

HEMS v1.2.x wiring

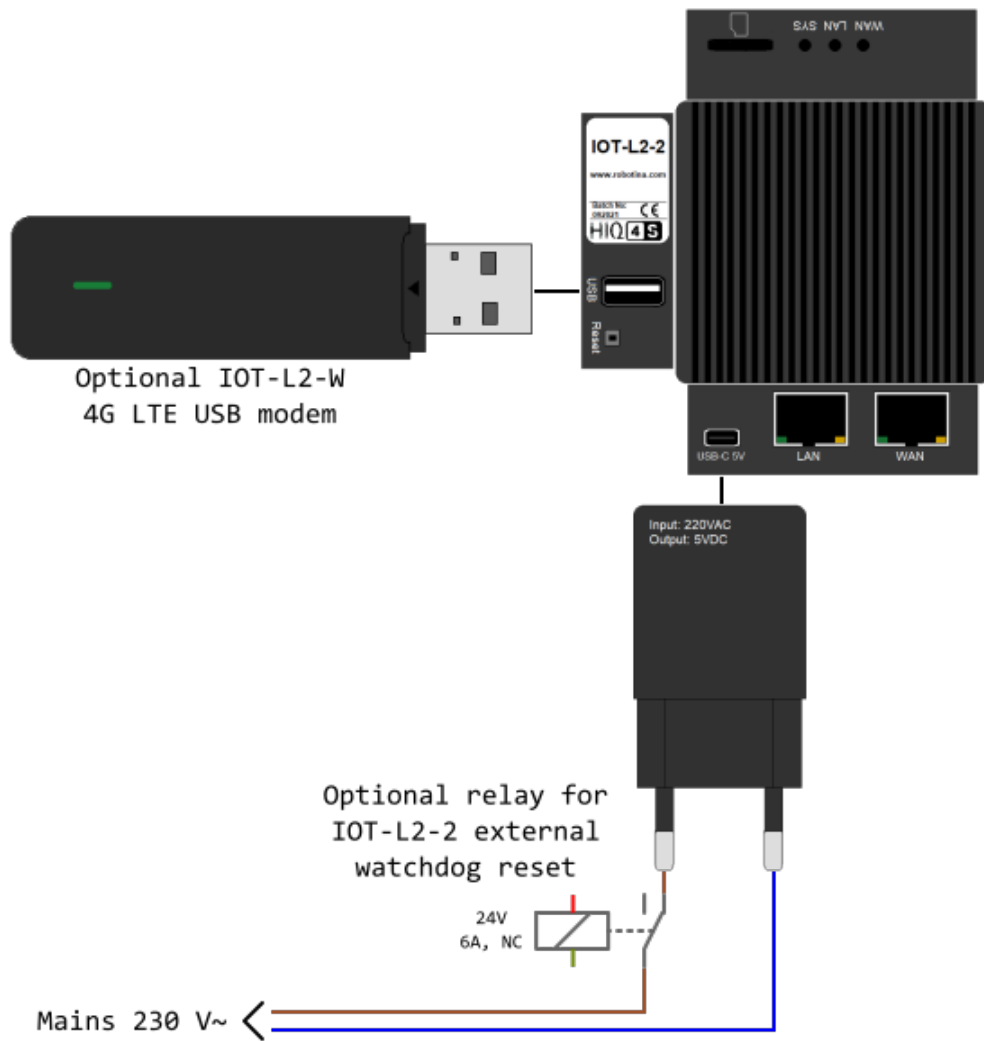
MC-230

Wiring of default configuration.

NOTE: several different configurations can be configured with [HEMS Configurator](#).



IOT-L2-2



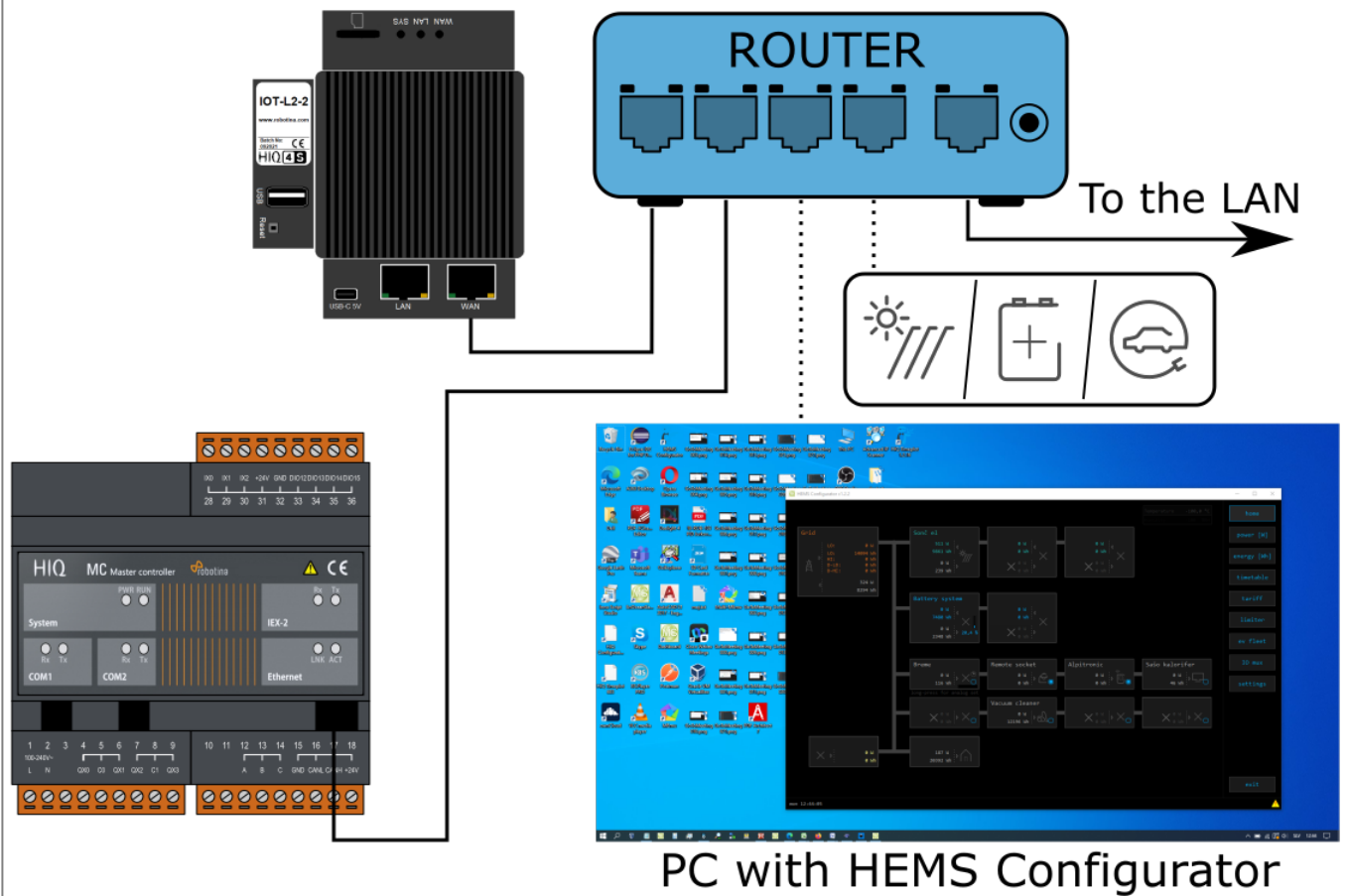
Network (LAN or LTE 4G modem) → MC-230 and IOT-L2-2

