

Neuinstallation ioBroker auf einem R-Pi 3 B+ oder 4 B

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Das Grundsystems

Installation

Die Verwendung von InfluxDB 2.x setzt ein 64-bit Betriebssystem voraus.

Ein Desktop bzw. eine vollständige grafische Oberfläche wird nicht benötigt. Daher bezeichnet man ein solches System als „Headless“. Somit basiert dieses Heimautomatisierungsprojekt auf einem Raspberry Pi OS (32 oder 64-bit) Lite.

```
# Raspberry Pi Image besorgen
#wget
https://downloads.raspberrypi.org/raspios_lite_armhf/images/raspios_lite_armhf-2023-02-22/2023-02-21-raspios-bullseye-armhf-lite.img.xz
wget
https://downloads.raspberrypi.com/raspios_lite_armhf/images/raspios_lite_armhf-2023-10-10/2023-10-10-raspios-bookworm-armhf-lite.img.xz
oder
#wget
https://downloads.raspberrypi.org/raspios_lite_arm64/images/raspios_lite_arm64-2023-02-22/2023-02-21-raspios-bullseye-arm64-lite.img.xz
wget
https://downloads.raspberrypi.com/raspios_lite_arm64/images/raspios_lite_arm64-2023-10-10/2023-10-10-raspios-bookworm-arm64-lite.img.xz
# R-Pi Imager herunterladen und intallieren:
wget https://downloads.raspberrypi.org/imager/imager_latest_amd64.deb
sudo dpkg -i imager_latest_amd64.deb
```

```
rpi-imager
#sudo touch /media/<benutzername>/bootfs/ssh
#sync
# SD-Karte aushängen und damit den R-Pi booten
```

Configuration

Während des Bootvorganges erhält der Raspberry eine IP Adresse vom Router. Diese kann über die entsprechende Weboberfläche des Routers ermittelt werden.

```
# Grundsystem auf den aktuellen Stand bringen:
ssh -l pi <IP>
sudo su
apt-get update && sudo apt-get upgrade
apt-get install aptitude mc apt-transport-https software-properties-common
raspi-gpio
raspi-config nonint do_hostname iobroker
raspi-config nonint do_owire 0
raspi-config nonint do_change_locale de_DE.UTF-8 UTF-8
raspi-config nonint do_expand_rootfs
raspi-config nonint do_update
reboot
# Feste IP für eth0 einstellen:
mcedit /etc/dhcpd.conf
interface eth0
static ip_address=192.168.10.11/24
static routers=192.168.10.1
static domain_name_servers=192.168.10.1
#
# Seit OS "Bookworm":
nmcli -p connection show
nmcli con mod "Kabelgebundene Verbindung 1" ipv4.addresses 192.168.10.11/24
ipv4.method manual
nmcli con mod "Kabelgebundene Verbindung 1" ipv4.gateway 192.168.10.1
nmcli con mod "Kabelgebundene Verbindung 1" ipv4.dns "192.168.10.1"
reboot
# oder
nmcli c down "Kabelgebundene Verbindung 1" && sudo nmcli c up
"Kabelgebundene Verbindung 1"
#
# nicht benötigte Dienste beenden und/oder entfernen:
systemctl disable ModemManager.service
systemctl stop ModemManager.service
apt-get purge modemmanager
#
mkdir -p /mnt/usb-stick
echo "UUID="52ff610a-2612-4021-8a8d-b818b3dba1f4" /mnt/usb-stick ext4
defaults 0 1" >> /etc/fstab
```

```
systemctl daemon-reload
mount -a
```

GPIO für USV

```
aptitude install raspi-gpio
# konfiguriere GPIO #18 als Input mit internem Pull-Down:
raspi-gpio set 18 ip pd
# GPIO Zustand abfragen:
raspi-gpio get 18
```

InfluxDB 1.x

Quelle: <https://docs.influxdata.com/influxdb/v1/introduction/install/>

Installation

```
sudo su
#wget -q0- https://repos.influxdata.com/influxdata-archive_compat.key | sudo
apt-key add -
#source /etc/lsb-release
#echo "deb https://repos.influxdata.com/${DISTRIB_ID,,} ${DISTRIB_CODENAME}
stable" | sudo tee /etc/apt/sources.list.d/influxdb.list
#curl https://repos.influxdata.com/influxdata-archive.key | gpg --dearmor |
sudo tee /usr/share/keyrings/influxdb-archive-keyring.gpg >/dev/null
#echo "deb [signed-by=/usr/share/keyrings/influxdb-archive-keyring.gpg]
https://repos.influxdata.com/debian $(lsb_release -cs) stable" | sudo tee
/etc/apt/sources.list.d/influxdb.list
wget -q https://repos.influxdata.com/influxdata-archive_compat.key
echo '393e8779c89ac8d958f81f942f9ad7fb82a25e133faddaf92e15b16e6ac9ce4c
influxdata-archive_compat.key' | sha256sum -c && cat influxdata-
archive_compat.key | gpg --dearmor | sudo tee
/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg > /dev/null
echo 'deb [signed-by=/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg]
https://repos.influxdata.com/debian stable main' | sudo tee
/etc/apt/sources.list.d/influxdata.list

apt-get update
apt-get install influxdb

systemctl unmask influxdb.service
systemctl enable influxdb
systemctl start influxdb
systemctl status influxdb
```

Konfiguration

```
sudo su
influx
> CREATE USER "admin" WITH PASSWORD 'influxdbadmin' WITH ALL PRIVILEGES
> CREATE USER "iobroker" WITH PASSWORD 'iobroker'
> CREATE DATABASE "iobroker"
> GRANT ALL ON "iobroker" TO "iobroker"
> exit
#
mcedit /etc/influxdb/influxdb.conf
[http]
  enabled = true
  bind-address = ":8086"
  auth-enabled = true
  log-enabled = true
  write-tracing = false
  pprof-enabled = true
  https-enabled = false
#
systemctl restart influxdb
```

Datenbankgröße ermitteln

```
sudo su
du -sh /var/lib/influxdb/data/iobrokerdb/
```

Backups

Quelle:

https://docs.influxdata.com/influxdb/v1/administration/backup_and_restore/#back-up-all-databases

Erstellen

```
sudo su
influxd backup -portable /path/to/backup-destination
#oder:
cd /; influxd backup -portable /mnt/usb-stick/backup/influxdb/`date +%Y%m%d`
```

Wieder herstellen

```
sudo su
influxd restore -portable /path/to/backup-destination
```

InfluxDB 2.x

Installation

```
sudo su
cd ~
wget -q https://repos.influxdata.com/influxdata-archive_compat.key
echo '393e8779c89ac8d958f81f942f9ad7fb82a25e133faddaf92e15b16e6ac9ce4c
influxdata-archive_compat.key' | sha256sum -c && cat influxdata-
archive_compat.key | gpg --dearmor | sudo tee
/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg > /dev/null
echo 'deb [signed-by=/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg]
https://repos.influxdata.com/debian stable main' | sudo tee
/etc/apt/sources.list.d/influxdata.list
apt-get update
apt-get install influxdb2
systemctl start influxdb
systemctl status influxdb
```

Konfiguration

Die Konfiguration der InfluxDB erfolgt über den Browser via <http://RASPI-IP:8086>.

