HM8143 Arbitrary Power Supply Technical Data







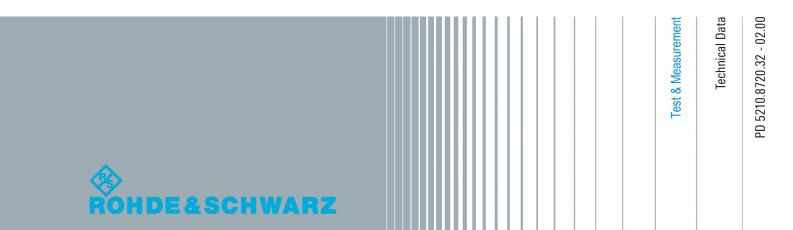






Key facts

- 1 2x 0V to 30V / 1x 5V, 3x 2A (130W)
- Linear regulated, two-quadrant power supply (current source and sink)
- Realtime voltage and current values
- Advanced parallel and serial operation
- Setting and readback resolution: 10 mV, 1 mA
- Electronic fuse and tracking mode
- Front connectors: 4mm safety sockets
- I SENSE connectors for line loss compensation (30 V channels)
- External modulation of output voltages up to 20 kHz
- Arbitrary module: 4,096 points, 12 bit
- RS-232/USB dual interface, IEEE-488 (GPIB) optionally



Specifications

HM8143 **Three-Channel Arbitrary Power Supply** from firmware version 2.45 **Electrical Specifications** 130 W Total power output 3 Number of outputs Front connectors 4 mm saftey sockets Maximum power per channel 60 W CH1, CH3 CH2 10W Voltage output 0 V to 30 V CH1, CH3 CH2 $5V (\pm 50 \, mV)$ Current output all channels max 2A Current sinking CH1, CH3 max 2A Line & load regulation Constant voltage mode CH1, CH3 $<0.02\% + 5 \,\text{mV}$ CH2 <0.25% + 10 mV Constant current mode CH1, CH3 <0.02% + 5 mA(no constant current mode) Voltage ripple 3 Hz to 300 kHz (front connectors) CH1, CH3 $<\!5\,mV_{rms}$ CH₂ $<1\,mV_{rms}$ Transient response time (10% to 90% load change) CH1, CH3 $<45\,\mu s$ in a band of $\pm20\,mV$ of V_{set} max. deviation: <800 mV CH2 <45 µs in a band of ±20 mV of V_{set} max. deviation: <200 mV SENSE connectors available for CH1, CH3 Max. SENSE compensation Programming accuracy (23°C ±5°C) Voltage / Current CH1, CH3 ±3 digits (typ. ±2 digits) Readback accuracy (23°C ±5°C) Voltage / Current CH1, CH3 ±3 digits (typ. ±2 digits) Resolution Voltage 10 mV CH1, CH3 Current CH1, CH3 1mA Voltage to earth max. $150\,V_{DC}$ Over current protection

Yes

(electronic fuse)

Modulation Input (CH1, CH3)	
Rear connectors	2x BNC
Input level	0V to 10V
Accuracy	1% of full scale
Modulation bandwidth	DC to 20 kHz
Trigger Input (BNC)	
Function	Triggering the arbitrary function
Trigger level	TTL
Edge direction	rising, falling
Arbitrary Function (CH1)	
Parameter	Voltage, dwell time
Number of Points	max. 4,096
Dwell time	100 µs to 60 s
Repetition rate	continous or burst mode with 1 to 255 repetitions
Resolution	12 Bit
Trigger	interface, trigger input
Remote Interfaces	
Standard	Dual interface RS-232 / USB (HO820)
Optional	IEEE-488 (GPIB) interface (HO880)
Miscellaneous	
Input power option	115 V_{AC} / 230 V_{AC} (±10%), 50 Hz to 60 Hz CAT II
Power consumption	300 VA
Mains fuses	
115 V _{AC}	2x 6A, slow blow (5mm x 20mm)
230 V _{AC}	2x 3.15 A, slow blow (5 mm x 20 mm)
Operating temperature	+5°C to +40°C
Storage temperature	-20°C to +70°C
Humidity	5% to 80%
Display	4x 4 digits, 7-segment LEDs
Dimensions (H x W x D)	75 x 285 x 365 mm
Rack mount capability	
(19" rack mount kit, 2RU)	Yes (HZ42)

The specifications are based on a 30 min warm-up period.

Accessories included:

Line cord, operating manual, software-CD

Recommended accessories:

HZ42 19" rackmount kit, 2 RU
HZ10S 5 x silicon test lead (black)
HZ10R 5 x silicon test lead (red)
HZ10B 5 x silicon test lead (blue)
HO880 IEEE-488 (GPIB) interface card