Optionally:

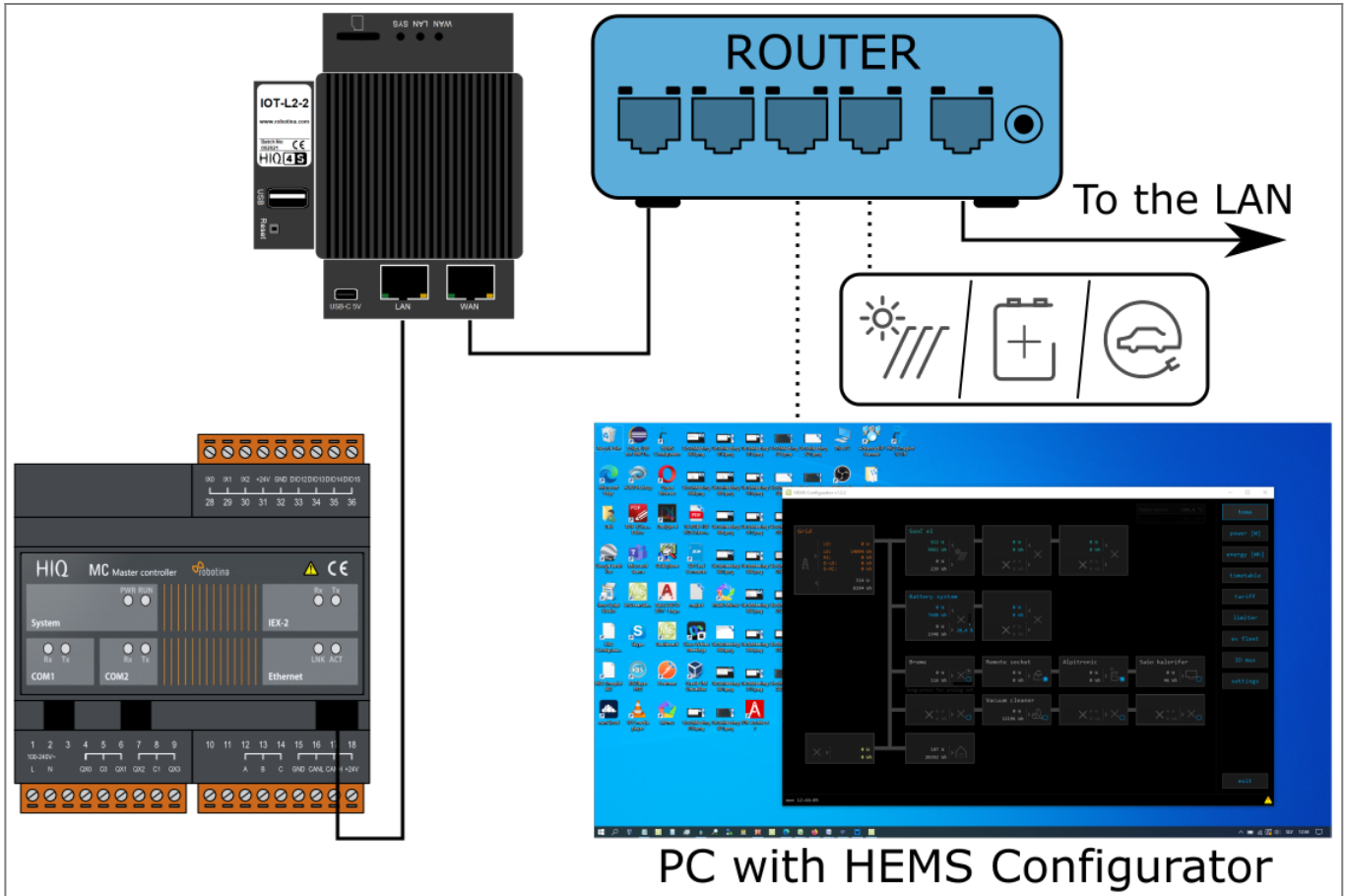
- PC with HEMS configurator
- PV inverter
- Hybrid inverter (battery storage system)
- EV charger

NOTE: When you change network configuration, MC-230 and IOT-L2-2 must be reset.

