# REACT

**Belimo – Description of functions & wiring diagrams**

*20231002*
*Document version: 1*

# Content

## Balanced air flow control

# Product description

## Climate products



**REACT** Parasol Zenith

Comfort module with integrated, pressure independent VAV control.

## Duct mounted products



**REACT** V BMB

Damper for variable or constant flow regulation (Modbus).



**REACT** V BBAC

Damper for variable or constant flow regulation (BACnet).



**REACT** V BMP

Damper for variable or constant flow regulation (MP-bus).

## Room controllers



**DETECT** IAQ

$CO_2$ and temperature controller (Modbus).



**DETECT** IAQ OCS

$CO_2$ and temperature controller that also detects occupancy (Modbus).



**DETECT** IAQ D

$CO_2$ and temperature controller for duct installation (Modbus).



**DETECT** Occupancy

Occupancy detector for ceiling installation.



**LUNA** RC

Room controller for temperature control, with display (Modbus).



**LUNA** RC $CO_2$

Room controller for temperature control and $CO_2$, with display (Modbus).



**LUNA** RE

Room controller for temperature control (Modbus).



**DETECT** Occupancy

Occupancy detector for wall and corner installation.

# Constant flow regulation

Air flow measurement and regulating damper to maintain the set air flow.
Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

### Air flow regulation

Vmin    :  Constant flow

Vmax    :  Nominal flow

Mode  :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol       :  Modbus alt BACnet

## Wiring diagram

**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

| ⊥<br>(-) | ~<br>(+) | Y | U | C₁<br>D- | C₂<br>D+ |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 |

$$-U--$$

$$-Y---$$

24 V AC/DC

Modbus/BACnet

*Modbus/BACnet communication not available

## Notes

# Air flow control

Air flow measurement and regulating damper that variably controls between the minimum and maximum air flow depending on the control signal.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

### Air flow regulation

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 (2)-10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram

**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*



*Modbus/BACnet communication not available

## Notes

# Two-flow control with occupancy detector

Air flow measurement and regulating damper that controls the air flow on the set position. The damper switches via occupancy detection between two fixed flows.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

### Air flow regulation

Vmin   :  Unoccupied flow

Vmax   :  Occupancy flow

Mode  :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol       :  Modbus alt BACnet

## Wiring diagram



**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

**DETECT** Occupancy*

| ⊥ (-) | ~ (+) | Y | U | C₁ D- | C₂ D+ |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 |

| NC | C | NO | 24 | ~ |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

24 V AC/DC

Modbus/BACnet

*Modbus/BACnet communication not available

## Notes

**Swegon**

# Air flow control with temperature and $CO_2$ function

Air flow measurement and regulating damper that variably controls between the minimum and maximum air flow depending on the current temperature and the $CO_2$ content in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

### Air flow regulation

Vmin   :  Minimum air flow

Vmax   :  Maximum air flow

Mode   :  0 - 10 V

Set point source  :  Analogue

Bus protocol        :  Modbus alt BACnet

## Wiring diagram



REACT V BMB
REACT V BBAC
REACT V BMP*

DETECT IAQ**
DETECT IAQ D**

*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Air flow control with temperature, $CO_2$ and occupancy function

Air flow measurement and regulating damper that variably controls the air flow between the minimum and maximum flow rate depending on the current temperature and the $CO_2$ content in occupancy mode. Occupancy is detected via internal occupancy sensor. The damper is regulated to minimum flow rate in no-occupancy mode.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

**Air flow regulation**

Vmin  :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol  :  Modbus alt BACnet

## Wiring diagram



**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

**DETECT** IAQ OCS**

*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Air flow control with temperature and $CO_2$ function via external occupancy detector

Air flow measurement and regulating damper that variably controls the air flow between the minimum and maximum flow rate depending on the current temperature and the $CO_2$ content in occupancy mode. Occupancy is detected via external occupancy sensor. The damper is regulated to minimum flow rate in no-occupancy mode.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

**Air flow regulation**

Vmin   :   Minimum air flow
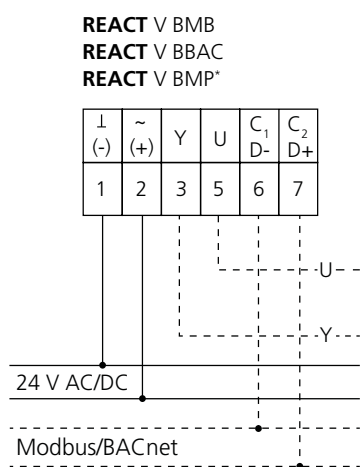
Vmax   :   Maximum air flow

Mode   :   0 - 10 V

Set point source   :   Analogue

Bus protocol       :   Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Air flow control with temperature controller for demand control and temperature regulation

Air flow measurement and regulating damper that variably controls between the set minimum and maximum flow rate (cooling function) depending on the set temperature set point. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings
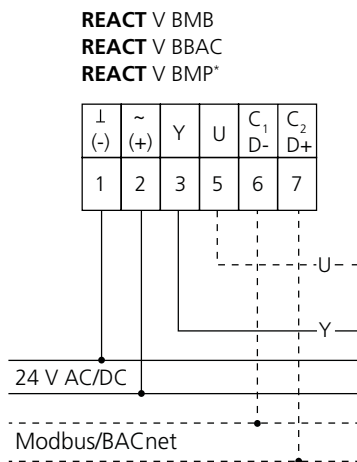
**Air flow regulation**

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 (2)-10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Air flow control with temperature controller for demand control and temperature regulation

Air flow measurement and regulating damper that variably controls between the set minimum and maximum flow rate (cooling function) depending on the set temperature set point. Control of thermo-actuators for cooling/heating.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

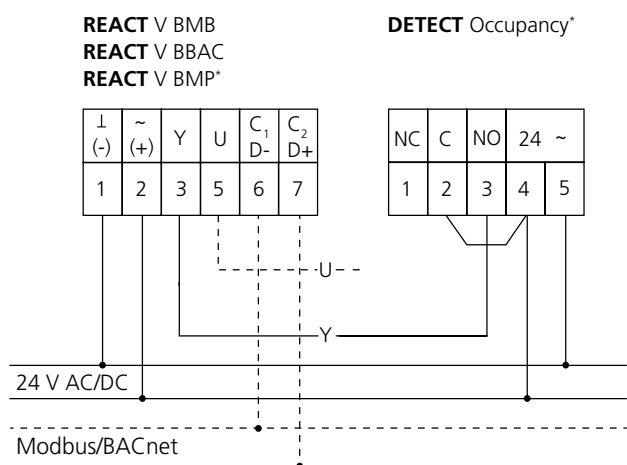## Settings

### Air flow regulation

Vmin  :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

**BACnet communication not available

## Notes

# Air flow control with temperature controller for demand control and temperature regulation

Air flow measurement and regulating damper that variably controls between the set minimum and maximum flow rate (cooling function) depending on the set temperature set point. Control of thermo-actuators for cooling/heating.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Potential to connect condensation sensor.
Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

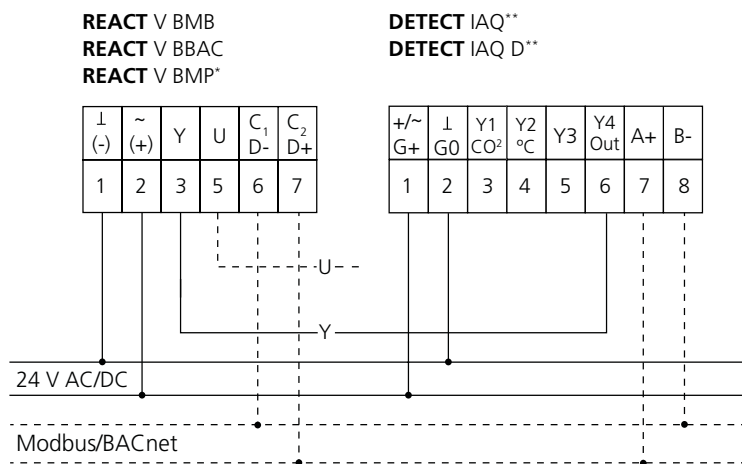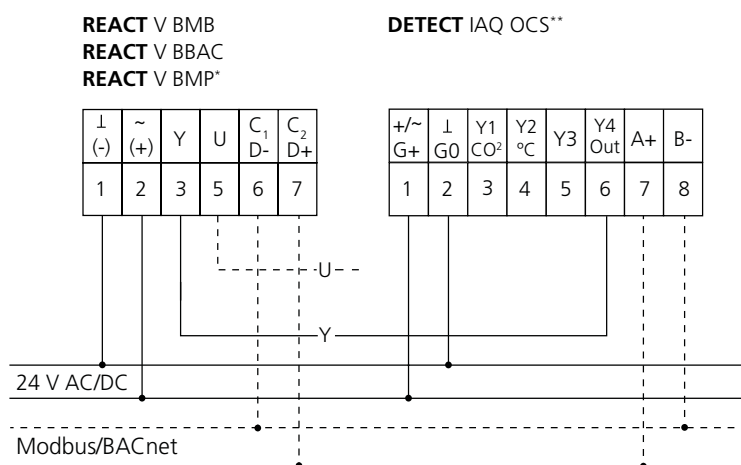### Air flow regulation

