

IPS (Isolated Power Supply)

5 - 10 KVA

Single Phase Input / Single Phase Output



Application area

The medical isolation panel is designated for use in group 2 locations as per

- IEC 60364 Part 7-710: Requirements for special installations or locations - Medical locations
- National Electric code 2011(SP 30:2011), Section 4, Medical Establishments Group 2 Medical Locations are
- Operation Theatre
- Operation Preparation Room
- Operation Plaster Room
- Operation Recovery Room
- Intensive Care Unit
- Heart Catheterization Room
- Angiographic Examination Room
- Premature Baby Room



Floor Mount



Wall Mount

Components

The Isolated Power Supply consists of the following components

- Medical Grade Isolation Transformer
- Line insulation monitoring
- Independent Fault Locator (optional)
- Stainless Steel Cabinet (optional)

Isolation Transformer

Transformers for Isolated Power Supply will have ratings which include 3, 5, 8 and 10kVA. The fixed primary and Secondary voltage for these transformers is 230V.

Transformers in accordance with IEC 61558-2-15, with the following additional requirements:

- The leakage current of the output winding to earth and the leakage current of the enclosure, when measured in no-load condition and the transformer supplied at rated voltage and rated frequency, shall not exceed 0,5 mA.
- Single-phase transformers shall be used to form the medical IT systems for portable and fixed equipment and the rated output shall not be less than 0,5 KVA and shall not exceed 10 KVA.
- If the supply of three-phase loads via an IT system is also required, a separate three phase transformer shall be provided for this purpose with output line-to-line voltage not exceeding 250 V.
- Monitoring of overload and high temperature for the medical IT transformer is required.

Line Insulation Monitoring

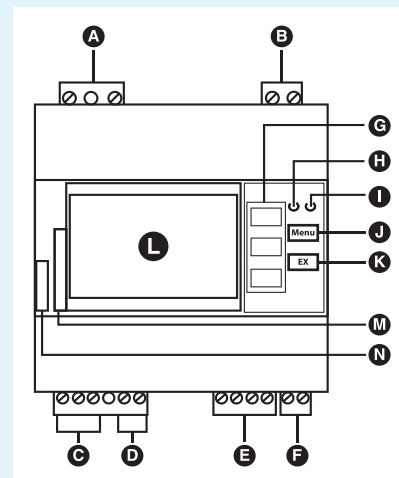
The line insulation is monitored through digital insulation monitoring devices (IMDs) for low voltage systems with isolated neutral IT.

The IMD's apply a low-frequency AC voltage between the system and ground. The insulation is then assessed on the basis of the current value returned.

The IMD's will have the following functions:

- Insulation resistance display (R)
- Detection of insulation faults in accordance with a configurable threshold
- Detection of a lost connection (ground or injection)
- Communication via the Modbus RS-485 protocol
- Insulation fault log
- Transformer monitoring:
- Display of load current for secondary (as a percentage)
- Threshold-based triggering of an alarm (as a percentage of nominal current)
- Temperature alarm (bimetal contact)

- A** Injection terminal block
- B** Auxiliary power supply terminal block
- C** Alarm relay terminal block
- D** Terminal block for 1 A or 5 A CT input for measuring the secondary current of the insulation transformer
- E** Modbus communication terminal block
- F** Terminal block for the bimetal input for monitoring the temperature of the insulation transformer
- G** Menu buttons
- H** Operating LED
- I** Alarm LED
- J** Menu button for accessing main menu
- K** Button for returning to previous menu or cancelling a parameter entry
- L** Display