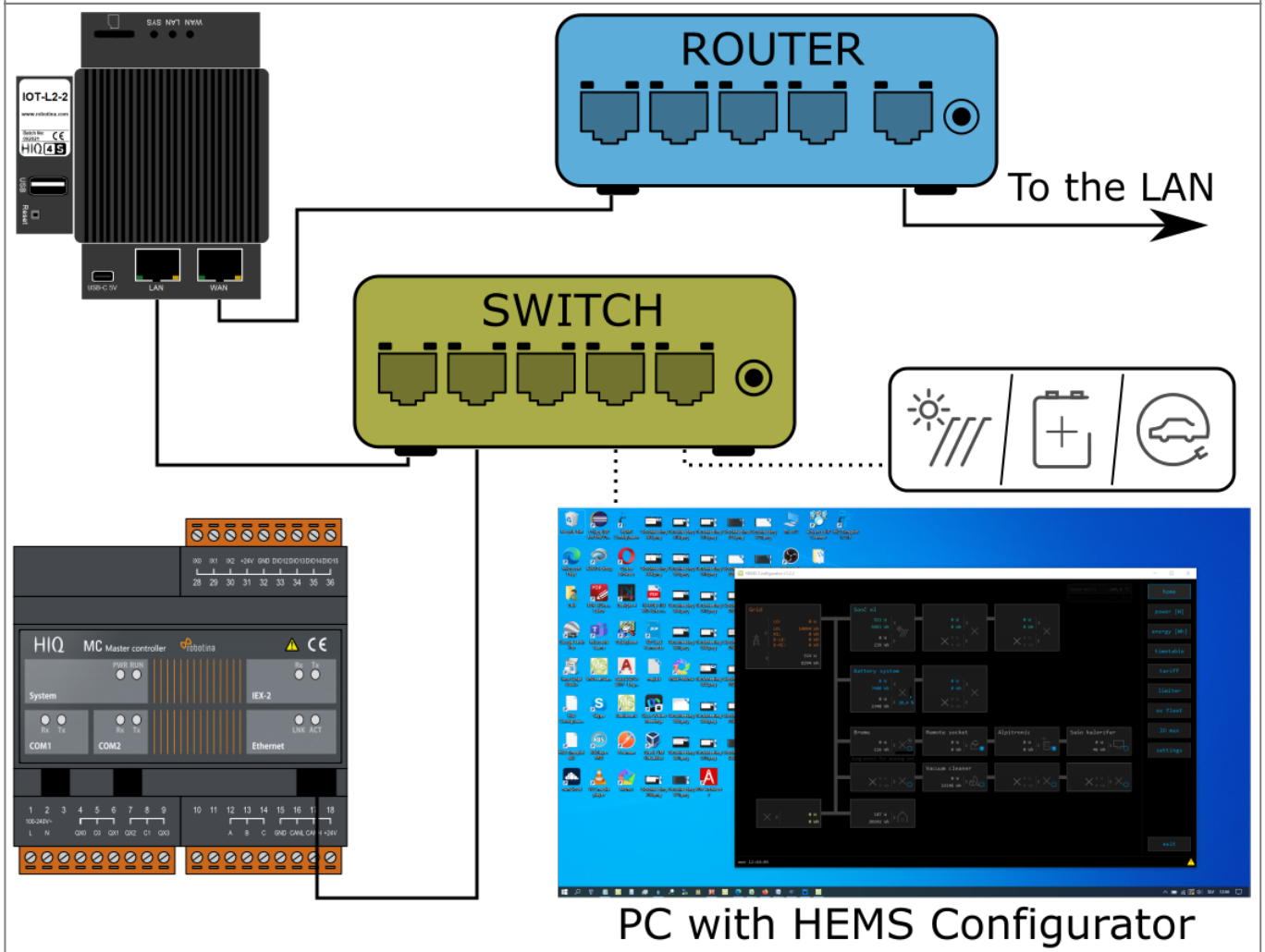
Default connection to the LAN network:



Optional LAN connections:



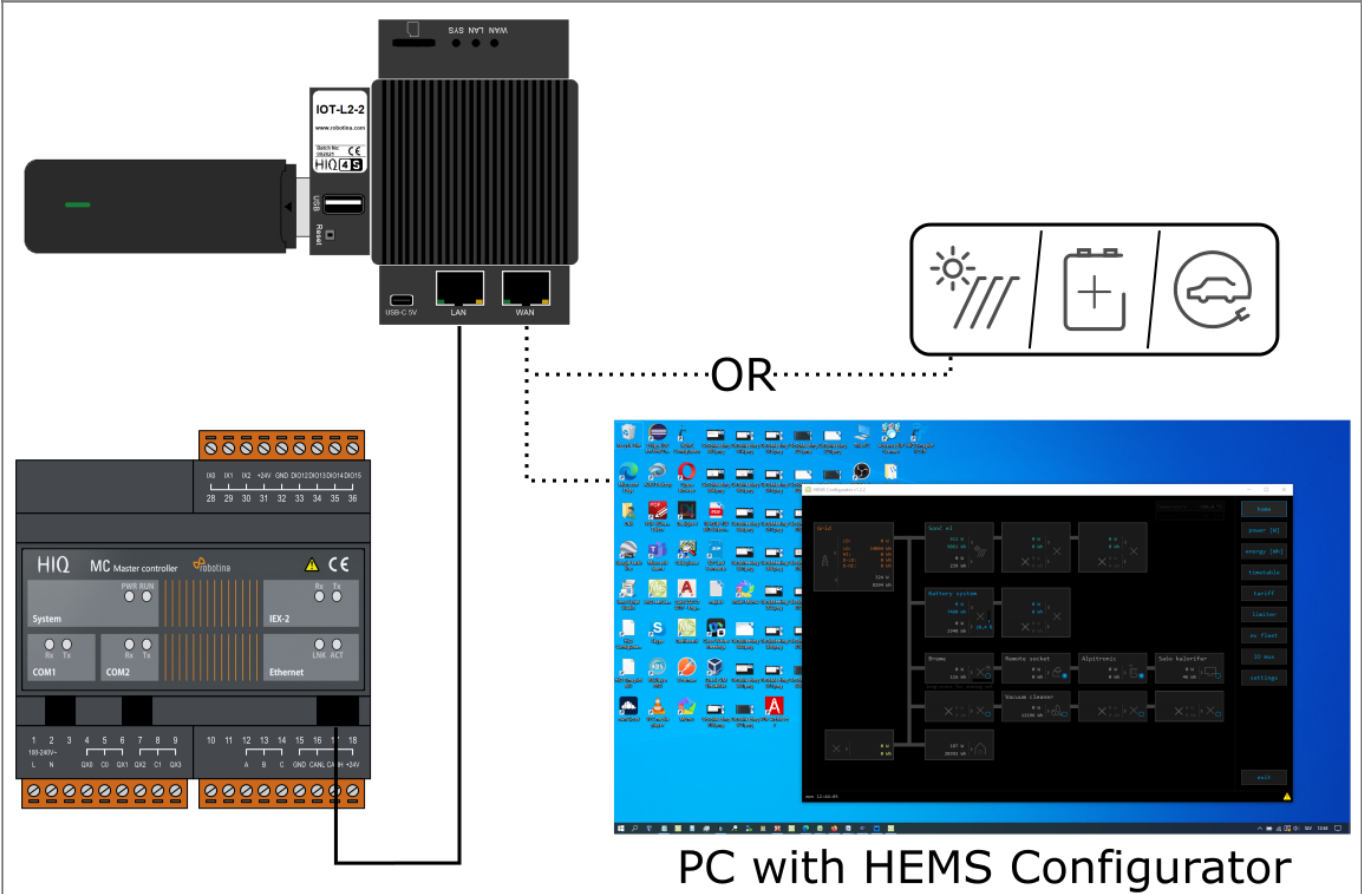
PC with HEMS Configurator



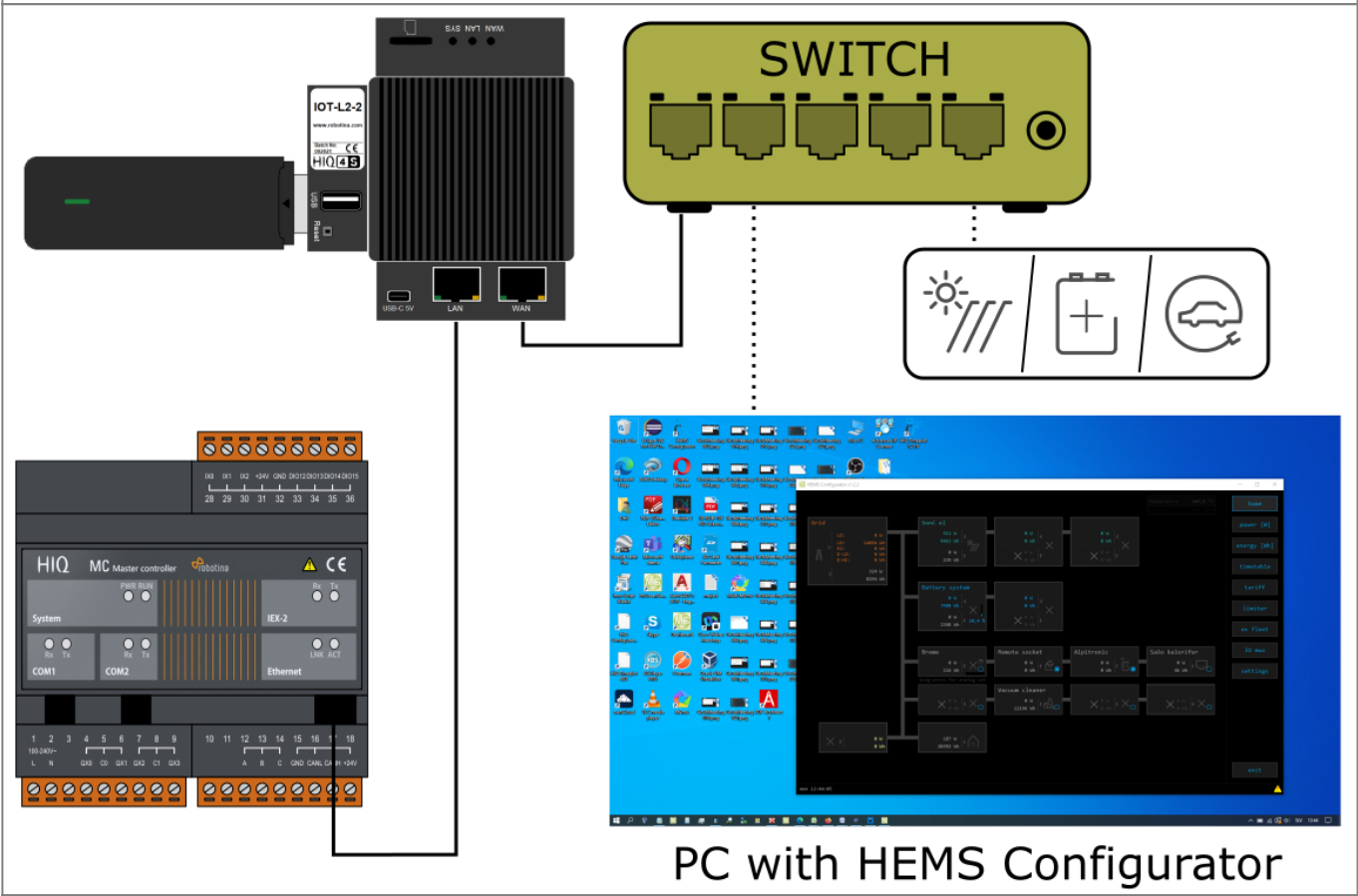
PC with HEMS Configurator

Default connection via LTE 4G modem:

NOTE: All connected devices will have internet access via LTE modem which can result in high costs on your LTE account.

