Magnet Power Supply
80A 10V

International Electric Co.
Output performance

- **NOMINAL OUTPUT CURRENT**: 80A
- **CURRENT SETTING RANGE**: ± 10%
- **OUTPUT VOLTAGE RANGE**: 0 to 10 Vdc
- **OUTPUT POWER RANGE**: 0 to 800 W
- **OPERATION**: Switching mode
- **SWITCHING FREQUENCY**: > 90 kHz
- **EFFICIENCY**: up to 93%
- **CURRENT INSTABILITY**
  - 1 minute period: < 0.2 ppm peak-to-peak
  - 30 minutes period: < 1.0 ppm peak-to-peak
  - Drift rate: < ±0.06 ppm/min
- **WARMING TIME**
  - Cold start: < 5 minutes to meet specifications
  - Warm start: < 1 minute to meet specifications
- **CURRENT RAMP UP TIME**: Load and output voltage dependent
- **CURRENT RAMP DOWN TIME**: Load dependent

Interface and control

- **LOCAL CURRENT CONTROL**
  - Adjustment range: ± 1%
  - Control type: Thumb wheels with 65536 steps, LSB=0.2ppm
- **REMOTE CURRENT CONTROL**
  - Adjustment range: ± 0.1%
  - Input mode: Differential
  - Signal type: Voltage or current, user definable
- **OUTPUT TERMINAL**: Terminals for M8 cable plugs
- **CONTROL INTERFACE**: D25 male
- **FRONT PANEL SWITCH**
  - Reset: Push button
  - Normal / Service mode: Toggle switch
  - Ramp up / down: Push button (service mode)
- **OVERSHOOT IN RAMP UP**: Optional, automatic
Monitoring and service

CURRENT METER   Digital meter with 0.1A sensitivity
VOLTAGE METER   Digital meter with 0.1V sensitivity
FRONT PANEL LEDS
Power OK          Green
Interlock OK (4)  Green
Power supply enabled  Green
Service mode      Orange
Fault             Red
SYSTEM PROTECTION
(Shutdown due to)
Overcurrent
Overvoltage
Overheat
Internal voltages out of tolerance
IGBT failure

System specifications

POWER REQUIREMENTS   Magnet dependent
INPUT VOLTAGE RANGE   230 VAC
                        Selected to meet power requirements
LOAD
Inductance range      No limit
Resistance range      0 to 0.1 Ω
THERMAL REQUIREMENTS
Ambient temperature   10 to 30 °C
Ambient humidity      30 to 70 %, non-condensing
Storage               -20 to 85 °C
COOLING               Air cooling (front in, rear out)
MECHANICAL
Mounting              Two 19” racks
Rack size             205mm (H) x 455mm (W) X 665mm (D)
SAFETY AND COMPLIANCE
Designed and manufactured to meet standards
IE 601-1, UL2601-1, UL 1012
Company in brief

International Electric Company (IECO) designs and manufactures state-of-the-art electronics for medical, industrial and military applications tailored to meet customer needs.

With over 30 years of experience in power electronics we are able to provide solutions for even the most challenging requirements. IECO's quality system is ISO 9001 and ISO 13485 certified.

Power amplifier technology

IECO introduced its first gradient amplifier in 1994. This revolutionary PWM amplifier enabled excellent image quality in open MRI systems. Simultaneously IECO also launched the first D-class magnet power supply delivering new efficiency levels with 0.1ppm accuracy. IECO’s expertise has recently been utilized in the development of the industry's first High Temperature Superconductive MRI magnets.

IECO’s power modules are easily scalable for any type of load and any power level needed. Compact units can be connected in parallel or in series in Master/Slave operation to gain output currents up to 1200A and output voltages up to 1100V.

Over 700 Magnet Power Supply systems delivered worldwide.