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 - 10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram

**REACT** Parasol Zenith        **LUNA** RC**

| ⊥ (-) | ~ (+) | Y | U | C₁ D- | C₂ D+ |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 |

| 24V AC/DC | 0 Vac | 0-10V VAV | 0-10V Fan | G0 Day/ night | Cool | Cool 0-10V | Heat | Heat 0-10V | CO₂ ext sp | Modbus | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | G0 | Y1 | Y2 | DI1 | A1 | Y3 | A2 | Y4 | U1 | A+ | B- | C |

| Sensor NTC10 | 0 Vac |
|---|---|
| S/DI2 | G0 |

-U-

-Y-

24 V AC/DC

Modbus/BACnet

Ts

Ts

Cond

**BACnet communication not available

## Notes

Swegon

# Air flow control with temperature and $CO_2$ controller for demand control and temperature regulation

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the set temperature set point (cooling function) and the $CO_2$ content in the room. Control of thermo-actuators for cooling/heating.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Potential to connect condensation sensor.
Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings
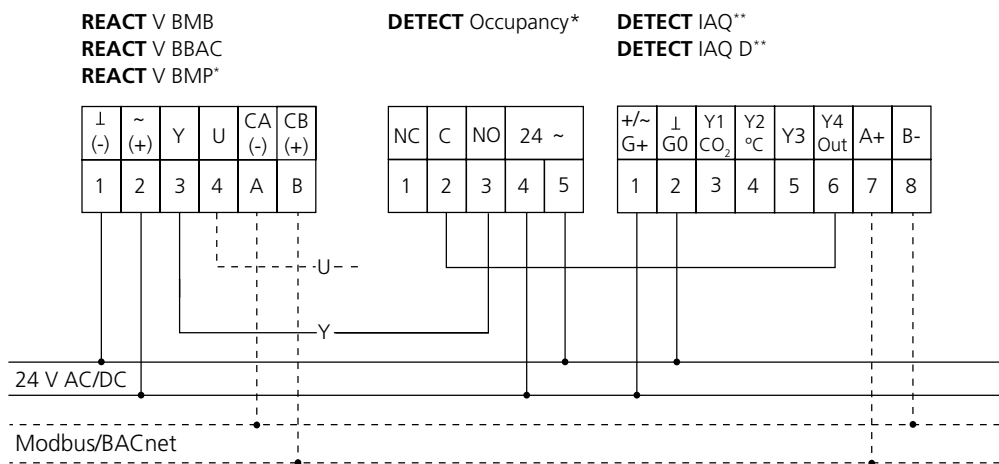
**Air flow regulation**

Vmin  :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol  :  Modbus alt BACnet

## Wiring diagram

REACT Parasol Zenith        LUNA RC $CO_2$**

| ⊥ (-) | ~ (+) | Y | U | $C_1$ D- | $C_2$ D+ |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 |

| 24V AC/DC | 0 Vac | 0-10V VAV | 0-10V Fan | G0 Day/ night | Cool | Cool 0-10V | Heat | Heat 0-10V | $CO_2$ ext sp | Modbus | | | Sensor NTC10 | 0 Vac |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | G0 | Y1 | Y2 | DI1 | A1 | Y3 | A2 | Y4 | U1 | A+ | B- | C | S/DI2 | G0 |

- U -
- Y -
Ts
Ts
Cond

24 V AC/DC

Modbus/BACnet

**BACnet communication not available

## Notes

# Air flow control with temperature and $CO_2$ controller for demand control and temperature regulation

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the set temperature set point (cooling function) and the $CO_2$ content in the room. Control of thermo-actuators for cooling/heating.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

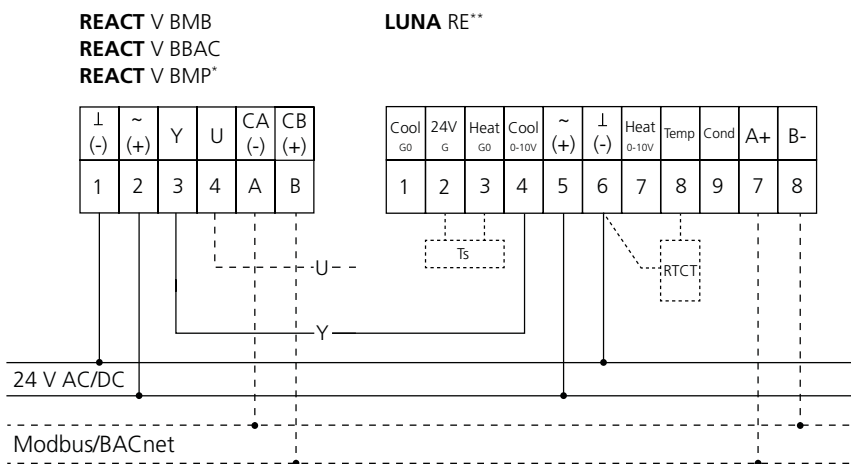### Air flow regulation

Vmin     :  Minimum air flow

Vmax    :  Maximum air flow

Mode   :  0 - 10 V

Set point source  :  Analogue

Bus protocol        :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Air flow control with controller for demand control

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the control signal.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings
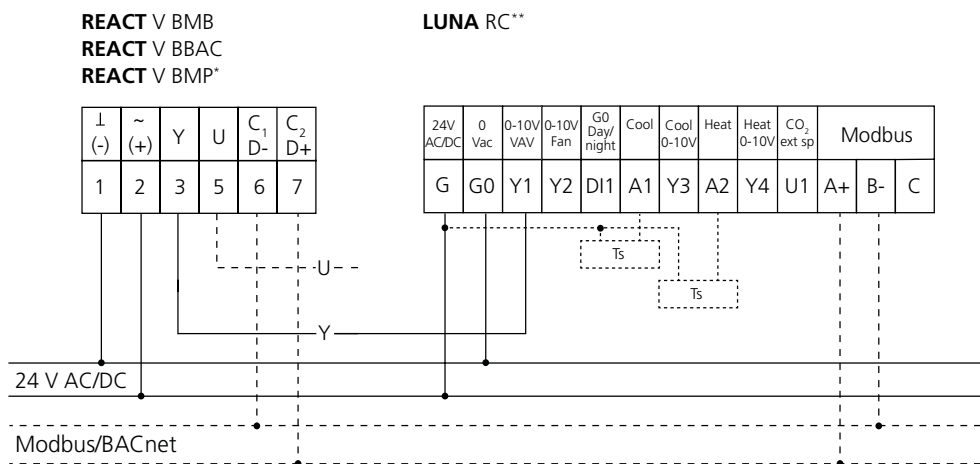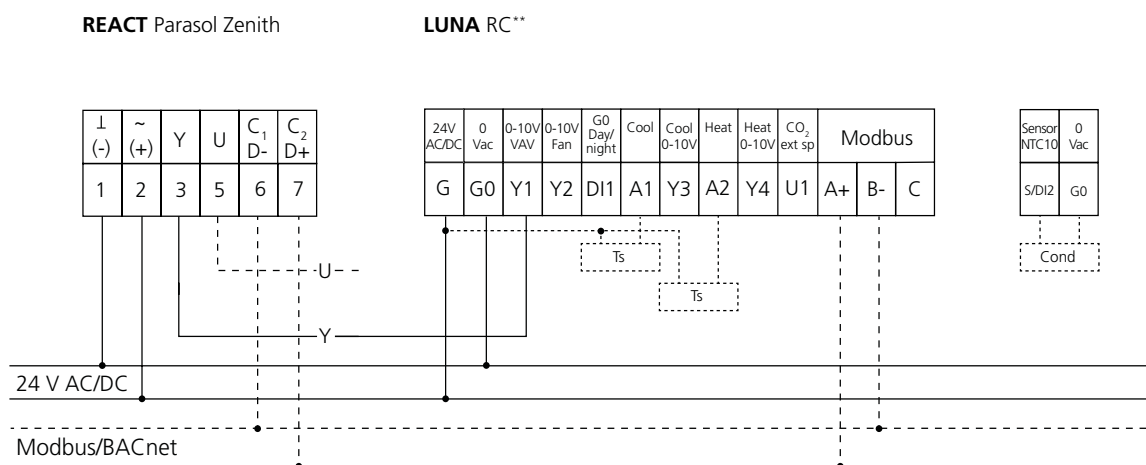
### Air flow regulation

Vmin   :   Minimum air flow

Vmax   :   Maximum air flow

Mode   :   0 (2)-10 V

Set point source   :   Analogue

Bus protocol       :   Modbus alt BACnet

## Wiring diagram



**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

Controller for demand control
(Room controller/DUC)

| $\perp$ (-) | ~ (+) | Y | U | $C_1$ | $C_2$ |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 |

| Y | $\perp$ (-) | ~ (+) | Modbus/ BACnet | |
|---|---|---|---|---|
| | | | (-) | (+) |

- - - - - - - ·U- -

- - - - - Y -

24 V AC/DC

Modbus/BACnet

*Modbus/BACnet communication not available

## Notes

# Air flow control with temperature controller and temperature regulation for demand control via external occupancy sensor