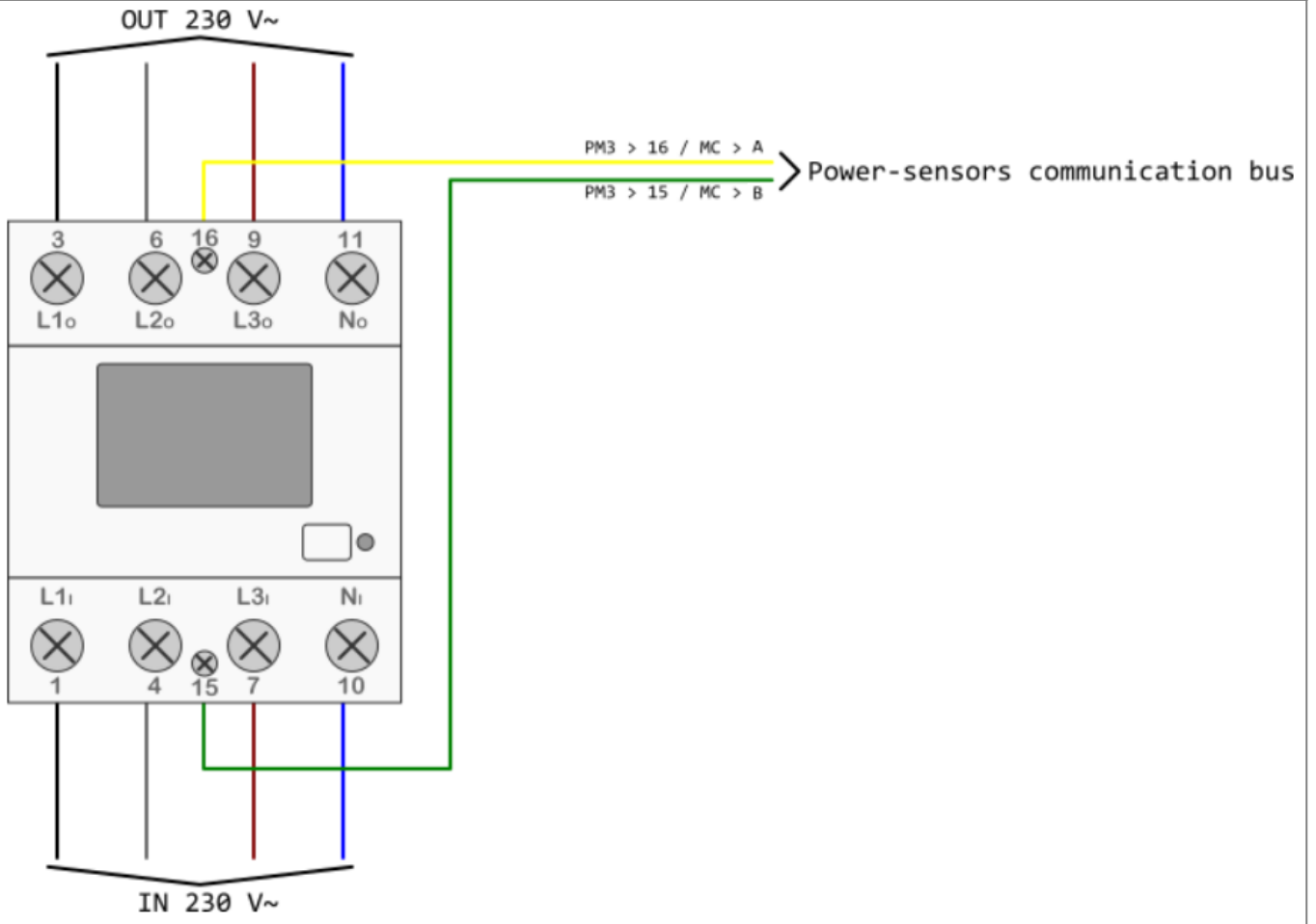


Optional LTE 4G modem connection:

