

Super WISE[®] Router

Internal communication unit for Modbus Forwarding



Super WISE Router

Quick facts

- ▶ Enables internal communication between the Super WISE (Gateway) and room units (thermostats)
- ▶ Manages 60 rooms per Super WISE Router
- ▶ Used mainly in ventilation systems without zone dampers
- ▶ Can be centrally located in plant rooms or out in the system

Technical description

Operation

The Super WISE Router is a communication unit designed for internal communication between gateway (Super WISE) and room level (WISE/CONDUCTOR)

Addressing and commissioning the system is made easier by employing a logical tree structure, which automatically puts the incorporated products on the correct level (via Modbus Forwarding). In small ventilation systems where zone control is not required, the Super WISE Router is needed as a communication unit for the room controllers.

The Super WISE Router has no functions of its own, apart from mediating communication between room level and Super WISE.

For detailed information about the system design, see also the product datasheet on Super WISE.

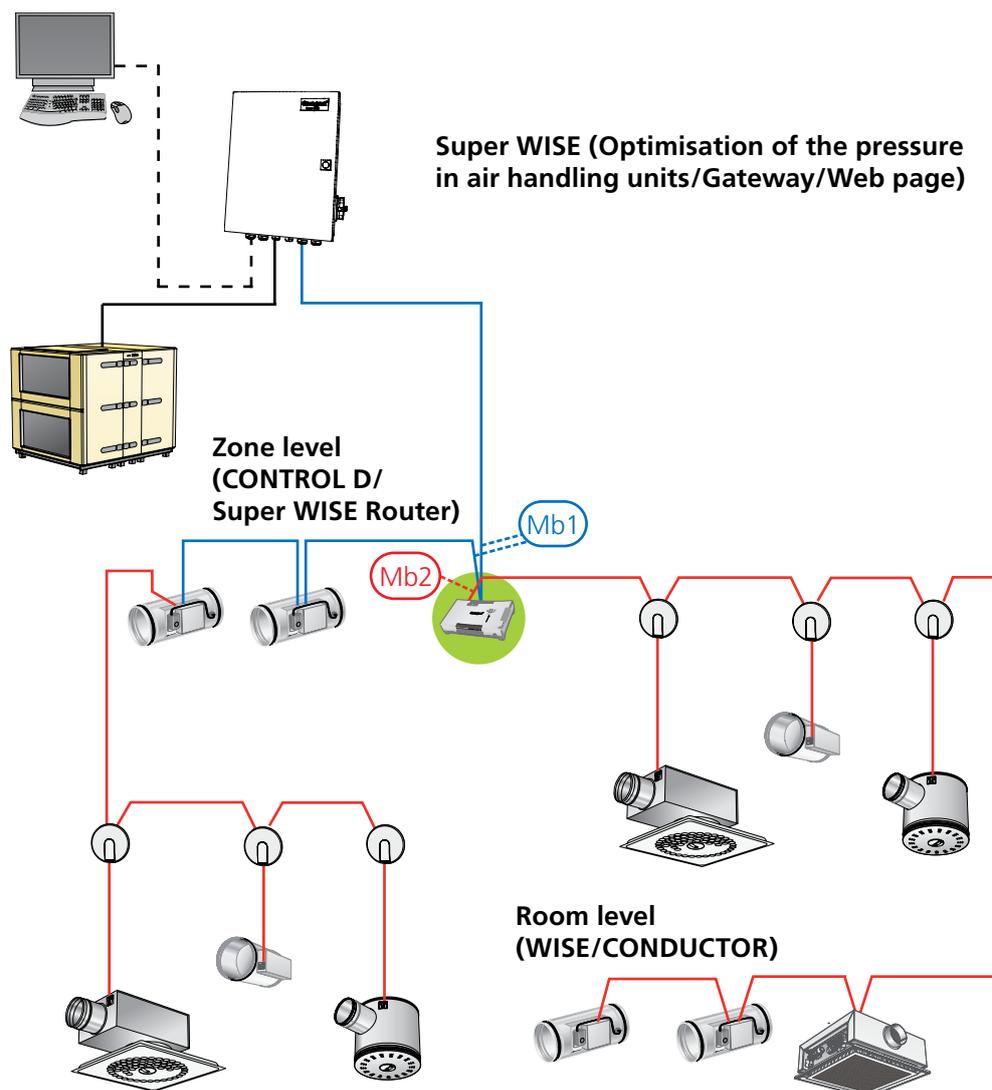


Figure 1. Super WISE Router supersedes zone products in smaller ventilation systems, without requirement for zone control. Zone level: blue line. Room level: red line.

