

Technical Datasheet

Hub

Universal Building
Connector



The WattSense Hub: Universal connector

The Hub is an electronic device

- Created to connect all equipment from all buildings: IoT sensors, meters, heating, air conditioning, air handling systems, building management systems (BMS).
- Easy and quick to install: accessible for all. If the building already has a BMS, the Hub connects to the main bus as the third party. If there's no BMS, a BMS network is directly created by the Hub.
- Telemetry and controls: collects data and controls equipment.
- Smart Converter: unifies the field communication protocols.
- Connected to your system: connect your software to the Hub thanks to the protocols BACnet server and MQTT client.
- Powerful IoT device: combines the functionality of a gateway, a PLC, a modem, and a device edge.
- Edge computing: hosts user plug-ins for local automation.

Power supply:

- 12V-24V DC, 2A.
- The cable between the power supply and the Hub: 2 wires (red, black), 22 AWG, minimum section: 0.35 mm².
- Protections for power supply overvoltage, under-voltage and over intensity with LED indicators.

Hardware	
CPU:	528MHz ARM Cortex A7
Memory:	256MB RAM
Storage:	256MB Flash
Consumption:	5W
Dimension:	160 x 110 x 55 mm
Weight:	340 g
Operating temperature:	From 0 ° C to + 45 ° C
Humidity:	5% to 95% humidity - No condensation

Interfaces		
Type of interface	Number	Operating LEDs
Modem 4G	1	yes
LoRaWAN module from 863MHz to 928MHz	1	yes
Ethernet	2	yes
RS485	2	yes
USB	2	yes
KNX	1	yes
M-Bus	1	yes
LPB/BSB	1	yes

Drivers:

- LoRaWAN 1.0
- MQTT client
- Diematic
- BACnet IP
- BACnet IP Server
- M-Bus
- KNX S/LTE
- LON FT10
- LON IP-852
- LPB
- Modbus TCP/IP
- Modbus RTU

Protections for communication bus.

Software:

- Secured Linux Yocto distribution.
- Built-in drivers for all buses, protocols and building equipment.
- Desktop App for local configuration.
- Secure server communication via WebSocket with SSL and MQTT.
- Secure software updates.

Security:

The HUB connects to your MQTT broker with the highest level of security based on SSL / TLS, with the following properties:

- Two-way authentication between Hub and server with 509 certificates..
- End-to-end encryption.
- Message integrity checks.

