Controller van derden

Het product kan ook worden gekoppeld aan een controller van derden. U kunt externe controllers aansluiten met behulp van het Modbus-protocol, behalve bij een LG-controller. Als een controller van derden wordt gebruikt, wordt de LG-controller niet tegelijkertijd op AWHP toegepast.

Hoe een controller van derden te installeren

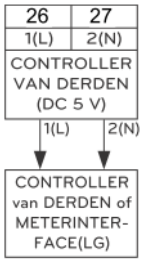
Volg de onderstaande procedures met stap 1 tot 4.

Stap 1. Controleer of de voeding van het apparaat is uitgeschakeld.

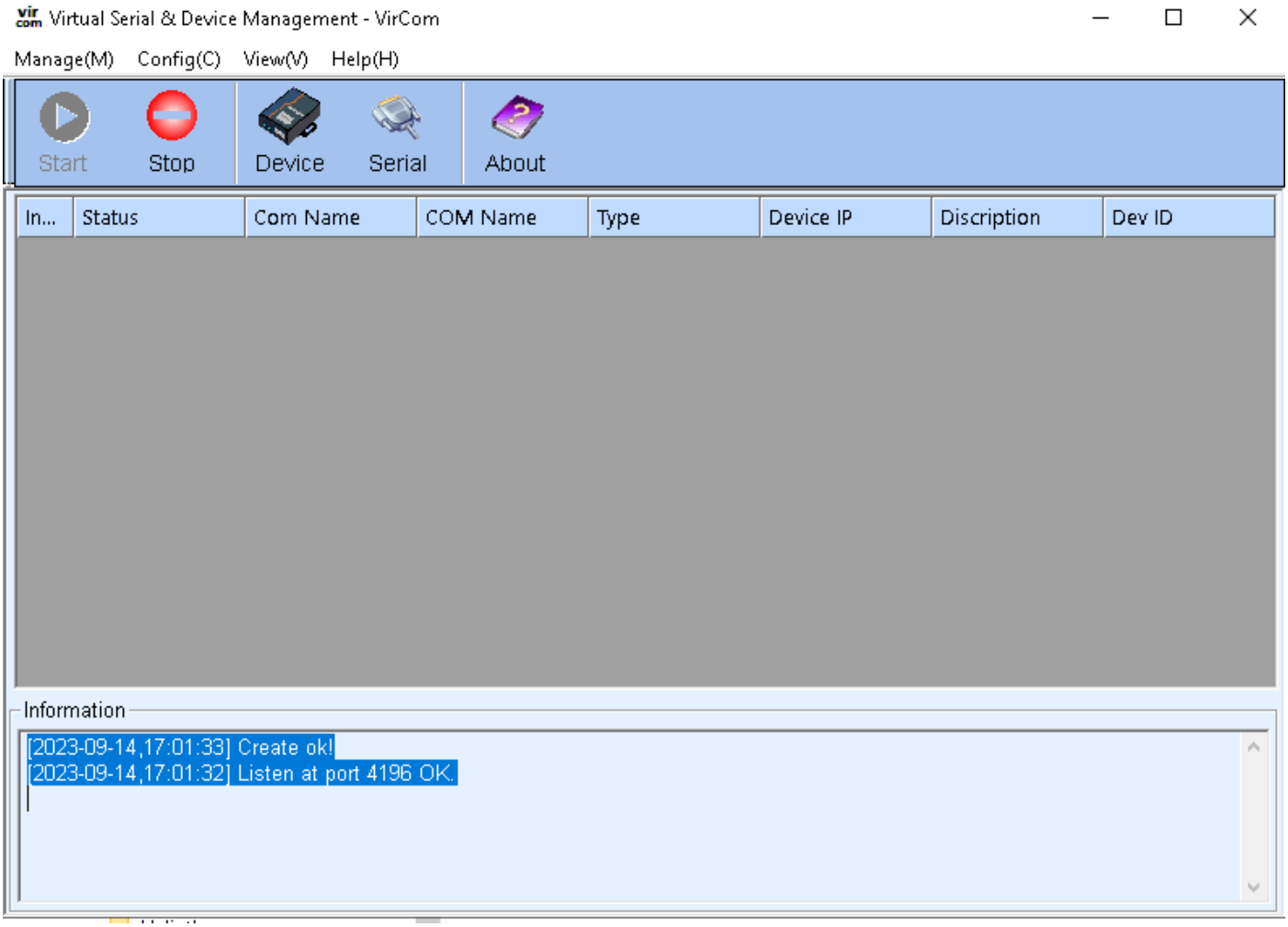
Stap 2. Demonteer de voorpanelen en zoek de schakelkast (binnen) van het apparaat.

Stap 3. Controleer of de kabelboom (wit) volledig in de printplaat van de binnenunit (CN_COM) zit.

