Product Datasheet

BLACKFROG®
TECHNOLOGIES

EMON-25 a Equipment Monitoring System

Product Description

The **EMON-25** is an IoT-enabled solution designed to continuously track and monitor essential parameters in vaccine/medical refrigerators. It provides real-time insights into key metrics such as internal chamber temperature, door opening history, voltage, and current. The device stores and transmits this data to the cloud for remote access and monitoring. Additionally, it incorporates visual and audio alerts to notify users of any irregular conditions or alarms. This device complies with the **WHO PQS E006/DL01.2, E006/EM01.2** and **IEC** standards.

Technical Specifications

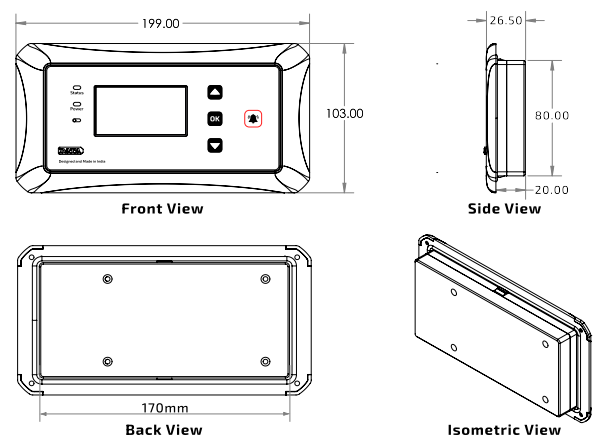|	
Display	128x64 Graphic display
Operating Ambient Temperature	-10°C to +55°C
Operating Ambient Humidity	0-95% RH
Operating Voltage	5V DC input via a 2-pin connector Up to 30V DC input via a 3-pin connector (LIN compatible)
IP Rating	IP64 (Front Panel only)
Ambient Temperature	Yes, (NTC) ±0.5°C from -30°C to +55°C
Freezer Temperature	Yes, (NTC) ±0.5°C from -30°C to +55°C
Vaccine Compartment Temperature	Yes, (NTC) ±0.5°C from -30°C to +55°C
Current Sensor	Yes ±5% in the range 0-30 A AC ±5% in the range 0-10 A DC
Voltage Sensor	Yes (Separate for AC / DC) ±2% in the range 0-50 V DC ±2% in the range 0-600 V AC
Door Sensor	Yes (Reed Switch/Plunger)
Condenser Temperature	Yes (NTC) (Can also be used for Fridge/Freezer)
Compressor Temperature	Yes (NTC) (Can also be used for Fridge/Freezer)
Data Download	USB-C
Battery Backup*	20 Days (Maximum)
Memory	60-day Data Report, 1-Year Data Storage
Overall Dimensions (LxWxH)**	199mm x 26.5mm x 103mm
Mounting Cutout Dimensions**	170.5mm x 80.5mm

*Can be varied depending on the Refrigerator's holdover time.
**Product design and dimensions are subject to change depending on the appliance.

Features

- Intuitive display for easy understanding of Refrigerator data.
- LED indicators for convenient refrigerator status monitoring.
- LIN/Modbus Interface for Communication with Smart Compressors.
- USB Type-C Enabled M2M Data Access.
- Option to Configure Local Date and Time.
- Wi-Fi and Bluetooth connectivity for Seamless Data Transmission and Download.
- Integrated 2G/4G communication system for transmitting logged data to the Cloud.

Mechanical Drawing

Front View — 199.00, 103.00
Side View — 26.50, 80.00, 20.00
Back View — 170mm
Isometric View

Note: All Dimensions are in mm