SuperWISE II

Communication unit to WISE

QUICK FACTS

- SuperWISE is the communication unit where all information is compiled to give a simple overview of the WISE system
- Loads and distributes the system's configuration file
- Possibility for connection via external communication protocol ModBus TCP, BACnet IP or API
- Updates software and synchronises functions throughout the whole WISE system without any downtime
- Possibility to connect to the Swegon INSIDE cloud to enable digital services

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Technical description

SuperWISE is the communication unit where all information is compiled to give a simple overview of the WISE system via a web interface. It loads and distributes the system's configuration file. It updates software and synchronises functions throughout the whole WISE system while operational. There is also a possibility to connect an external communication protocol ModBus TCP, BACnet IP or API.

Design

The communication unit is available in 4 variants:

- SuperWISE II
- SuperWISE II IC (with INSIDE Connect)
- SuperWISE II 2K (for larger properties)
- SuperWISE II 2K IC (for larger properties, with INSIDE Connect)

*SuperWISE II,
SuperWISE II IC.*

*SuperWISE II 2K,
SuperWISE II 2K IC.*

*Figure 1. SuperWISE II, SuperWISE II IC.
NOTE! INSIDE Connect (2) only included in SuperWISE II IC.*

*Figure 2. SuperWISE II 2K, SuperWISE II 2K IC.
NOTE! INSIDE Connect (2) only included in SuperWISE II 2K IC.*

1. SuperWISE control unit - Main communication unit

2. INSIDE Connect – Router (only included in SuperWISE II IC/SuperWISE II 2K IC). Communicates on the mobile network. If the cabinet contains INSIDE Connect, the cabinet must be placed so that it can receive mobile signals. The cabinet can be supplemented with an extra antenna for increased signal strength for improved mobile coverage. See the separate documentation for INSIDE Connect on www.swegon.com

3. Switch - 8 ports (if more ports are required, install a supplementary switch outside of the cabinet)

   - Port 1: SuperWISE control unit
   - Port 2: INSIDE Connect
   - Port 3-8: Free for e.g. WISE DIR/AHU/BMS

4. Main switch - Connection of the power supply

5. Transformer

6. Earth connection

Functions

SuperWISE is the communication unit where all information, communications, control and calculations are compiled and presented in a web interface or via an external communication protocol.

Loading and distribution of the configuration file

An important function of SuperWISE is to load the system's configuration file and ensure that it is distributed to the entire system. In this way the functionality and setpoint values of the system's different products are assigned.

NOTE! Without a loaded configuration file the system will not start, but instead switches to default mode.

Updating the software

The system software can be updated on site by connecting a USB memory to SuperWISE or remotely via the web interface.

The update process is started via the web interface. The different software is sent out during operations where after the system automatically restarts. As the software is sent out during operations, and all units are updated from one and the same point, a complete software update takes up to seven hours.

Synchronisation of functions

All radio products check that they have the right configuration according to the configuration file during start up through communication with WISE DIR. If the unit's configuration corresponds with the one in WISE DIR the unit starts up. Otherwise the unit's configuration is synchronised with the one in WISE DIR. The product's LED flashes with a blue light when it awaits configuration, and lights with a fixed green light during normal operations.

