit into bench model. For ordering bench version add T to model no, like MT 5-10.

EUROPA CARD POWER SUPPLIES



Card	DC output		Transformer	AC output
C 5-5	5 V	5 A	T 55	8.5-0-8.5 V
C 24-1.5	24 V	1.5 A	T 2415	0-30 V
CD 15-1	± 12 V	0.8 A	TD 151	18.5-0-18.5 V
	to ± 15 V	1 A		
CV 15-2	5-15 V	2 A	TV 152	0-13-16-19 V
CV 30-1	15-30 V	1 A	TV 301	0-24-29-34 V
CV 60-0.6	30-60 V	0.6 A	TV 6006	0-45-54-64 V

- Standardized Europa dimensions 100 x 160 mm
- All cards are delivered including matching connector
- Fold back current limit, except C 5-5, which has const. current limit with thermal shut down
- Double screens in all transformers

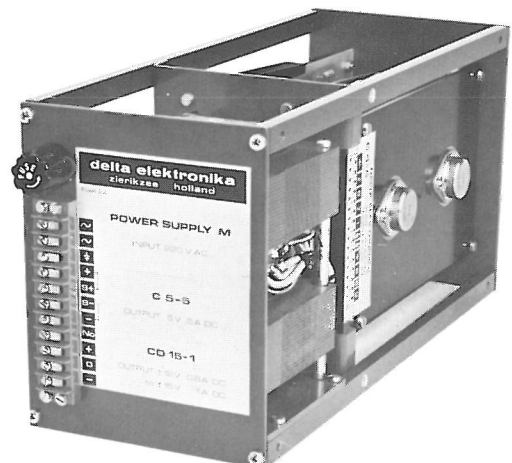
Line regulation ± 10 %	5 mV
Load regulation 0-100 %	10 mV, except C 5-5 5 mV and C 60-0.6 20 mV
Temp. coeff. per °C	0.01 %
Ripple	0.5 mV r.m.s., 1.5 mV p-p
Recovery time	10 μ S
Dimensions and weight	100 x 160 x 40 mm 0.32 kg
except C 5-5	100 x 160 x 52 mm 0.4 kg
Dim. and w. of transformer	72 x 78 x 60 mm 1.1 kg
Transformer standard input	220 V 50 Hz
Multi input transf. add A to typeno.	110-117-220-234 V 50-400 Hz

CARDS IN 1/4 19" UNITS

Rack units 103 x 132.5 x 260 mm can be ordered with one or two cards plus transformers built-in.
All combinations are possible except two cards C 5-5.
These units can be combined with M 5-10, M 24-10 etc. to be used in a 19 inch rack system.

Ordering code: Add prefix M to card type no, for example MC 5-5 (unit with one card), MC 5-5/CD 15-1 (with two cards).

To order bench version use code MT, for example MT / C 5-5 / CD 15-1, see also page 4.



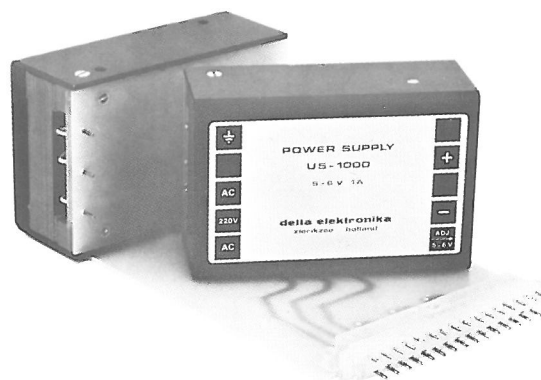
SMALL POWER SUPPLY MODULES

Voltage adjustment with 20-turn trimpot

INPUT 220 V 50 Hz

110, 117 or 234 V 50–60 Hz at special order

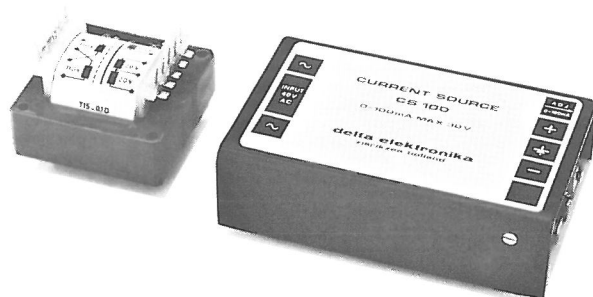
U 5-500	5–6 V 500 mA
U 5-1000	5–6 V 1000 mA
U 15-250	12–15 V 250 mA
U 15-500	12–15 V 500 mA
UD 15-100	$\pm 7,5$ to ± 15 V 100 mA (or 15–30 V 100 mA)
UD 15-200	± 12 to ± 15 V 200 mA (or 24–30 V 200 mA)
P 200	Europacard for 1 or 2 units including matching connector