Air flow measurement and regulating damper that variably controls between the set minimum and maximum flow rate (cooling function) depending on the set temperature set point in occupancy mode. Occupancy is detected via external occupancy sensor. The room is regulated to minimum flow rate in no-occupancy mode. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

**Air flow regulation**
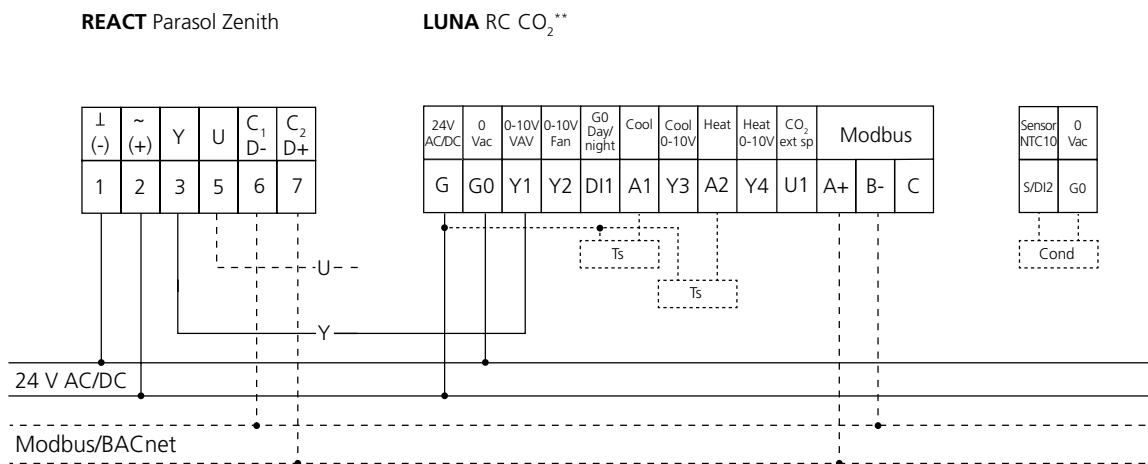
Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 (2)-10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

Swegon

# Air flow control with controller for demand control via external occupancy sensor

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the control signal in occupancy mode. Occupancy is detected via external occupancy sensor. The room is regulated to minimum flow rate in no-occupancy mode.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

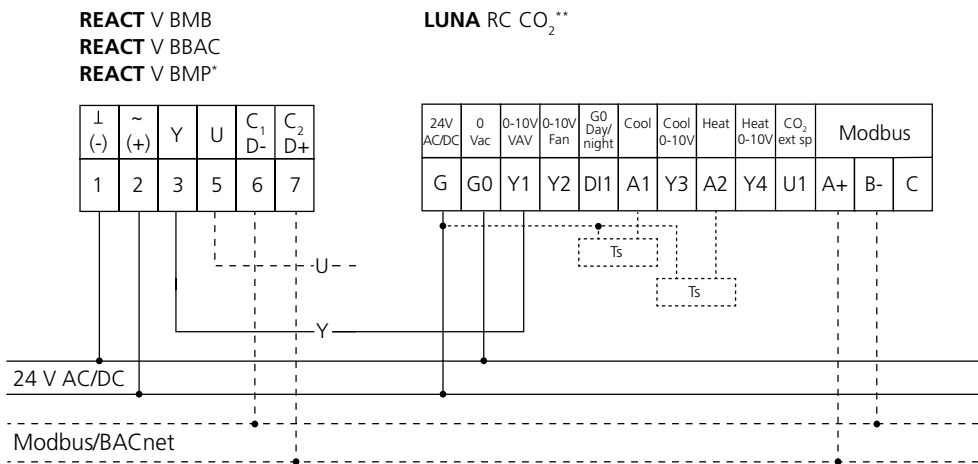### Air flow regulation

Vmin  :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol    :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

# Air flow control with temperature controller for demand control and absence control

Air flow measurement and regulating damper that variably controls between the set minimum and maximum flow rate (cooling function) depending on the set temperature set point in occupancy mode. The room is set to absence temperature set point in no-occupancy mode. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

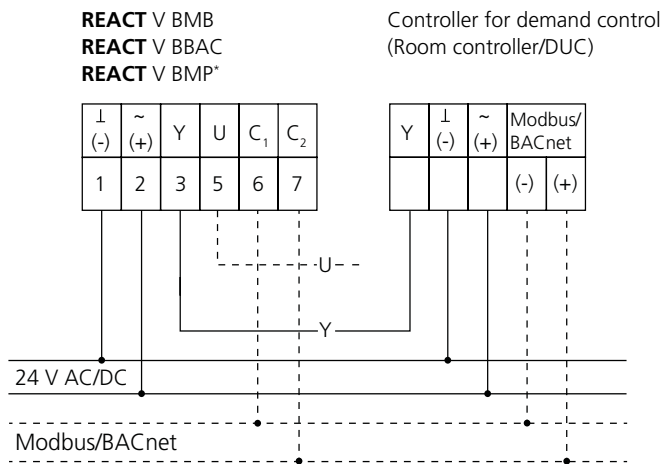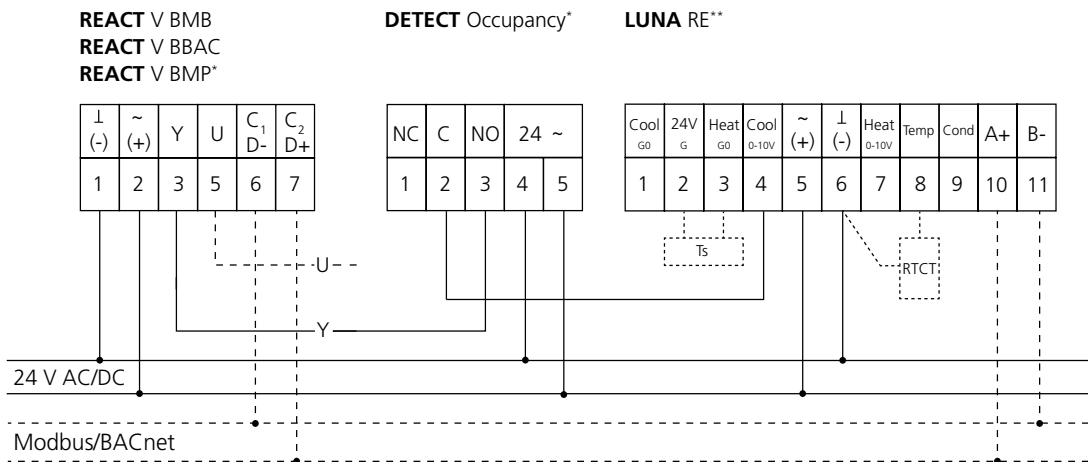**Air flow regulation**

Vmin  :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol  :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

**BACnet communication not available

## Notes

# Air flow control with demand control via Modbus or BACnet communication

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the set demand.

Demand control via Modbus/BACnet communication.

## Settings

| **Air flow regulation** | **BACnet** | **Modbus** |
|---|---|---|
| Vmin : Minimum air flow | Set point source, SpSource (MV[122]) : 2 | Set point source (Address 118) : 1 |
| Vmax : Maximum air flow | Set point, SpRel (MO[1]) : 0...10000 | Setpoint (Address 0) : 0...10000 |
| Set point source : Analogue | 0 = 0% (min. flow), 10000 = 100% (max. flow) | 0 = 0% (min. flow), 10000 = 100% (max. flow) |
| Bus protocol : Modbus alt BACnet | For more information, see BACnet documentation for REACT Belimo. | For more information, see Modbus documentation for REACT Belimo. |

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

# Parallel controlled air flow control

Air flow measurement and regulating damper that variably controls the air flow in parallel between minimum and maximum flow rate depending on the control signal.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

**Air flow regulation**
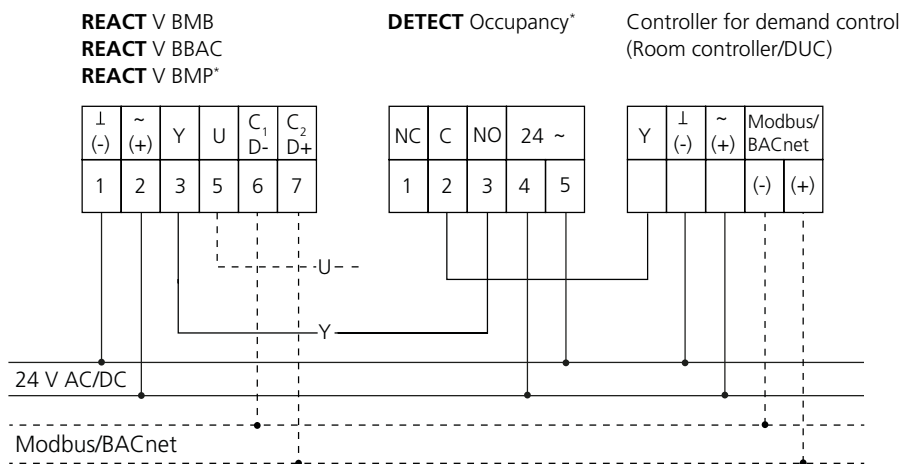
Vmin    :  Minimum air flow

Vmax    :  Maximum air flow

Mode   :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

## Wiring diagram

**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

| ⊥ (-) | ~ (+) | Y | U | $C_1$ D- | $C_2$ D+ |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 |

| ⊥ (-) | ~ (+) | Y | U | $C_1$ D- | $C_2$ D+ |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 |