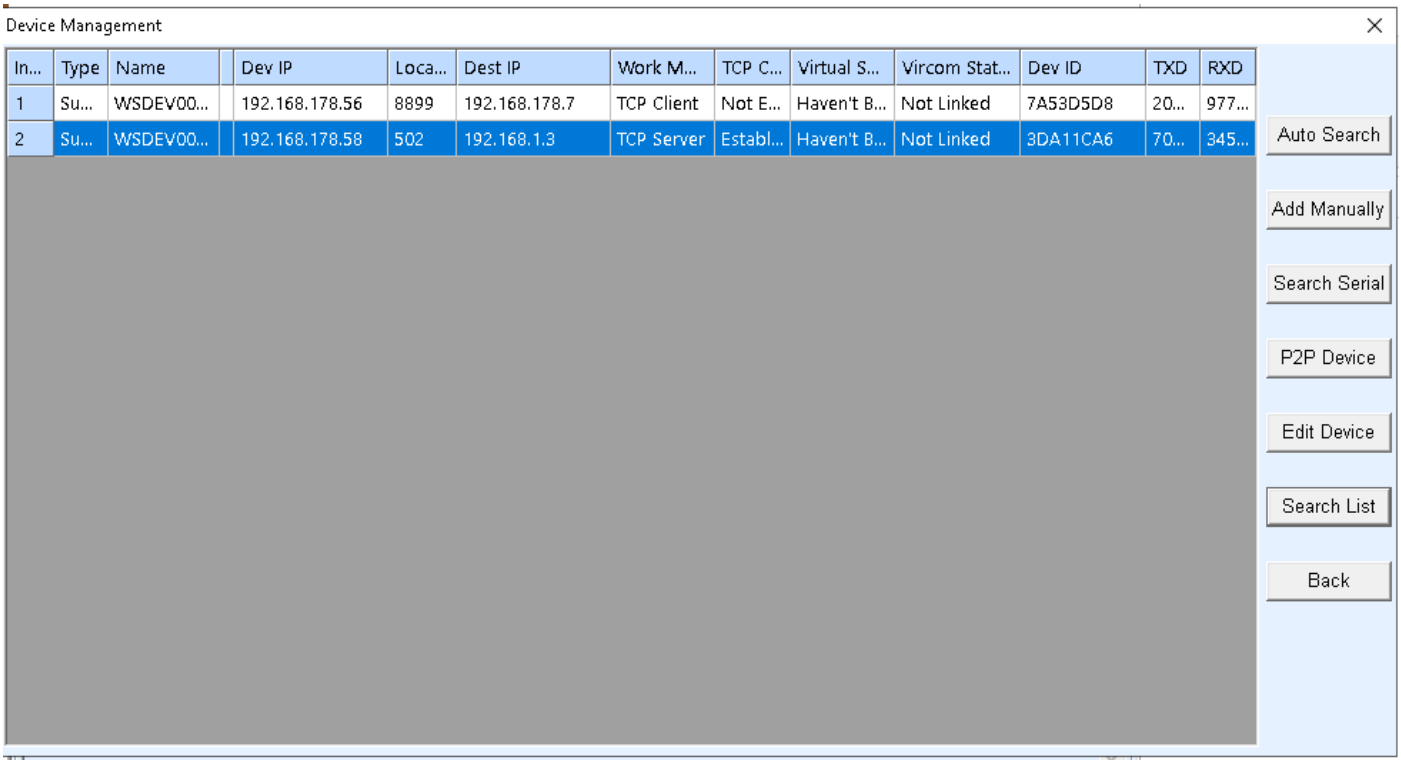
Stap 4. Sluit de controller van derden goed aan op klemmenblok 2 (11/12). (inclusief de meterinterfacemodule)



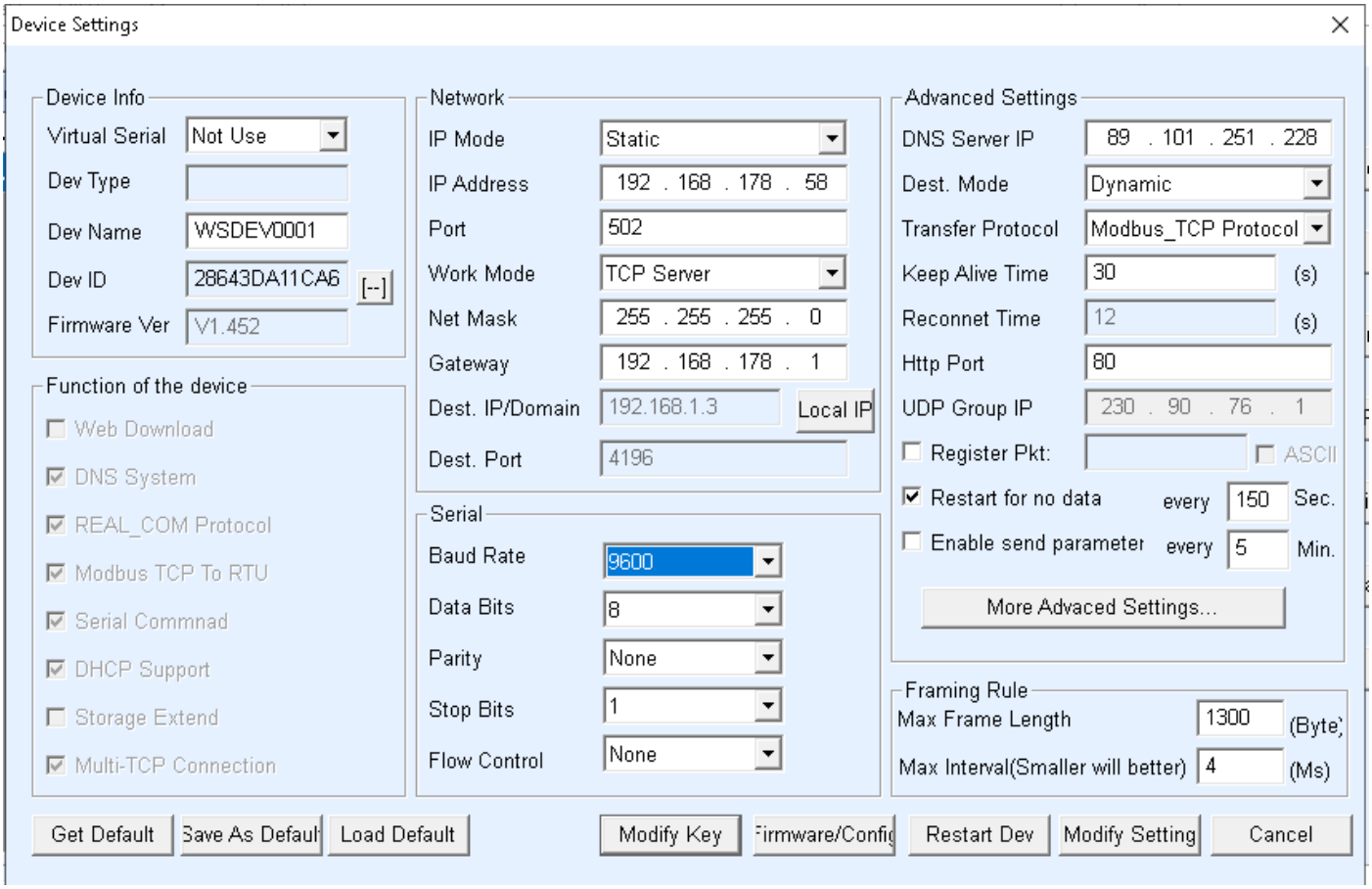
Om de Waveshare gateway te configureren gebruik je het programma VirCom.exe. Na het starten krijg je het volgende scherm:



