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Test & Measurement

- > sales
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Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

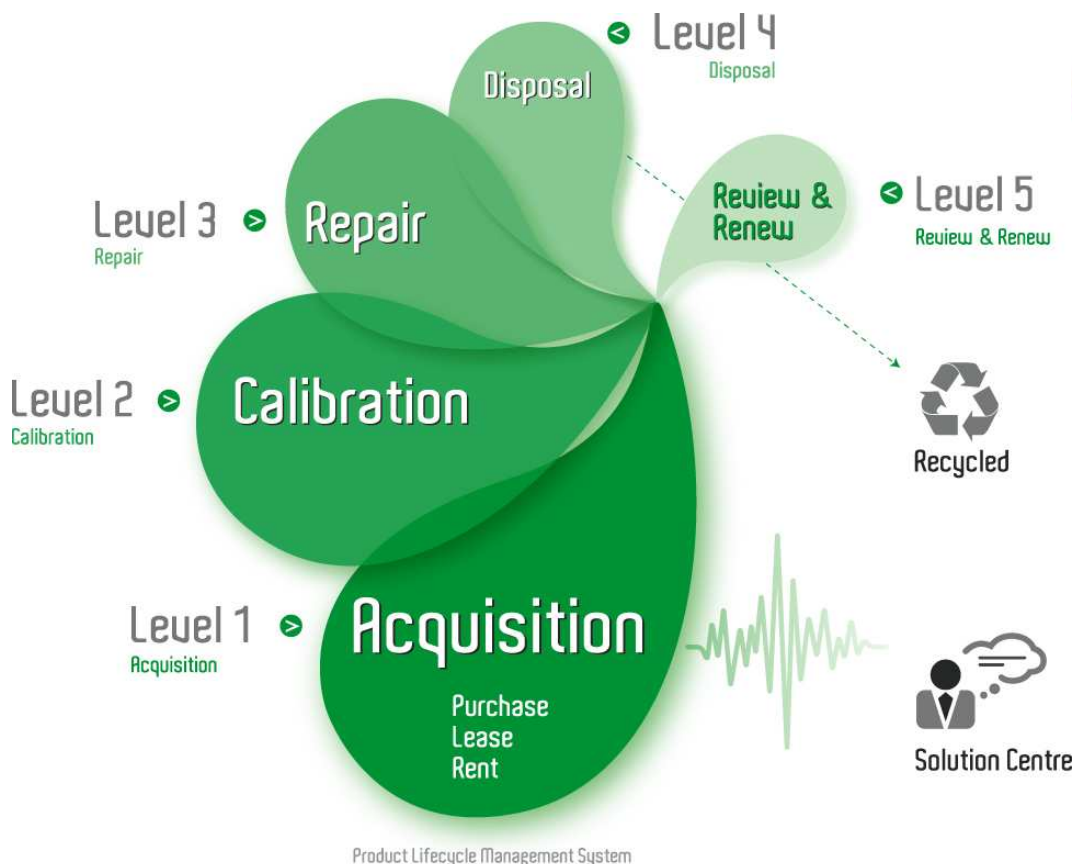
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Product Lifecycle Management System

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Programmable 2/3 Channel High-Performance Power Supply HMP2020/HMP2030

1st Quarter
2009

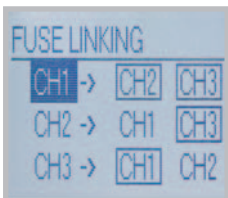
HMP2030



2 channel derivative
HMP2020



Individual linking of single
channels using FuseLink



Rear outputs for simple
integration in rack systems



- ✓ HMP2020: 1x0...32V/0...10A 1x0...5.5V/0...5A
- ✓ HMP2030: 2x0...32V/0...5A 1x0...5.5V/0...5A
- ✓ 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/0.1mA
- ✓ 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 independant 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

Output terminals:	4mm safety sockets frontside Screw-type terminal rear side (4 units per channel)
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Output power:	
HMP2020/HMP2030	188W max.
HMP4030	384W max.

Compensation of lead resistances [Sense]:	1V
Overvoltage / overcurrent protection [OVP/OCP]:	Adjustable for each channel
Electronic fuse:	Adjustable for each channel, combinable via FuseLink

32V channels

Output values:	
HMP2020	1 x 0...32V/0...10A, [5A at 32V]
HMP2030	2 x 0...32V/0...5A, [2.5A at 32V]
HMP4030	3 x 0...32V/0...10A, [5A at 32V]

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

Setting accuracy:	
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)

Measurement accuracy:	
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

Residual ripple [3Hz...300kHz]:	
Voltage	< 150µV _{rms}
Current	< 1mA _{rms}

Stabilisation at load change (10...90%):	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

Stabilisation at line voltage variation (±10%):	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

Entire load regulation:	
(at 10%...90% load peak, balance time to match within 10mV U _{nom})	< 50µs

5.5V channel

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

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

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

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

Residual ripple [3Hz...300kHz]:	
Voltage	< 150µV _{rms}
Current	< 1mA _{rms}

Stabilisation at load change (10%...90%):	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

Stabilisation at line voltage variation (±10%):	
Voltage	< 0.01% + 2mV
Current	< 0.01% + 250µA

Entire load regulation:	
(at 10%...90% load peak, balance time to match within 10mV U _{Nenn})	< 50µs

Arbitrary Function easyARB (only 32V channels)

Parameters of points:	Voltage, current, time
Number of points:	128
Dwell time:	10ms ...100s
Repetition rate:	Continuously or burst mode with 1...255 changes
Trigger:	Manually via keyboard or via Interface

Maximum ratings

Reverse voltage:	33V max.
Incorrectly 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% + 2mV
Current	0.02% + 3mA

Display:	
HMP2020/HMP2030	240 x 64 Pixel LCD (full grafical)
HMP4030	240 x 120 Pixel LCD (full grafical)

Memory:	Non volatile memory for 1 Arbitrary function and 10 device settings
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Interface:	Dual-Interface USB/RS-232 (H0720)
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Process time:	< 50ms
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Protection class:	Safety class I [EN61010-1]
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Power supply:	115/230V ± 10%; 50/60Hz, CAT II
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Mains fuse:	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

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

Operating temperature:	+5°C...+40°C
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Storage temperature:	-20°C...+70°C
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Max. rel. humidity:	5%...80% (non condensing)
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Dimensions (W x H x D):	
HMP2020/HMP2030	285 x 75 x 365mm
HMP4030	285 x 125 x 365mm

Weight:	
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)