Grafana

Installation

```
sudo su
#wget -q -O /usr/share/keyrings/grafana.key https://apt.grafana.com/gpg.key
#echo "deb [signed-by=/usr/share/keyrings/grafana.key]
https://apt.grafana.com stable main" | sudo tee -a
/etc/apt/sources.list.d/grafana.list

wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
echo "deb https://packages.grafana.com/oss/deb stable main" | sudo tee -a
/etc/apt/sources.list.d/grafana.list
apt-get update
# Install the latest OSS release:
apt-get install -y grafana
# Start System Service aka. Server
systemctl daemon-reload
systemctl start grafana-server
systemctl status grafana-server
systemctl enable grafana-server.service
```

Grafana Server: <http://IP:3000>

Grafana ohne Login

```
mcedit /etc/grafana/grafana.ini
# [auth.anonymous]
enabled = true
systemctl restart grafana-server
```

Backup

Quelle: <http://cactusprojects.com/backup-restore-grafana/>

Erstellen

```
sudo su
cp /var/lib/grafana/grafana.db /path/to/backup-destination
cp /etc/grafana/grafana.ini /path/to/backup-destination
# or do it in one line:
cd /; mkdir /mnt/usb-stick/backup/grafana/`date +%Y%m%d`; cp
/etc/grafana/grafana.ini /mnt/usb-stick/backup/grafana/`date +%Y%m%d`; cp
/var/lib/grafana/grafana.db /mnt/usb-stick/backup/grafana/`date +%Y%m%d`
```

Wieder herstellen

```
sudo su
cd /path/to/backup-destination
cp grafana.db /var/lib/grafana/
cp grafana.ini /etc/grafana/
```

ioBroker

Wiederherstellung

Folgende Backup Dateien via Backupup Adapter wieder einsoielen:

- iobroker_<TIMESTAMP>_backupiobroker.tar.gz
- influxDB_<TIMESTAMP>_backupiobroker.tar.gz
- grafana_<TIMESTAMP>_backupiobroker.tar.gz
- javascripts_<TIMESTAMP>_backupiobroker.tar.gz

Installation

```
sudo su
# automatische Installation:
curl -sLf https://iobroker.net/install.sh | bash -
```

Nach der Installation ist die ioBroker Instanz erreichbar unter <http://<Raspberry-Pi-IP>:8081>.

Steuerung

```
# ioBroker starten:
iobroker start
# ioBroker stoppen:
iobroker stop
# ioBrker Infos anzeigen
iobroker info
```

Backups

Erstellung

Siehe unten → Script oder per 'Backupup' Adapter

Wiederherstellung

- Verzeichniss '/opt/iobroker/backups' anlegen
- Kopieren des Backups dort hinein

Backups die mit dem Backupup-Adapter erstellt wurden können nachde dem kopieren via Web-Interface wieder eingesielt werden.

Alternativ kann auch die Konsole verwendet werden:





































```
sudo su
cd /opt/iobroker
iobroker stop
iobroker restore 0
iobroker stop
```

Adapter installieren

Als Adapter werden alle Schnittstellen zu externen aber auch zu internen Datenquellen (z.B. Shelly Sensoren, Temperatur, Luftfeuchte, GPIO, 1-Wire, etc.) und Senken (Shelly Aktoren) bezeichnet.

- influxDB (Datenbank zur Speicherung von Messwerten)
- DS18B20 (Auslesen von 1-Wire Temperatursensoren)

- HABpanel (Steuerung von Aktoren vis Webseite)
- Jeelink-Geräte (Empfangen von 868MHz LaCrosse Temperatur- und Feuchtesensoren (hier z.B. TX29DTH-IT) mit Hilfe eines Jeelink Klones
- MQTT Broker (zur Datenverarbeitung von MQTT-fähigen Sensoren und Aktoren)
- Philips Luftreiniger (für die Anbindung eines Philips Air Purifier 4000i Series (Typ: AC4236/10)
- RPI-Monitor (Nutzung von GPIOs z.B. zum Einlesen eines Reed-Kontaktes für den Gaszähler)
- Skriptausführung (Javascript und Blockly)
- WEB-Server (für HABpanel)
- Shelly

admin ★★★★★ Admin    Installierte Instanzen: 1 Verfügbare Version: 6.3.5 Installierte Version: 6.3.5	backup ★★★★★ BackItUp    Installierte Instanzen: 1 Verfügbare Version: 2.5.12 Installierte Version: 2.5.12	influxdb ★★★★★ Daten mit InfluxDB protokollieren    Installierte Instanzen: 1 Verfügbare Version: 3.2.0 Installierte Version: 3.2.0	ds18b20 ★★★★★ DS18B20    Installierte Instanzen: 1 Verfügbare Version: 1.6.1 Installierte Version: 1.6.1	simple-api ★★★★★ Einfache RESTful API  Verfügbare Version: 2.7.2 Installierte Version: 2.7.2
discovery ★★★★★ Gerätesuche   Installierte Instanzen: 1 Verfügbare Version: 3.1.0 Installierte Version: 3.1.0	habpanel ★★★★★ HABpanel   Installierte Instanzen: 1 Verfügbare Version: 0.5.0 Installierte Version: 0.5.0	jeelink ★★★★★ Jeelink-Geräte Installierte Instanzen: 1 Verfügbare Version: 0.1.4 Installierte Version: 0.1.4	mqtt ★★★★★ MQTT Broker/Client    Installierte Instanzen: 1 Verfügbare Version: 4.0.7 Installierte Version: 4.0.7	philips-air ★★★★★ Philips Luftreiniger    Installierte Instanzen: 1 Verfügbare Version: 1.0.1 Installierte Version: 1.0.1
rpiz ★★★★★ RPI-Monitor   Installierte Instanzen: 1 Verfügbare Version: 1.3.2 Installierte Version: 1.3.2	javascript ★★★★★ Skriptausführung   Installierte Instanzen: 1 Verfügbare Version: 6.1.4 Installierte Version: 6.1.4	socketio ★★★★★ socket.io    Verfügbare Version: 4.2.0 Installierte Version: 4.2.0	ws ★★★★★ Web socket    Verfügbare Version: 1.3.0 Installierte Version: 1.3.0	web ★★★★★ WEB-Server    Installierte Instanzen: 1 Verfügbare Version: 4.3.0 Installierte Version: 4.3.0

Adapter konfigurieren

Die oben aufgeführten Adapter sind nach der Installation unter Instanzen zu finden und müssen dort konfiguriert werden.

