

Programmable 2[3] Channel High-Performance Power Supply HMP2020 [HMP2030]

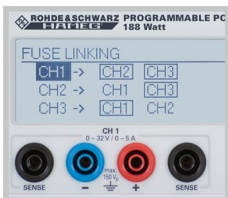
HMP2030



2 Channel Version
HMP2020



Individual Linking of single
Channels using FuseLink



Rear Outputs for simple
Integration in Rack Systems



- ✓ 1 x 0...32V/0...10A 1 x 0...32V/0...5A 188W max.
[3 x 0...32V/0...5A 188W max.]
- ✓ 188W Output Power realized by intelligent Power Management
- ✓ Low Residual Ripple: <math><150\mu\text{V}_{\text{rms}}</math> due to linear Post Regulators
- ✓ High Setting- and Read-Back Resolution of 1mV up to 0.1mA
- ✓ Galvanically isolated, earth-free and short circuit protected Output Channels
- ✓ Advanced Parallel- and Serial Operation via V/I Tracking
- ✓ EasyArb Function for freely definable V/I Characteristics
- ✓ FuseLink: Individual Channel Combination of Electronic Fuses
- ✓ Free adjustable Overvoltage Protection (OVP) for all Outputs
- ✓ All Parameters clearly displayed via LCD and Illuminated Buttons
- ✓ Rear Connectors for all Channels including SENSE
- ✓ USB/RS-232 Dual-Interface, optional Ethernet/USB Dual-Interface or IEEE-488 (GPIB)

Programmable 2 Channel High Performance Power Supply HMP2020
[Programmable 3 Channel High Performance Power Supply HMP2030]
 All data valid at 23 °C after 30 minutes warm-up.

Outputs

Advanced parallel and series operation: simultaneous switching on/off of active Channels via "Output" button, common voltage- and current control using tracking mode (individual channel linking), individual mapping of Channels which shall be affected by FuseLink overcurrent protection (switch-off), all Channels galvanically isolated from each other and the protective earth

HMP2020:	1 x 0...32V/0...10A	1 x 32V/0...5A
HMP2030:	3 x 0...32V/0...5A	
Output terminals:	4 mm safety sockets frontside, Screw-type terminal rear side (4 units per channel)	
Output power:	188W max.	
Compensation of lead resistances [SENSE]:	1V	
Overvoltage/overcurrent protection [OVP/OCP]:	Adjustable for each channel	
Electronic fuse:	Adjustable for each channel, may be combined using FuseLink	
Response time:	<10 ms	

32V Channels

Output values:	
HMP2020	1 x 0...32V/0...10A, [5A at 32V, 160W max.] 1 x 0...32V/0...5A, [2.5A at 32V, 80W max.]
HMP2030	3 x 0...32V/0...5A, [2.5A at 32V, 80W max.]

Resolution:	
Voltage	1 mV
Current HMP2030	<1 A: 0.1 mA; ≥1 A: 1 mA
Current HMP2020	<1 A: 0.2 mA; ≥1 A: 1 mA, (10A Channel, CH 1) <1 A: 0.1 mA; ≥1 A: 1 mA, (5A Channel, CH 2)

Setting accuracy:	
Voltage	<0.05 % + 5 mV (typ. ±2 mV)
Current HMP2030	<0.1 % + 5 mA (typ. ±0.5 mA at I <500 mA)
Current HMP2020	<0.1 % + 5 mA (typ. ±1 mA at I <500 mA), (10A Channel, CH 1) <0.1 % + 5 mA (typ. ±0.5 mA at I <500 mA), (5A Channel, CH 2)

Measurement accuracy:	
Voltage	<0.05 % + 2 mV
Current HMP2030	<500 mA: <0.05 % + 0.5 mA, typ. ±0.2 mA
Current HMP2030	≥500 mA: <0.05 % + 2 mA, typ. ±1 mA
Current HMP2020	<500 mA: <0.05 % + 0.5 mA, typ. ±0.5 mA, (10A Channel, CH 1) <500 mA: <0.05 % + 0.5 mA, typ. ±0.2 mA, (5A Channel, CH 2)
Current HMP2020	≥500 mA: <0.05 % + 2 mA, typ. ±2 mA, (10A Channel, CH 1) ≥500 mA: <0.05 % + 2 mA, typ. ±1 mA, (5A Channel, CH 1)

Residual ripple:	3 Hz...100 kHz	3 Hz...20 MHz
Voltage	<150 μV _{rms}	1.5 mV _{rms} typ.
Current	<1 mA _{rms}	

Residual deviation after a load change (10...90 %):	
Voltage	<0.01 % + 2 mV
Current	<0.01 % + 250 μA

Residual deviation after a line voltage change (±10 %):	
Voltage	<0.01 % + 2 mV
Current	<0.01 % + 250 μA

Recovery time after a load step from 10...90 % for return within a ±10 mV window:	<100 μs
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Arbitrary Function EasyArb

Parameters of points:	Voltage, current, time
Number of points:	128
Dwell time:	10 ms...60 s
Repetition rate:	Continuous or burst mode with 1...255 repetitions
Trigger:	Manually via keyboard or via Interface

Maximum ratings

Reverse voltage:	33V max.
Reverse polarized voltage:	0.4V max.
Max. permitted current in case of reverse voltage:	5A max.
Voltage to earth:	150V max.

Miscellaneous

Temperature coefficient/°C:	
Voltage	0.01 % + 2 mV
Current	0.02 % + 3 mA
Display:	240 x 64 Pixel LCD (full graphical)
Memory:	Non volatile memory for 3 Arbitrary functions and 10 device settings
Interface:	Dual-Interface USB/RS-232 (H0720)
Processing time:	<50 ms
Protection class:	Safety class I (EN61010-1)
Power supply:	115/230V±10%; 50...60 Hz, CAT II
Mains fuses:	115V: 2 x 6 A slow blow 5 x 20 mm 230V: 2 x 3.15A slow blow 5 x 20 mm
Power consumption:	350VA max.
Operating temperature:	+5...+40 °C
Storage temperature:	-20...+70 °C
Rel. humidity:	5...80 % (non condensing)
Dimensions (W x H x D):	285 x 75 x 365 mm
Weight:	8,5kg

Accessories supplied: Line cord, Operating manual, CD, Software

Recommended accessories:

H0730	Dual-Interface Ethernet/USB
H0740	Interface IEEE-488 (GPIB), galvanically isolated
HZ10S	5 x silicone test lead (measurement connection in black)
HZ10R	5 x silicone test lead (measurement connection in red)
HZ10B	5 x silicone test lead (measurement connection in blue)
HZ13	Interface cable (USB) 1.8m
HZ14	Interface cable (serial) 1:1
HZ42	2RU 19" Rackmount Kit
HZ72	GPIB-Cable 2m