Project Design

The Super WISE Router is well suited for use in smaller ventilation systems in which zone control is not required, for example a system involving one ventilation unit per storey, or in a smaller building. Several Super WISE Routers can be subject to supervision of the same Super WISE if it is desirable to divide room supervision into several parts.

Commissioning

The Super WISE Router normally does not need to be commissioned; requires only to be assigned a Modbus ID.

The Modbus ID is set to 1 on delivery, and is adjustable via the hand-held thermostat (CONDUCTOR RU or TUNE Control). For further information about addressing, see the WISE Project Manual.

Installation

The Super WISE Router can be mounted directly on a wall, in plant rooms or out in the system.

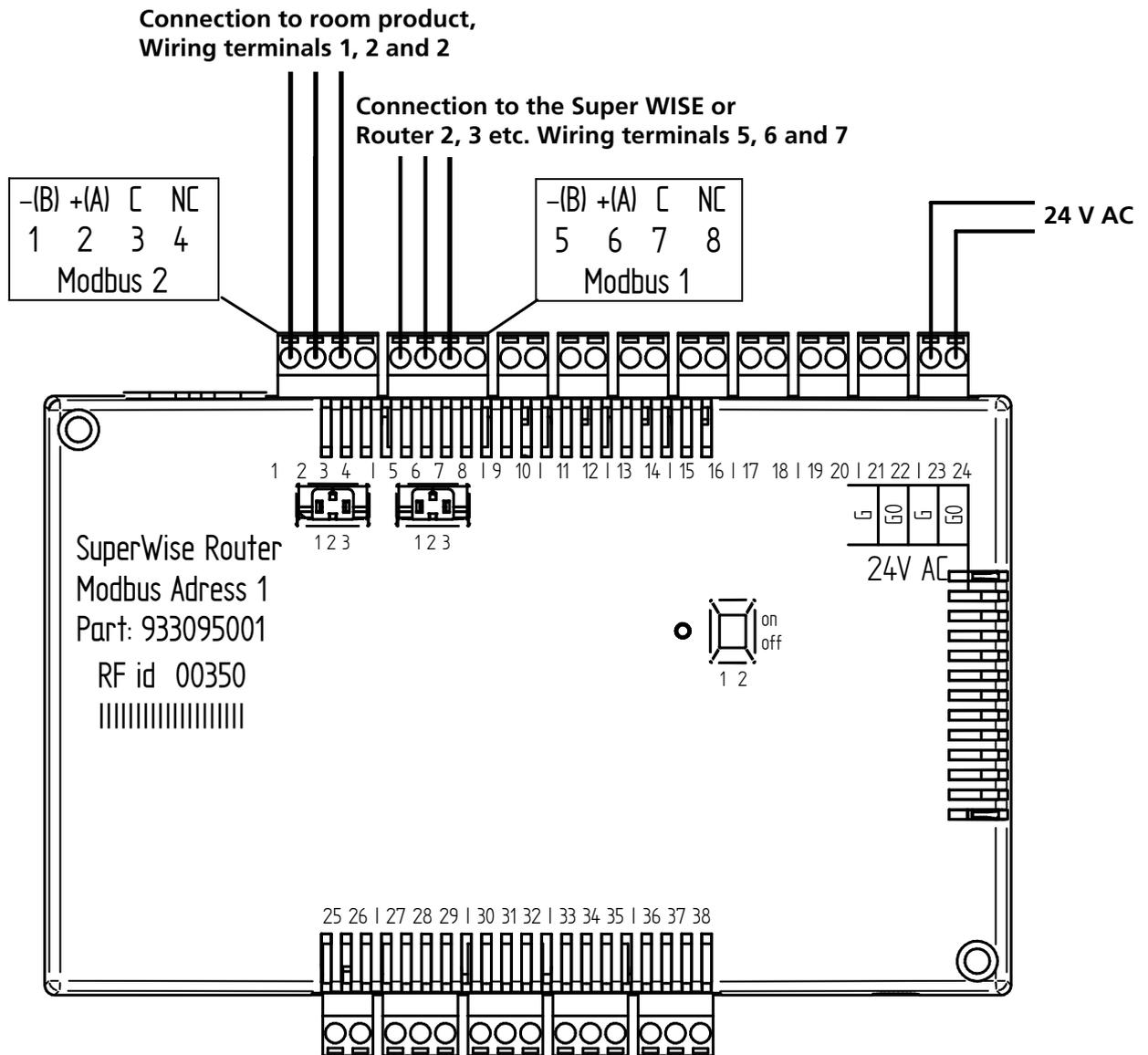
Connections

Normally only the power supply and communication for internal Modbus communication between Super WISE and room products are connected.

Connect to wiring terminals 5, 6 and 7 (Modbus loop 1) on the Super WISE as well as 1, 2 and 3 (Modbus loop 2) on the room products. Connect the 24 V AC supply voltage to terminals 23 and 24; see the wiring instructions below.

Terminations Table

Pos. 1	Passive termination. Used when the product is placed first or last on the loop and there is one termination like Position 2 at the other end.
Pos. 2	Termination via internal pull-up resistor to ensure correct 0 level. One of the loop ends must be terminated in this way.
Pos. 3	Non-terminated. This setting is used on all units that are not placed first or last on the loop.



