Manufacture Process

Survey of processes under IEC 60848

3D modeling of system

Design and elaboration of standardized electric drawings, according to the standard IEC-60947

Implementation and setting to work of the system

DIM-4U
Digital Insulation
Measurement System

VENPROACÚSTIK

VENPROACÚSTIK

info@venproacustik.com   www.venproacustik.com

DIM-4U

Digital Insulation
Measurement System

Digital Insulation Measurement System

System that allows to carry out measurements of DC electrical insulation between the groups of batteries and ground.

The DC insulation is represented by an electrical resistance value, which allows to find faults in cells and between connectors and cells, avoiding the risk of equipment damage and / or hurting people.

To determine the level of insulation, the system performs measurements of voltages associated with the battery groups, between the positive and negative terminals of each group and between each of the terminals with respect to ground.

Characteristics

Configurable system, to adapt to the need of each application: Number of batteries, critical levels to monitor, sampling period.

Continuous system, allowing the measurement of resistance with sampling time of up to 1s.

Modular system, which allows to select the variable type to be monitored (analogue, digital).

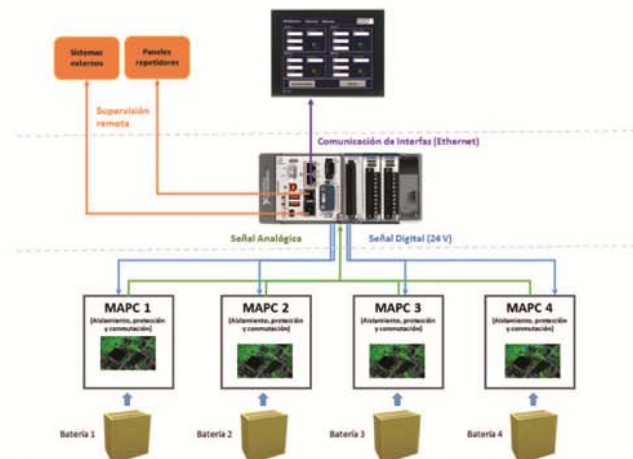**Self-managed** system, with BIST (Built-in Self Test).

Scalable system, allowing the integration of new battery banks, if necessary.

Technical specifications

Supply Voltage	100V-240V AC @ 60Hz / 90V-300V DC
Power Consumption	Entre 120W and 960W
Operating temperature	-20°C to 55°C
Storage temperature	-40°C to 85°C
Encapsulation of equipment	Housing made of polycarbonate, aluminum or steel*
Protection grade	IP-65
Monitoring and control equipment	Controller with real-time processing and reprogrammable logic gate array FPGA (Field Programmable Gate Array). Analog input module: +/- 10V channels, 16 bit Resolution.
User interface	Touch screen between 6 "and 12" *
Connectivity	Communication via serial port (RS-422 / RS-485) with built-in NMEA-0183 protocol, or via a network (Ethernet) port.
External connection	Robust connectors with threaded closure for safety or cable glands *
Others	Light and audible indicators as required.

*Optional according to requirement or choice.

User interface

Displays the numerical value of the insulation resistance [RISO in kilohms (kΩ)] of the battery, highlighting with colors the range of normality or criticality obtained

It provides a system event log: faults, alarms or the restoration of normal conditions, with the time of each event.

It offers a graphical representation of the behavior of the DC insulation resistance as a function of time.

System Architecture