

Medical Isolated Power Supply (MIPS)

Electrical Medical IT Systems

10kVA

- » Patient safety
- » Absolute reliability
- » Power availability

BPC Energy MIPS products are suitable for medical locations like:

- » Operating Rooms
- » Intensive Care Rooms
- » MRI Rooms
- » Recovery Rooms
- » Therapy Rooms

BPC Energy range of Medical Isolated Power Supply (MIPS) products are electrical Medical IT systems which are isolated from earth and enable insulation maintenance faults to be monitored. These MIPS systems are used in Medical Group 2 locations, according to HTMo6-01-2017, to minimise risk of failure so that, in the event of a first fault to earth, supply continuity is maintained.

The purpose of MIPS products are:

- ✓ Providing PATIENT safety
- ✓ Reducing electrical shock hazard
- ✓ Reducing tripping of breakers during earth fault
- ✓ Providing monitoring and alarms for normal and abnormal conditions



Medical Isolated Power Supply (MIPS) Features

MIPS FRONT PANEL

Indicates input from independent sources.

MAINTENANCE BYPASS SWITCH

The MIPS system is provided with a rotary break before make Maintenance Bypass Switch (MBS). The MBS allows the output to be connected to the ATS, or directly to the primary supply, the switch also allows the output to be isolated OFF.

INSULATION MONITOR

The MIPS system is fitted with an insulation monitor and earth fault detection system.

TRANSFER RELAY

The MIPS system can be supplied by two different source supplies. The transfer system provides a fast changeover between supplies.

OUTPUT BREAKERS

The output distribution can be ordered as 6, 12, 18 or 24 way double pole MCB's.

IP41 CONSTRUCTION

The MIPS cabinet is provided with IP41 dust filtration system at the bottom of the door with easily maintained filters.



Medical Isolated Power Supply (MIPS) Features

AIR CIRCULATION

Dual fan top assembly improves the overall efficiency of the system and advances independent component heat dissipation.

EASY INSTALLATION

Top entry cable glands provide easy access to the terminals for all power, load and monitoring cable infrastructure.

FAULT DETECTION SYSTEM (FDS)

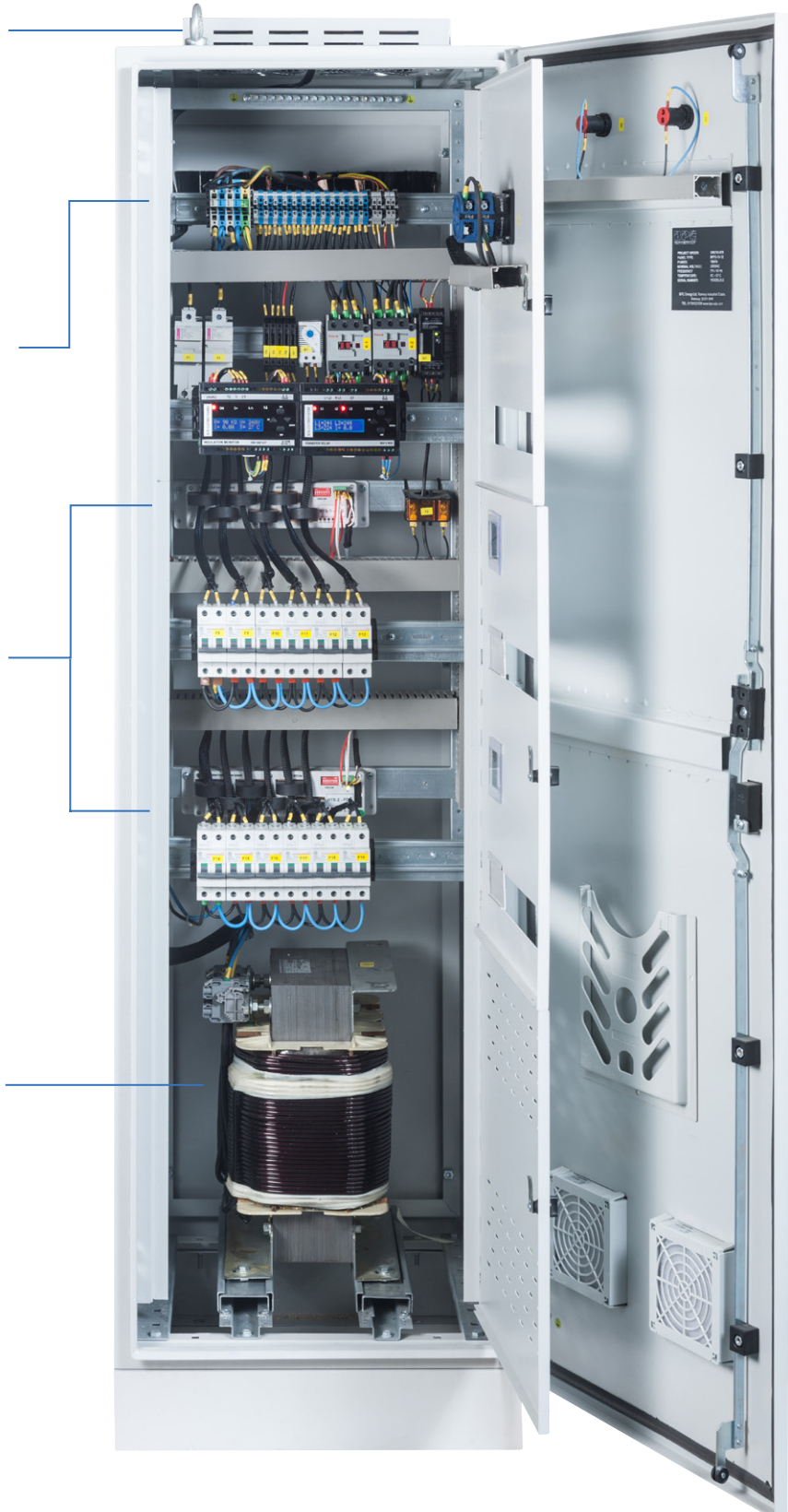
Insulation fault detection device with integrated current transformers is used for detecting insulation faults in IT systems. Insulation faulty detection system consists of test device, control and indicator device, fault evaluator and current transformer.

