

# Programmable 3 Channel High-Performance Power Supply HMP4030

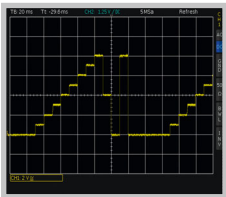
**NEW**



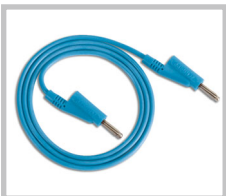
HMP4030



EasyArb functionality for simple voltage- and current characteristics



Silicone test cable HZ10B



Ethernet/USB-interface H0730 for industrial use (Option)



- ✓ 3 x 0...32V/0...10A, 384W max.
- ✓ 384W 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 1mV/0.2mA
- ✓ Keypad for direct parameter entry
- ✓ Galvanically isolated, earth-free 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

**Programmable 2 Channel High Performance Power Supply HMP2020**  
**Programmable 3 Channel High Performance Power Supply HMP2030**  
**Programmable 3 Channel High Performance Power Supply HMP4030**

All data valid at 23 °C after 30 minute 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 independent from protective earth

HMP2020	1 x 0...32V/0...10A 0...5.5V/0...5A
HMP2030	2 x 0...32V/0...5A 0...5.5V/0...5A
HMP4030	3 x 0...32V/0...10A

<b>Output terminals:</b>	4mm safety sockets frontside Screw-type terminal rear side (4 units per channel)
--------------------------	--

<b>Output power:</b>	
HMP2020/HMP2030	188W max.
HMP4030	384W max.

<b>Compensation of lead resistances [Sense]:</b>	1V
--	----

<b>Overvoltage / overcurrent protection [OVP/OC]:</b>	Adjustable for each channel
---	-----------------------------

<b>Electronic fuse:</b>	Adjustable for each channel, combinable via FuseLink
-------------------------	--

<b>Response time:</b>	< 10ms
-----------------------	--------

**32V channels**

<b>Output values:</b>	
HMP2020	1 x 0...32V/0...10A, [5A at 32V, 160W max.]
HMP2030	2 x 0...32V/0...5A, [2.5A at 32V, 80W max.]
HMP4030	3 x 0...32V/0...10A, [5A at 32V, 160W max.] I1 + I2 + I3 ≤ 25A

<b>Resolution:</b>	
Voltage	1mV
Current HMP2030	< 1A: 0.1mA; ≥ 1A: 1mA
Current HMP2020/4030	< 1A: 0.2mA; ≥ 1A: 1mA

<b>Setting accuracy:</b>	
Voltage	< 0.05% + 5mV (typ. ±2mV)
Current HMP2030	< 0.1% + 5mA (typ. ±0.5mA at I < 500mA)
Current HMP2020/4030	< 0.1% + 5mA (typ. ±1mA at I < 500mA)

<b>Measurement accuracy:</b>	
Voltage	< 0.05% + 2mV
Current HMP2030	< 500mA: < 0.05% + 0.5mA, typ. ±0.2mA
Current HMP2030	≥ 500mA: < 0.05% + 2mA, typ. ±1mA
Current HMP2020/4030	< 500mA: < 0.05% + 0.5mA, typ. ±0.5mA
Current HMP2020/4030	≥ 500mA: < 0.05% + 2mA, typ. ±2mA

<b>Residual ripple [3Hz...100kHz]:</b>	
Voltage	< 150µV <sub>rms</sub>
Current	< 1mA <sub>rms</sub>

<b>Stabilisation at load change [10...90%]:</b>	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

<b>Stabilisation at line voltage variation [±10%]:</b>	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

<b>Entire load regulation:</b> (at 10%...90% load peak, balance time to match within 10mV U <sub>nom</sub> .)	< 100µs
--	---------

**5.5V channel**

<b>Output values:</b>	
HMP2020/HMP2030	1 x 0...5.5V/0...5A

<b>Resolution:</b>	
Voltage	1mV
Current	< 1A: 0.1mA; ≥ 1A: 1mA

<b>Setting accuracy:</b>	
Voltage	< 0.05% + 5mV (typ. ±2mV)
Current	< 0.1% + 5mA (typ. ±0.5mA at I < 500mA)

<b>Measurement accuracy:</b>	
Voltage	< 0.05% + 2mV
Current	< 500mA: < 0.05% + 0.5mA; typ. ±0.2mA ≥ 500mA: < 0.05% + 2mA, typ. ±1mA

<b>Residual ripple [3Hz...100kHz]:</b>	
Voltage	< 150µV <sub>rms</sub>
Current	< 1mA <sub>rms</sub>

<b>Stabilisation at load change [10%...90%]:</b>	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

<b>Stabilisation at line voltage variation [±10%]:</b>	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

<b>Entire load regulation:</b> (at 10%...90% load peak, balance time to match within 10mV U <sub>nom</sub> .)	< 100µs
--	---------

**Arbitrary Function easyARB [32V and 5V channels]**

<b>Parameters of points:</b>	Voltage, current, time
<b>Number of points:</b>	128
<b>Dwell time:</b>	10ms...60s
<b>Repetition rate:</b>	Continuously 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% + 2mV
Current	0.02% + 3mA

<b>Display:</b>	
HMP2020/HMP2030	240 x 64 Pixel LCD (full graphical)
HMP4030	240 x 128 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>Process time:</b>	< 50ms
----------------------	--------

<b>Protection class:</b>	Safety class I [EN61010-1]
--------------------------	----------------------------

<b>Power supply:</b>	115/230V ± 10%; 50/60Hz, CAT II
----------------------	---------------------------------

<b>Mains fuse:</b>	Microfuse 5 x 20mm slow blow
HMP2020/HMP2030	115V: 2 x 6A 230V: 2 x 3.15A
HMP4030	115V: 2 x 10A 230V: 2 x 5A

<b>Power consumption:</b>	
HMP2020/HMP2030	350VA max.
HMP4030	550VA max.

<b>Operating temperature:</b>	+5°C...+40°C
-------------------------------	--------------

<b>Storage temperature:</b>	-20°C...+70°C
-----------------------------	---------------

<b>Rel. humidity:</b>	5%...80% (non condensing)
-----------------------	---------------------------

<b>Dimensions (W x H x D):</b>	
HMP2020/HMP2030	285 x 75 x 365mm
HMP4030	285 x 125 x 365mm

<b>Weight:</b>	
HMP2020/HMP2030	8,5kg
HMP4030	approx. 10kg

**Accessories supplied:** Line cord, Operating manual, Dual-Interface USB/RS-232 (H0720), CD

**Optional 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)
HZ42	2RU 19" Rackmount Kit [HMP2020, HMP2030]
HZ43	3RU 19" Rackmount Kit [HMP4030]