Summary of IoT case

The Bitzer Heat Pump Ecosystem is provided by BITZER Electronics, a company in the BITZER Group. BITZER Electronics targets OEMs, installers, owners and service technicians of domestic and industrial heat pumps.

The core component is an intelligent smart grid ready system controller or intelligent compressor module. The intelligent compressor module allows connection between compressors and the heat pump control unit plus to a gateway simultaneously by using an IQ-Bus.

There are two possible use cases for the Ecosystem. The first uses the Bitzer Gateway to load data into the Cloud via WiFi or a 4G signal. The cloud is hosted by Bitzer and is fully compliant with the General Data Protection Regulation. The data stored there can be accessed via the BEST App which is available for Android, iOS and Microsoft and allows for troubleshooting and data
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analysis and provides multiple service and commissioning tools and apps for end-users.

The second possibility uses the heat pump controller by Bitzer which features USB, Modbus and RS-485 connectivity and a customer hosted cloud. The Smart Connect App for Android and iOS features a user interface to control and monitor the heat pump. Furthermore, it is possible to use a customer branded GUI via the Smart Connect Cloud which features alarm handling, trend logging and monitoring.

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FACTS ABOUT THE IoT CASE

IoT category: optimize HP operation, predictive maintenance, performance benchmark, installation error analysis

Heating capacity: any

Heat source: any

Analysis method: depending on service, e.g. simulations, big data analysis, market models, control engineering, fault detections, energy balance calculations

Modelling requirements: No specific requirements regarding modelling.

Data required: Depending on use case. Enables access to compressor data.

Data interface: LAN, WLAN, 4G, Bluetooth, IQ-BUS, USB, RS485

Transmission protocol for data: Modbus, MQTT

Quality-of-Service: real time, depending on use case and connectivity option. Limited only by Modbus/IQ-BUS capabilities.

Technology Readiness Level: TRL 9

Link to webpage:
https://www.bitzer.de/gb/en/bdn.jsp