MPS-160-240

# Magnet Power Supply

160A 240V


International Electric Co.

MPS-160-240

## Output performance

| | |
|---|---|
| NOMINAL OUTPUT CURRENT | 160A |
| CURRENT SETTING RANGE | ± 10% |
| OUTPUT VOLTAGE RANGE | 0 to 240 Vdc |
| OUTPUT POWER RANGE | 0 to 40 kW |
| OPERATION | Switching mode |
| SWITCHING FREQUENCY | > 180 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 |

## 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

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| | |
|---|---|
| CURRENT METER | Digital meter with 0,1A sensitivity |
| VOLTAGE METER | Digital meter with 1V sensitivity |
| FRONT PANEL LEDS | |
| Power OK | Green |
| Interlocks OK (4) | Green |
| Power supply enabled | Green |
| Service mode | Orange |
| Fault | Red |
| SYSTEM PROTECTION | |
| (Shutdown due to) | Overcurrent<br>Overvoltage<br>Overheat<br>Internal voltages out of tolerance<br>IGBT failure |

# System specifications

| | |
|---|---|
| POWER REQUIREMENTS | Magnet dependent |
| INPUT VOLTAGE RANGE | 280 to 430 VDC<br>Selected to meet power requirements |
| LOAD | |
| Inductance range | No limit |
| Resistance range | 0 to 1,5 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 |
| Size | 205mm (H) x 455mm (W) x 665mm (D) |
| SAFETY AND COMPLIANCE | Designed and manufactured to meet standards<br>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.

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