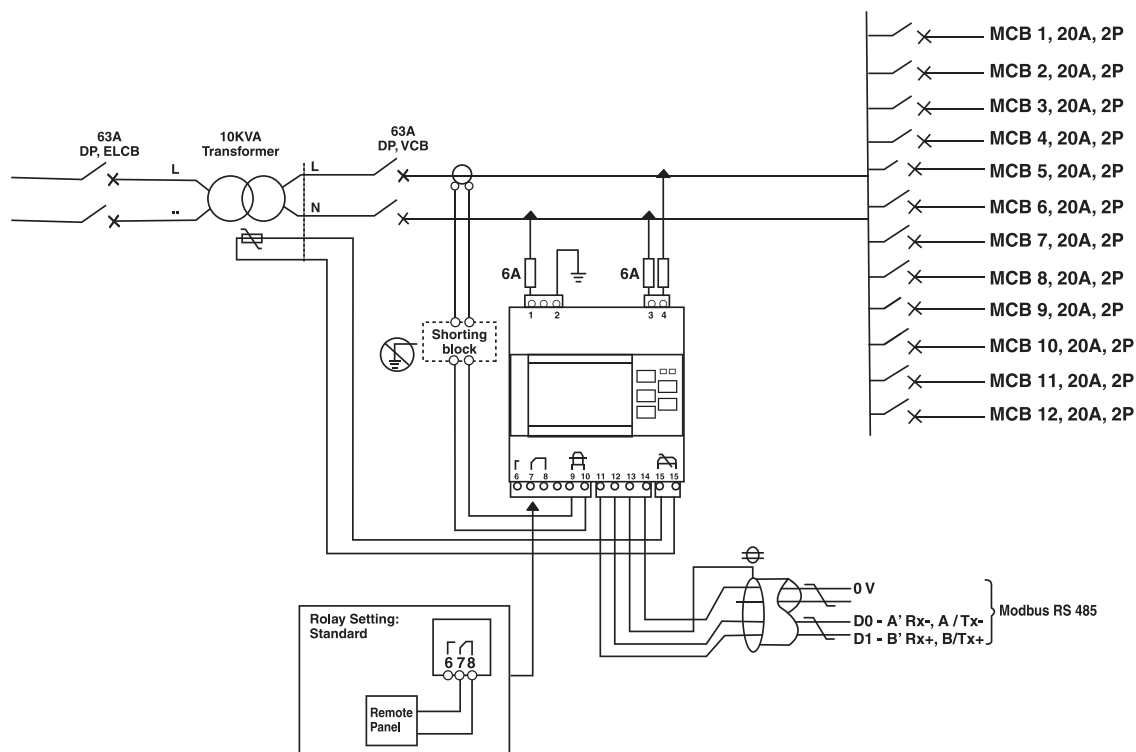
Independent Fault Locator (optional)

Independent fault locators are used to locate the faults at the feeder level and will be able to monitor upto 12 feeders and will have 12 fault indicator lights corresponding to 12 feeders.

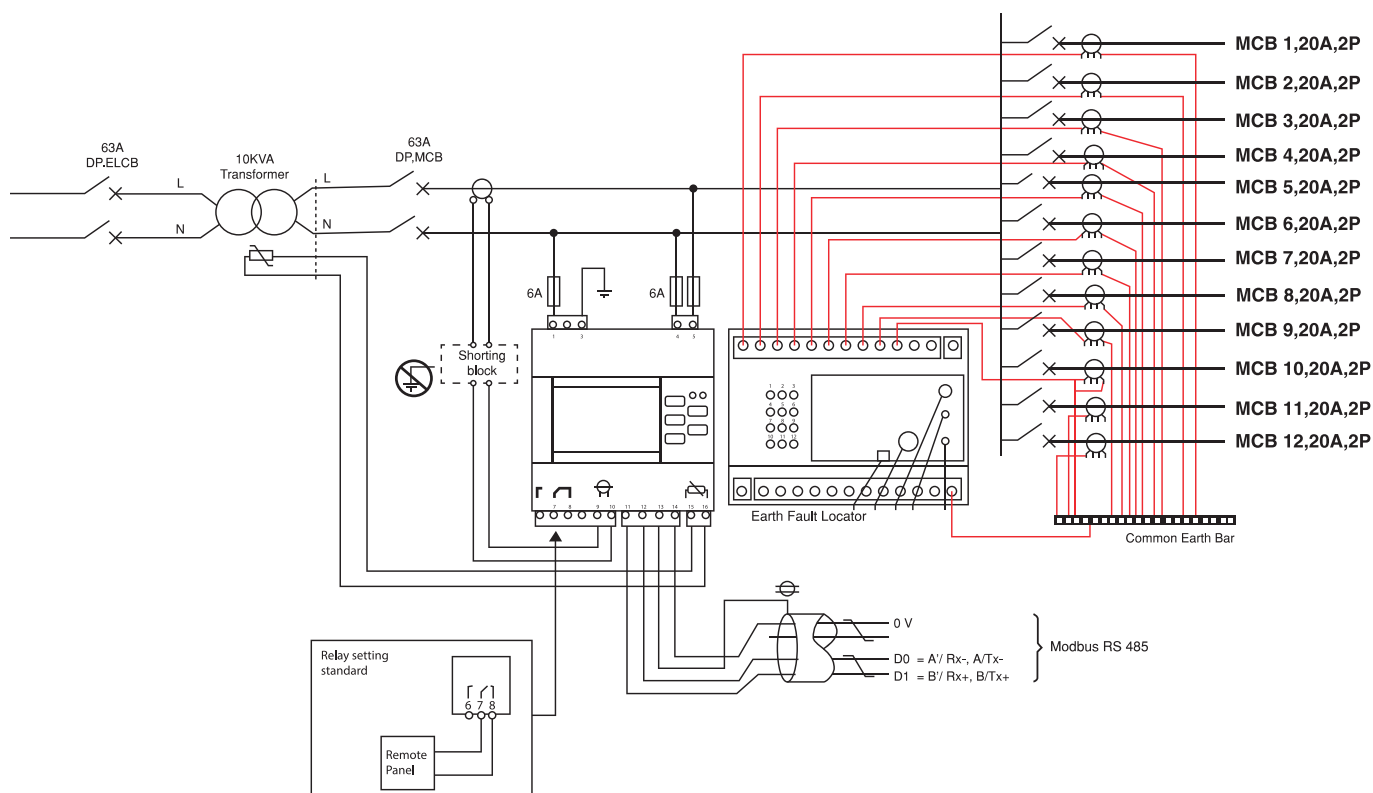
In principle, independent fault locators will have two functions:

- Fault detection (with respect to the fault threshold)
- Automatic locating of the faulty circuit

Schematic of Isolated Power Supply Standard Configuration



Independent Fault Locator - Optional



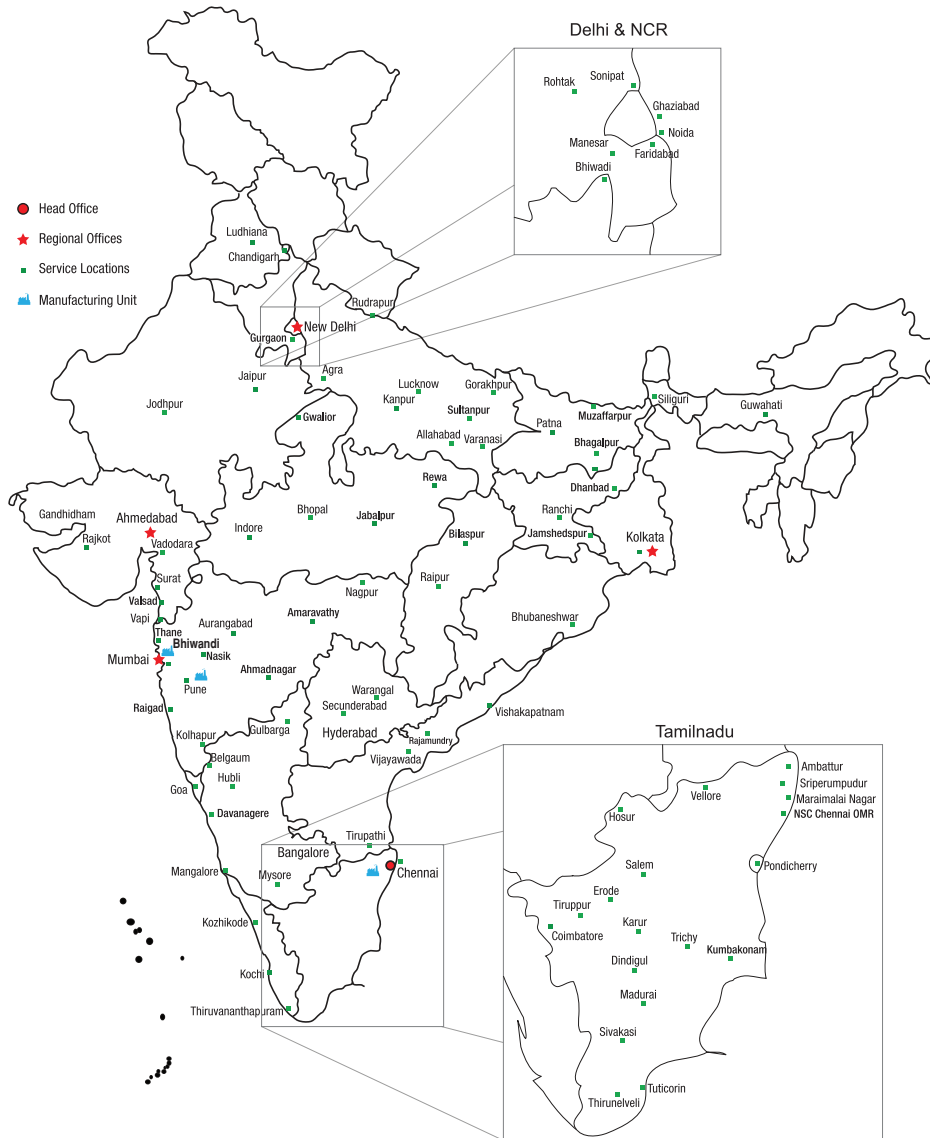
Technical Specification

IPS (Isolated Power Supply)

5 - 10 KVA

Isolation Transformer	Floor Mount	Wall Mount
Rating	5 / 8 / 10 KVA	
Voltage Ratio	1:1	
Primary Voltage	230 V AC + 10%	
Secondary Voltage	230 V AC + 1%	
Cooling	Forced Air Cooling	
Winding & Type	Copper winding double wound with shield grounded to isolated ground bus	
Earthing System	IT Earthing, Isolated Neutral	
Insulation Class	Class H	
Temperature Sensor	Inbuilt in the Transformer Winding	
Insulation Monitoring		
Voltage Range	0-230 Vac (+ 15%)	
Frequency	50/60 Hz	
Range for Insulation Resistance Readings	1 kΩ...10 MΩ	
Fault Signalling, Threshold	50...500 kΩ, Default value: 50 kΩ	
Response Time	≤ 1s	
Device Performance Test	Self-test and Manual Test	
LED Indication	Satisfactory insulation resistance (Green Light). Drop in insulation resistance below the fault threshold (Orange Light)	
Metering & Alarm	Transformer Load Current in %	
	Measurement and display of insulation resistance	
	Transformer overload alarm	
	Transformer high temperature alarm	
	Transformer overload alarm	
Event Log	upto 30 events	
Communication	RS 485 Modbus Communication	
Remote Alarm System		
Indication	Audible alarm with LED Indication	
LED Alarm Indication	Orange LED: Visual signal indicating an insulation fault	
	Red LED : Visual signal indicating an electrical fault	
	(transformer overloaded or overheating)	
Earth Fault Locator		