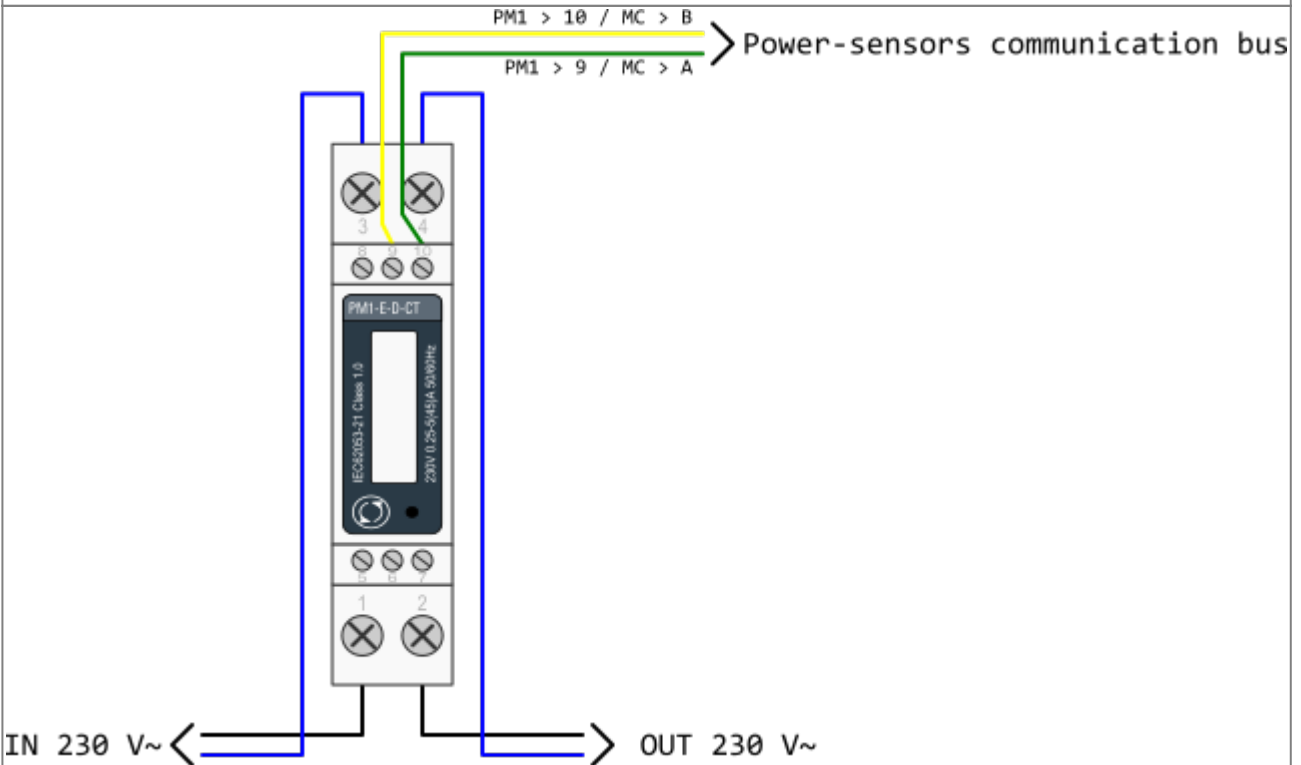


NOTE: Specific network requirements, i.e. static IP address can be configured on the cloud service.
Please contact [support](#).