Klik op “Device”. Het programma zal zoeken naar beschikbare gateways in het netwerk. In mijn geval zijn dat er 2.



Selecteer de juiste gateway en klik op “Edit Device”:



Je kunt nu de gateway configureren met de voor jou benodigde parameters:

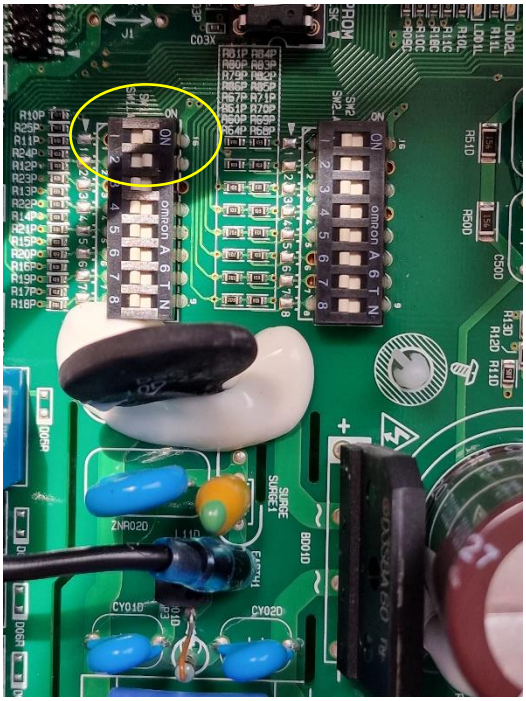
IP Mode:	Static
IP Addres:	Vul hier je lokaal IP adres voor de gateway
Port:	502
Work Mode:	TCP Server
Net Mask:	255.255.255.0
Gateway:	Vul hier je lokaal IP adres in van je Acces Point of Modem
Dest. IP/Domain:	192.168.1.3
Dest. Port:	4196
Serial:	9600
Data Bits:	8
Parity:	None
Stop Bits:	1
Flow Control:	None
DNS Server IP:	Vul hier een geschikte DNS server adres in
Desst. Mode:	Dynamic
Transfer Protocol:	Modbus_TCP_Protocol
Keep Alive Time:	Vul hier een tijd in waarbinnen normal gesproken communicatie plaats vindt. Als je maar 1 keer minuut gegevens afvraagt, dan moet deze tijd langer dan 60 s gezet worden.
Http Port:	80
Restart for no data:	Vul hier een tijd in, wanneer automatisch een connectie moet worden gemaakt nadat de verbinding is uitgevallen
Max Frame Length:	1300 Byte
Max Interval:	4 Ms

Instellingen LG:

Dipswitches:

Optie schakelaar 1

Beschrijving	Instelling		Standaard
MODBUS -communicatietype	1 ▯	Als Master (LG-uitbreidingsmodules)	1 ▯
	1 ▮	Als slaaf (controller van derden)	
MODBUS-functie	2 ▯	REGINE	2 ▯
	2 ▮	Uniform open protocol	
Antivriesmiddel	8 ▯	Er wordt geen antivriesmiddel gebruikt	8 ▯
	8 ▮	Er wordt antivriesmiddel gebruikt *	



Instellingen:

Modbus adres op 01.

Modbus adressen:

Input

Register	Description
30001	Error Code
30002	ODU operation Cycle 0 : Standby(OFF) / 1 : Cooling / 2 : Heating
30003	Water inlet temp. [0.1 °C ×10]
30004	Water outlet temp. [0.1 °C ×10]
30005	Backup heater outlet temp. [0.1 °C ×10]
30006	DHW tank water temp. [0.1 °C ×10]
30007	Solar collector temp. [0.1 °C ×10]
30008	Room air temp. (Circuit 1) [0.1 °C ×10]
30009	Current Flow rate [0.1 LPM ×10]
30010	Flow temp. (Circuit 2) [0.1 °C ×10]
30011	Room air temp. (Circuit 2) [0.1 °C ×10]
30012	Energy State input 0 : Energy state 0; 1: Energy state 1….
30013	Outdoor Air temp. [0.1 °C ×10]
30014	
30015	
30016	
30017	Pipe in temp [0.1 °C ×10]
30018	Pipe out temp [0.1 °C ×10]
30019	Suction temp [0.1 °C ×10]
30020	Fan [rpm]
30021	HEX temp [0.1 °C ×10]
30022	
30023	HighPress [mBar]
30024	LowPress [mBar]
30025	Inverter [Hz]
39998	Produc Group 0x8X (0x80, 0x83, 0x88, 0x89)
39999	Product Info. Split : 0 / Monobloc : 3 / High Temp. : 4 / Medium Temp. : 5 / System Boiler : 6

