# Zigbee features of FireFence by Brun EL

**Purpose**
This documents describes basic Zigbee features of FireFence by Brun Holding.

**General**
The Zigbee features are implemented in PCU, so that only connection to PCU is sufficient. No Zigbee connection to HDU is required since PCU and HDU communicate via BLE.

**Joining Zigbbe network**
To initialize new connection (or reset the old one) go to *Service Menu* (down arrow) → *3. Activation* →*3. ZB Pairing* and switch the Zigbee pairing ON by pressing green button.
Approximately one minute after successful connection a Zigbee icon will appear on the main screen.

**Zigbee Features**
There are two endpoints implemented in FireFence PCU.
Endpoint no. 1 is a Smart Plug endpoint.

**Endpoint no. 1 description**
ProfileId: 0x0104 (Home automation), DeviceId: 0x0051 (Smart Plug)

In clusters:

| Cluster name | Cluster ID | Attribute name | Attribute ID | Default value | Comment |
|---|---|---|---|---|---|
| Basic | 0x0000 | ZCL version | 0x0000 | 2 | - |
| | | Manufacturer name | 0x0004 | "Brun Holding" | - |
| | | Model identifier | 0x0005 | "Power Control Unit" | - |
| | | Power source | 0x0007 | 0x01 | Single-phase mains |
| Power Configuration | 0x0001 | Battery Percentage Remaining | 0x0021 | 0xFF | Specifies the remaining battery life as a half integer percentage of the full battery capacity (e.g., 34.5%, 45%, 68.5%, 90%) with a range between zero and 100%, with 0x00 = 0%, 0x64 = 50%, and 0xC8 = 100%. The value 0xFF indicates an invalid or unknown reading. |
| Identify | 0x0003 | Identify time | 0x0000 | - | - |
| On/Off | 0x0006 | On/Off | 0x0000 | - | State of PCU's relay. |
| Temperature | 0x0402 | Measured value | 0x0000 | - | Measured value = 100 * |

| Cluster name | Cluster ID | Attribute name | Attribute ID | Default value | Comment |
|---|---|---|---|---|---|
| measurement | | | | | temperature (in degrees Celsius) Where -273.15 <= temperature <= 327.67 corresponding to a Measured value in the range 0x954d to 0x7fff. A Measured value of 0x8000 indicates that the temperature measurement is invalid. |
| | | Min measured value | 0x0001 | 0x8000 | - |
| | | Max measured value | 0x0002 | 0x8000 | |
| Metering | 0x0702 | Current summation delivered | 0x0000 | - | Total delivered power in kWh. To get real value: raw value from this attribute must be multiplied and divided by Multiplier (0x0301) and Divisor (0x0302). |
| | | Status | 0x0200 | - | - |
| | | Unit of measure | 0x0300 | 0x00 | kW, kWh binary value |
| | | Multiplier | 0x0301 | 1 | Current summation delivered should be multiplied by this value |
| | | Divisor | 0x0302 | 10 | Current summation delivered should be divided by this value |
| | | Summation Formatting | 0x0303 | 0xF9 | 15 digits to the right of the Decimal Point. (Bits 0 to 2) 1 digit to the left of the Decimal Point. (Bits 3 to 6) Suppress leading zeros. (Bit 7) |
| | | Device type | 0x0306 | 0x00 | Electric metering |
| Electrical measurement | 0x0B04 | Measurement type | 0x0000 | 0x09 | Active measurement, single phase or phase A |
| | | Active power | 0x050B | - | Active power delivered in Watts (W). |

Out cluster:

| Cluster name | Cluster ID | Attribute name | Attribute ID | Default value | Comment |
|---|---|---|---|---|---|
| Identify | 0x0003 | Identify time | 0x0000 | - | |