Web interface

The SuperWISE web interface helps users to use, maintain and optimise their WISE-system. The interface and its different functions are described in the WISE User manual.
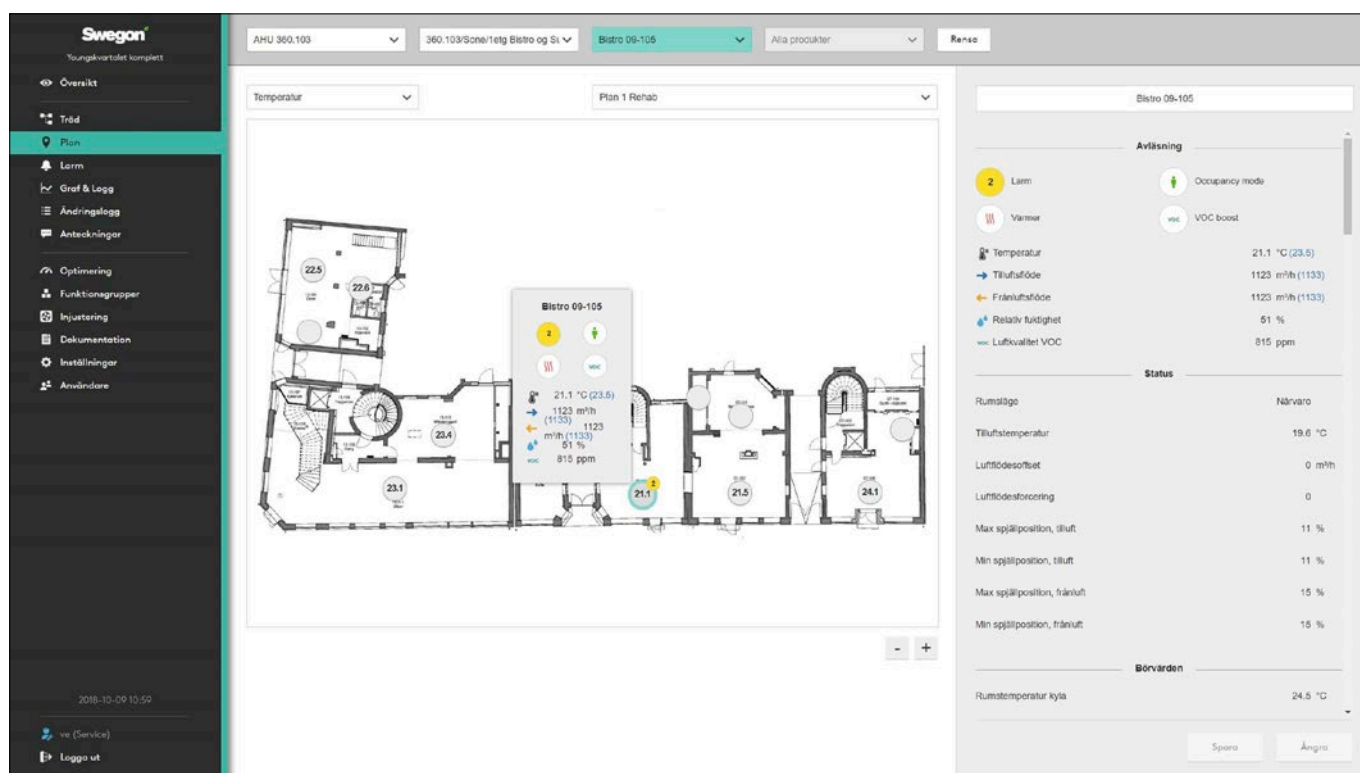

Figure 3. SuperWISE web interface.

Connection of the operating net to SuperWISE II / SuperWISE II IC

SuperWISE II / SuperWISE II IC - Connection port "Operation"

WISE DIR (Director) - Connection port 4

Control card, GOLD - Connection port B
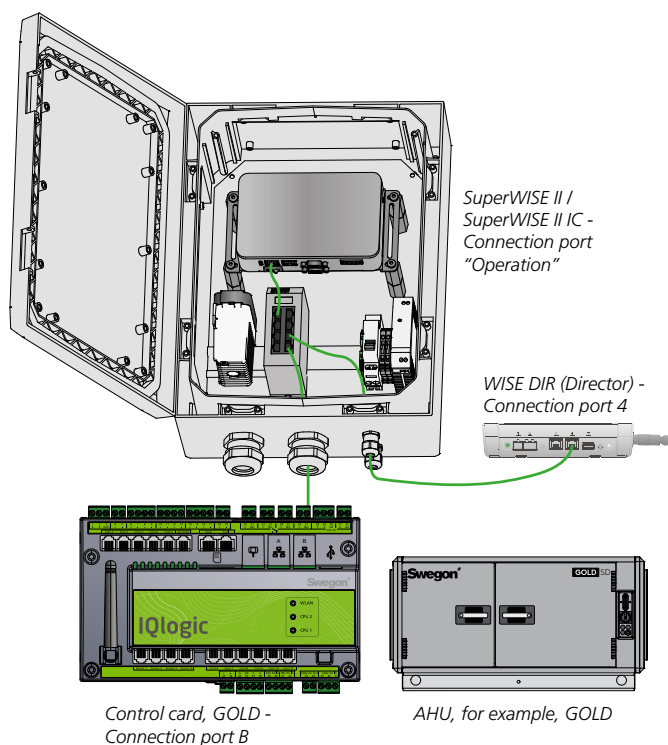
AHU, for example, GOLD

Figure 4. Connection of the operating net, SuperWISE II, SuperWISE II IC.