-U--

-U--

-Y--

24 V AC/DC

Modbus/BACnet

*Modbus/BACnet communication not available

## Notes

Swegon

# Parallel controlled two-flow control with occupancy detector

Air flow measurement and regulating damper that controls the air flow on the set position. Via occupancy detection, the dampers switch between unoccupied and occupancy flow.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

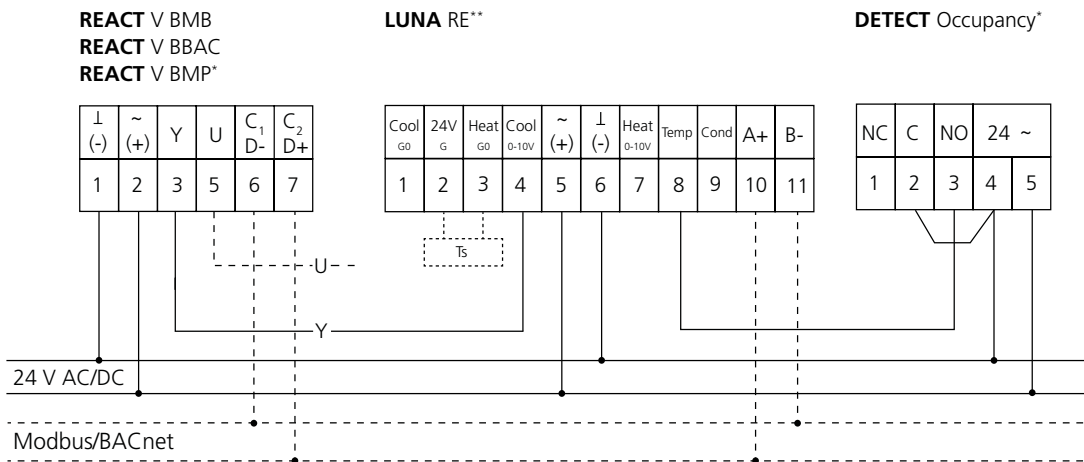## Settings

### Air flow regulation

Vmin    :  Unoccupied flow

Vmax    :  Occupancy flow

Mode    :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

# Parallel controlled air flow control with temperature and $CO_2$ function

Air flow measurement and regulating damper that variably controls the air flow in parallel between the minimum and maximum air flow depending on the current temperature and the $CO_2$ content in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

### Air flow regulation

Vmin    :  Minimum air flow

Vmax    :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol        :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Parallel controlled air flow control with temperature, $CO_2$ and occupancy function

Air flow measurement and regulating damper that variably controls the air flow in parallel between the minimum and maximum flow rate depending on the current temperature and the $CO_2$ content in occupancy mode. Occupancy is detected via internal occupancy sensor. The damper is regulated to minimum flow rate in no-occupancy mode.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings
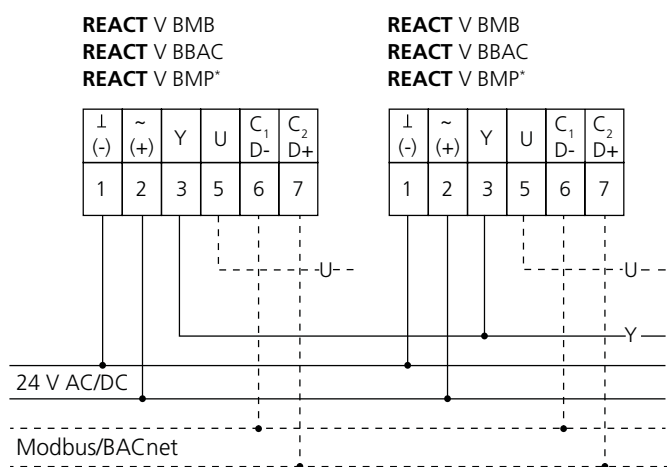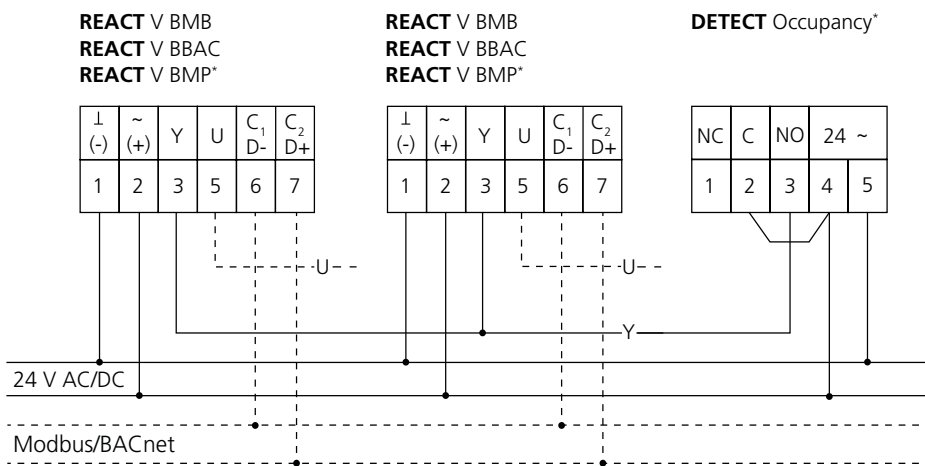
**Air flow regulation**

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 - 10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Parallel controlled air flow control with temperature and $CO_2$ function via external occupancy detector

Air flow measurement and regulating damper that variably controls the air flow in parallel between the minimum and maximum flow rate depending on the current temperature and the $CO_2$ content in occupancy mode. Occupancy is detected via external occupancy sensor. The damper is regulated to minimum flow rate in no-occupancy mode.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

**Air flow regulation**
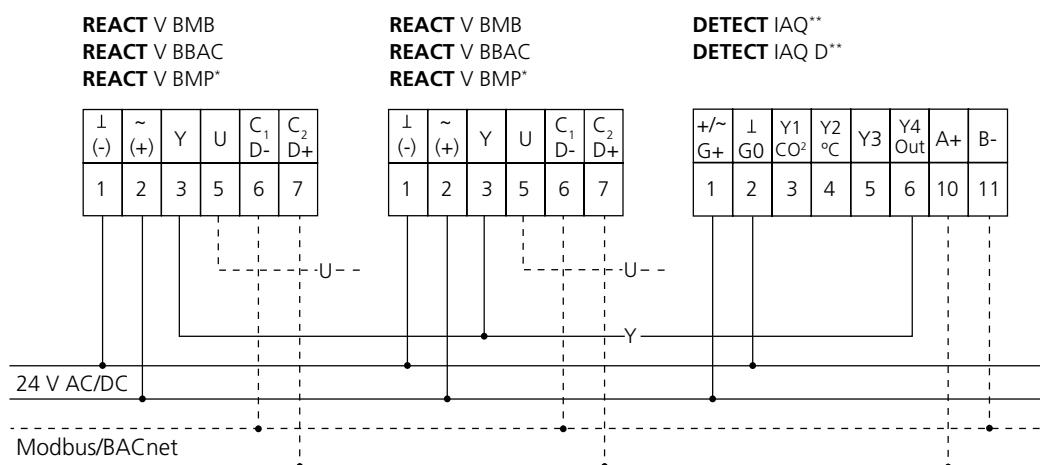
Vmin   :   Minimum air flow

Vmax   :   Maximum air flow

Mode   :   0 - 10 V

Set point source  :  Analogue

Bus protocol       :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Parallel controlled air flow control with temperature controller for demand control and temperature regulation

Air flow measurement and regulating damper that variably controls the air flow in parallel between the minimum and maximum flow rate (cooling function) depending on the set temperature set point. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

**Air flow regulation**

Vmin  :  Minimum air flow

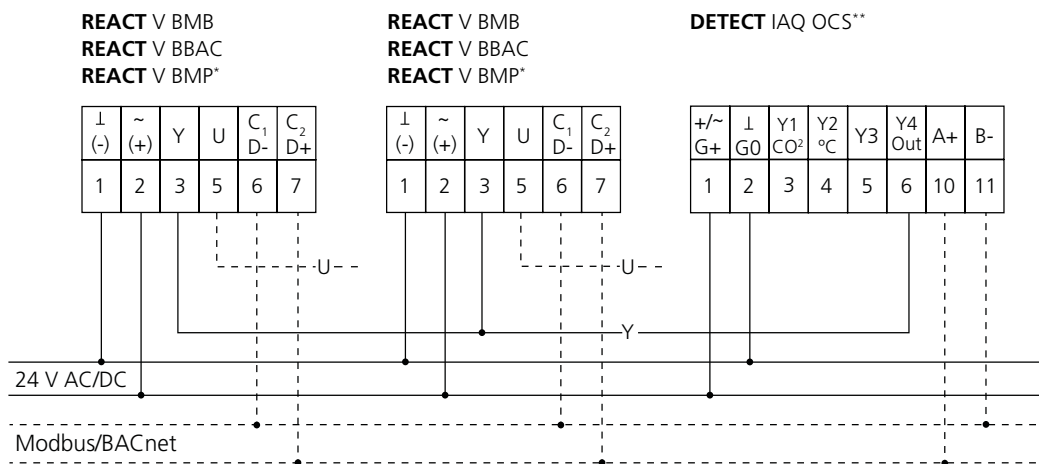Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol    :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Parallel controlled air flow control with controller for demand control