Holding

Register	Description
40001	Operation Mode 0 : Cooling / 4 : Heating / 3 : Auto
40002	Control method (Circuit 1/2) 0 : Water outlet temp. Control 1 : Water inlet temp. Control 2 : Room air control
40003	Target temp (Heating/Cooling) Circuit 1 [0.1 °C ×10]
40004	Room Air Temp. Circuit 1 [0.1 °C ×10]
40005	Shift value(Target) in auto mode Circuit 1 1K
40006	Target temp (Heating/Cooling) Circuit 2 [0.1 °C ×10]
40007	Room Air Temp. Circuit 2 [0.1 °C ×10]
40008	Shift value(Target) in auto mode Circuit 2 1K
40009	DHW Target temp. [0.1 °C ×10]
40010	Energy state input 0..8

Discrete

Register	Description
10001	Water flow status 0 : Flow rate ok / 1 : Flow rate too low
10002	Water Pump status 0 : Water Pump OFF / 1 : Water Pump ON
10003	Ext. Water Pump status 0 : Water Pump OFF / 1 : Water Pump ON
10004	Compressor status 0 : Compressor OFF / 1 : Compressor ON
10005	Defrosting status 0 : Defrost OFF / 1 : Defrost ON
10006	DHW heating status (DHW Thermal On/Off) 0 : DHW inactive / 1 : DHW active
10007	DHW Tank disinfection status 0 : Disinfection inactive / 1 : Disinfection active
10008	Silent mode status 0 : Silent mode inactive / 1 : Silent mode active
10009	Cooling status 0 : No cooling / 1 : Cooling operation
10010	Solar pump status 0 : Solar pump OFF / 1: Solar pump ON
10011	Backup heater (Step 1) status 0 : OFF / 1 : ON
10012	Backup heater (Step 2) status 0 : OFF / 1 : ON
10013	DHW boost heater status 0 : OFF / 1 : ON
10014	Error status 0 : no error / 1 : error state
10015	Emergency Operation Available (Space heating/cooling) 0 : Unavailable / 1 : Available
10016	Emergency Operation Available (DHW) 0 : Unavailable / 1 : Available
10017	Mix pump status 0 : Mix pump OFF / 1 : Mix pump ON

Coil

Register	Description
00001	Enable/Disable (Heating/Cooling) 0 : Operation OFF / 1 : Operation ON
00002	Enable/Disable (DHW) 0 : Operation OFF / 1 : Operation ON
00003	Silent Mode Set 0 : Silent mode OFF / 1 : Silent mode ON
00004	Trigger Disinfection operation 0 : Keep status / 1 : Operation start
00005	Emergency Stop 0 : Normal operation / 1 : Emergency stop
00006	Trigger Emergency Operation 0 : Keep status / 1 : Operation Start

