

Interface Design (IDD)

Description_Arrowhead_Zwave_System_Demonstrator_WallPlugEnergyServices

Abstract

This document provides the Interface Design Description of Arrowhead compliant Interfaces of Zwave Wall Plug Services.

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1. Interface Design Description Overview

This document describes the services provided by Thermostat Valve with REST interface. This interface uses HTTPs.

| Service description | Path |
|--------------------------|------|
| get-power | |
| get-energy-consumption | |
| set-energy-counter-reset | |
| | |

| Communication Profile | Path |
|-----------------------|------|
| REST-JSON-TLS | |

2. Interfaces

GetPower:

The base URL for the request is: `https://<host>:<port>/zwave`

| Function | URL subpath | Method | Input | Output | Description |
|----------|----------------------------------|--------|----------------------|---|---|
| GetPower | /plugs/get-power/{deviceId} " | GET | deviceId (String) | deviceId (String) power (String) | Get the Plug power (the power of the device connected to the plug) in KW for the given deviceId |

GetEnergyConsumption:

The base URL for the request is: `https://<host>:<port>/zwave`

| Function | URL subpath | Method | Input | Output | Description |
|----------------------|---|--------|----------------------|---|---|
| GetEnergyConsumption | /plugs/get-energy-consumption/{deviceId} " | GET | deviceId (String) | deviceId (String) energyConsumption (String) | Get the Plug energy consumption (the energy consumed by the device connected to the plug) in KWH for the given deviceId |

SetEnergyCounterReset:

The base URL for the request is: `https://<host>:<port>/zwave`

| Function | URL subpath | Method | Input | Output | Description |
|-----------------------|--|--------|-------------------|----------------------|--|
| SetEnergyCounterReset | /plugins/set-energy-counter-reset/{deviceId} | PUT | deviceId (String) | UPDATED, BAD_REQUEST | Set the Plug energy counter reset for the given deviceId |

3. Information Model

Example: GetPower

Request:

```
{
  "deviceId": "24"
}
```

Response:

```
{
  "deviceId": "24",
  "power": "10",
}
```

4. Data Model

| Object Field | Value Type | Description |
|---------------------|------------|--|
| "deviceId" | String | Unique ID of the device from 2 to N assigned by the zwave Hat |
| "power" | String | Plug power (the power of the device connected to the plug) in KW |
| "energyConsumption" | String | Plug energy consumption (the energy consumed by the device connected to the plug) in KWH |

5. Revision history

5.1. Amendments

| No. | Date | Version | Subject of Amendments | Author |
|-----|------------|---------|-----------------------|--------------|
| 1 | 2021-01-6 | 0.1 | First Draft | Salman Javed |
| 2 | 2021-03-18 | 0.2 | Second draft | Salman Javed |

5.2. Quality Assurance

| No. | Date | Version | Approved by |
|-----|------|---------|-------------|
| 1 | | | |