TRANSFORMER

BPC Medical Isolating Transformer is produced to comply with EN 61558-2-15 Standards for supplying critical loads. With a static screen placed between the primary and secondary windings is isolated from the fixed angle transformer core.

EXTENDED WARRANTY - PEACE OF MIND

All BPC MIPS systems come with a standard five year warranty subject to there being planned, preventative maintenance measures in place.

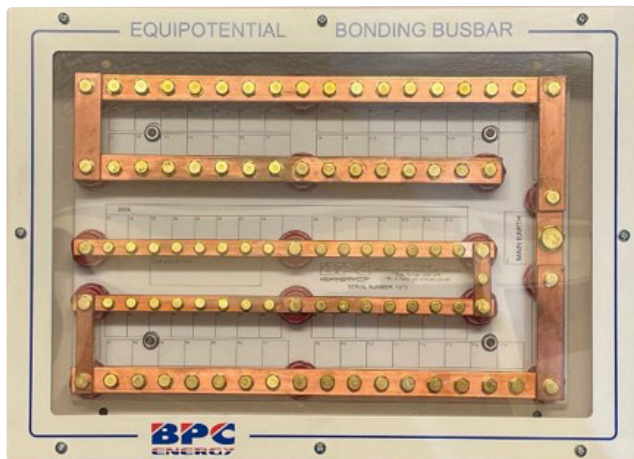


Medical Isolated Power Supply (MIPS)™

EQUIPOTENTIAL BONDING BUSBAR (EBB)

In Medical Locations of Group 1 and Group 2, additional earthing requirements are set out in section 710 of BS7671.

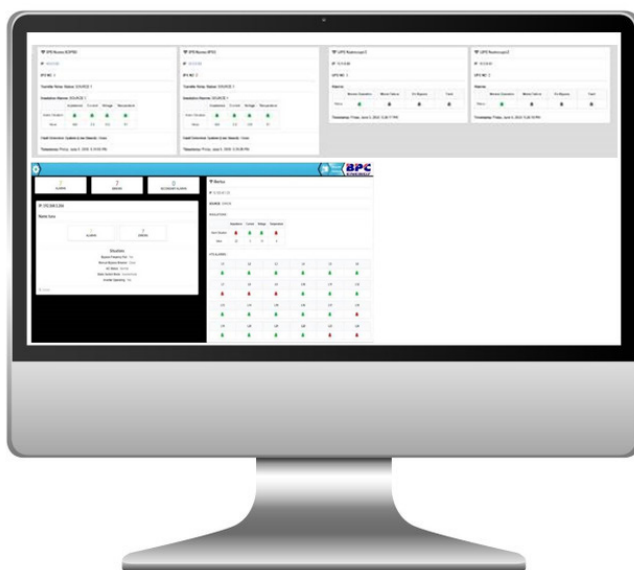
These include supplementary equipotential bonding and supplementary equipotential bonding connection points along with an associated (EBB).



