

User Guide SmartPI

REST-API:

With the REST-API, it is possible via a web browser to query the values of the SmartPI.

First, make sure that the right connection between Raspberry Pi and SmartPI is established and the program is started.

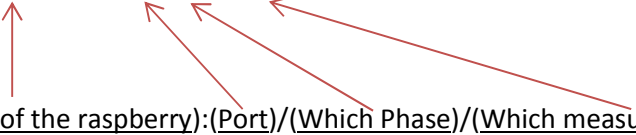
The values are returned in **JSON**-Format.

To use the REST-API, the IP address of the Raspberry Pi must be called.

It is important to ensure that the port 5000 is used.

For example:

<http://192.168.2.22:5000/all/current>



(IP-address of the raspberry):(Port)/(Which Phase)/(Which measured variable)

The next two pages show an example answer of the query in JSON-format.

(The current of all Phases (1, 2, 3 and N)).

```
{  
  
  "serial": "12345678",  
  
  "time": "2016-5-24 12:20:40",  
  
  "softwareversion": "1.0.1",  
  
  "ipaddress": "192.168.2.22",  
  
  "datasets": [{  
  
    "time": "2016-5-24 12:20:40",  
  
    "phases": [{  
  
      "phase": 1,  
  
      "name": "phase 1",  
  
      "values": [{  
  
        "type": "current",  
  
        "unity": "A",  
  
        "data": 1.879352  
  
      }]  
  
    }, {  
  
      "phase": 2,  
  
      "name": "phase 2",  
  
      "values": [{  
  
        "type": "current",  
  
        "unity": "A",  
  
        "data": 2.016854  
  
      }]  
  
    }, {  
  
      "phase": 3,  
  
      "name": "phase 3",  
  
      "values": [{  
  
        "type": "current",  
  
        "unity": "A",  
  
        "data": 3.016977  
  
      }]  
  
    }  
  
  ]  
  
}
```

```
    }, {  
      "phase": 4,  
      "name": "neutral",  
      "values": [{  
        "type": "current",  
        "unity": "A",  
        "data": 0.017093  
      }]  
    }  
  ]  
}
```

The next lines show all request strings you can use!

Current:

<http://192.168.2.22:5000/1/current> (phase 1)
<http://192.168.2.22:5000/2/current> (phase 2)
<http://192.168.2.22:5000/3/current> (phase 3)
<http://192.168.2.22:5000/N/current> (phase N)
<http://192.168.2.22:5000/all/current> (all phases)

Voltage:

<http://192.168.2.22:5000/1/voltage> (phase 1)
<http://192.168.2.22:5000/2/voltage> (phase 2)
<http://192.168.2.22:5000/3/voltage> (phase 3)
<http://192.168.2.22:5000/all/voltage> (all phases)

Power:

<http://192.168.2.22:5000/1/power> (phase 1)
<http://192.168.2.22:5000/2/power> (phase 2)
<http://192.168.2.22:5000/3/power> (phase 3)
<http://192.168.2.22:5000/all/power> (all phases)

Cos Phi:

<http://192.168.2.22:5000/1/cos> (phase 1)
<http://192.168.2.22:5000/2/cos> (phase 2)
<http://192.168.2.22:5000/3/cos> (phase 3)
<http://192.168.2.22:5000/all/cos> (all phases)

Frequenzy:

<http://192.168.2.22:5000/1/frequenz> (phase 1)
<http://192.168.2.22:5000/2/frequenz> (phase 2)
<http://192.168.2.22:5000/3/frequenz> (phase 3)
<http://192.168.2.22:5000/all/frequenz> (all phases)

All values (current, voltage, power, cos, frequency):

<http://192.168.2.22:5000/1/all> (phase 1)

<http://192.168.2.22:5000/2/all> (phase 2)

<http://192.168.2.22:5000/3/all> (phase 3)

<http://192.168.2.22:5000/all/all> (all phases)

It is also possible to make the input as follows:

<http://192.168.2.22:5000/1/values?current&voltage&cosphi>

<http://192.168.2.22:5000/1/values?power&voltage&frequenz>



(IP-address of the raspberry):(Port)/(Which Phase)/(Which measured variables)

After the string “values?” the values to be measured can be entered (separate with “&”).

Web-Frontend:

It is also possible to display the values graphically.

First, make sure that the right connection between Raspberry Pi and SmartPI is established and the program is started.

You have to enter the following string:

<http://192.168.2.22/smartpi/>



(IP-address of the raspberry)/(display the graphics)

If the page is open, you can navigate to the individual measuring values.