1-Wire

DS18B20

Instanzeinstellungen: ds18b20.0

v2.0.4

Info

ALLGEMEINE EINSTELLUNGEN

SENSOREN

REMOTE-SYSTEME

Sensoren

Adresse	Remote-System-ID	Name	Abfrageintervall	Einheit	Faktor	Offset	Dezimalstellen	Null bei Fehler	Aktiviert	
10-00080359c712	keins	Vorlauftemperatur	Standard	°C	1	0	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	↓
10-00080359e7fe	keins	Rücklauftemperatur	Standard	°C	1	0	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	↑

JeeLink

TBC - Empfänger bauen und programmieren → TBC

JeeLink Settings

/dev/ttyUSB0

57600

Serial port

Baud rate

/dev/ttyUSB0 or /dev/ttyACME0

usually 57600

JeeLink Command (trial)

☐ Befehl aktivieren

usually empty

Befehl für Stick-Setup

usually empty

Sensorkonfiguration

gültige Sensortypen:

emonTH, emonWater, LaCrosseDTH, LaCrosseDTT, LaCrosseBMP180, HMS100T, LaCrosseWS, EC3000, EMT7110, level

+

GET FROM ADAPTER

	id	type	uid	Name	Löschen
1	22	LaCrosseDTH	▼ Badezimmer	THS_#03	
2	43	LaCrosseDTH	▼ Küche	THS_#05	
3	21	LaCrosseDTH	▼ Wohnzimmer	THS_#06	
4	11	LaCrosseDTH	▼ Wintergarten	THS_#08	
5	14	LaCrosseDTH	▼ Schlafzimmer	THS_#04	
6	37	LaCrosseDTH	▼ Jonas	THS_#02	
7	40	LaCrosseDTH	▼ IT-Schrank	THS_#09	
8	9	LaCrosseDTH	▼ Lager	THS_#07	
9	8	LaCrosseDTH	▼ Außensensor	THS_#00	

MQTT

Für IKEA Sensoren -> Die angepasste Firmware gibt es [hier](#).

Instanzeinstellungen: mqtt.0

WARN

VERBINDUNG

MQTT EINSTELLUNGEN

IP

Server/Broker

☐ WebSockets benutzen

Verbindungseinstellungen

IP Adresse

Port

[IPv4] 192.168.10.11 - eth0

1883

☐ SSL

Authentifizierungseinstellungen

Benutzer

Passwort

Passwort (wiederholen)