Connection of the operating net to SuperWISE II 2K / SuperWISE II 2K IC

SuperWISE II 2K / SuperWISE II 2K IC - Connection port "Operation"

WISE DIR (Director) - Connection port 4

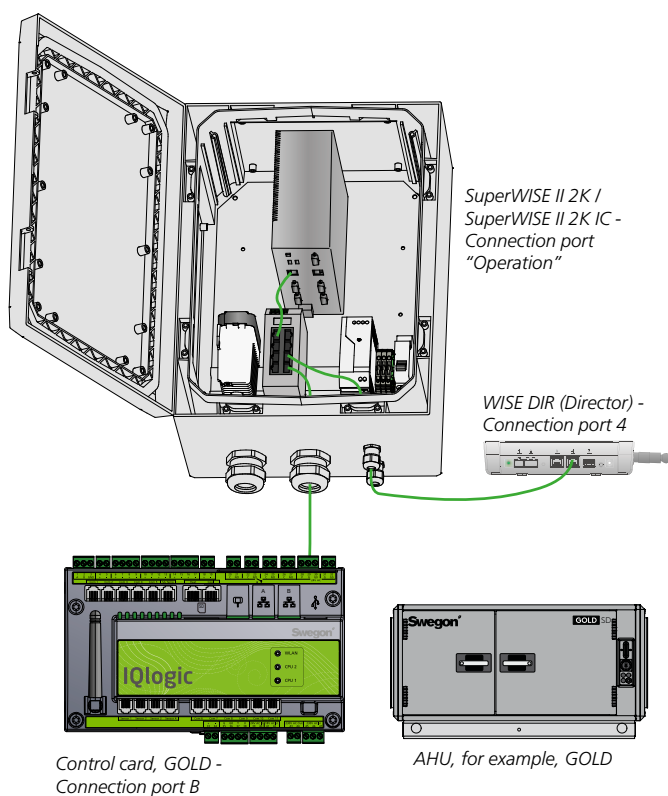*Control card, GOLD - Connection port B*

AHU, for example, GOLD

Figure 5. Connection of the operating net, SuperWISE II 2K, SuperWISE II 2K IC.

Materials and surface treatment
- The cabinet is made of polycarbonate (PC), colour code: RAL 7035 (Industrial grey).

Project planning
See the separate documentation "WISE System Guide", which is available for download via www.swegon.com.

Maintenance
The product does not require any maintenance/service, except for any cleaning when necessary. See the separate Instructions for Use, available on www.swegon.com.

Environment
The Building Materials Declaration is available from www.swegon.com.

Technical data

Output power (ERP) SuperWISE II IC/SuperWISE II 2K IC	
External mobile network:	Max. 2W (GSM mode)
Frequency band SuperWISE II IC/SuperWISE II 2K IC	
External mobile network:	900/2100... MHz
USB:	Type A
Switch/ Ethernet:	Switch supports 3 (GOLD/AHU) + 3 outputs (WISE DIR)
IP class:	IP44
Ambient temperature	
Operation:	-20 – +50°C
Storage:	-40 – +80°C
RH:	10-95% non-condensing
CE marking:	2014/53/EU (RED)
	2011/65/EU (RoHS2)

Electrical data

Power supply:	230V 10 A
Connections pipe dim.	
Power terminals:	Max. 2.5 mm^2
Suitable cable diameter through the chassis (screw terminals):	5-10 mm
Max. power consumption	
SuperWISE II:	34W
SuperWISE II IC:	34W
SuperWISE II 2K:	60W
SuperWISE II 2K IC:	60W

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Installation, dimensions and weights

SuperWISE II, SuperWISE II IC

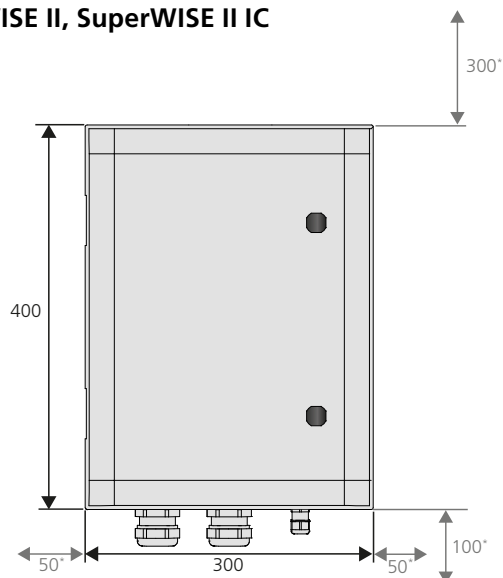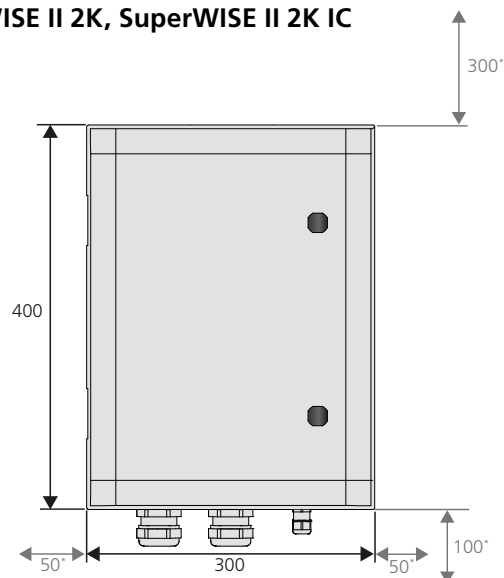Figure 6. SuperWISE II, SuperWISE II IC, dimension figure (mm).
*Minimum free clearance to nearby installations.