CENTRAL ALARM PANEL (CAP)

Central Alarm Panel provides the centralised monitoring of all MIPS and UPS equipment within the healthcare facility.

Central Alarm Panel includes a web browser that can be accessed anywhere on the network.



LOCAL ALARM PANEL (LAP)

For each MIPS system, an audible and visual alarm can be provided by the LAP system which can be installed in various medical locations ensuring power availability can be monitored by medical staff.

Effective green or yellow indicators show normal and abnormal conditions. Providing the MIPS insulation, voltage, temperature and UPS alarms.



OPERATING ROOM PANEL (ORP)

Touch Screen operating room control panel offers comfort for medical personnel enabling full control of the environmental conditions and medical devices.

Surgical teams can communicate with other medical professionals using a built-in hands-free phone with high voice quality.



Medical Isolated Power Supply (MIPS)TM Standards

INSULATION MONITOR & EARTH FAULT DETECTION SYSTEM – IMED	HD-60364-7-710	Electrical installations of buildings. Requirements for special installations or locations - Medical locations
	EN61557-8	Electrical safety in low voltage distribution systems up to 1,000 V a.c. and 1,500 V d.c. Equipment for testing, measuring or monitoring of protective measures. Insulation monitoring devices for IT systems
	EN61557-9	Electrical safety in low voltage distribution systems up to 1,000 V a.c. and 1,500 V d.c. Equipment for testing, measuring or monitoring of protective measures. Equipment for insulation fault location in IT systems
TRANSFER RELAY CONTROLLER	EN61000-6-2	Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments
	EN61000-6-4	Electromagnetic compatibility (EMC). Generic standards. Emission standard for industrial environments
	HD-60364-7-710	Electrical installations of buildings. Requirements for special installations or locations - Medical locations
	HD-60947-6-1	Specification for low voltage switchgear and control gear. Multiple function equipment. Automatic transfer switching equipment
	HD-60364-5-53	Low voltage electrical installations. Selection and erection of electrical equipment. Devices for protection for safety, isolation, switching, control and monitoring
INSULATION FAULT DETECTION SYSTEM – FDS	EN61557-8	Electrical safety in low voltage distribution systems up to 1,000 V a.c. and 1,500 V d.c. Equipment for testing, measuring or monitoring of protective measures. Insulation monitoring devices for IT systems
	EN61557-9	Electrical safety in low voltage distribution systems up to 1,000 V a.c. and 1,500 V d.c. Equipment for testing, measuring or monitoring of protective measures. Equipment for insulation fault location in IT systems
ENCLOSURE	EN61439-1	Low-voltage switchgear and control gear assemblies. General rules
	EN61439-2	Low-voltage switchgear and control gear assemblies. Power switchgear and controlgear assemblies
ISOLATION TRANSFORMER	EN61558-2-15	Safety of transformers, reactors, power supply units and combinations thereof. Particular requirements and tests for isolating transformers for the supply of medical locations
LOCAL ALARM PANEL – LAP	IEC 60364-7-710	Electrical installations of buildings. Requirements for special installations or locations - Medical locations
OPERATING ROOM PANEL – ORP	EN55022	Information Technology Equipment. Radio Disturbance Characteristics
	EN55024	Information Technology Equipment. Immunity Characteristics
	EN60950	Information Technology Equipment. Safety, Equipment to be installed outdoors
OTHER	BS7671:2018	Requirements for Electrical Installations. IET Wiring Regulations
	HTM06-01 (2017 Edition)	Health Technical Memorandum 06-01, Part A: 'Electrical Services Supply and Distribution'
	IEE Guidance Note 7:2015	Emphasises that a hospital electrical distribution system should be designed to provide security of supply and flexibility and safety in operation
	MEIGaN - Withdrawn by MHRA (2012)	

Medical Isolated Power Supply (MIPS)

Electrical Medical IT systems 10kVA

Technical Specification



MODEL	MIPS – 10-6		MIPS – 10-12		MIPS – 10-18	MIPS – 10-24
Power Rating kVA	10		10		10	10
INPUT						
Output Voltage	230VAC					
Frequency Range	50 Hz / 60 Hz					
Isolation Level	3KV / 1MIN					
OUTPUT						
Output Protection	MCB					
Output Distribution	6 way	12 way		18 way	24 way	
Alarm Output	Insulation Fault / Overload / Over Temperature					
Functional Test	Advanced Insulation Fault					
Enclosed Leakage Current	<0.5Ma					
Isolation Fault Detection Period	<1sec					
GENERAL						
Cabinet Protection	IP41					
Operating Temperature	0°C / 50°C					
Storage Temperature	-15°C / 70°C					
Ventilation	Dual Fan					
Management Software	Isolation resistance by LCD screen					
Colour	RAL9003 / RAL7035					
Transfer System	ATS via Contactor					
Transfer Time	<5ms					
Response Rate	50 - 500 kΩ					
Overall Heat Dissipation	<500W					
Dimension (mm) WxDxH	500 x 500 x 1750					
Net Weight (kgs)	134				135	



The BPC Group

BPC is an international company operating for 25 years globally, with partners and distributors located around the world.