Application	Fault detection (with respect to the fault threshold) Automatic locating of the faulty circuit	
Maximum Value Measured	50 KOhm	
Monitoring Circuits	12 Circuits	
Auxiliary Power Supply	220/230V, -15 % to +10 %	
Local Signalling	12 LEDs : Fault Indication	
	1 LED : General Fault Indication	
Sampling Time	20 s per Channel	
Mechanical Construction		
IP Protection Class	IP 20	
Paint Shade	Siemens Grey	
Dimensions	400x500x1000 (WxDxH in mm)	400x525x500 (WxDxH in mm)

Pan India Sales & Service Network



Product Offerings

- Online UPS (1-800 KVA)
- Servo Controlled Voltage Stabilizer (Oil Cooled / Air Cooled)
- Active Harmonic Filter
- Static Transfer Switch
- Isolation Transformer
- Solar Inverter
- Medium Voltage / Low Voltage VFD
- Instrumentation
- Factory Automation
- Process Automation (PLC/HMI/SCADA)

Service Offerings

- Comprehensive Annual Maintenance Contracts (CAMC)
- Annual Maintenance Contracts (Labour - AMC)
- AMC for Third Party Power Products
- Battery Replacement Services
- Power Audits
- Stabilizer Retrofits
- Rental UPS and Stabilizers
- Stabilizer Oil Replacement
- Remote Monitoring

Service Support



Real time E-service report through mobile app



Service request through mobile app



400 company trained service engineers



80+ service locations



Spare Parts warehouse in 24 Locations



Call center with multi language support



Any time service request

Fuji Electric India Pvt. Ltd.

(CIN:U31900TN1985PTCO11866)

119, 120, 120A, Electrical and Electronics Industrial Estate,
Perungudi, Chennai - 600 096, Tamil Nadu, India

☎ +91 78100 09955

✉ enquiry.fei@fujielectric.com

🌐 www.india.fujielectric.com



Scan QR code for Service support