mqttuser

Philips



Instanzeinstellungen: philips-air.0

v1.0.3

WARN

Geräte-IP

192.168.10.125

Lebenszeitüberschreitung

Wiederverbindungsintervall

30000

30000

ms

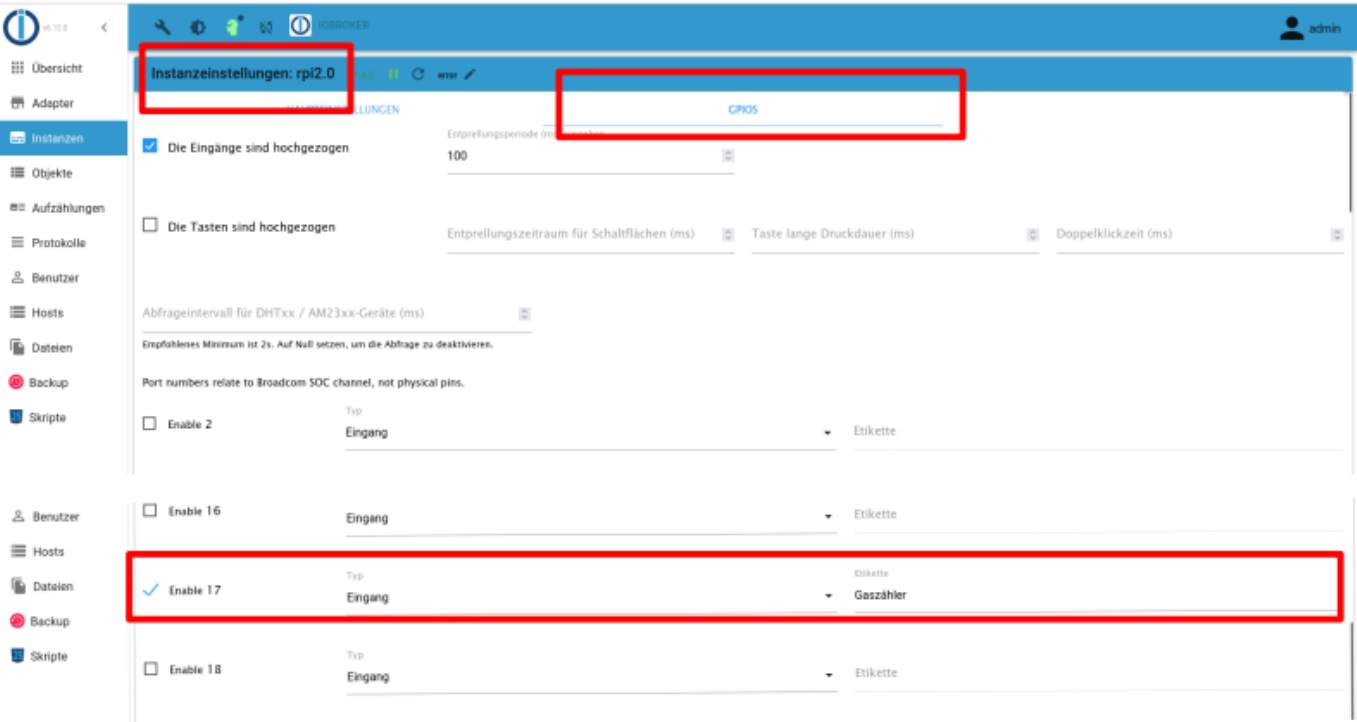
ms

Kommunikationsprotokoll

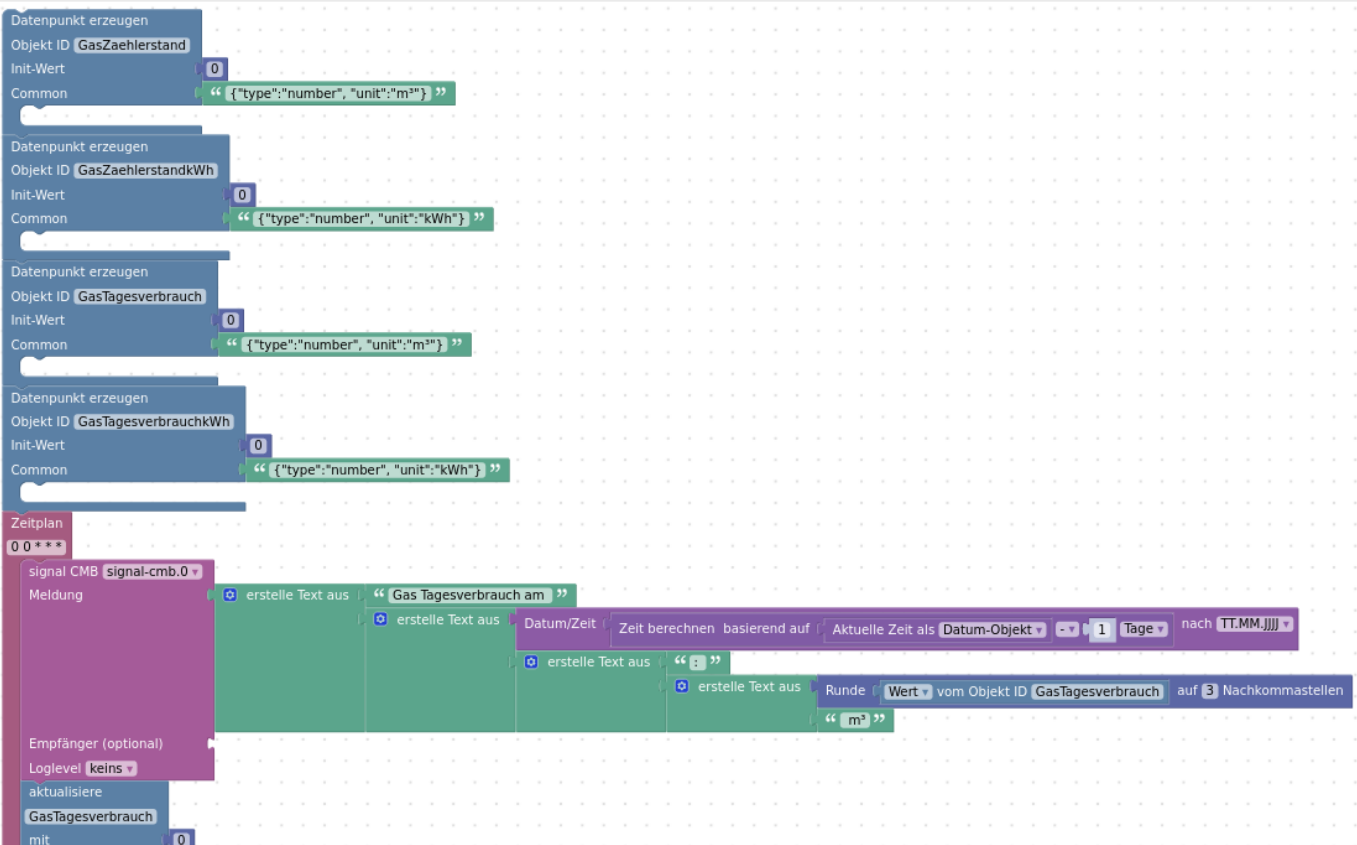
CoAP

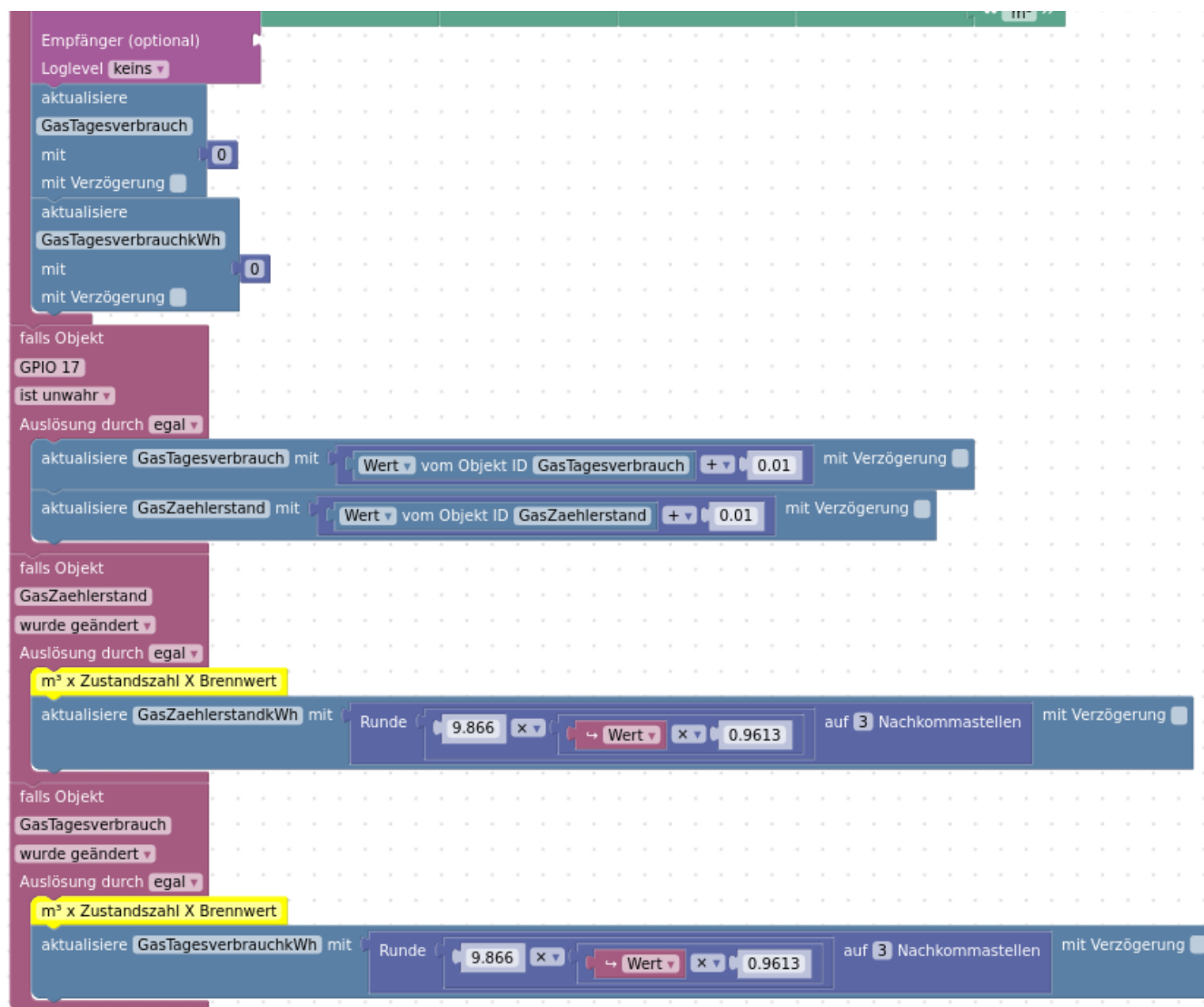
Gaszähler

Reedkontakt am GPIO #17 - Name: Gaszähler



Blockly





Und das ganze als XML:

Title

gaszaehler_blockly.xml

```
<xml xmlns="https://developers.google.com/blockly/xml">
  <block type="create" id="0B{}LlRd,d!Br67@Vl bv" x="113" y="-112">
    <field name="NAME">GasZaehlerstand</field>
    <value name="VALUE">
      <block type="math_number" id="zCMHZ;$=evsZ~g#$$B,d">
        <field name="NUM">0</field>
      </block>
    </value>
    <value name="COMMON">
      <block type="text" id="+waJXiBe~1dn@SNBXD]b">
        <field name="TEXT">{"type":"number", "unit":"m³"}</field>
      </block>
    </value>
  </block>
  <next>
```

```

<block type="create" id="2[=]D*fweUy]z]fKRb*N">
  <field name="NAME">GasZaehlerstandkWh</field>
  <value name="VALUE">
    <block type="math_number" id="6#vjQv4JhiY|mZ`tva4+">
      <field name="NUM">0</field>
    </block>
  </value>
  <value name="COMMON">
    <block type="text" id="lD}p7.V%!=!S:e/(Pj1[e">
      <field name="TEXT">{"type":"number", "unit":"kWh"}</field>
    </block>
  </value>
  <next>
    <block type="create" id="Jt^U$w~,3R~)UPJJP+$c">
      <field name="NAME">GasTagesverbrauch</field>
      <value name="VALUE">
        <block type="math_number" id="ob;_09!^uke_;c@UqtCZ">
          <field name="NUM">0</field>
        </block>
      </value>
      <value name="COMMON">
        <block type="text" id="Br7y=,dGAF9I]mb?z-,:">
          <field name="TEXT">{"type":"number",
"unit":"m³"}</field>
        </block>
      </value>
      <next>
        <block type="create" id="0S(2ltH~c|{]uV)aZEoI">
          <field name="NAME">GasTagesverbrauchkWh</field>
          <value name="VALUE">
            <block type="math_number" id="uL]uOd@Q!FgAK,u/~1i0">
              <field name="NUM">0</field>
            </block>
          </value>
          <value name="COMMON">
            <block type="text" id="?PxPe$PT.{E1el.m,Fl{">
              <field name="TEXT">{"type":"number",
"unit":"kWh"}</field>
            </block>
          </value>
          <next>
            <block type="schedule" id="#TX=ZX{-w2cu=Uj!nu0*">
              <field name="SCHEDULE">0 0 * * *</field>
              <statement name="STATEMENT">
                <block type="signal-cmb" id="n4NEdLb^*N-
$c[YJUMw_">
                  <field name="INSTANCE">.0</field>
                  <field name="LOG"></field>
                  <value name="MESSAGE">
                    <shadow type="text"
id="F/ePx6FS0r+[BT|h0L68">

