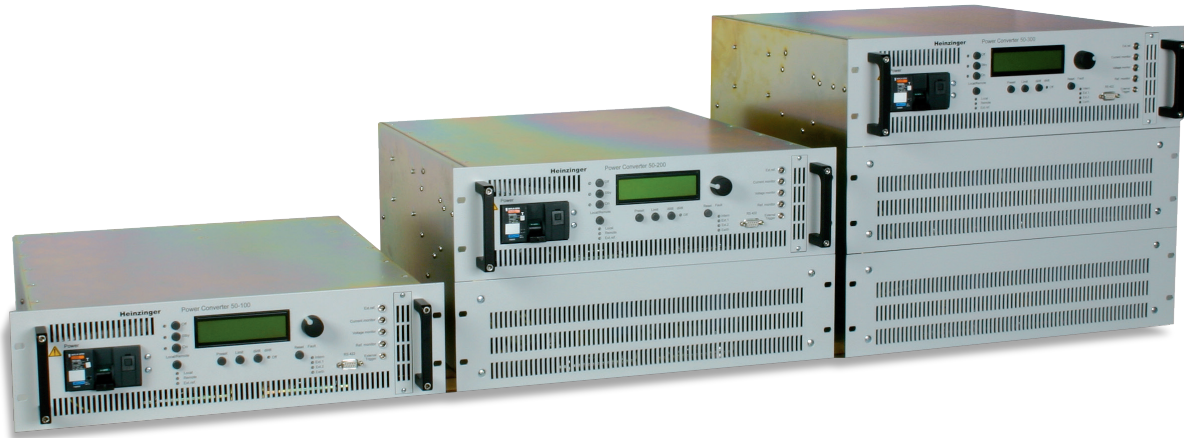


# PCU HIGH PRECISION MAGNET POWER SUPPLIES

## Output Current up to 340 A



### Magnet Power Supplies for Output Current up to 340 A

Meet the highest requirements in terms of accuracy and control capacity

The power supply units of the Heinzinger PCU series are optimized for use as power supplies for magnets. The switch-mode power supplies provide high-precision DC voltage with excellent current stability and extremely low ripple. They are available in typical voltage categories with modular design.

Various currents between 100 A and 340 A are available for each power supply. In applications requiring more power, the power supplies can be used in master/slave mode in parallel. The power supplies of the PCU series are used i.e. at well-known research institutes where they are used as reliable magnet power supplies in 24/7 operation.

The optimal ratio between power density and maximum precision ensures that the unit complies with the prescribed technical specifications in highly demanding, long-term applications.

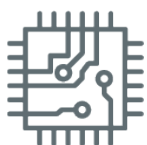
In all magnet applications demanding the highest in quality, precision and accuracy, our units from the PCU series are your reliable power supply.

The performance classes of the various Heinzinger PCU units extend as high as 15 kW (higher on request). Many manual operating and programming features make it easy to customize the units for a wide range of load conditions and requirements. Using the analog and digital interface (available as a standard) you can read and write values to the power supply in a variety of remote control applications.

### PCU-Series Highlights

- Voltage: 50 V
- Current: 100 A – 340 A
- Power: 5/10/15 kW
- Maximum accuracy and stability of 5ppm
- Temperature coefficient  $\leq 5\text{ppm}$
- DCCT current measurement
- Programmable current ramp function
- Analog (0 .. 10V) and digital interfaces (RS422)
- Short circuit proof

### Typical Applications



Semiconductor tests / manufacturing



HV tests



Quality tests



Mass spectrometer detectors



Accelerators (kickers, detectors)

# PCU HIGH PRECISION MAGNET POWER SUPPLIES

## Technical Data

Model (PCU)	50-100	50-200	50-300	30-340
Nominal output current (A)	100	200	300	340
Nominal output voltage (V)	50	50	50	30
Nominal output power (W)	5000	10,000	15,000	10,000
Line input voltage (V) +/-10 %	400/3p; 47..63 Hz (other on request)			
Ambient temperature (°C)	0 - 40			
Minimum efficiency (%)	≥90			
Power factor (%)	≥90			
Setting range (%)	1 - 100			
Regulation mode	CC or CV mode, selectable			
Displays	2-line LCD display: 5 digits for current, 4 digits for voltage, CC or CV mode, alarm message; LED indications for failures			
Interface analog	0..10 V analog interface for current & voltage measuring and setting			
Interface digital	RS422 digital interface for current & voltage measuring and setting, output ON/OFF with status; indication and rest alarms; polarity indication			
Ramp function	Programmable di/dt ramp function			
Current loop adjustment	Via plug on components			
DAC resolution	16 bit			
ADC resolution	16 bit			
Rise time (10 - 90 %) full load	Depending on load (R, L), typically 30ms			
Residual voltage ripple p/p up to 10 kHz	200...300 mV			
Current deviation for +/- 10 % of mains variation	≤5 ppm			
Current deviation for +/- 10 % of load variation	≤5 ppm			
Current stability over 8 hours	≤6 ppm			
Current deviation in temperature (ppm/°C)	≤5 ppm			
Absolute current accuracy deviation	2 mA	4 mA	6 mA	7 mA
Current reproducibility deviation	5 mA	10 mA	15 mA	7 mA
MTBF (hrs)	≥100,000			
Input/output insulation (kV r.m.s. 1 min)	2.3			
Cooling	Air cooling (water cooled optionally)			

### Accessories / Options:

- Water-cooled variant on request
- Master/slave configuration consisting of: PCU master unit and PCS slave unit for multiplication of power
- Redundant units (n+1 redundancy)
- Pole reversal unit for switching polarity
- Plug-in card for changing controller settings
- Customer-specific variants
- Additional voltage and current combinations