PSPowEr.Pl ul. Szafirowa 56, 62-023 Kamionki, tel. 502-355-433, email: biuro@pspower.pl

MIpB v1.0 Bridge

WebAPI Programming Guide

Table of Contents

Change log

Change w PG:

- v1.0 – First release.

Introduction

MIpB v1.0 bridge have data exchange interface based on WebAPI in JSON format.

Status

Url:	http://<Host>/webapi/v1/Status	
Access method:	GET	
Access type:	Read only	
Objects in response:		
Object	Type	Description
TimeStamp	Number	Time stamp [ms] from system starts.
SystemVersion	String	System version [Major.Minor.Build]
WiFiInfo	String	Actual WiFi network [SSID:RSSI[%]]
Meter1Status	Number	Shows meter 1 communication quality. Value > 0 – reading data errors gauge.
Meter2Status	Number	Shows meter 2 communication quality. Value > 0 – reading data errors gauge.

Example: GET http://192.168.0.17/webapi/v1/Status
Response:

```
{
        "TimeStamp": 179760,
        "SystemVersion": "0.9.1",
        "WiFiInfo": "559EVSE:68%",
        "Meter1Status": 0,
        "Meter2Status": 0
}
```

Energy meter - 1

Url:	http://<Host>/webapi/v1/Meter1
Access method:	GET
Access type:	Read only

Returning container object „Meter 1”, which include time stamp and sub container „Modbus Data” which include objects with meter data:

```
{
        Meter1:{
                        TimeStamp: <X>,
                        ModbusData:{
                                                FCxADDRESS:{ <Data>},
                                        }
                }
}
```

Each object include:

Object	Type	Description
Desc	String	Meter register description according to meter manufacturer documentation.
ErrCounter	Number	Register reading - error counter
Value	Number	Register value
DataStatus	String	Validity Status: Valid – good. Not available – obsolete or not available.

Example: GET http://192.168.0.16/webapi/v1/Meter1
Response:


```
{
        "Meter1": {
        "TimeStamp": 1826814,
        "ModbusData": {
                                "0x04_0x0034": {
                                "Desc": "TotalSystemPower[W]",
                                "ErrCounter": 0,
                                "Value": 475.2041931152344,
                                "DataStatus": "Valid"
                                },
                                "0x04_0x0048": {
                                "Desc": "TotalImport[kWh]",
                                "ErrCounter": 0,
                                "Value": 0.3310000002384186,
                                "DataStatus": "Valid"
                                },
                                "0x04_0x004a": {
                                "Desc": "TotalExport[kWh]",
                                "ErrCounter": 0,
                                "Value": 0,
                                "DataStatus": "Valid"
                                },
                                "0x04_0x0156": {
                                "Desc": "Total[kWh]",
                                "ErrCounter": 0,
                                "Value": 0.3310000002384186,
                                "DataStatus": "Valid"
```

```
                    },
                    "0x04_0x0180": {
                    "Desc": "ResettableTotalActiveEnergy[kWh]",
                    "ErrCounter": 0,
                    "Value": 0.3310000002384186,
                    "DataStatus": "Valid"
                    },
                    "0x04_0x0184": {
                    "Desc": "ResettableImportActiveEnergy[kWh]",
                    "ErrCounter": 0,
                    "Value": 0.3310000002384186,
                    "DataStatus": "Valid"
                    },
                    "0x04_0x0186": {
                    "Desc": "ResettableExportActiveEnergy[kWh]",
                    "ErrCounter": 0,
                    "Value": 0,
                    "DataStatus": "Valid"
                    },
                    "0x04_0x0500": {
                    "Desc": "TotalImportActivePower[W]",
                    "ErrCounter": 0,
                    "Value": 476.0400695800781,
                    "DataStatus": "Valid"
                    },
                    "0x04_0x0502": {
                    "Desc": "TotalExportActivePower[W]",
                    "ErrCounter": 0,
                    "Value": 0,
                    "DataStatus": "Valid"
                    }
                }
        }
}
```


Energy meter - 2

Url:	http://<Host>/webapi/v1/Meter2
Access method:	GET
Access type:	Read only
Data structure according to statistics meter.	

System configuration

Url:	http://<Host>/webapi/v1/SystemConfig	
Access method:	GET	
Access type:	Read only	
Objects in response:		
Object	Type	Description
TimeStamp	Number	Time stamp [ms] from system starts.
SystemVersion	String	System version [Major.Minor.Build]
Meter1Type	Number	Energy meter 1 type: 0 – None, 1 – Modbus SDM72D-M, 2 – Modbus NMID30-2, 3 – Modbus SDM120M
Meter2Type	Number	Energy meter 2 type: 0 – None, 1 – Modbus SDM72D-M, 2 – Modbus NMID30-2, 3 – Modbus SDM120M

Example: GET http://192.168.0.16/webapi/v1/SystemConfig
Response:

```
{
        "TimeStamp": 1661687,
        "SystemVersion": "0.5.0",
        "Meter1Type": 1,
        "Meter2Type": 2
}
```

Url:	http://<Host>/webapi/v1/SystemConfig	
Access method:	POST	
Access type:	Write only	
Allowable objects:		
Object	Type	Description
Meter1Type	Number	According to GET
Meter2Type	Number	

System information

Url:	http://<Host>/webapi/v1/SystemInfo	
Access method:	GET	
Access type:	Read only	
Objects in response:		
Obiekt	Typ	Opis
TimeStamp	Number	Time stamp [ms] from system starts.
SystemVersion	String	System version [Major.Minor.Build]
ProductType	String	Product type signature.
MAC	String	Mac address.
WiFiInfo	String	Information about WiFi: SSID,RSSI dB/%
HeapInfo	String	Heap allocation information
GeneralInfo	String	General system condition.
OTAMsg	String	OTA system message.
OTACheckAllowed	Boolean	Shows whether OTA check new firmware function is allowed.
OTAUpdateAllowed	Boolean	Shows whether OTA update firmware function is allowed.

Example: GET http://192.168.0.17/webapi/v1/SystemInfo
Response:


```
{
        "TimeStamp": 520144,
        "SystemVersion": "0.9.2",
        "ProductType": "01100200",
        "MAC": "E0:E2:E6:52:AA:D4",
        "WiFiInfo": "559EVSE,RSSI:-49dB/68%",
        "HeapInfo": "0x022DF0/0x02D230",
        "GeneralInfo": "System: Failure free",
        "OTAMsg": "Operation not allowed in WiFi AP mode!",
        "OTACheckAllowed": true,
        "OTAUpdateAllowed": false
}
```


Url:	http://<Host>/webapi/v1/SystemInfo	
Access method:	POST	
Access type:	Write only	
Allowable objects:		
Object	Type	Description
SCode	String	Service code.
SCodeData	String	Data for service code.
UpdateCheckToggle	Boolean	It runs single check for new firmware available.
UpdateRunToggle	Boolean	It runs firmware update.

Service codes:

SCode	SCodeData	Description
Reset		System restart.
FactoryDefault		Sets factory default settings.
WiFiSetToAP		Sets WiFi to AP (when STA).

Example: POST http://192.168.0.17/webapi/v1/SystemInfo

```
{
	"Scode": "Reset",
	"SCodeData": ""
}
```

Response:

```
{
	"Reset": "Performing"
}
```