HomeAssistant

Configurations.yaml

```
# Loads default set of integrations. Do not remove.
default_config:

automation: !include automations.yaml
script: !include scripts.yaml
scene: !include scenes.yaml


modbus:
  - type: tcp
    host: 192.168.178.58
    port: 502
    name: "lg_modbus"
    retry_on_empty: true
    retries: 10
    sensors:

    ##input
      - name: lg_error_code
        scan_interval: 120
        address: 0
        slave: 1
        input_type: input

      - name: lg_water_inlet_temp
        scale: 0.1
        precision: 1
        scan_interval: 15
        address: 2
        slave: 1
        unit_of_measurement: °C
        input_type: input

      - name: lg_water_outlet_temp
        scale: 0.1
        precision: 1
        scan_interval: 15
        address: 3
        slave: 1
        unit_of_measurement: °C
        input_type: input

      - name: lg_dhw_water_temp
        scale: 0.1
        precision: 1
        scan_interval: 30
        address: 5
        slave: 1
        unit_of_measurement: °C
        input_type: input

      - name: lg_room_air_temp_circuit1
        scale: 0.1
        precision: 1
        scan_interval: 60
        address: 7
        slave: 1
        unit_of_measurement: °C
        input_type: input

      - name: lg_current_flow_rate
        scale: 0.1
        precision: 1
        scan_interval: 30
        address: 8
        slave: 1
        unit_of_measurement: l/min
        input_type: input

      - name: lg_outdoor_air_temp
        scale: 0.1
        precision: 1
        scan_interval: 30
        address: 12
        slave: 1
        unit_of_measurement: °C
        input_type: input

      - name: lg_Pipe_in_temp
        scale: 0.1
        precision: 1
        scan_interval: 60
        address: 16
        slave: 1
        unit_of_measurement: °C
        input_type: input

      - name: lg_Fan_speed
        scale: 1
        precision: 0
        scan_interval: 60
        address: 19
        slave: 1
        unit_of_measurement: rpm
        input_type: input

      - name: lg_high_press
        scale: 1
        precision: 0
        scan_interval: 60
        address: 22
        slave: 1
        unit_of_measurement: mBar
        input_type: input
```

```
    - name: lg_low_press
      scale: 1
      precision: 0
      scan_interval: 60
      address: 23
      slave: 1
      unit_of_measurement: mBar
      input_type: input

    - name: lg_inverter
      scale: 1
      precision: 0
      scan_interval: 30
      address: 24
      slave: 1
      unit_of_measurement: Hz
      input_type: input

      ##holding
    - name: lg_operation_mode
      scan_interval: 30
      address: 0
      slave: 1
      input_type: holding

    - name: lg_control_method
      scan_interval: 30
      address: 1
      slave: 1
      input_type: holding

    - name: lg_target_temp_circuit1
      scale: 0.1
      precision: 1
      scan_interval: 30
      address: 2
      slave: 1
      unit_of_measurement: °C
      input_type: holding

    - name: lg_room_air_temp_circuit1_holding
      scale: 0.1
      precision: 1
      scan_interval: 30
      address: 3
      slave: 1
      unit_of_measurement: °C
      input_type: holding

    - name: lg_shift_value_in_auto_mode_circuit1
      scan_interval: 30
      address: 4
      slave: 1
      input_type: holding

    - name: lg_shift_value_in_auto_mode_circuit2
      scan_interval: 30
      address: 7
      slave: 1
      input_type: holding

    - name: lg_dhw_target_temp
      scale: 0.1
      precision: 1
      scan_interval: 30
      address: 8
      slave: 1
      unit_of_measurement: °C
      input_type: holding

  binary_sensors:
      ## discrete
    - name: lg_water_flow_status
      scan_interval: 30
      address: 0
      slave: 1
      input_type: discrete_input

    - name: lg_water_pump_status
      scan_interval: 30
      address: 1
      slave: 1
      input_type: discrete_input

    - name: lg_compressor_status
      scan_interval: 30
      address: 3
      slave: 1
      input_type: discrete_input

    - name: lg_defrosting_status
      scan_interval: 30
      address: 4
      slave: 1
      input_type: discrete_input

    - name: lg_dhw_heating_status
      scan_interval: 30
      address: 5
      slave: 1
      input_type: discrete_input

    - name: lg_silent_mode_status
      scan_interval: 30
      address: 7
      slave: 1
      input_type: discrete_input

    - name: lg_error_status
      scan_interval: 30
      address: 13
      slave: 1
```

```
        input_type: discrete_input

    switches:
        ##coil
      - name: lg_enable_disable_heating/cooling
        address: 0
        slave: 1
        write_type: coil
        verify:

      - name: lg_enable_disable_dhw
        address: 1
        slave: 1
        write_type: coil
        verify:

      - name: lg_silent_mode_set
        address: 2
        slave: 1
        write_type: coil
        verify:

      - name: lg_trigger_desinfection_operation
        address: 3
        slave: 1
        write_type: coil
        verify:

      - name: lg_emergency_stop
        address: 4
        slave: 1
        write_type: coil