Air flow measurement and regulating damper that variably controls the air flow in parallel between minimum and maximum flow rate depending on the control signal.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

**Air flow regulation**

Vmin   :   Minimum air flow
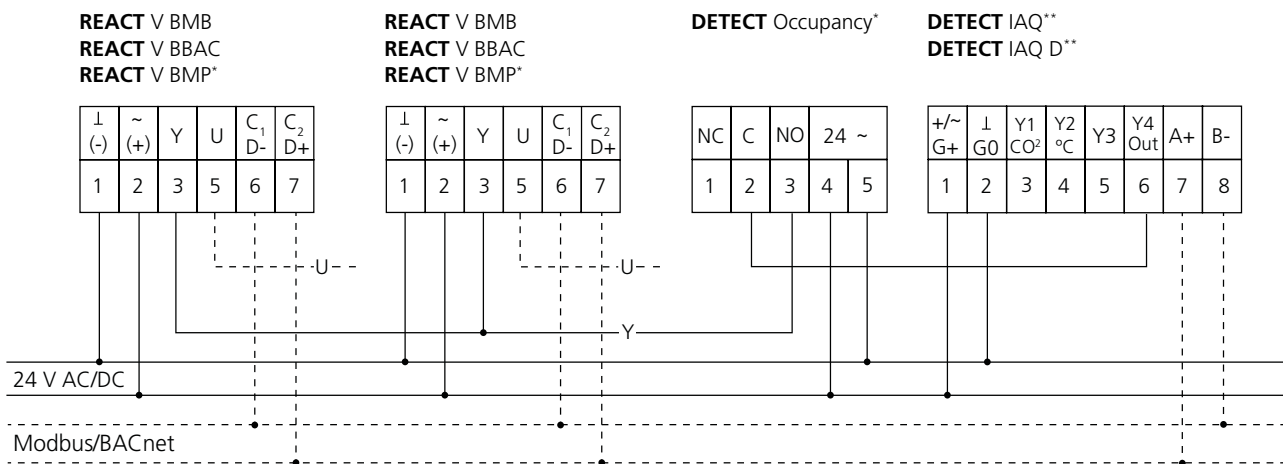
Vmax   :   Maximum air flow

Mode   :   0 (2)-10 V

Set point source   :   Analogue

Bus protocol     :   Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

**Swegon**

# Parallel controlled air flow control with temperature controller and temperature regulation for demand control via external occupancy sensor

Air flow measurement and regulating damper that variably controls the air flow in parallel between the set minimum and maximum flow rate (cooling function) depending on the temperature set point in occupancy mode. Occupancy is detected via external occupancy sensor. The room is regulated to minimum flow rate in no-occupancy mode. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings
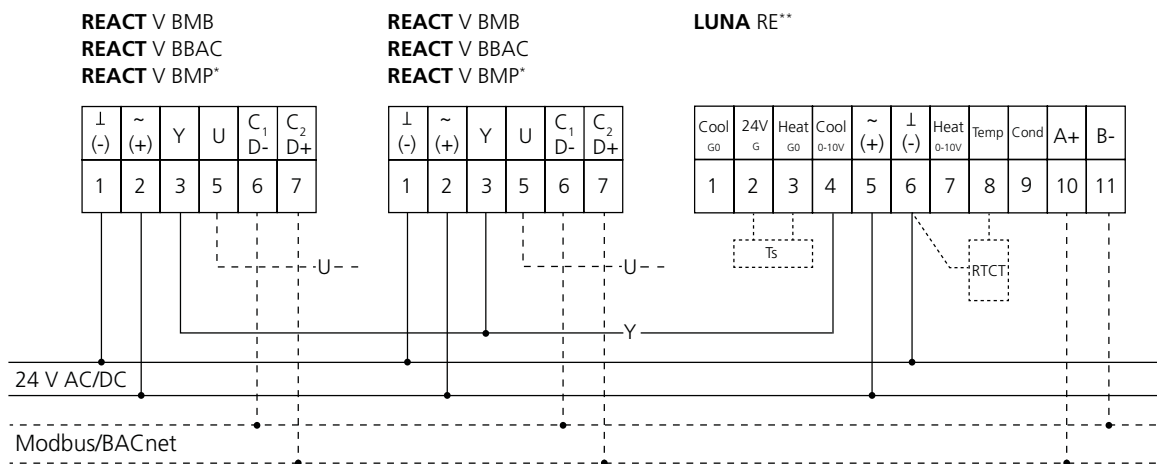
**Air flow regulation**

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 - 10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Parallel controlled air flow control with controller for demand control via external occupancy sensor

Air flow measurement and regulating damper that variably controls the air flow in parallel between minimum and maximum flow rate depending on the control signal in occupancy mode. Occupancy is detected via external occupancy sensor. The room is regulated to minimum flow rate in no-occupancy mode.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings
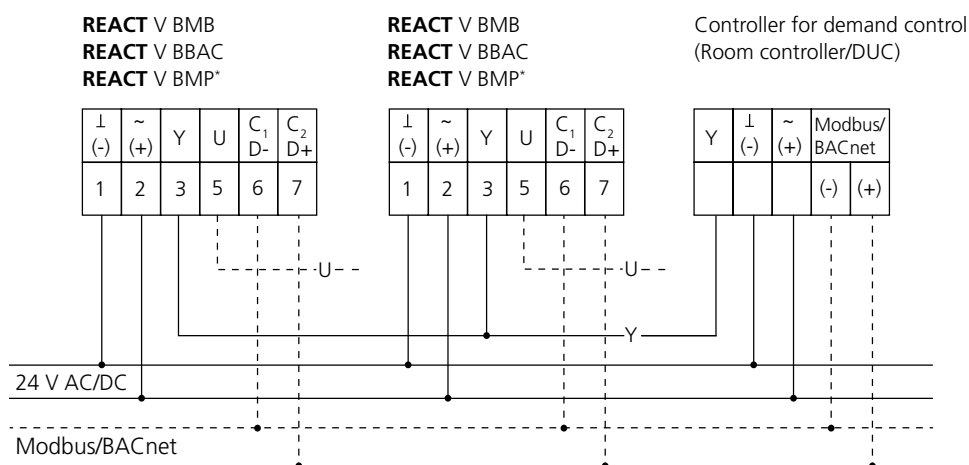
### Air flow regulation

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 (2)-10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

# Parallel controlled air flow control with temperature controller for demand control and absence control

Air flow measurement and regulating damper that variably controls the air flow in parallel between the set minimum and maximum flow rate (cooling function) depending on the temperature set point in occupancy mode. The room is set to absence temperature set point in no-occupancy mode. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

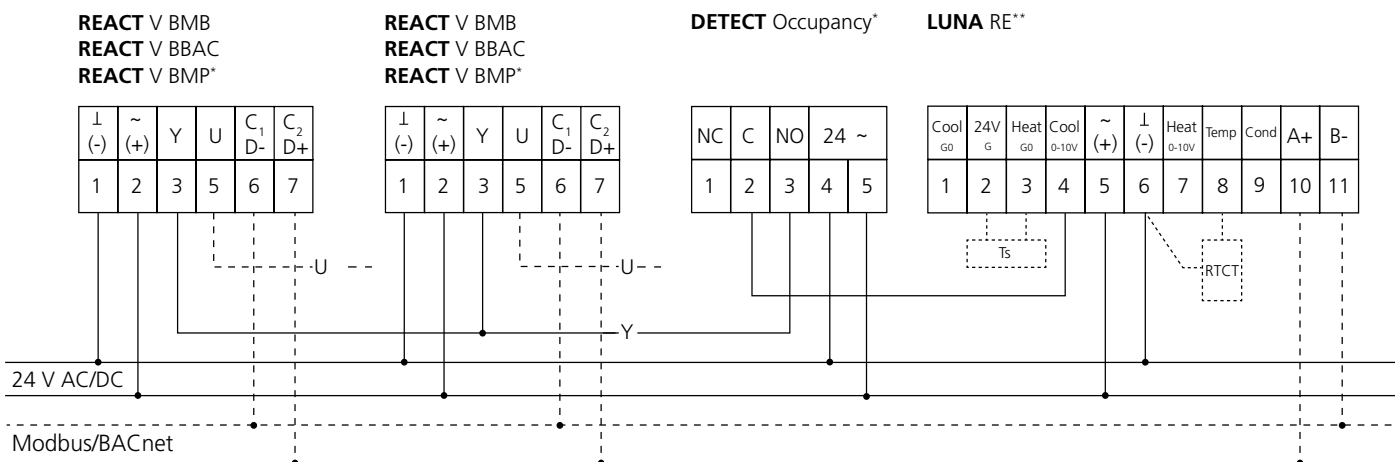**Air flow regulation**

Vmin  :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol    :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

