

VE XO S-BMS 455 Control Panel - Data Sheet

Product Codes

V-SBMS455 - 4G Version

V-SBMS455B - Ethernet Version

Product Description

The S-BMS 455 is a ready-to-install, cost-effective plant control panel. Pre-wired, pre-configured, tested, and inspected, it simplifies building management for small to medium-sized applications, offering convenient remote monitoring and control. Ideal for locations such as care homes, schools, and leisure facilities.



Functionality

- **Remote Access:** Manage and monitor the system from any internet-connected device, with customizable user profiles for different access levels.
- **Flexible Scheduling:** Program various schedules based on events, time, and calendar entries.
- **Adjustable Setpoints & Alarms:** Control setpoints for parameters like temperature, pressure, flow rate, and power consumption. Configure a range of alarm triggers.
- **Data Logging & Reporting:** Historical data is stored for analysis and reporting purposes.
- **Energy Monitoring:** Track energy usage and pinpoint opportunities for efficiency improvements using RS485 and/or LoRaWAN connected devices.
- **Seamless Integration:** Secure 4G connectivity (Ethernet available) to the cloud platform. Standard integration with other systems and devices via Modbus, BACnet, and LoRaWAN.

Benefits

- **Simplified, Electrician-Friendly Design:** Clear wiring diagrams and intuitive setup minimize installation and commissioning time and costs.
- **Cost-Effective Solution:** Competitive pricing makes the VEXO S-BMS accessible for smaller projects.
- **User-Friendly Interface:** Easy to understand and operate, reducing the learning curve for both contractors and end-users.
- **Remote Accessibility:** Provides convenient remote monitoring and control capabilities for optimized building management for FM contractors.
- **Reliable Performance:** A robust design ensures dependable operation and minimizes downtime.

Applications

The combination of the input and outputs allows the VEXO S-BMS 455 to monitor and control a wide range of building systems including:

- **HVAC (Heating, Ventilation, and Air Conditioning):** Temperature control, ventilation management, and energy optimization.
- **Lighting:** On/Off control and potential motion sensing based on schedules or occupancy.
- **Energy Monitoring:** Tracking energy consumption and identifying areas for improvements.
- **Security:** Integration with security systems for monitoring door contacts and alarms.
- **Other Building Services:** Control of pumps, fans, and other equipment as required.

Control Centre Connectivity

The S-BMS 455 offers flexible connectivity options to the remote cloud control center via the below options:



- Secure 4G cellular communication provides reliable access to the cloud control center, even in locations without readily available wired network connections.



Ethernet

- Ethernet connectivity is also available for installations where a wired network is preferred.

These dual options ensures accessibility and control regardless of site conditions.

Integration Capabilities

The S-BMS 455 offers a robust suite of communication options to ensure seamless integration and control:

Modbus RS485

- Standard Modbus communication allows for easy connection to a wide range of metering devices and other equipment, facilitating data collection and control.



BACnet

- Built-In BACnet compatibility enables smooth integration into existing Building Management Systems (BMS), ensuring interoperability and centralized control.