        verify:

      - name: lg_trigger_emergency_operation
        address: 5
        slave: 1
        write_type: coil
        verify:

input_number:
  box_lg3:
    name: Numeric Input Box_lg3
    initial: 21
    min: 15
    max: 35
    step: 0.1
    mode: box
  box_lg4:
    name: Numeric Input Box_lg4
    initial: 21
    min: 15
    max: 25
    step: 0.1
    mode: box
  box_lg5:
    name: Numeric Input Box_lg5
    initial: 0
    min: -5
    max: 5
    step: 1
    mode: box
  box_lg9:
    name: Numeric Input Box_lg9
    initial: 50
    min: 40
    max: 58
    step: 0.1
    mode: box

  box_tb_min:
    name: Numeric Input Box_tb_min
    initial: -20
    min: -30
    max: 0
    step: 0.1
    mode: box
  box_tb_max:
    name: Numeric Input Box_tb_max
    initial: 8
    min: 0
    max: 30
    step: 0.1
    mode: box
  box_target_min:
    name: Numeric Input Box_target_min
    initial: 27
    min: 20
    max: 50
    step: 0.1
    mode: box
  box_target_max:
    name: Numeric Input Box_target_max
    initial: 31
    min: 20
    max: 50
    step: 0.1
    mode: box

sensor:
  - platform: filter
    name: "filtered_buiten_temperature"
    entity_id: sensor.shellyplusht_buiten_temperature
    filters:
      - filter: outlier
        window_size: 4
        radius: 4.0
      - filter: lowpass
        time_constant: 10
        precision: 2
  - platform: filter
    name: "filtered_buiten_temperature2"
    entity_id: sensor.shelly1pm_wp_temperature_3
```

```
    filters:
      - filter: outlier
        window_size: 2
        radius: 1.0
      - filter: lowpass
        time_constant: 10
      - filter: time_simple_moving_average
        window_size: "00:02"
        precision: 2
  - platform: filter
    name: "filtered_kamer_temperature"
    entity_id: sensor.shelly1pm_kamer_temperature_3
    filters:
      - filter: outlier
        window_size: 2
        radius: 1.0
      - filter: lowpass
        time_constant: 300
      - filter: time_simple_moving_average
        window_size: "00:30"
        precision: 2
  - platform: filter
    name: "filtered_wp_kwth_neg"
    entity_id: sensor.wp_kwth
    filters:
      - filter: range
        lower_bound: -20.0
        upper_bound: 0.0
  - platform: filter
    name: "filtered_wp_kwth"
    entity_id: sensor.wp_kwth
    filters:
      - filter: range
        lower_bound: 0.0
        upper_bound: 20.0

  - platform: integration
    source: sensor.wp_kwth_neg
    name: wp_neg_thermal_energy
    round: 2
  - platform: integration
    source: sensor.wp_kwth_pos
    name: wp_pos_thermal_energy
    round: 2

template:
  - sensor:
      - name: temp_stooklijn
        unique_id: id_temp_stooklijn
        state: >
            {% if states('sensor.filtered_buiten_temperature2') | float < states('input_number.box_tb_min') | float  %}
                {% set lghp_stooklijn = states('input_number.box_target_max') | float %}
            {% elif states('sensor.filtered_buiten_temperature2') | float > states('input_number.box_tb_max') | float  %}
                {% set lghp_stooklijn = states('input_number.box_target_min') | float %}
            {% else %}
                {% set lghp_stooklijn = (states('input_number.box_target_max') | float - (( states('sensor.filtered_buiten_temperature2') |
float - states('input_number.box_tb_min') | float ) * (states('input_number.box_target_max') | float - states('input_number.box_target_min') |
float)/(states('input_number.box_tb_max') | float - states('input_number.box_tb_min') | float) )) %}
            {% endif %}
            {{ lghp_stooklijn | float | round(2)  }}
        unit_of_measurement: °C

  - sensor:
      - name: temp_wp_aanvoer
        unique_id: id_temp_wp_aanvoer
        state: "{{ (states('sensor.shelly1pm_wp_temperature') | float ) | round(2) }}"
        unit_of_measurement: °C

  - sensor:
      - name: temp_wp_retour
        unique_id: id_temp_wp_retour
        state: "{{ (states('sensor.shelly1pm_wp_temperature_2') | float ) | round(2) }}"
        unit_of_measurement: °C

  - sensor:
      - name: wp_kwth
        unique_id: id_wp_kwth
        state: >
            {% if states('sensor.lg_current_flow_rate')| float < 6 %}
                {% set lghp_thermal_power = 0.0 | float %}
            {% else %}
                {% set lghp_thermal_power = ((states('sensor.temp_wp_aanvoer') | float - states('sensor.temp_wp_retour') | float) * 1.176 *
1.16277 ) | float %}
            {% endif %}
                {{ lghp_thermal_power | float | round(2)  }}
        unit_of_measurement: kW

  - sensor:
      - name: wp_kwth_pos
        unique_id: id_wp_kwth_pos
        state: "{{ (states('sensor.filtered_wp_kwth') | float * 1.0) | round(2) }}"
        unit_of_measurement: kW

  - sensor:
      - name: wp_kwth_neg
        unique_id: id_wp_kwth_neg
        state: "{{ (states('sensor.filtered_wp_kwth_neg') | float * -1.0) | round(2) }}"
        unit_of_measurement: kW

  - sensor:
      - name: wp_cop
        unique_id: id_wp_cop
        state: "{{ ((states('sensor.wp_kwth') | float) * 1000 / (states('sensor.kwh_meter_wp_lg_active_power') | float)) | round(2) }}"
        unit_of_measurement: kWth/kWe
```