**BACnet communication not available

## Notes

# Balanced air flow control

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the control signal. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

### Air flow regulation – Slave

Vmin    :  0

Vmax   :  Vnom on Master

Mode  :  Same as Master

Set point source  :  Analogue

Bus protocol        :  Modbus alt BACnet

### Air flow regulation – Master
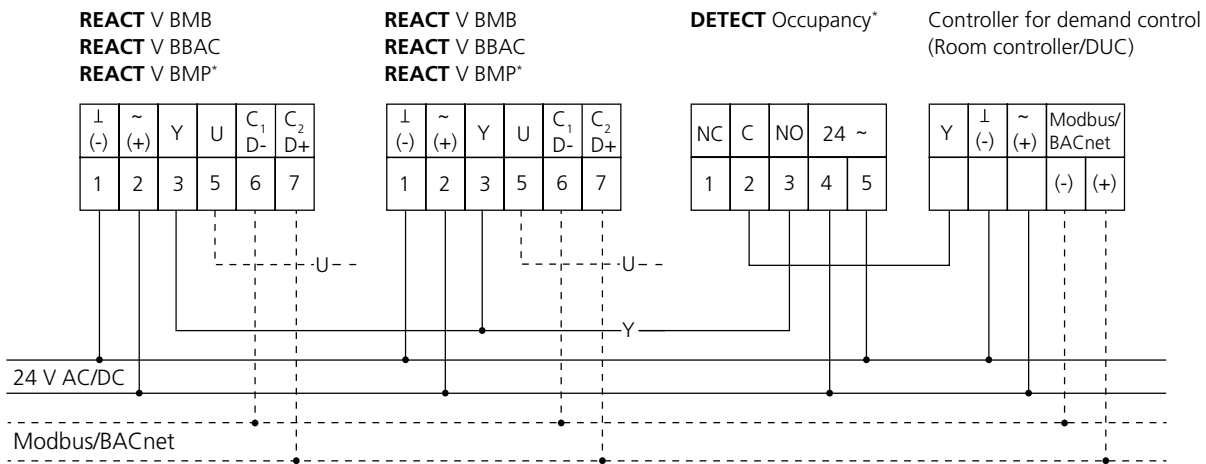
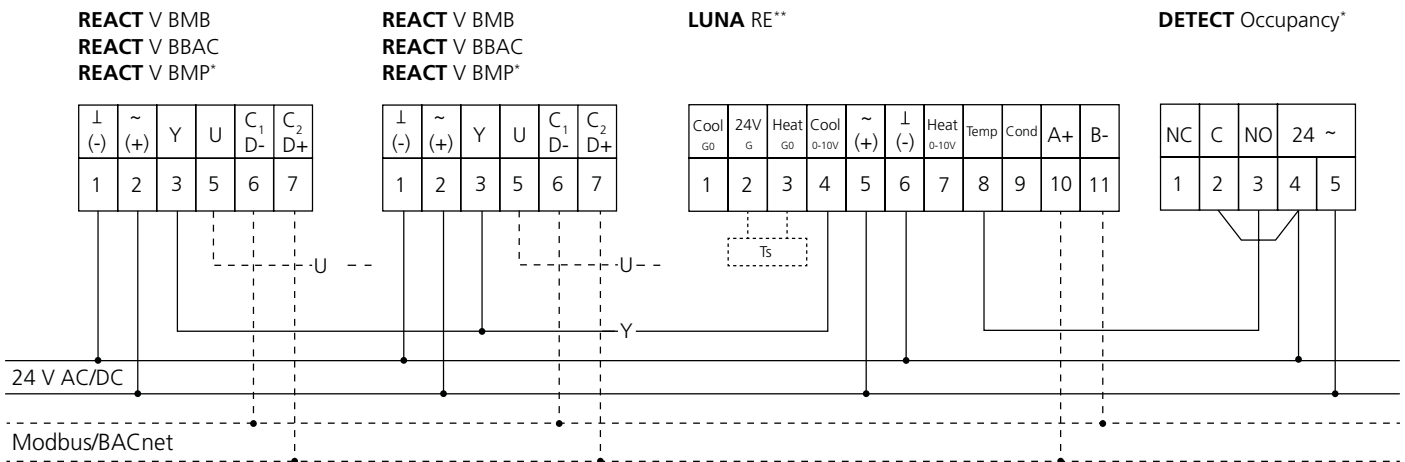Vmin   :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol        :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

# Balanced two-flow control with occupancy detector

Air flow measurement and regulating damper that controls the air flow on the set position. The damper switches via occupancy detection between two fixed flows. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.

## Settings

### Air flow regulation – Slave

Vmin   :  0

Vmax  :  Vnom on Master

Mode  :  Same as Master

Set point source  :  Analogue

Bus protocol       :  Modbus alt BACnet

### Air flow regulation – Master

Vmin   :  Unoccupied flow

Vmax  :  Occupancy flow

Mode  :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol       :  Modbus alt BACnet

## Wiring diagram



Slave

**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

Master

**REACT** V BMB
**REACT** V BBAC
**REACT** V BMP*

**DETECT** Occupancy*

*Modbus/BACnet communication not available

## Notes

# Balanced air flow control with temperature and $CO_2$ function

Air flow measurement and regulating damper that variably controls the air flow between minimum and maximum flow rate depending on the current temperature and the $CO_2$ content in the room. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
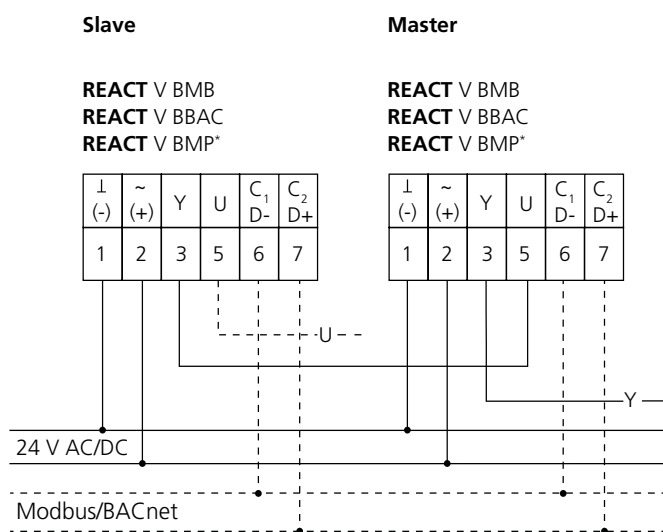
## Settings

### Air flow regulation – Slave

Vmin : 0

Vmax : Vnom on Master

Mode : Same as Master

Set point source : Analogue

Bus protocol : Modbus alt BACnet

### Air flow regulation – Master

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 - 10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

**BACnet communication not available

## Notes

# Balanced air flow control with temperature, $CO_2$ and occupancy function

Air flow measurement and regulating damper that variably controls the air flow between the minimum and maximum flow rate depending on the current temperature and the $CO_2$ content in occupancy mode. Occupancy is detected via internal occupancy sensor. The damper is regulated to minimum flow rate in no-occupancy mode. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
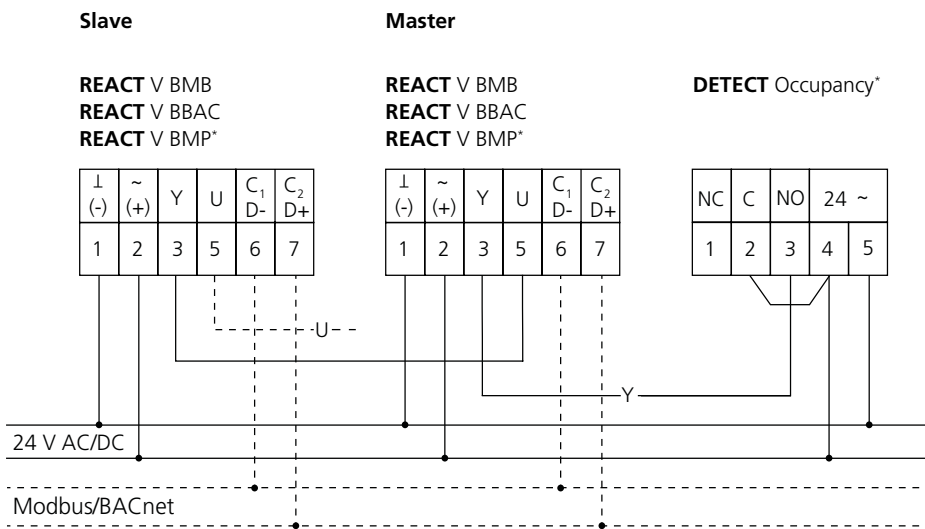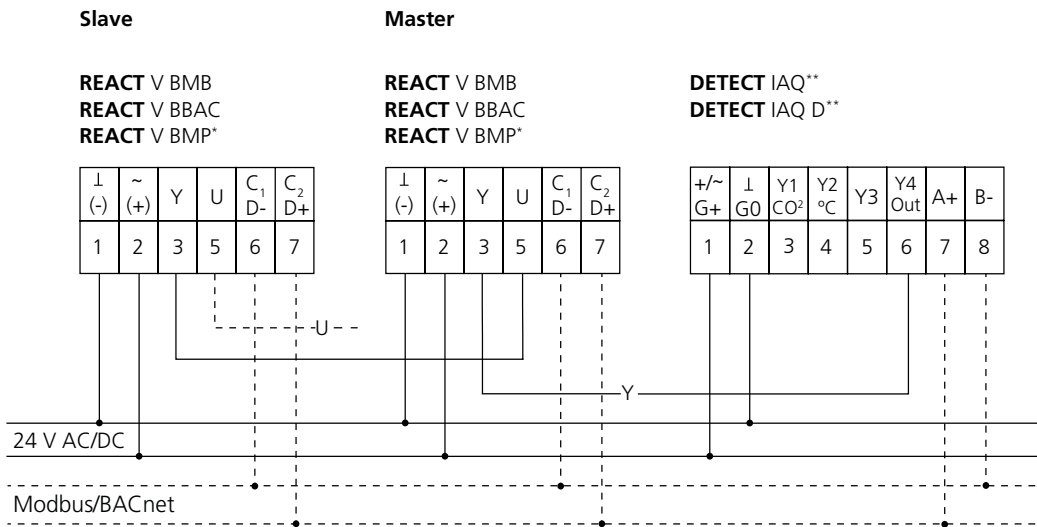
## Settings