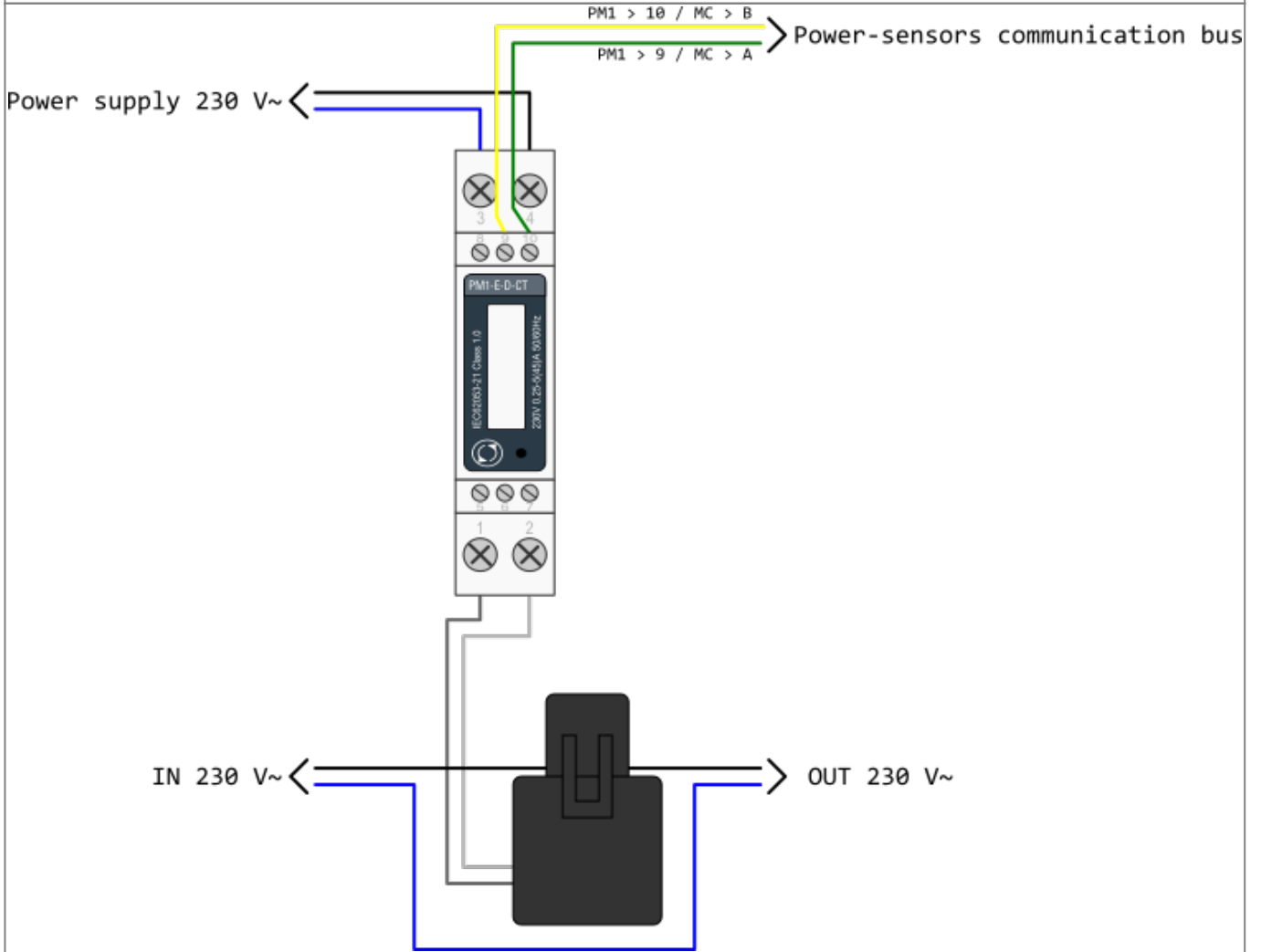
PM3-I-D



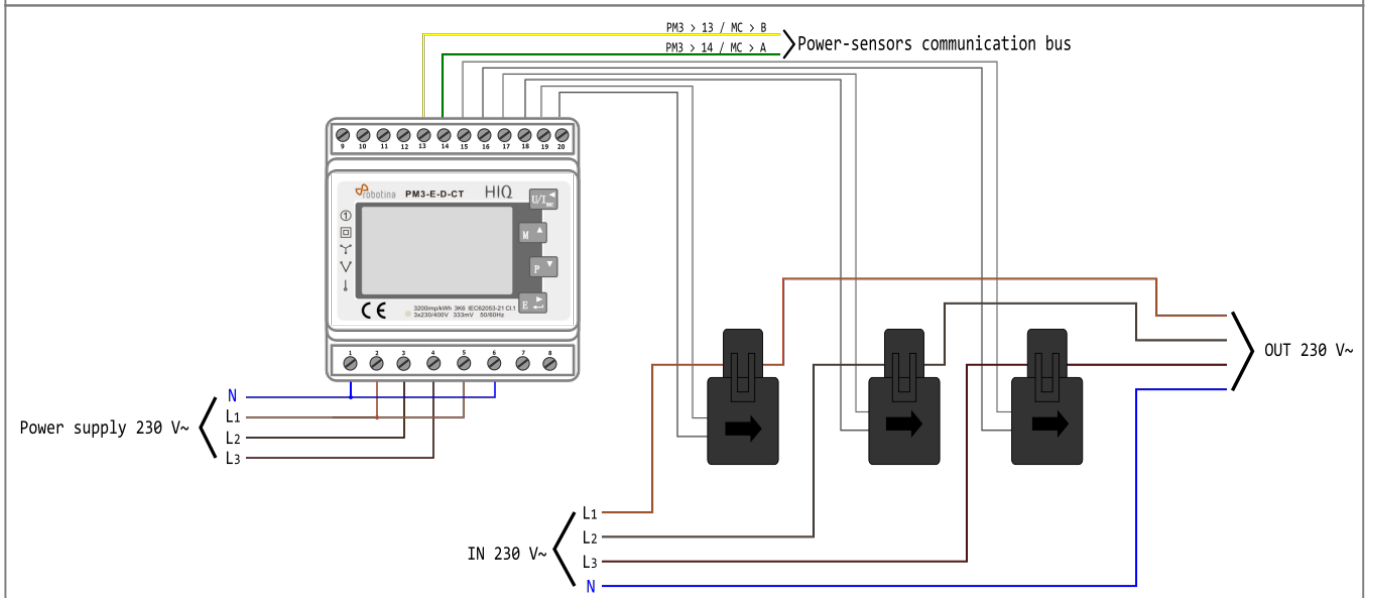
PM1-E-D

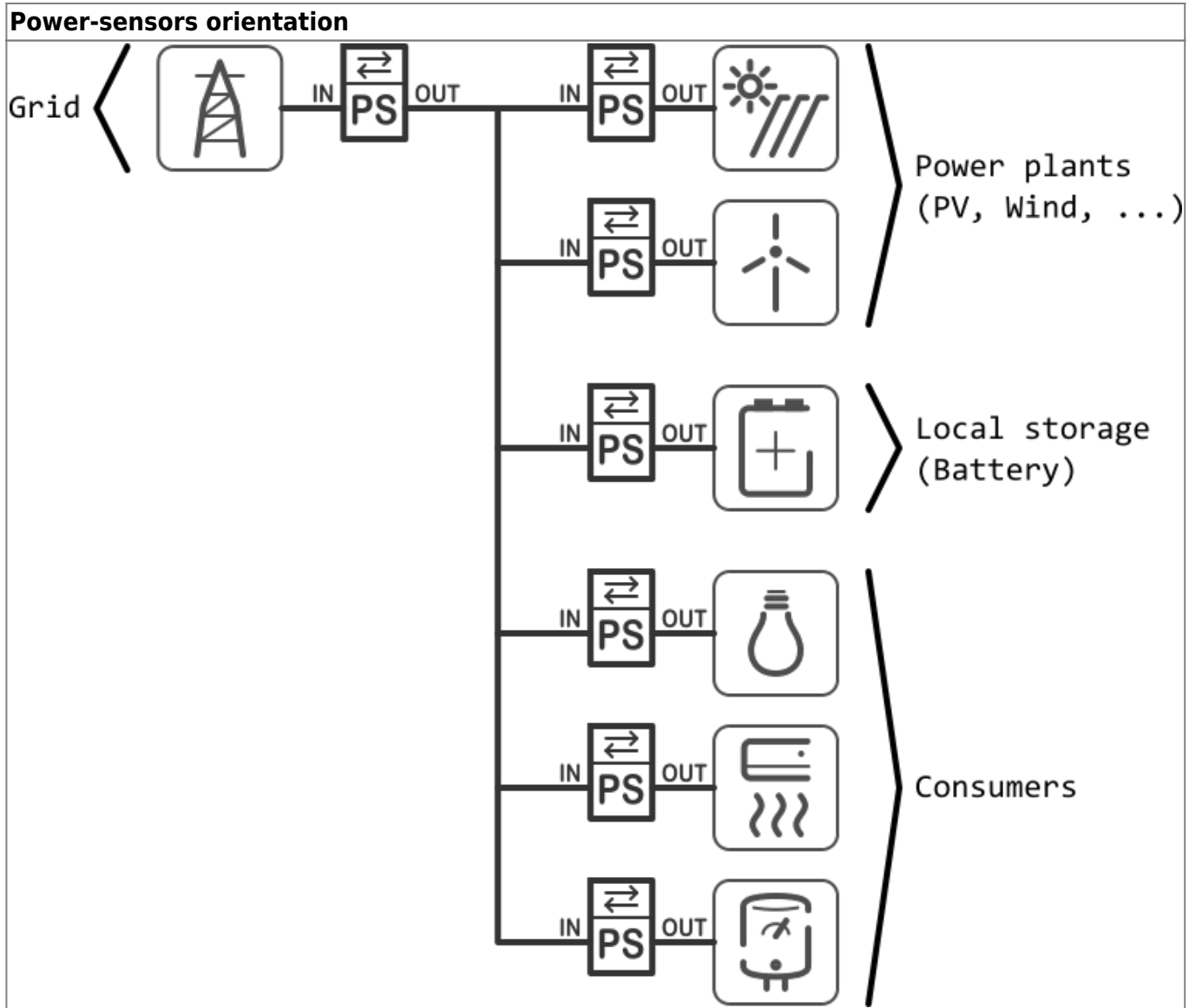


PM1-E-D-CT



PM3-E-D-CT





Control consumer by external signal

Connect external source to control device, e.g. thermostat signal on IX0 to control temperature by enabling/disabling connected device on QX0.

