Compact DC Resistance Welding Power Supplies

The m1 series is a compact, lightweight resistance welding power supply range that blends leading edge power technology with affordable pricing.

The range offers high speed closed loop adaptive feedback control with embedded monitoring, making it the ideal tool for a wide range of joining applications where quality is crucial.

The m1-10 unit offers precision linear technology for low current applications.

The m1-40 uses a hybrid fast response twin loop HFDC system for higher current application.

All m1 series products feature:

- Very high speed closed loop output control for consistent welding process definition and control.
- Constant Current, Voltage and Power modes with programmable double pulse combinations.
- Advanced component conditioning functions.
- Simple to use, intuitive menu.
- Compact, high performance and low cost.
- Single phase 95VAC to 265VAC operation.

m1-10: 1000 Amp Precision Linear DC Welding power supply

A versatile Linear supply for precision joining below 1000 Amps

**Typical Applications**
- Gold ribbon welding
- Micro circuit welding
- Solar cell assembly
- Sensor and component welding
- Detonator and bridge wire welding

**m1-10 product features**
- Precision control, ultra fast response for low current applications
- Ideal replacement for MCW-550 & Unibond™® systems

m1-40: 4000 Amp Hybrid HFDC Welding power supply

A high power HFDC based supply for conductive component joining.

**Typical Applications**
- Battery and battery pack assembly
- Miniature contact welding
- Automotive electronics
- Wire and lead termination
- Lamp manufacture
- Conductive material welding

**m1-40 product features**
- Short high current pulse capability for conductive material joining.
- Ideal replacement for capacitor discharge equipment
- Hybrid HFDC for very fast response
### m1 Standard Specifications

#### Standard Features
- **M1-10**
  - Maximum Output Current (A): 1000 Amps DC
  - Maximum Output Voltage at Full Load: 5 V DC at maximum current
  - Maximum Output Power: 5 KW
  - Duty Cycle at:
    - 4000 Amps: 10ms / second
    - 3000 Amps: 50ms / second
    - 2000 Amps: 70 ms / second
    - 1000 Amps: 30 ms / second
    - 500 Amps: 20 ms / second
- **M1-40**
  - Maximum Output Current (A): 4000 Amps DC
  - Maximum Output Voltage at Full Load: 4 V DC at maximum current
  - Maximum Output Power: 16 kW
  - Duty Cycle at:
    - 4000 Amps: 5ms / second
    - 3000 Amps: 20 ms / second
    - 2000 Amps: 70 ms / second
    - 1000 Amps: 30 ms / second
    - 500 Amps: 20 ms / second

#### Control Modes
- Current, voltage and power

#### Programmed Values
- **Squeeze Time**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Upslope Time Pulse 1**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Peak Time Pulse 1**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Downslope Time Pulse 1**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Delay Time Between Pulses**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Upslope Time Pulse 2**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Peak Time Pulse 2**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Downslope Time Pulse 2**
  - M1-10: 0.1 – 999 ms
  - M1-40: 0.1 – 999 ms
- **Process Monitor Limits**
  - Voltage and Current

#### Input Requirements
- **Input Voltage**
  - 95 – 260 VAC
- **Control I/O**
  - Single phase
- **Serial Communications**
  - Options: RS232, RS422/485, CAN

#### Dimensions
- **Width (mm)**
  - M1-10: 170 mm
  - M1-40: 170 mm
- **Height (mm)**
  - M1-10: 275 mm
  - M1-40: 275 mm
- **Depth (mm)**
  - M1-10: 470 mm
  - M1-40: 470 mm
- **Weight (Kg)**
  - M1-10: 16.5 kg
  - M1-40: 16.5 Kg

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**UK OFFICE**
MACGREGOR WELDING SYSTEMS LTD
69 Fred Dannatt Rd, Mildenhall, Suffolk, IP28 7RD, U.K.
Tel: +44 (0)1638 510011 Fax: +44 (0)1638 510329
E-mail: sales@macgregorsystems.com Web: www.macgregorsystems.com

**US OFFICE**
MACGREGOR SYSTEMS LTD
7959 Silverton Avenue, Suite 1021, San Diego, CA 92126-6355
Tel: +1 858 586 9000 Fax: +1 858 586 9291
E-mail: sales@macgregorsystems.com Web: www.macgregorsystems.com

**BENELUX OFFICE**
MACGREGOR WELDING SYSTEMS LTD
Vivaldilaan 5, 5707 RA Helmond, The Netherlands
Tel: +31 492 538 597 Fax: +31 492 538 597
E-mail: sales@macgregorsystems.com Web: www.macgregorsystems.com

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