| **Air flow regulation – Slave** | | **Air flow regulation – Master** | |
|---|---|---|---|
| Vmin | : 0 | Vmin | : Minimum air flow |
| Vmax | : Vnom on Master | Vmax | : Maximum air flow |
| Mode | : Same as Master | Mode | : 0 (2)-10 V |
| Set point source | : Analogue | Set point source | : Analogue |
| Bus protocol | : Modbus alt BACnet | Bus protocol | : Modbus alt BACnet |

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Balanced air flow control with temperature and $CO_2$ function via external occupancy detector

Air flow measurement and regulating damper that variably controls the air flow between the minimum and maximum flow rate depending on the current temperature and the $CO_2$ content in the room. Occupancy is detected via external occupancy sensor. The damper is regulated to minimum flow rate in no-occupancy mode. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
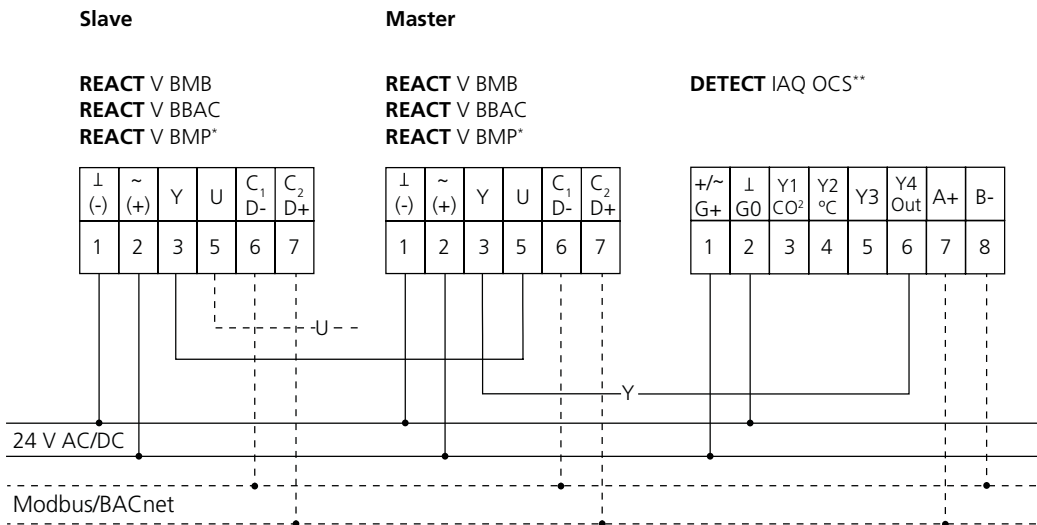
## Settings

### Air flow regulation – Slave

Vmin   :  0

Vmax  :  Vnom on Master

Mode  :  Same as Master

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

### Air flow regulation – Master

Vmin   :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes

# Balanced air flow control with temperature controller for demand control and temperature regulation

Air flow measurement and regulating damper that variably controls the air flow between the set minimum and maximum flow rate (cooling function) depending on the temperature set point. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
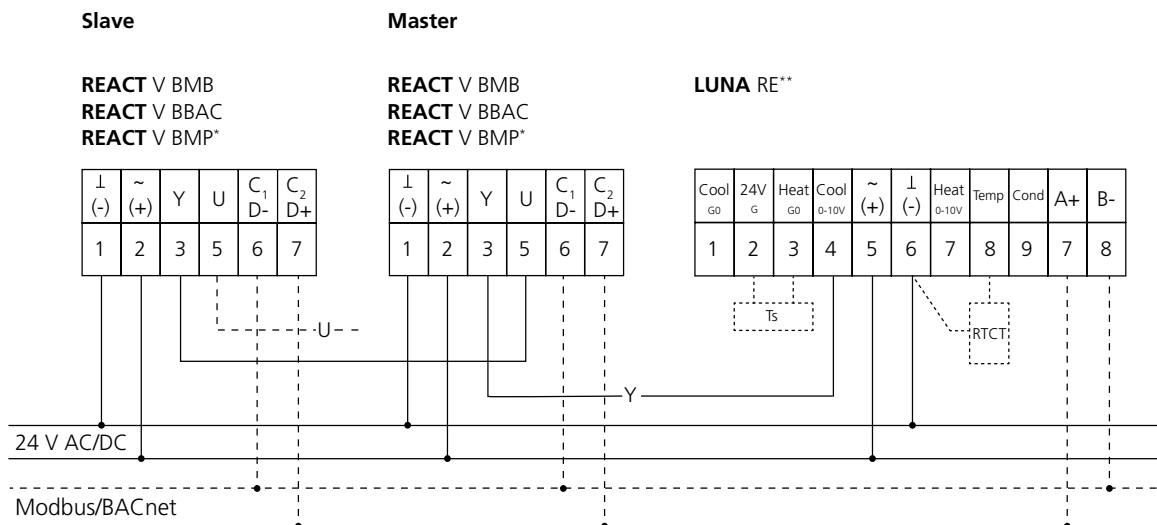
## Settings

### Air flow regulation – Slave

Vmin : 0

Vmax : Vnom on Master

Mode : Same as Master

Set point source : Analogue

Bus protocol : Modbus alt BACnet

### Air flow regulation – Master

Vmin : Minimum air flow

Vmax : Maximum air flow

Mode : 0 - 10 V

Set point source : Analogue

Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

**BACnet communication not available

## Notes

# Balanced air flow control with controller for demand control

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the control signal. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
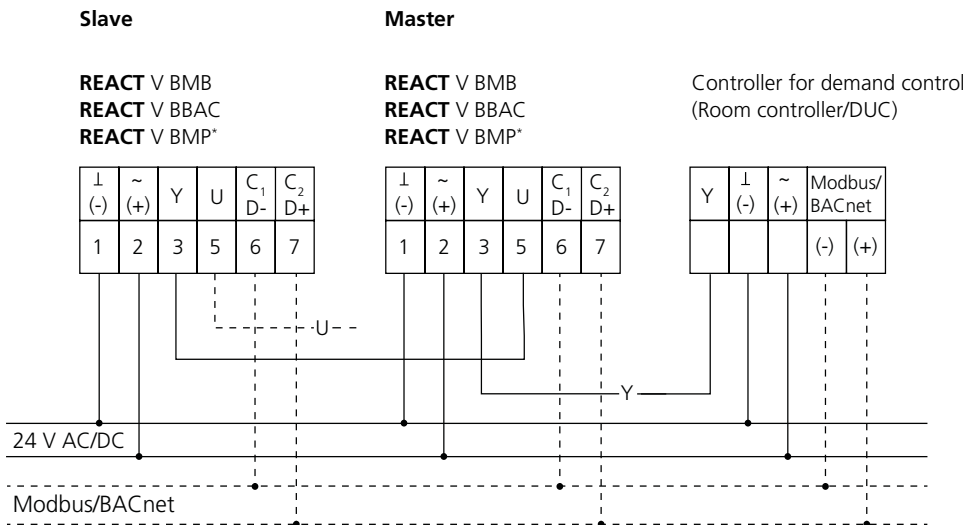
## Settings

### Air flow regulation – Slave

Vmin    :  0

Vmax    :  Vnom on Master

Mode    :  Same as Master

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

### Air flow regulation – Master

Vmin    :  Minimum air flow

Vmax    :  Maximum air flow

Mode    :  0 (2)-10 V

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

# Balanced air flow control with temperature controller and temperature adjustment for demand control via external occupancy sensor