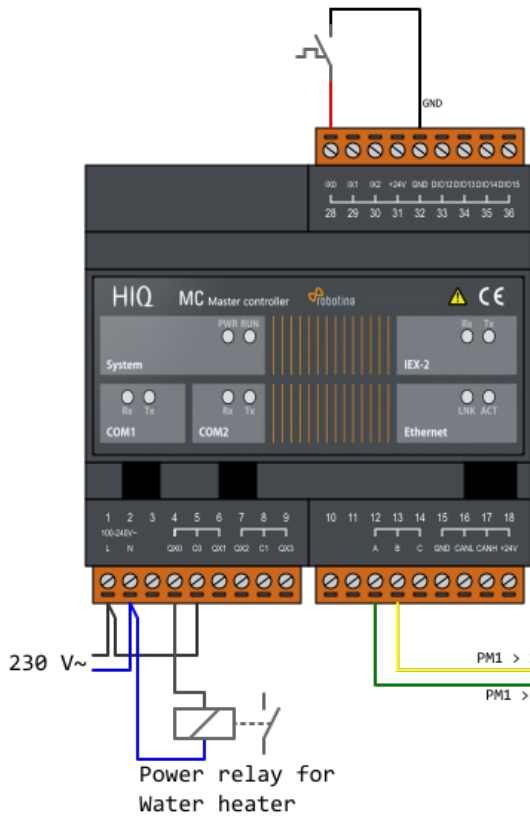
HEMS configurator

Using HEMS configurator settings page, set Digital 1 for consumer in this case water heater.

| CONSUMERS | icon | output | man.time | P nominal |
|--------------|--------------|-----------|----------|-----------|
| Water heater | Water heater | Digital-1 | 0 min | 2500 W |

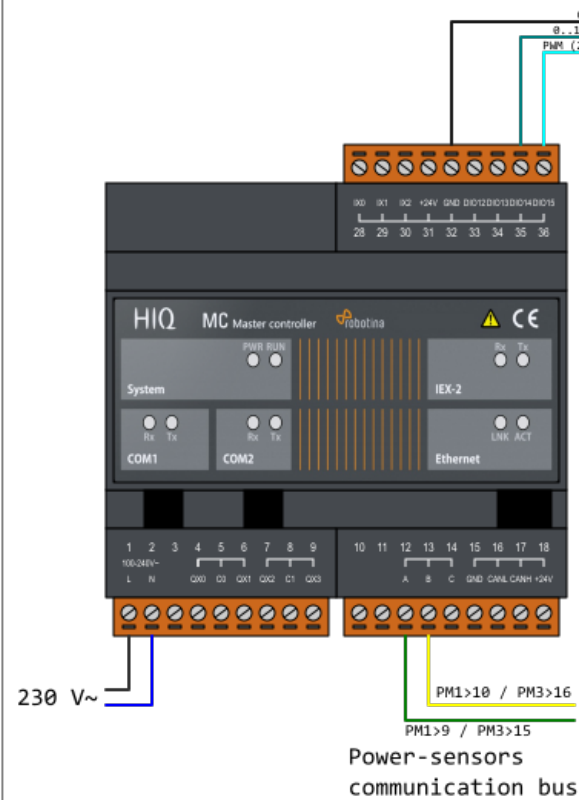
Using HEMS configurator IO mux page, set QX0 to Digital 1 and IX0 to Enable consumer 1:

| | Select input/output type | out mode |
|------|--------------------------|----------|
| QX0 | Digital-1 | normal |
| QX1 | / | normal |
| QX2 | / | normal |
| QX3 | / | normal |
| IO12 | / | normal |
| IO13 | / | normal |
| IO14 | / | normal |
| IO15 | / | normal |
| IX0 | Enable consumer-1 | normal |
| IX1 | / | normal |
| IX2 | / | normal |



Set analog for consumer 1

Connect analog device to IO14 for analog signal 0-10V or to IO15 for PWM signal (f=1kHz). Analog load is possible to set in configurator for consumer 1 only and reserved outputs are on IO14 & IO15.



Managed consumer 1 analog outputs

HEMS configurator

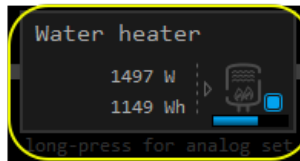
Using HEMS configurator settings page, set Analog for consumer in this case water heater.

| CONSUMERS | icon | output | man.time | P nominal |
|--------------|--------------|--------|----------|-----------|
| Water heater | Water heater | Analog | 0 min | 2500 W |

Using HEMS configurator IO mux page, set IO14 to Analog output 0-10V and IO15 to PWM output

| | Select input/output type | out mode |
|------|--------------------------|----------|
| QX0 | / | normal |
| QX1 | Digital-2 | normal |
| QX2 | Digital-3 | normal |
| QX3 | / | normal |
| IO12 | Digital-6 | normal |
| IO13 | / | normal |
| IO14 | Analog output 0-10V | normal |
| IO15 | PWM output | normal |
| IX0 | Toggle consumer-1 | normal |
| IX1 | Toggle consumer-2 | normal |
| IX2 | Toggle consumer-3 | normal |

On home page, set consumer 1 (water heater) to desired % of power.



NOTE: analog signal is available for consumer 1 on IO14 and IO15 only.

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