```

```
<field name="TEXT">text</field>
</shadow>
<block type="text_join"
id="+A!rZ(7aVj!~E{6~WV0m">
    <mutation items="2"></mutation>
    <value name="ADD0">
        <block type="text"
id="8EJ*o[R;:^=5;).KbZeh">
            <field name="TEXT">Gas Tagesverbrauch
am </field>
        </block>
    </value>
    <value name="ADD1">
        <block type="text_join"
id="HeWwloE2zR[^)91A5vLf">
            <mutation items="2"></mutation>
            <value name="ADD0">
                <block type="convert_from_date"
id="s;*kY*B;HuSZ^~w0=Q1B">
                    <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                    <field
name="OPTION">DD.MM.YYYY</field>
                    <value name="VALUE">
                        <block type="time_calculation"
id="YM!lstPQJsLk~Nr|/C9S">
                            <field name="OPERATION">-
</field>
                            <field name="UNIT">day</field>
                            <value name="DATE_TIME">
                                <shadow type="time_get"
id="*vxqb!BXG7I/C$mm0(,6">
                                    <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                                    <field
name="OPTION">object</field>
                                    </shadow>
                                    <block type="time_get"
id="c7c*a4_Wl/:1^bYj[5Gv">
                                        <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                                        <field
name="OPTION">object</field>
                                        </block>
                                    </value>
                                    <value name="VALUE">
                                        <shadow type="math_number"
```

```

id="|4-%[@-^:5+J56T:106m">
    <field name="NUM">1</field>
    </shadow>
    </value>
    </block>
    </value>
    </block>
    </value>
    <value name="ADD1">
    <block type="text_join"

id="=%;,#+%QHjmLt3hl!=~r">
    <mutation items="2"></mutation>
    <value name="ADD0">
    <block type="text"

id="3:2kP58oTBRcZi2),~ld">
    <field name="TEXT">: </field>
    </block>
    </value>
    <value name="ADD1">
    <block type="text_join"

id="tmVWY7$h@F7sTbDx8RxC">
    <mutation items="2"></mutation>
    <value name="ADD0">
    <block type="math_rndfixed"

id="r$r$dA.ncKJ|_gq606gB">
    <field name="n">3</field>
    <value name="x">
    <shadow

type="math_number" id="AThWyAlfXj`^N:24Bj)1">
    <field
name="NUM">3.1234</field>
    </shadow>
    <block type="get_value"

id="#R/Z*/!V{2!I`w97g5# $">
    <field
name="ATTR">val</field>
    <field
name="OID">javascript.0.GasTagesverbrauch</field>
    </block>
    </value>
    </block>
    </value>
    <value name="ADD1">
    <block type="text"

id="wPYk)Zw6;xd5M2HRI[=?">
    <field name="TEXT">

m³</field>
    </block>
    </value>
    </block>
    </value>

```

```

        </block>
      </value>
    </block>
  </value>
</block>
<next>
  <block type="update"
id="@0uFnK3p@d(aFNzT|/lb" inline="false">
    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
    <field
name="OID">javascript.0.GasTagesverbrauch</field>
    <field name="WITH_DELAY">FALSE</field>
    <value name="VALUE">
      <block type="math_number"
id="4)r,X`Fg.[q=u_H*lfRk">
        <field name="NUM">0</field>
      </block>
    </value>
    <next>
      <block type="update"
id="TI_1t%q+ZcJ4QYR55c_V" inline="false">
        <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
        <field
name="OID">javascript.0.GasTagesverbrauchkWh</field>
        <field name="WITH_DELAY">FALSE</field>
        <value name="VALUE">
          <block type="math_number"
id="r%v}PcT3aL`0u#bfv}2v">
            <field name="NUM">0</field>
          </block>
        </value>
      </block>
    </next>
  </block>
</next>
</block>
</statement>
<next>
  <block type="on" id="4Y-zykZ$Wh;oiRmsNJ5@">
    <field name="OID">rpi2.0.gpio.17.state</field>
    <field name="CONDITION">>false</field>
    <field name="ACK_CONDITION"></field>
    <statement name="STATEMENT">
      <block type="update"
id="9]|sNN!RG]pSo)u[+a:l">
        <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>

```



```

        <field
name="OID">javascript.0.GasTagesverbrauch</field>
        <field name="WITH_DELAY">FALSE</field>
        <value name="VALUE">
            <block type="math_arithmetic"

id="6}2q8C;`zJ=g7E_fxS}|">

                <field name="OP">ADD</field>
                <value name="A">
                    <shadow type="math_number"

id="bh@Wx=0!@N|v#@:zwozA">

                        <field name="NUM">1</field>
                        </shadow>
                        <block type="get_value"

id="kR$.7#of[Q%v[4%`)`qw">

                                <field name="ATTR">val</field>
                                <field
name="OID">javascript.0.GasTagesverbrauch</field>
                                </block>
                                </value>
                                <value name="B">
                                    <shadow type="math_number"

id="U_G`SdC1Ek1L0eD^e0GZ">

                                            <field name="NUM">0.01</field>
                                            </shadow>
                                            </value>
                                            </block>
                                            </value>
                                            <next>
                                            <block type="update"

id="KH(0kBhtIn0cIneAPNH$">

                                                    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
                                                    <field
name="OID">javascript.0.GasZaehlerstand</field>
                                                    <field name="WITH_DELAY">FALSE</field>
                                                    <value name="VALUE">
                                                        <block type="math_arithmetic"

id="JllB@rBhaoQ78i!%QiN@">

                                                                <field name="OP">ADD</field>
                                                                <value name="A">
                                                                    <shadow type="math_number"

id="bh@Wx=0!@N|v#@:zwozA">

                                                                            <field name="NUM">1</field>
                                                                            </shadow>
                                                                            <block type="get_value"

id=";Rlcv?|LRTX~#Ib;c81n">

                                                                                    <field name="ATTR">val</field>
                                                                                    <field
name="OID">javascript.0.GasZaehlerstand</field>
                                                                                    </block>
                                                                                    </value>