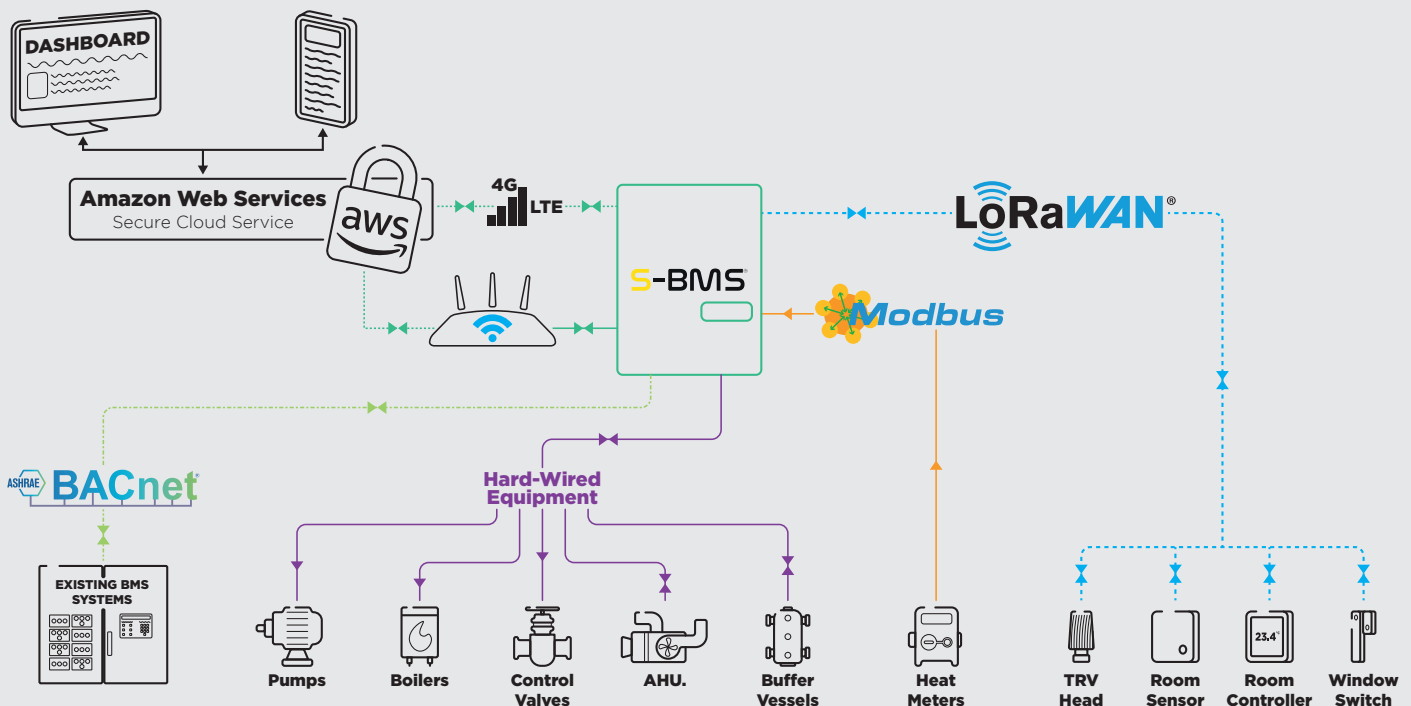


LoRaWAN

- Built-In LoRaWAN compatibility enable integration of IoT devices for addition monitoring and control capabilities.



System Architecture

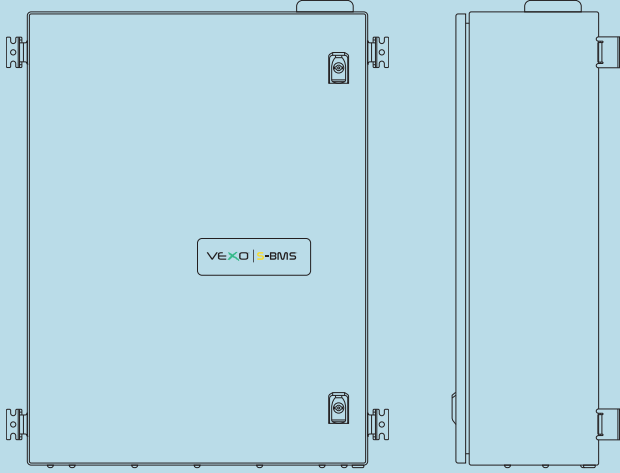


S-BMS 455 Technical Specification

Environment

Ambient Temperature (Min)	-5°C
Ambient Temperature (Max)	40°C
Ambient Humidity (Max)	95% at 5°C to +30°C 70% at +35°C 57% at +40°C
EMC Environment	Environment B - Light Industrial/Commercial/Residential
Altitude	<=2000m
Enclosure Insulation Class	Class 1
Enclosure Location	Indoor
Enclosure IP Rating	IP2X


Installation

Type	Wall Mounted
Stationary/Movable	Stationary
Dimensions	 <p>Height: 800mm x Width: 600mm x Depth: 250mm</p>
Weight	50KG

Electrical Requirements

Power Supply	230V
Frequency	50 Hz
Current Rating	1A
Cable Entry	Bottom

Electrical Requirements

Electrical Safety	Compliant with BS EN IEC 61439-2.
Electromagnetic Compatibility	Meets relevant EMC directives to minimize electromagnetic interference and ensure reliable operation in various environments.
CE Mark	

S-BMS 455 Technical Specification - Continued

Inputs and Outputs Compatibility

Inputs:

13 Analogue Inputs: These versatile inputs can be configured to accept a variety of analogue signals (e.g, 0-10V or 4-20mA) from sensors measuring parameters like:

- Temperature: Immersion Temperature Sensors (PT1000) This allows for precise climate control.
- Pressure: From pressure transducers monitoring water, air or other fluid systems. Used for maintaining optimal pressure levels.

17 Digital Inputs: These inputs accept on/off signals from devices such as:

- Switches: For manual overrides, status indication (e.g., pump on/off) and alarms.
- Relays: From other systems to provide status information or trigger actions.
- Fire Alarms: To integrate fire safety systems with the BMS.
- Other Digital Signals: For various other on/off indication or triggers.

Outputs:

10 Analogue Outputs: These outputs provide variable control signals (e.g., 0-10v, 4-20mA) to devices such as:

- Valves: To modulate flow rates in heating systems. Allows for precise temperature control.
- Dampers: To control airflow in ventilation systems. Optimizes airflow and energy efficiency.
- Variable Speed Drives (VSDs): To control the speed of pumps and fans, optimizing performance and energy consumption.
- Other Analogue Devices: For controlling other devices requiring a variable analogue signal.

16 Digital Outputs: These outputs provide on/off control to devices such as:

- Relays: To switch power to pumps, fans, heaters, and other equipment.
- Contractors: For switching larger loads.
- Light: For lighting control.
- Alarms: To activate audible or visual alarms.
- Other Digital Devices: For controlling various other on/off devices.

Input and Output Expansion via LoRaWAN

The S-BMS 455 can be expanded with LoRaWAN IoT devices, accommodating up to 50 additional input and output statuses for even greater flexibility and control.

Explore our wide range of IoT devices for various applications on our website or by contacting our technical team.

Installation and Commissioning

Electrical Installation

Installation should be carried out by a qualified electrician in accordance with all applicable regulations. The VEXO S-BMS is designed for simplified installation and does not require a specialized BMS engineer. Wiring diagrams are supplied with each unit, offering both standardized schematics for common applications and bespoke designs tailored to specific project requirements. This flexibility allows for efficient and accurate wiring, minimizing on-site complexities.

Commissioning and Support

Each VEXO S-BMS panel includes remote commissioning as standard. This service, provided by our in-house technical team, ensures full operational testing and verification of all system functionalities before handover to the end client. Remote commissioning minimizes on-site setup time and allows for expert review, guaranteeing optimal performance and a smooth transition to operational status.

For more information

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