Super WISE Router

Figure 2. Wiring diagram for the Super WISE Router

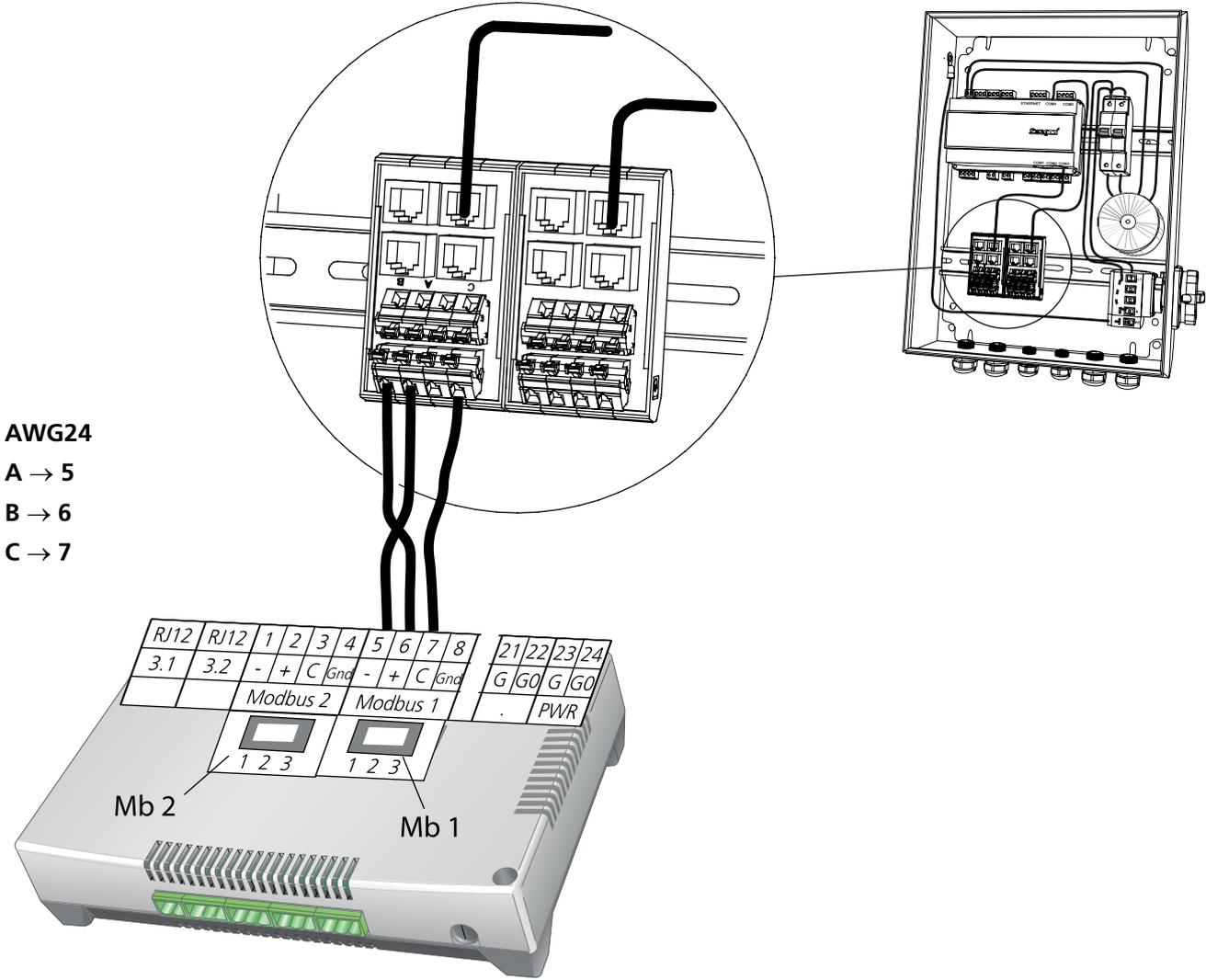


Figure 3. Router for connection to the Super WISE.

Technical data

Designation: Super WISE Router
 Storage temperature: -40 to + 80 °C
 Operating temperature: -20 to + 50 °C
 Degree of protection: IP 32
 IP 55 (with enclosure)
 Dimensions: 121 × 193 × 44 mm
 Power supply: 24 V AC ±10 %
 Power consumption: 4.5 VA
 Mounting: Mounting holes in enclosure or to DIN rail