```

```

                                <value name="B">
                                <shadow type="math_number"
id="vl8GbHNo/:J]~V5.2V5z">
                                <field name="NUM">0.01</field>
                                </shadow>
                                </value>
                                </block>
                                </value>
                                </block>
                                </next>
                                </block>
                                </statement>
                                <next>
                                <block type="on" id="X7m/%;,l,u[1#P61eH}b">
                                <field
name="OID">javascript.0.GasZaehlerstand</field>
                                <field name="CONDITION">ne</field>
                                <field name="ACK_CONDITION"></field>
                                <statement name="STATEMENT">
                                <block type="comment"
id="[Q_/w^nv`)y#;e4ru1nD">
                                <field name="COMMENT">m³ x Zustandszahl
X Brennwert</field>
                                <next>
                                <block type="update"
id="8.z/}1(PYiq*8X7[Q9Ae">
                                <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
                                <field
name="OID">javascript.0.GasZaehlerstandkWh</field>
                                <field
name="WITH_DELAY">FALSE</field>
                                <value name="VALUE">
                                <block type="math_rndfixed"
id="+0$=HuhMm)n j7_00c56=">
                                <field name="n">3</field>
                                <value name="x">
                                <shadow type="math_number"
id="aeqHXH7yQcf5k2Qn,tC/">
                                <field
name="NUM">3.1234</field>
                                </shadow>
                                <block type="math_arithmetic"
id="(N6Ay,~*P)f+G|I0~!p2">
                                <field
name="OP">MULTIPLY</field>
                                <value name="A">
                                <shadow
type="math_number" id="XwM0.cfS~dYqK@(o/Pc)">
                                <field
```

```

name="NUM">9.866</field>
                                </shadow>
                                </value>
                                <value name="B">
                                <shadow
type="math_number" id="}/IuLzLcCeHe!b~b/V0~">
                                <field
name="NUM">1</field>
                                </shadow>
                                <block
type="math_arithmetic" id="7w-+v.aR0eGiRwfMHXNM">
                                <field
name="OP">MULTIPLY</field>
                                <value name="A">
                                <shadow
type="math_number" id="%qWr/Hv}vgETQg]nGDE9">
                                <field
name="NUM">1</field>
                                </shadow>
                                <block
type="on_source" id="KxNJKuqKY/]s[I!V$Mol">
                                <field
name="ATTR">state.val</field>
                                </block>
                                </value>
                                <value name="B">
                                <shadow
type="math_number" id="M}_|BoUHL8urPnuw;e9=">
                                <field
name="NUM">0.9613</field>
                                </shadow>
                                </value>
                                </block>
                                </value>
                                </block>
                                </value>
                                </block>
                                </value>
                                </block>
                                </value>
                                </block>
                                </next>
                                </block>
                                </statement>
                                <next>
                                <block type="on"
id="1,.5mB=(/f/jzm?Qa)50">
                                <field
name="OID">javascript.0.GasTagesverbrauch</field>
                                <field name="CONDITION">ne</field>
                                <field name="ACK_CONDITION"></field>
                                <statement name="STATEMENT">
                                <block type="comment" id="-

```

```
m![Gh^zQ_@np0AF3~!!">
                                <field name="COMMENT">m³ x
Zustandszahl X Brennwert</field>
                                <next>
                                <block type="update"
id="8:U}a~4U+pX]:KTxvyW}">
                                <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
                                <field
name="OID">javascript.0.GasTagesverbrauchkWh</field>
                                <field
name="WITH_DELAY">FALSE</field>
                                <value name="VALUE">
                                <block type="math_rndfixed"
id="YcCf+;GbSY/PZ.e(zMeH">
                                <field name="n">3</field>
                                <value name="x">
                                <shadow
type="math_number" id="aeqHXH7yQcf5k2Qn,tC/">
                                <field
name="NUM">3.1234</field>
                                </shadow>
                                <block
type="math_arithmetic" id="%.k-kW,6s)i$)d0kK2[Y">
                                <field
name="OP">MULTIPLY</field>
                                <value name="A">
                                <shadow
type="math_number" id="R^,D.8GKv}Jv!N-k5,?w">
                                <field
name="NUM">9.866</field>
                                </shadow>
                                </value>
                                <value name="B">
                                <shadow
type="math_number" id="}/IuLzLcCeHe!b~b/V0~">
                                <field
name="NUM">1</field>
                                </shadow>
                                <block
type="math_arithmetic" id="GZh_TDV2T-Wfkl$v.6%B">
                                <field
name="OP">MULTIPLY</field>
                                <value name="A">
                                <shadow
type="math_number" id="%qWr/Hv}vgETQg]nGDE9">
                                <field
name="NUM">1</field>
                                </shadow>
                                <block
```

```

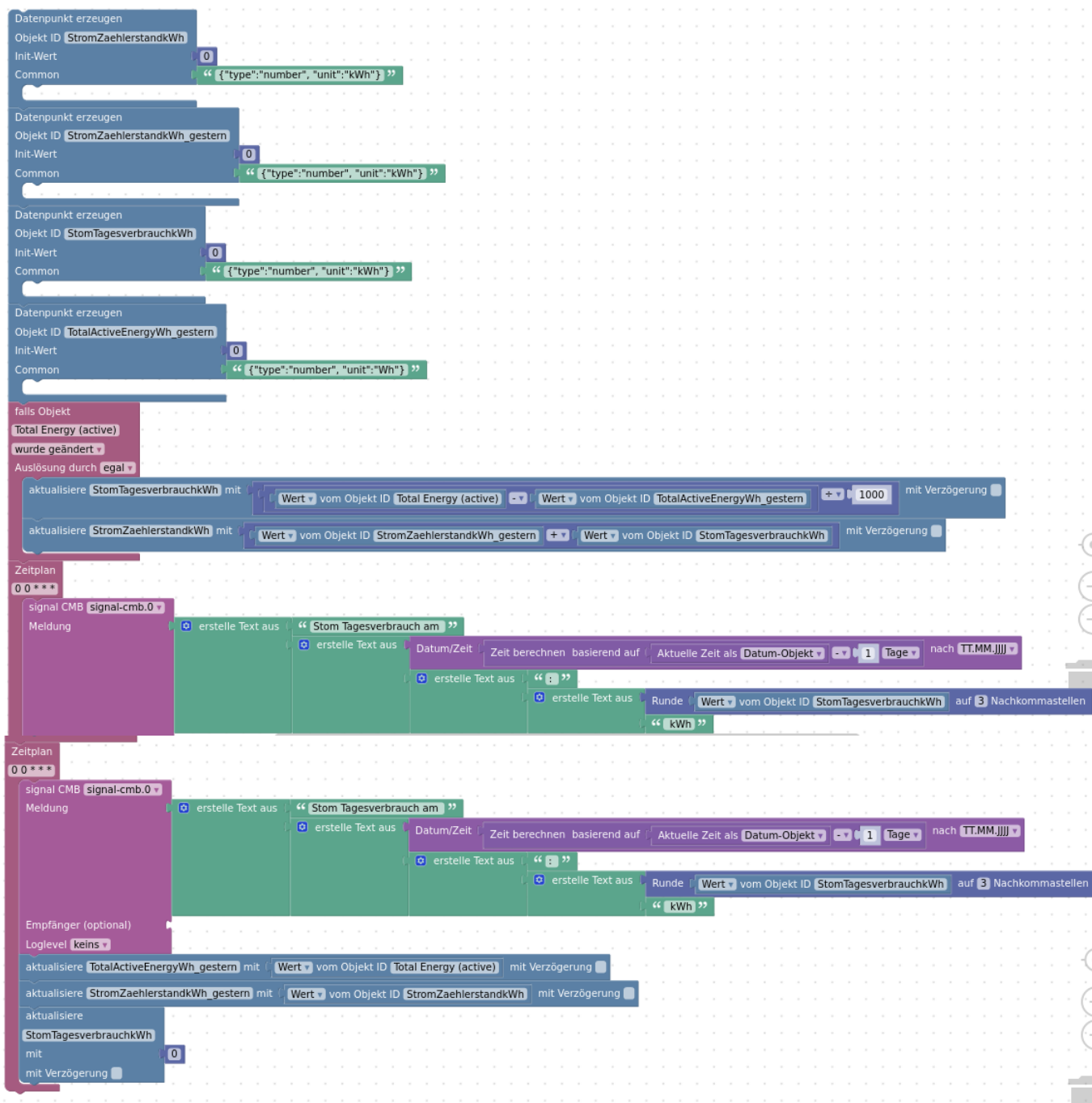
type="on_source" id="j60tdQ-opx@n@HuS.5;[">
name="ATTR">state.val</field>
type="math_number" id="w[4vjUZr~ib${TrBsYgL">
name="NUM">0.9613</field>
</xml>

