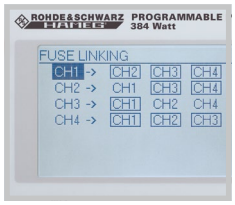
HAMEG Instruments
A Rohde&Schwarz Company

HMP4040

Programmable 3[4] Channel High-Performance Power Supply HMP4030 [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.]
- ☑ 384W Output Power realized by intelligent Power Management
- ☑ Low Residual Ripple: <150µV_{rms} due to linear Post Regulators
- ☑ High Setting- and Read-Back Resolution of 1mV 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 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 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: 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

HMP4030:	3 x 0...32 V/0...10 A
HMP4040:	4 x 0...32 V/0...10 A
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, may be combined using FuseLink
Response time:	<10 ms

32 V Channels

Output values:		
HMP4030	3 x 0...32 V/0...10 A, (5 A at 32 V, 160 W max.)	
HMP4040	4 x 0...32 V/0...10 A, (5 A at 32 V, 160 W max.)	
Resolution:		
Voltage	1 mV	
Current	<1 A: 0.2 mA; ≥1 A: 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 % + 0.5 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}	
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	

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:	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 functions and 10 device settings
Interface:	Dual-Interface USB/RS-232 (HO720)
Processing time:	<50 ms
Protection class:	Safety class I (EN61010-1)
Power supply:	115/230 V ±10 %; 50...60 Hz, CAT II
Mains fuses:	115 V: 2 x 10 A slow blow 5 x 20 mm 230 V: 2 x 5 A slow blow 5 x 20 mm
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, Software

Recommended accessories:

HO730	Dual-Interface Ethernet/USB
HO740	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	19" Rackmount Kit 3RU
HZ72	GPIB-Cable 2 m
HZP91	19" Rackmount Kit 4RU

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