

MAGNET POWER SUPPLY MODEL 855 SYSTEM 8500

Regulation Topology

12 pulsed thyristor (SCR) bridge with a passive LCR-filter. A DCCT is used for current regulation and readback.

Specifications

DC Output ratings

Power range	:	10 - 1,000 kW
Standard current range	:	100 – 20,000 A
Voltage range	:	100 – 400 V

Performance

All drift and regulation data are given for max. current output.

Warm up time (cold start)	:	30 min.
Warm up time (from stand by)	:	15 min.

Drift

Short term 30 min. (fwhm)	:	30ppm
Long term 8 hours (fwhm)	:	100ppm

Line regulation

+/- 10% slow, T > 1 min.	:	<5ppm
+/- 1% fast, T > 3 m sec.	:	<50ppm

Load regulation

+/- 10% resistance change	:	<5ppm
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PARV (Periodic and Random Variations) : 0.5% of V_{out}

Temperature coefficient

Ambient	:	1ppm/°C
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DC output isolation resistance : > 1 Mohm

Output polarity : Built-in motorized polarity switch (optional)

Current setting resolution

Standard	:	16 bit (15 ppm)
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Absolute calibration of current : < 400ppm

Current readback resolution

Standard	:	8 bit (3906ppm)
Optional	:	16 bit (15ppm)



Operator Control Panel, Type M

Current setting by push button. Three resolution ranges for the control of 1/10, 1/1000, and 1/100,000 per rev. of full scale.

Alphanumeric LCD display - with push-button selection of:

- Preset output current (%)
- Actual output current (%) - A (optional)
- Output output voltage (%) - V (optional)
- Transistor passbank voltage
- Interlock status text string

Regulation system status readback:

- Polarity (LED)
- Local remote (LED)

Computer Interface

- RS 232C/RS 422/RS 485
- RS 422 Multidrop
- IEEE-488 (GPIB) (optional)
- Customer specified interface

Interlocks

- DC overcurrent and overload
- AC line overcurrent
- Regulation module failure
- Phase failure
- Overtemperature
- Cabinet door interlock
- Water flow
- Earth leakage (optional)
- Two user supplied inputs for remote shutdown

Temperature ratings

Operating	:	
Ambient	:	15 to 35°C
Water	:	15 to 35°C
Storage	:	-20 to 50°C
Main cooling	:	Water

Cooling water pressure:

Minimum diff.	:	3 bar
Max. absolute	:	12 bar
Test pressure	:	15 bar

AC Input

Control Voltage,	:	
Single phase, 50-60 Hz, standard	:	Europe 230 V (+/- 5%) & USA 115 V (+/- 5%)
Available on request	:	110 V & 240 V
Mains voltage,	:	
3 phase, 3 or 4 wire, 50-60 Hz, standard	:	Europe 400 V (+/- 5%) & USA 480 V (+/- 5%)
Available on request	:	208 V & 415 V & 565 V

Cabinet dim.

Steel W x D x H

10 kW – 50 kW	:	612 x 1,050 x 1,800 mm
– 200 kW	:	1,224 x 1,050 x 1,800 mm

Operator Control Panel

Removable W x D x H	:	19 inch rack mount x 75 x 88 mm
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