```

Stromzähler

Zur Erfassung des Stromverbrauches meiner Wohnung verwende ich einen [Shelly 3EM Pro](#) den ich via Shelly Adapter eingebunden habe.

Blockly



Und das ganze als XML:

Title

strozaehler_blockly.xml

```
<xml xmlns="https://developers.google.com/blockly/xml">
  <block type="create" id="WNiKV(pYZ3,|L9mDGTHD" x="138" y="-62">
    <field name="NAME">StromZaehlerstandkWh</field>
    <value name="VALUE">
      <block type="math_number" id="0F`c7%Isi~b|@ep0RR*S">
        <field name="NUM">0</field>
      </block>
    </value>
  </block>
```

```

</value>
<value name="COMMON">
  <block type="text" id="/1(k)0A[2kB~j;PxbH_4">
    <field name="TEXT">{"type":"number", "unit":"kWh"}</field>
  </block>
</value>
<next>
  <block type="create" id="2[=]D*fweUy]z]fKRb*N">
    <field name="NAME">StromZaehlerstandkWh_gestern</field>
    <value name="VALUE">
      <block type="math_number" id="6#vjQv4JhiY|mZ`тва4+">
        <field name="NUM">0</field>
      </block>
    </value>
    <value name="COMMON">
      <block type="text" id="lD}p7.V%!=!S:e/(Pj1[e">
        <field name="TEXT">{"type":"number", "unit":"kWh"}</field>
      </block>
    </value>
    <next>
      <block type="create" id="0S(2ltH~c|{]uV)aZEoI">
        <field name="NAME">StomTagesverbrauchkWh</field>
        <value name="VALUE">
          <block type="math_number" id="uL]u0d@Q!FgAK,u/~1i0">
            <field name="NUM">0</field>
          </block>
        </value>
        <value name="COMMON">
          <block type="text" id="?PxPe$PT.{ElEl.m,Fl{">
            <field name="TEXT">{"type":"number",
"unit":"kWh"}</field>
          </block>
        </value>
        <next>
          <block type="create" id="rss(Q.udF1BQD5Bz@T7~">
            <field name="NAME">TotalActiveEnergyWh_gestern</field>
            <value name="VALUE">
              <block type="math_number" id="tx?^zyUsJqm}GHq-b.f3">
                <field name="NUM">0</field>
              </block>
            </value>
            <value name="COMMON">
              <block type="text" id="xDII{fs[B3khS-DSylb8">
                <field name="TEXT">{"type":"number",
"unit":"Wh"}</field>
              </block>
            </value>
            <next>
              <block type="on" id="?c^{.iN$6fj256L#A8Ql">
                <field
name="OID">shelly.0.shellypro3em#c8f09e8314fc#1.EMData0.TotalActiveEner

```

```
gy</field>
    <field name="CONDITION">ne</field>
    <field name="ACK_CONDITION"></field>
    <statement name="STATEMENT">
        <block type="update" id="g+V`|DyKF[]Pmy+=sl;0">
            <mutation xmlns="http://www.w3.org/1999/xhtmll"
delay_input="false"></mutation>
            <field
name="OID">javascript.0.StomTagesverbrauchkWh</field>
            <field name="WITH_DELAY">FALSE</field>
            <value name="VALUE">
                <block type="math_arithmetic"
id="1ldXVHhW_NGn{g;5pw_+">
                    <field name="OP">DIVIDE</field>
                    <value name="A">
                        <shadow type="math_number" id="v-
*1r6*(074YeD/hDb~_">
                            <field name="NUM">1</field>
                        </shadow>
                        <block type="math_arithmetic"
id="";nKGmG#8.~l5jQA,gp[o">
                            <field name="OP">MINUS</field>
                            <value name="A">
                                <shadow type="math_number"
id="@8B(02U-tIrBZ2qRS*QM">
                                    <field name="NUM">1</field>
                                </shadow>
                                <block type="get_value"
id="]jZ_e/iQou/04%E2EUcM">
                                    <field name="ATTR">val</field>
                                </block>
                            <field
name="OID">shelly.0.shellypro3em#c8f09e8314fc#1.EMData0.TotalActiveEner
gy</field>
                                    </block>
                                </value>
                                <value name="B">
                                    <shadow type="math_number"
id="b6Bt(ksp=pv)Rge1D{;r">
                                        <field name="NUM">1</field>
                                    </shadow>
                                    <block type="get_value"
id="l+nL:/(/S=]UY|M2-#7M">
                                        <field name="ATTR">val</field>
                                    </block>
                                <field
name="OID">javascript.0.TotalActiveEnergyWh_gestern</field>
                                        </block>
                                    </value>
                                </block>
                                </value>
                                <value name="B">
```



```

                                <shadow type="math_number"
id="nkI`PVg;I,we%ojJ,TA*>
                                <field name="NUM">1000</field>
                                </shadow>
                                </value>
                                </block>
                                </value>
                                <next>
                                <block type="update"
id="SJ~Ys@X?5pv50XP=wqj">
                                <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
                                <field
name="OID">javascript.0.StromZaehlerstandkWh</field>
                                <field name="WITH_DELAY">FALSE</field>
                                <value name="VALUE">
                                <block type="math_arithmetic"
id="},ExWVJxj)o(5=vmy1.e">
                                <field name="OP">ADD</field>
                                <value name="A">
                                <shadow type="math_number"
id="@8B(02U-tIrBZ2qRS*QM">
                                <field name="NUM">1</field>
                                </shadow>
                                <block type="get_value"
id="_#ZSu=g6=)eF7:(ey4Bh">
                                <field name="ATTR">val</field>
                                <field
name="OID">javascript.0.StromZaehlerstandkWh_gestern</field>
                                </block>
                                </value>
                                <value name="B">
                                <shadow type="math_number" id="H-
iY+5=={P}IKvpkKUi;">
                                <field name="NUM">1</field>
                                </shadow>
                                <block type="get_value"
id="?DIb~Cgt]yKCn?Eau4?j">
                                <field name="ATTR">val</field>
                                <field
name="OID">javascript.0.StomTagesverbrauchkWh</field>
                                </block>
                                </value>
                                </block>
                                </value>
                                </block>
                                </next>
                                </block>
                                </statement>
                                <next>
                                <block type="schedule" id="#TX=ZX{-w2cu=Uj!nu0*">

