MPS-160-10

Magnet Power Supply

160A 10V

International Electric Co.

MPS-160-10

Output performance

NOMINAL OUTPUT CURRENT	160A
CURRENT SETTING RANGE	± 10%
OUTPUT VOLTAGE RANGE	0 to 10 Vdc
OUTPUT POWER RANGE	0 to 1600 W
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
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

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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.

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