Automation.yaml

```
- id: lg_holding3
  alias: Target water temperatuur
  description: Instellen gewenste water temperatuur
  trigger:
  - platform: state
    entity_id:
    - input_number.box_lg3
  condition: []
  action:
  - service: modbus.write_register
    data:
      address: 2
      slave: 1
      hub: lg_modbus
      value: '{{ (states.input_number.box_lg3.state) | float * 10  }}'
  mode: single
- id: lg_holding4
  alias: Target kamer temperatuur
  description: Instellen gewenste kamer temperatuur
  trigger:
  - platform: state
    entity_id:
    - input_number.box_lg4
  condition: []
  action:
  - service: modbus.write_register
    data:
      address: 3
      slave: 1
      hub: lg_modbus
      value: '{{ (states.input_number.box_lg4.state) | float * 10  }}'
  mode: single
- id: lg_holding5
  alias: Target shift temperatuur
  description: Instellen gewenste verschuiving temperatuur
  trigger:
  - platform: state
    entity_id:
    - input_number.box_lg5
  condition: []
  action:
  - service: modbus.write_register
    data:
      address: 4
      slave: 1
      hub: lg_modbus
      value: '{%set Correctie = states("input_number.box_lg5") | int%} {% if Correctie
        < 0 %} {% set Correctie = Correctie + 65536 | int(16) %} {% endif %} {{ Correctie
        }}'
  mode: single
- id: lg_holding9
  alias: Target DHW temperatuur
  description: Instellen gewenste tapwater temperatuur
  trigger:
  - platform: state
    entity_id:
    - input_number.box_lg9
  condition: []
  action:
  - service: modbus.write_register
    data:
      address: 8
      slave: 1
      hub: lg_modbus
      value: '{{ (states.input_number.box_lg9.state) | float * 10  }}'
  mode: single
- id: lg_holding3_update
  alias: Update LG Target water temperatuur
  description: Update LG Target water temperatuur
  trigger:
  - platform: state
    entity_id:
    - sensor.lg_target_temp_circuit1
  condition: []
  action:
  - service: input_number.set_value
    data:
      value: '{{ (states.sensor.lg_target_temp_circuit1.state) }}'
    target:
      entity_id: input_number.box_lg3
  mode: single
- id: lg_holding4_update
  alias: Update LG Target kamer temperatuur
  description: Update LG Target kamer temperatuur
  trigger:
  - platform: state
    entity_id:
    - sensor.lg_room_air_temp_circuit1_holding
  condition: []
  action:
  - service: input_number.set_value
    data:
      value: '{{ (states.sensor.lg_room_air_temp_circuit1_holding.state) }}'
    target:
      entity_id: input_number.box_lg4
  mode: single
- id: lg_holding5_update
  alias: Update LG Target shift temperatuur
  description: Update LG Target shift temperatuur
  trigger:
  - platform: state
    entity_id:
    - sensor.lg_shift_value_in_auto_mode_circuit1
  condition: []
  action:
  - service: input_number.set_value
```

```
    data:
      value: '{{ (states.sensor.lg_shift_value_in_auto_mode_circuit1.state) }}'
    target:
      entity_id: input_number.box_lg5
  mode: single
- id: lg_holding9_update
  alias: Update LG Target DHW temperatuur
  description: Update LG Target DHW temperatuur
  trigger:
  - platform: state
    entity_id:
    - sensor.lg_dhw_target_temp
  condition: []
  action:
  - service: input_number.set_value
    data:
      value: '{{ (states.sensor.lg_dhw_target_temp.state) }}'
    target:
      entity_id: input_number.box_lg9
  mode: single

- id: '1676731122476'
  alias: 'Warmtepomp: Stille modus aan/uit'
  description: 'Warmtepomp: Stille modus aan/uit omschakeling'
  trigger:
  - platform: state
    entity_id:
    - binary_sensor.lg_defrosting_status
    for:
      hours: 0
      minutes: 0
      seconds: 0
    from: 'off'
    to: 'on'
    id: 'Trigger_ID01: Defrost gestart'
  - platform: state
    entity_id:
    - switch.lg_silent_mode_set
    from: unavailable
    to: 'off'
    id: 'Trigger_ID02: Silent mode switch komt weer beschikbaar'
  - platform: numeric_state
    entity_id: sensor.filtered_buiten_temperature2
    above: 5
    id: 'Trigger_ID03: Voortschrijdend gemiddelde Temperatuur buiten boven 5 graden'
  - platform: numeric_state
    entity_id: sensor.shelly1pm_wp_temperature_3
    above: 6
    id: 'Trigger_ID04: Temperatuur buiten boven 6 graden'
  - platform: state
    entity_id:
    - binary_sensor.lg_compressor_status
    from: 'off'
    to: 'on'
    id: 'Trigger_ID05: Compressor gaat weer aan'
  - platform: numeric_state
    entity_id: sensor.filtered_buiten_temperature2
    id: 'Trigger_ID06: Voortschrijdend gemiddelde Temperatuur buiten onder 2.5 graden'
    below: 2.5
  - platform: time
    at: '13:00:00'
    id: 'Trigger_ID07: om 13 uur '
  - platform: numeric_state
    entity_id: sensor.filtered_buiten_temperature2
    id: 'Trigger_ID08: Voortschrijdend gemiddelde Temperatuur buiten onder 3.4 graden'
    below: 3.4
  - platform: numeric_state
    entity_id: sensor.shellyplusht_buiten_humidity
    id: 'Trigger_ID09: Vochtigheid boven 90%'
    above: 90
  condition: []
  action:
  - if:
    - condition: trigger
      id: 'Trigger_ID01: Defrost gestart'
    then:
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    - delay:
        hours: 0
        minutes: 17
        seconds: 0
        milliseconds: 0
    - service: switch.turn_off
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
  - if:
    - condition: trigger
      id: 'Trigger_ID02: Silent mode switch komt weer beschikbaar'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'off'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      above: 5
    then:
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID02: Silent mode switch
      komt weer beschikbaar'
  - if:
    - condition: trigger
      id: 'Trigger_ID03: Voortschrijdend gemiddelde Temperatuur buiten boven 5 graden'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'off'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
```

```
      above: 5
    then:
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID03: Voortschrijdend
      gemiddelde Temperatuur buiten boven 5 graden'
  - if:
    - condition: trigger
      id: 'Trigger_ID04: Temperatuur buiten boven 6 graden'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'off'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      above: 5
    then:
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID04: Temperatuur buiten
      boven 6 graden'
  - if:
    - condition: trigger
      id: 'Trigger_ID05: Compressor gaat weer aan'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'off'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      above: 5
    then:
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID05: Compressor gaat
      weer aan en temperatuur > 5'
  - if:
    - condition: trigger
      id: 'Trigger_ID06: Voortschrijdend gemiddelde Temperatuur buiten onder 2.5 graden'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'on'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      below: 3
    then:
    - service: switch.turn_off
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID06: Voortschrijdend
      gemiddelde Temperatuur buiten onder 2.5 graden'
  - if:
    - condition: trigger
      id: 'Trigger_ID07: om 13 uur '
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      for:
        hours: 21
        minutes: 0
        seconds: 0
      state: 'on'
    then:
    - service: switch.turn_off
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    - delay:
        hours: 2
        minutes: 5
        seconds: 0
        milliseconds: 0
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID07: om 13 uur '
  - if:
    - condition: trigger
      id: 'Trigger_ID08: Voortschrijdend gemiddelde Temperatuur buiten onder 3.4 graden'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'on'
    - condition: numeric_state