Figure 7. Holes for installation (mm), SuperWISE II, SuperWISE II IC.
4x installation screws (clearance hole Ø = 8 mm), screw selection based on the substrate.

Figure 8. SuperWISE II, SuperWISE II IC underside, dimension figure (mm).

Weight (kg)	
SuperWISE II	5.8
SuperWISE II IC	6.3

SuperWISE II 2K, SuperWISE II 2K IC

Figure 9. SuperWISE II 2K, SuperWISE II 2K IC, dimension figure (mm).
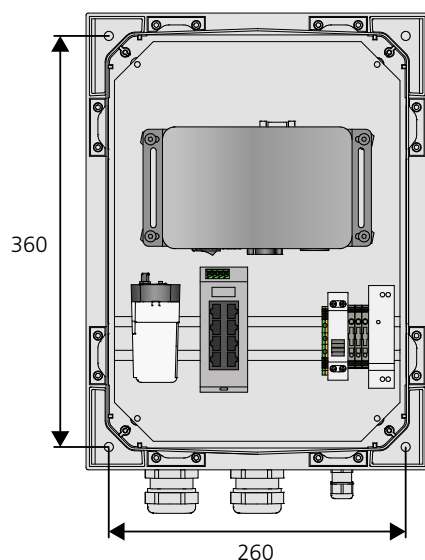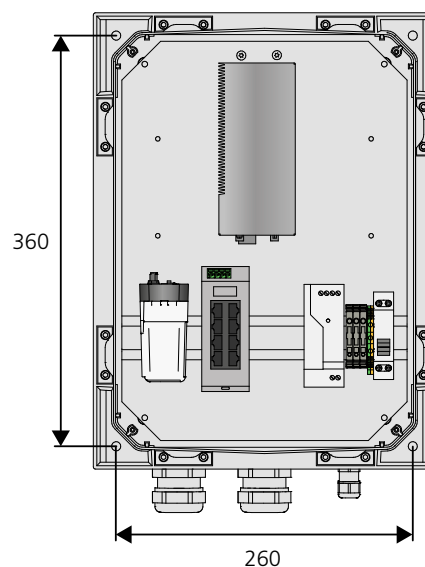*Minimum free clearance to nearby installations.

Figure 10. Holes for installation (mm), SuperWISE II 2K, SuperWISE II 2K IC. 4x installation screws (clearance hole Ø = 8 mm), screw selection based on the substrate.
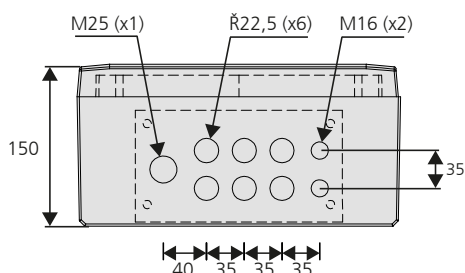

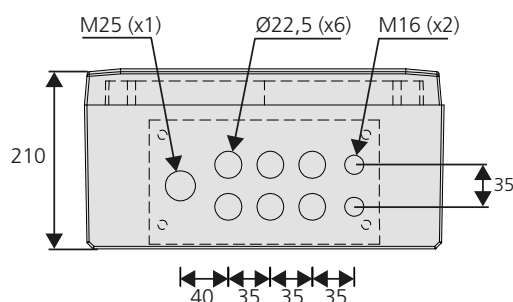Figure 11. SuperWISE II 2K, SuperWISE II 2K IC underside, dimension figure (mm).

Weight (kg)	
SuperWISE II 2K	7.1
SuperWISE II 2K IC	7.6

Ordering key

Product

Communication unit	SuperWISE II	bb	a
	SuperWISE II 2K		
With INSIDE Connect: IC			
Version:			

Specification text

Communication unit for Swegon's system WISE, with the following functions:

- Available in four variants, depending on the property size and with or without INSIDE Connect.
- Compiled information to give a simple overview of the WISE system.
- Handling of the system's configuration file.
- Connection via external communication protocol.
- Program updates and synchronization of functions in the entire WISE system without downtime.
- Wireless communication in Swegon's demand controlled indoor climate system WISE.
- Adapted for mounting on wall.

Specification

Power supply:	230V 10 A	
IP class:	IP44	
Type:	SuperWISE II a	xx items
	SuperWISE II IC a	
	SuperWISE II 2K a	xx items
	SuperWISE II 2K IC a	

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