Air flow measurement and regulating damper that variably controls between the set minimum and maximum flow rate (cooling function) depending on the set temperature set point in occupancy mode. Occupancy is detected via external occupancy sensor. The room is regulated to minimum flow rate in no-occupancy mode. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
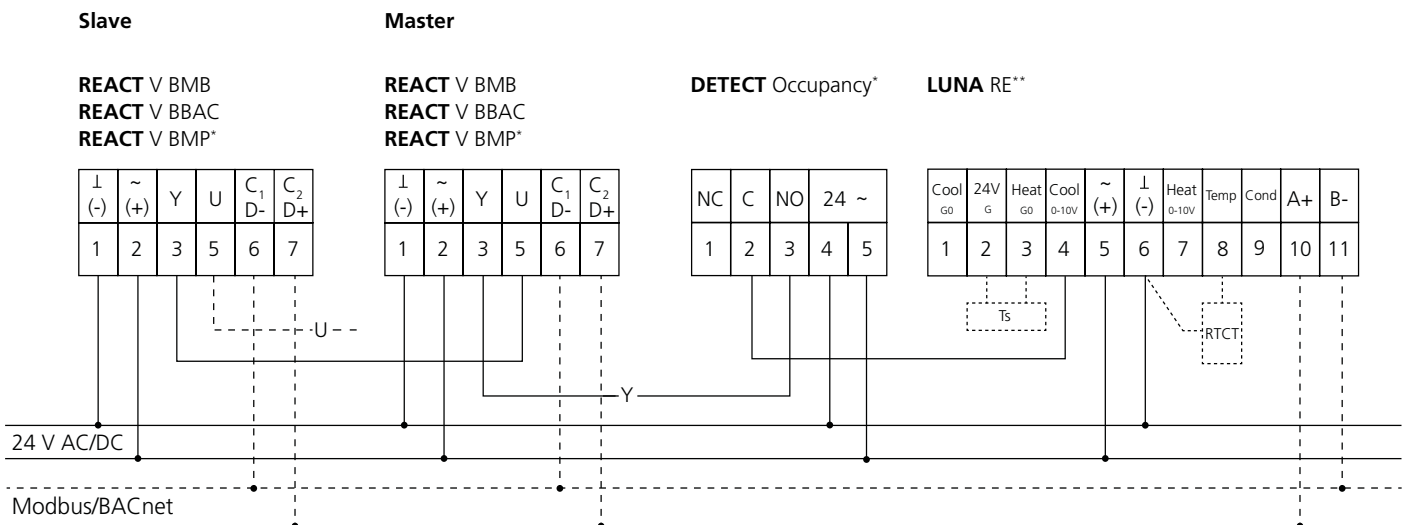
## Settings

### Air flow regulation – Slave

Vmin  : 0

Vmax  : Vnom on Master

Mode  :  Same as Master

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

### Air flow regulation – Master

Vmin  :  Minimum air flow

Vmax  :  Maximum air flow

Mode  :  0 - 10 V

Set point source  :  Analogue

Bus protocol      :  Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available

**BACnet communication not available

## Notes

# Balanced air flow control with controller for demand control via external occupancy sensor

Air flow measurement and regulating damper that variably controls between the minimum and maximum flow rate depending on the control signal in occupancy mode. Occupancy is detected via external occupancy sensor. The room is regulated to minimum flow rate in no-occupancy mode. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
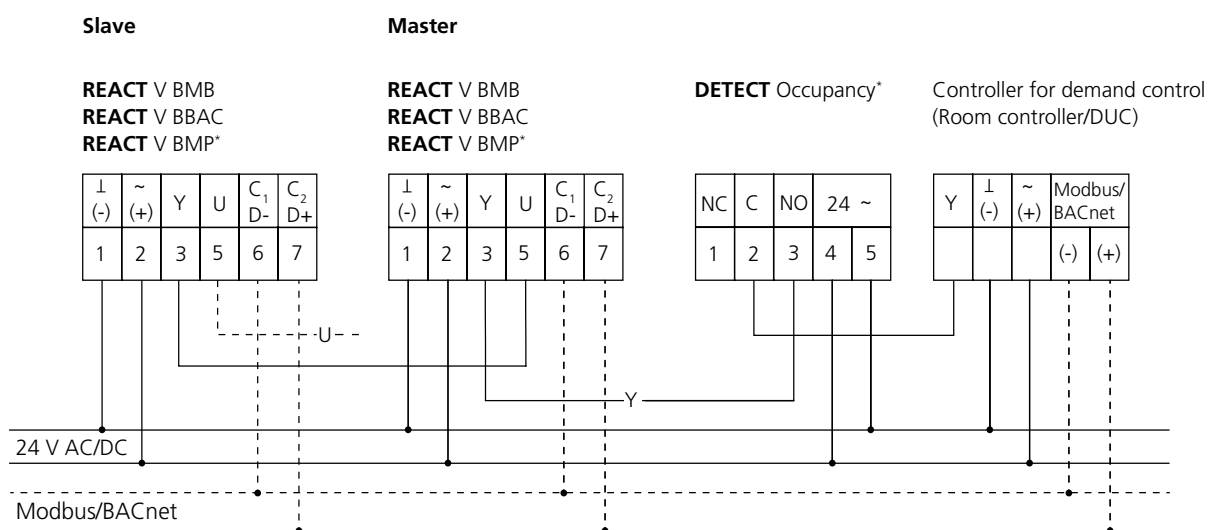
## Settings

| **Air flow regulation – Slave** | | **Air flow regulation – Master** | |
|---|---|---|---|
| Vmin | : 0 | Vmin | : Minimum air flow |
| Vmax | : Vnom on Master | Vmax | : Maximum air flow |
| Mode | : Same as Master | Mode | : 0 (2)-10 V |
| Set point source | : Analogue | Set point source | : Analogue |
| Bus protocol | : Modbus alt BACnet | Bus protocol | : Modbus alt BACnet |

## Wiring diagram



*Modbus/BACnet communication not available

## Notes

# Balanced air flow control with temperature controller for demand control and absence control

Air flow measurement and regulating damper that variably controls the air flow between the set minimum and maximum flow rate (cooling function) depending on the temperature set point in occupancy mode. The room is set to absence set point in no-occupancy mode. The air flow value from the master damper is sent analogously to the slave damper to maintain the balance in the room. The wiring diagram also shows the alternative with RTCT duct temperature sensor and thermo-actuator (Ts) for heating function.

Demand control via analogue control signal (Y). Return of the current air flow via analogue actual value signal (U). Possibility of Modbus/BACnet communication in combination with analogue control signals.
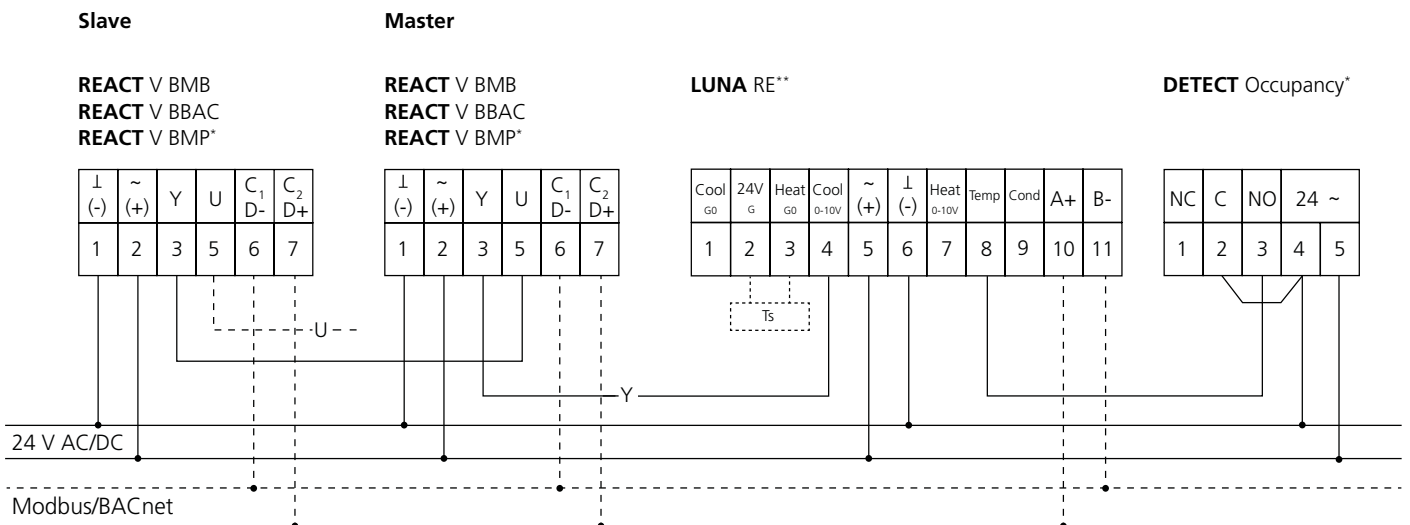
## Settings

### Air flow regulation – Slave

Vmin : 0
Vmax : Vnom on Master
Mode : Same as Master
Set point source : Analogue
Bus protocol : Modbus alt BACnet

### Air flow regulation – Master

Vmin : Minimum air flow
Vmax : Maximum air flow
Mode : 0 - 10 V
Set point source : Analogue
Bus protocol : Modbus alt BACnet

## Wiring diagram



*Modbus/BACnet communication not available
**BACnet communication not available

## Notes