

# 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 free 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/Illuminated Buttons
- ✓ Rear Connectors for all Channels including Sense
- ✓ USB/RS-232 Interface, optional Ethernet/USB 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	
<b>Output terminals:</b>	4 mm safety sockets frontside, Screw-type terminal rear side (4 units per channel)	
<b>Output power:</b>	188W max.	
<b>Compensation of lead resistances (SENSE):</b>	1V	
<b>Overvoltage/overcurrent protection (OVP/OCP):</b>	Adjustable for each channel	
<b>Electronic fuse:</b>	Adjustable for each channel, may be combined using FuseLink	
<b>Response time:</b>	<10 ms	

**32V channels**

<b>Output values:</b>		
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.]	
<b>Resolution:</b>		
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: 0.2 mA; ≥1 A: 1 mA, (5A Channel, CH 2)	
<b>Setting accuracy:</b>		
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)	
Current HMP2020	<0.1 % + 5 mA (typ. ±0,5 mA at I <500 mA), (5A Channel, CH 2)	
<b>Measurement accuracy:</b>		
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)	
Current HMP2020	<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)	
Current HMP2020	≥500 mA: <0,05 % + 2 mA, typ. ±1 mA, (5A Channel, CH 1)	
<b>Residual ripple</b>	3 Hz...100 kHz 3 Hz...20 MHz	
Voltage	<150 μV <sub>rms</sub> 1.5 mV <sub>rms</sub> typ.	
Current	<1 mA <sub>rms</sub>	
<b>Residual deviation after a load change (10...90 %):</b>		
Voltage	<0.01 % + 2 mV	
Current	<0.01 % + 250 μA	
<b>Residual deviation after a line voltage change (±10 %):</b>		
Voltage	<0.01 % + 2 mV	
Current	<0.01 % + 250 μA	
<b>Recovery time after a load step from 10...90 % for return within a ±10 mV window:</b>	<100 μs	

**Arbitrary Function EasyArb**

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

**Maximum ratings**

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

**Miscellaneous**

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

**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) 1.8 m
HZ14	Interface cable (serial) 1:1
HZ42	2RU 19" Rackmount Kit
HZ72	GPIB-Cable 2m