      entity_id: sensor.shellyplusht_buiten_humidity
      above: 96
    then:
    - service: switch.turn_off
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID08: Voortschrijdend
      gemiddelde Temperatuur buiten onder 3.4 graden'
  - if:
    - condition: trigger
      id: 'Trigger_ID09: Vochtigheid boven 90%'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'on'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      below: 3.4
    then:
    - service: switch.turn_off
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID09: Vochtigheid boven
      90%'
```

```
  - if:
    - condition: trigger
      id: 'Trigger_ID05: Compressor gaat weer aan'
    - condition: state
      entity_id: binary_sensor.lg_silent_mode_status
      state: 'off'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      below: 5
    then:
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    - delay:
        hours: 0
        minutes: 17
        seconds: 0
        milliseconds: 0
    - service: switch.turn_off
      data: {}
      target:
        entity_id: switch.lg_silent_mode_set
    alias: 'Perform an action if: When triggered by Trigger_ID05: Compressor gaat
      weer aan en temperatuur < 5'
  mode: single
- id: '1676797926588'
  alias: 'Warmtepomp: Gewenste temperatuur en aan/uit instellen'
  description: Warmtepomp Gewenste temperatuur en aan/uit instellen
  trigger:
  - platform: time
    at: 06:00:00
    id: 'Trigger_ID01: 6 uur ''s morgens'
  - platform: time
    at: 08:00:00
    id: 'Trigger_ID02: 8 uur ''s morgens'
  - platform: time
    at: '10:00:00'
    id: 'Trigger_ID03: 10 uur ''s morgens'
  - platform: time
    at: '22:00:00'
    id: 'Trigger_ID04: 10 uur ''s avonds'
  - platform: time
    at: 00:00:00
    id: 'Trigger_ID05: 12 uur ''s nachts'
  - platform: time
    at: 02:00:00
    id: 'Trigger_ID06: 2 uur ''s nachts'
  - platform: time
    at: '10:30:00'
    id: 'Trigger_ID07: 10:30 uur ''s morgens'
  - platform: time
    at: '20:00:00'
    id: 'Trigger_ID08: 8 uur ''s avonds'
  condition: []
  action:
  - if:
    - condition: trigger
      id: 'Trigger_ID01: 6 uur ''s morgens'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      below: 8
    - condition: numeric_state
      entity_id: sensor.lg_target_temp_circuit1
      below: 21
    - condition: numeric_state
      entity_id: sensor.shelly1pm_kamer_temperature_3
      below: 21.5
    then:
    - service: input_number.set_value
      data:
        value: 21
      target:
        entity_id: input_number.box_lg3
    alias: 'Perform an action if: When triggered by Trigger_ID01: 6 uur ''s morgens'
  - if:
    - condition: trigger
      id: 'Trigger_ID02: 8 uur ''s morgens'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      below: 8
    - condition: numeric_state
      entity_id: sensor.lg_target_temp_circuit1
      below: 21
    - condition: numeric_state
      entity_id: sensor.shelly1pm_kamer_temperature_3
      below: 21.5
    then:
    - service: input_number.set_value
      data:
        value: 21
      target:
        entity_id: input_number.box_lg3
    alias: 'Perform an action if: When triggered by Trigger_ID02: 8 uur ''s morgens'
  - if:
    - condition: trigger
      id: 'Trigger_ID03: 10 uur ''s morgens'
    - condition: numeric_state
      entity_id: sensor.lg_target_temp_circuit1
      below: 21
    then:
    - service: input_number.set_value
      data:
        value: 21
      target:
        entity_id: input_number.box_lg3
    alias: 'Perform an action if: When triggered by Trigger_ID03: 10 uur ''s morgens'
  - if:
    - condition: trigger
      id: 'Trigger_ID04: 10 uur ''s avonds'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      above: 4
```

```
    - condition: numeric_state
      entity_id: sensor.lg_target_temp_circuit1
      above: 20
    - condition: numeric_state
      entity_id: sensor.shelly1pm_kamer_temperature_3
      above: 22
    then:
    - service: input_number.set_value
      data:
        value: 20
      target:
        entity_id: input_number.box_lg3
    alias: 'Perform an action if: When triggered by Trigger_ID04: 10 uur ''s avonds'
  - if:
    - condition: trigger
      id: 'Trigger_ID05: 12 uur ''s nachts'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      above: 6
    - condition: numeric_state
      entity_id: sensor.lg_target_temp_circuit1
      above: 20
    - condition: numeric_state
      entity_id: sensor.shelly1pm_kamer_temperature_3
      above: 22.5
    then:
    - service: input_number.set_value
      data:
        value: 20
      target:
        entity_id: input_number.box_lg3
    alias: 'Perform an action if: When triggered by Trigger_ID05: 12 uur ''s nachts'
  - if:
    - condition: trigger
      id: 'Trigger_ID06: 2 uur ''s nachts'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      above: 8
    - condition: numeric_state
      entity_id: sensor.kwh_meter_wp_lg_active_power
      above: 200
    - condition: numeric_state
      entity_id: sensor.shelly1pm_kamer_temperature_3
      above: 22
    then:
    - service: input_number.set_value
      data:
        value: 20
      target:
        entity_id: input_number.box_lg3
    - service: switch.turn_off
      data: {}
      target:
        entity_id: switch.lg_enable_disable_heating_cooling
    - delay:
        hours: 0
        minutes: 5
        seconds: 0
        milliseconds: 0
    - service: switch.turn_on
      data: {}
      target:
        entity_id: switch.lg_enable_disable_heating_cooling
    alias: 'Perform an action if: When triggered by Trigger_ID06: 2 uur ''s nachts'
  - if:
    - condition: trigger
      id: 'Trigger_ID07: 10:30 uur ''s morgens'
    - condition: numeric_state
      entity_id: sensor.kwh_meter_wp_lg_active_power
      below: 200
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      below: 10
    then:
    - service: input_number.set_value
      data:
        value: 22
      target:
        entity_id: input_number.box_lg3
    - delay:
        hours: 0
        minutes: 15
        seconds: 0
        milliseconds: 0
    - service: input_number.set_value
      data:
        value: 21
      target:
        entity_id: input_number.box_lg3
    alias: 'Perform an action if: When triggered by Trigger_ID07: 10:30 uur ''s morgens'
  - if:
    - condition: trigger
      id: 'Trigger_ID08: 8 uur ''s avonds'
    - condition: numeric_state
      entity_id: sensor.filtered_buiten_temperature2
      above: 10
    - condition: numeric_state
      entity_id: sensor.lg_target_temp_circuit1
      above: 20
    - condition: numeric_state
      entity_id: sensor.shelly1pm_kamer_temperature_3
      above: 22
    then:
    - service: input_number.set_value
      data:
        value: 20
      target:
        entity_id: input_number.box_lg3
    alias: 'Perform an action if: When triggered by Trigger_ID08: 8 uur ''s avonds'
  mode: single
- id: '1679084935339'
  alias: Update na herstart
  description: Update LG
```

```
trigger:
- platform: homeassistant
  event: start
condition: []
action:
- delay:
    hours: 0
    minutes: 5
    seconds: 0
    milliseconds: 0
- service: input_number.set_value
  data:
    value: '{{ (states.sensor.lg_target_temp_circuit1.state) }}'
  target:
    entity_id: input_number.box_lg3
- service: input_number.set_value
  data:
    value: '{{ (states.sensor.lg_dhw_target_temp.state) }}'
  target:
    entity_id: input_number.box_lg9
- service: input_number.set_value
  data:
    value: '{{ (states.sensor.lg_room_air_temp_circuit1_holding.state) }}'
  target:
    entity_id: input_number.box_lg4
- service: input_number.set_value
  data:
    value: '{{ (states.sensor.lg_shift_value_in_auto_mode_circuit1.state) }}'
  target:
    entity_id: input_number.box_lg5
mode: single
```