```

```
<field name="SCHEDULE">0 0 * * * </field>
<statement name="STATEMENT">
  <block type="signal-cmb" id="n4NEdLb^*N-
$c[YJUMw_ ">
  <field name="INSTANCE">.0</field>
  <field name="LOG"></field>
  <value name="MESSAGE">
    <shadow type="text"
id="F/ePx6FS0r+[BT|h0L68">
    <field name="TEXT">text</field>
  </shadow>
  <block type="text_join"
id="+A!rZ(7aVj!~E{6~WV0m">
    <mutation items="2"></mutation>
    <value name="ADD0">
      <block type="text"
id="8EJ*o[R;:^=5;).KbZeh">
        <field name="TEXT">Stom
Tagesverbrauch am </field>
      </block>
    </value>
    <value name="ADD1">
      <block type="text_join"
id="HeWwloE2zR[^)91A5vLf">
        <mutation items="2"></mutation>
        <value name="ADD0">
          <block type="convert_from_date"
id="s;*kY*B;HuSZ^~w0=Q1B">
            <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
            <field
name="OPTION">DD.MM.YYYY</field>
            <value name="VALUE">
              <block
type="time_calculation" id="YM!lstPQJsLk~Nr|/C9S">
                <field name="OPERATION">-
</field>
                <field
name="UNIT">day</field>
                <value name="DATE_TIME">
                  <shadow type="time_get"
id="*vxqb!BXG7I/C$mm0(,6">
                    <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                    <field
name="OPTION">object</field>
                    </shadow>
                  <block type="time_get"
```

```

id="c7c*a4_Wl/:1^bYj[5Gv">
                                <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                                <field
name="OPTION">object</field>
                                </block>
                                </value>
                                <value name="VALUE">
                                <shadow
type="math_number" id="|4-%[@-^:5+J56T:106m">
                                <field
name="NUM">1</field>
                                </shadow>
                                </value>
                                </block>
                                </value>
                                </block>
                                </value>
                                <value name="ADD1">
                                <block type="text_join"
id="=%;,#+%QHjmlt3hl!=~r">
                                <mutation items="2"></mutation>
                                <value name="ADD0">
                                <block type="text"
id="3:2kP58oTBRcZi2),~ld">
                                <field name="TEXT">:
</field>
                                </block>
                                </value>
                                <value name="ADD1">
                                <block type="text_join"
id="tmVWY7$h@F7sTbDx8RxC">
                                <mutation
items="2"></mutation>
                                <value name="ADD0">
                                <block
type="math_rndfixed" id="r$r$dA.ncKJ|_gq606gB">
                                <field
name="n">3</field>
                                <value name="x">
                                <shadow
type="math_number" id="AThWyAlfXJ`^N:24Bj)1">
                                <field
name="NUM">3.1234</field>
                                </shadow>
                                </block>
type="get_value" id="#R/Z*/!V{2!I`w97g5#"$">
                                <field
name="ATTR">val</field>
                                <field

```

```
name="OID">javascript.0.StomTagesverbrauchkWh</field>
    </block>
  </value>
</block>
</value>
<value name="ADD1">
  <block type="text"
id="wPYk)Zw6;xd5M2HRI[=?">
    <field name="TEXT">
      kWh</field>
    </block>
  </value>
</block>
</value>
</block>
</value>
</block>
</value>
</block>
</value>
</block>
</value>
<next>
  <block type="update"
id="Ndg}s0%K1?awGPp}{),)">
    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
    <field
name="OID">javascript.0.TotalActiveEnergyWh_gestern</field>
    <field name="WITH_DELAY">FALSE</field>
    <value name="VALUE">
      <block type="get_value"
id="8|m`jKyWKA/LP=!E(Xkw">
        <field name="ATTR">val</field>
      </field>
      <field
name="OID">shelly.0.shellypro3em#c8f09e8314fc#1.EMData0.TotalActiveEner
gy</field>
    </block>
  </value>
</next>
  <block type="update"
id="05;QEhX_vzA~$gGS^OQ-">
    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
    <field
name="OID">javascript.0.StromZaehlerstandkWh_gestern</field>
    <field
name="WITH_DELAY">FALSE</field>
    <value name="VALUE">
      <block type="get_value"
id="Zb6figE|CI],mV=zy!AK">
        <field name="ATTR">val</field>
```

[illegible]

InfluxDB

Instanzeinstellungen: influxdb.0

v8.2.0

warn

DB SETTINGS

STANDARDEINSTELLUNGEN

EXPERTENEINSTELLUNGEN

DB-Version

1.x

Protokoll

http

Server

localhost

Port

8086

Benutzer

admin

Passwort

Passwort (wiederholen)

DB Name

iobroker

Request Timeout

30000

Millisekunden

Runden Sie bei der Abfrage die Zahlen auf

4

☒ Protokollieren Sie den letzten Wert erneut beim Start

Schreibaktionen zusammenfassen

0

Schreibintervall

60

Sekunden

Wert 0 schreibt Werte direkt

DIE VERBINDUNG ZUM SERVER TESTEN

ALLE DATEN IN DATENBANK LÖSCHEN

Backup durch Script

Übersicht

Adapter

Instanzen

Objekte

Aufzählungen

Protokolle

Benutzer

Hosts

Dateien

Backup

Skripte

common

backup_to_usb-stick

Gaszaehler

JS BACKUP_TO_USB-S...

```
1 // Täglich um 03:00 Uhr Nachts wird das Backup ausgeführt. Anpassbar unter "schedule"
2 var usbstick = "/mnt/usb-stick/backup/"; /*Hier den Pfad zum USB-Stick eintragen*/
3
4 function backup() {
5   exec('iobroker backup',
6     function (error, stdout, stderr) {console.log('stdout: ' + stdout)});
7   setTimeout( function() {
8     exec('mv -v /opt/iobroker/backups/* ' + usbstick,
9       function (error, stdout, stderr) {console.log('stdout: ' + stdout)});
10  }, 180000);
11 }
12
13 schedule('0 3 * * *', function(obj){
14   backup();
15 });
```

```
// Täglich um 03:00 Uhr Nachts wird das Backup ausgeführt. Anpassbar unter "schedule"
```

```
var usbstick = "/mnt/usb-stick/backup/"; /*Hier den Pfad zum USB-Stick eintragen*/
```

```
function backup() {
  exec('iobroker backup',
    function (error, stdout, stderr) {console.log('stdout: ' +
stdout)});
  setTimeout( function() {
    exec('mv -v /opt/iobroker/backups/* ' + usbstick,
      function (error, stdout, stderr) {console.log('stdout: ' +
stdout)});
  }, 180000);
}
```

```
schedule("0 3 * * *", function(obj){  
    backup();  
});
```

Update und Bugfixing

```
iobroker stop  
iobroker update  
iobroker fix  
# oder curl -sL https://iobroker.net/fix.sh | bash -  
iobroker upgrade self  
iobroker start
```

From:

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