MODULES WITH EXTERNAL TRANSFORMER

U 125	± 125 V 50 mA or 250 V 50 mA
T 125	Transformer for U 125
P 125 A	Europacard for U 125

CS 100	Current Source 0–100 mA Max 30 V
T 15-01 D	Transformer for CS 100



	U 5-500	U 5-1000	U 15-250	U 15-500	UD 15-100	UD 15-200	U 125	CS 100
Line reg. $\pm 10\%$	5 mV	5 mV	10 mV	10 mV	10 mV	10 mV	0.05 %	1 μ A
Load reg. 0-100 %	10 mV	10 mV	10 mV	10 mV	10 mV	10 mV	0.05 %	1 μ A
TC per $^{\circ}$ C	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.03 %	0.005 %
Ripple r.m.s.	0.5 mV	0.5 mV	0.5 mV	0.5 mV	0.5 mV	0.5 mV	0.5 mV	5 μ A
Recovery time	10 μ S	10 μ S	10 μ S	10 μ S	10 μ S	10 μ S	80 μ S	5 μ S
Input AC 50 Hz	220 V	220 V	220 V	220 V	220 V	220 V	145-0-145V	20-0-20 V

Dim. and weight	U 5-500, U 15-250, UD 15-100	93	×	65	×	33 mm	0.40 kg
	U 5-1000, U 15-500, UD 15-200	93	×	65	×	41 mm	0.55 kg
	U 125	145	×	95	×	28 mm	0.30 kg
	T 125	55	×	55	×	66 mm	0.80 kg
	CS 100	95	×	60	×	28 mm	0.15 kg
	T 15-01 D	47,2	×	47,2	×	37 mm	0.25 kg

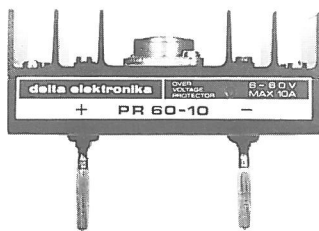
CURRENT SOURCE



CST 100 0-20/0-100 mA
Output imp. 20 MOhm + 4000 pF
Voltage limit adjustable 15-30 V
Specifications see CS 100

OVER VOLTAGE PROTECTORS

Max. current 100 A during 10 milliseconds



PR 60-10
Adjustable 6-60 V
Max. 10 A continuously

PR 60-20
Adjustable 6-60 V
Max. 20 A continuously



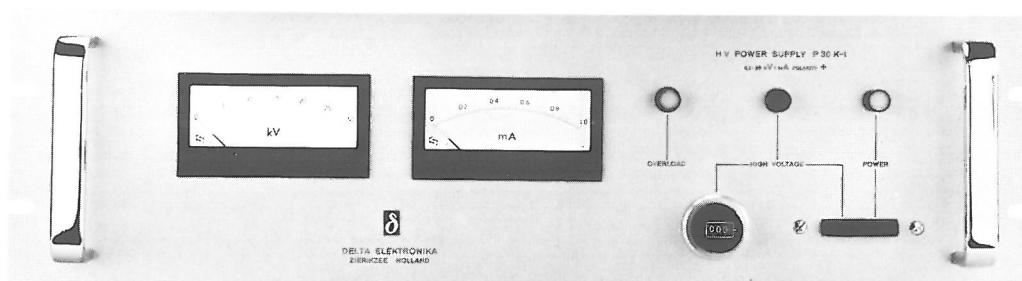
PR 60-3
Adjustable 6-60 V
Max. 3 A continuously or
10 A if mounted on
a heat sink
Can be built-in
into M 24-10 etc.

Recovery time is specified as the time required for recovery to within 30 mV of steady state voltage after a step load change from 10 % to 100 %.

Operating temperature range is 0-50 °C for most power supplies.

Data sheets with more detailed specifications of each model are available on request.

HIGH VOLTAGE POWER SUPPLIES



P 10 K 3	0.1-10 kV	3 mA
P 30 K 1	0.1-30 kV	1 mA
P 60 K 0.5	0.1-60 kV	0.5 mA

Fully protected against overload and short circuit conditions. Positive output is standard, negative output on request.

Line regulation ± 10 %	20 ppm
Load regulation 0-100 %	50 ppm
Temp. coeff. per °C	50 ppm
Ripple p-p	50 ppm
Recovery time	30 mS to within 100 V of steady state voltage
Dimensions and weight	19" x 132.5 x 330 mm, 12 kg
except P 60 K 0.5	19" x 132.5 x 400 mm, 18 kg



DELTA ELEKTRONIKA BV

P.O. BOX 27 - ZIERIKZEE - HOLLAND

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