These regions include:

EUROPE

UK, France, Germany, Gibraltar, Ireland, Netherlands, Malta, Norway, Portugal, Russia.

MIDDLE EAST

Bahrain, Georgia, Iraq, Jordan, Kuwait, KSA, Lebanon, Oman, Qatar, Syria, Turkey, UAE, Yemen.

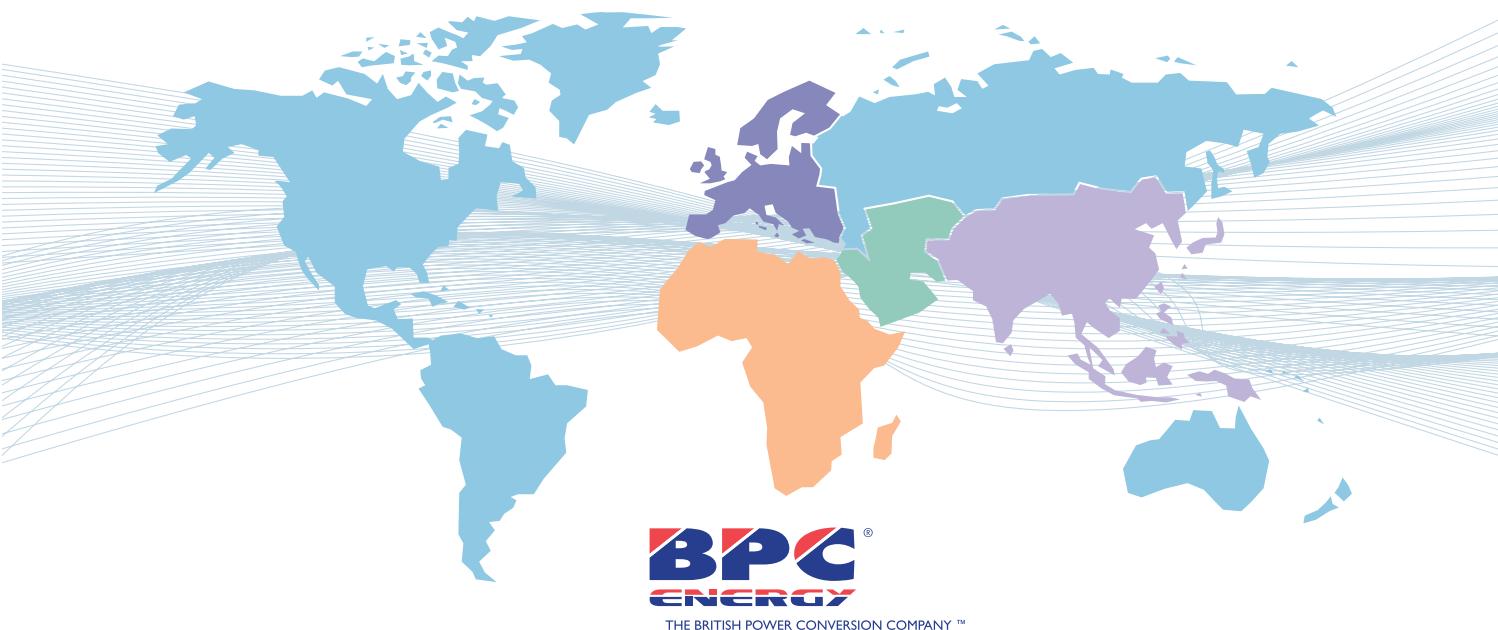
AFRICA

Algeria, Botswana, Burkina Faso, Democratic Republic of the Congo, Egypt, Ethiopia, Ghana, Kenya, Libya, Mozambique, Nigeria, Rwanda, Sierra Leone, South Africa, Sudan, Tanzania, Uganda, Zambia.

FAR EAST & ASIA

India, Pakistan, Sri Lanka, Indonesia.

To ensure a high level of pre and post sales support is offered, BPC work closely with distributors, providing key commercial and technical training whilst providing competitive costing structures tailored to specific region markets, ensuring the most suitable BPC products are offered. We pride ourselves on long standing relationships with our partners which is reflected in the ongoing support provided locally.



Authorised Distributor