

Programmable 3[4] Channel High-Performance Power Supply HMP4030 [HMP4040]

HMP4040



3 Channel Version
HMP4030



Individual Linking of single
Channels using FuseLink



Rear Outputs for
simple Integration
in Rack Systems



- ☑ 3 x 0...32V/0...10A 384W max.
[4 x 0...32V/0...10A 384W max.]
- ☑ 384 W Output Power realized by intelligent Power Management
- ☑ Low Residual Ripple: $<150\mu\text{V}_{\text{rms}}$ due to linear Post Regulators
- ☑ High Setting- and Read-Back Resolution of 1 mV up to 0.2mA
- ☑ Keypad for direct Parameter Entry
- ☑ 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/Glowing Buttons
- ☑ Rear Connectors for all Channels including Sense
- ☑ USB/RS-232 Interface, optional Ethernet/USB or IEEE-488 (GPIB)

Programmable 3 Channel High Performance Power Supply HMP4030
[Programmable 4 Channel High Performance Power Supply HMP4040]
 All data valid at 23 °C after 30 minutes warm-up.

Outputs

Advanced parallel and series operation: simultaneously switch 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 and independant from protective earth.

HMP4030	3 x 0...32V/0...10A
HMP4040	4 x 0...32V/0...10A
Output terminals:	4 mm safety sockets frontside Screw-type terminal rear side (4 units per channel)
Output power:	384 W max.
Compensation of lead resistances (Sense):	1 V
Overvoltage/overcurrent protection (OVP/OCP):	Adjustable for each channel
Electronic fuse:	Adjustable for each channel, combinable via FuseLink
Response time:	<10 ms

32V channels

Output values:	
HMP4030	3 x 0...32V/0...10A, (5A at 32V, 160W max.)
HMP4040	4 x 0...32V/0...10A, (5A at 32V, 160W max.)
Resolution:	
Voltage	1 mV
Current	<1A: 0.2 mA; ≥1A: 1 mA
Setting accuracy:	
Voltage	<0.05 % + 5 mV (typ. ±2 mV)
Current	<0.1 % + 5 mA (typ. ±1 mA at I < 500 mA)
Measurement accuracy:	
Voltage	<0.05 % + 2 mV
Current	<500 mA: <0.05 % + 1 mA, typ. ±0.5 mA
Current	≥500 mA: <0.05 % + 2 mA, typ. ±2 mA
Residual ripple	3 Hz...100 kHz 3 Hz...20 MHz
Voltage	<150 μV _{rms} 1.5 mV _{rms} typ.
Current	<1 mA _{rms}
Stabilisation at load change (10...90 %):	
Voltage	<0.01 % + 2 mV
Current	<0.01 % + 250 μA
Stabilisation at line voltage variation (±10 %):	
Voltage	<0.01 % + 2 mV
Current	<0.01 % + 250 μA
Entire load regulation: (at 10...90 % load peak, balance time to match within 10 mV V _{nom})	<100 μs

Arbitrary Function EasyArb

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

Maximum ratings

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

Miscellaneous

Temperature coefficient/°C:	
Voltage	0.01 % + 2 mV
Current	0.02 % + 3 mA
Display:	240 x 128 Pixel LCD (full graphical)
Memory:	Non volatile memory for 3 Arbitrary function and 10 device settings
Interface:	Dual-Interface USB/RS-232 (H0720)
Process time:	<50 ms
Protection class:	Safety class I (EN61010-1)
Power supply:	115...230 V±10 %; 50/60 Hz, CAT II
Mains fuse:	Microfuse 5 x 20 mm slow blow 115V: 2 x 10 A 230V: 2 x 5 A
Power consumption:	550 VA 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 125 x 365 mm
Weight:	approx. 10 kg

Accessories supplied: Line cord, Operating manual, CD

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
HZ43	3RU 19" Rackmount Kit
HZ72	GPIB-Cable 2 m