 Connections: Wiring terminal for 2.5 mm² multicore cable
 Data communication: Modbus RTU
 Wireless communication: 433 MHz band radio modem with room thermostat
 Modular contact: RJ12 6-pole for connecting up to the room unit (thermostat)

Ordering key

Product

Internal connections unit	Super WISE Router	a
1 = Without enclosure		
2 = With enclosure		

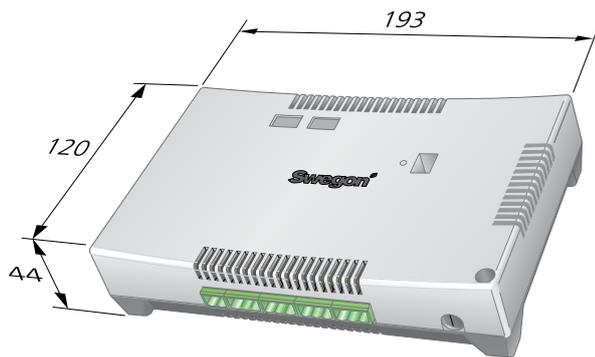


Figure 4. Super WISE Router

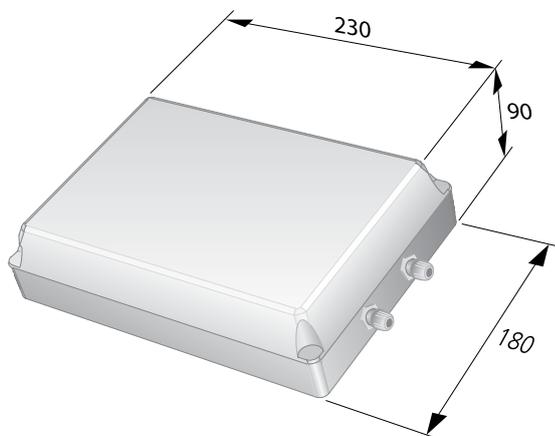


Figure 5. Super WISE Router with enclosure

Super WISE Router