INSIDE Connect

Remote connection for monitoring, service and maintenance of the indoor climate

Swegon

INSIDE Connect - Quick, easy and secure access to your products!

Function

INSIDE Connect is a communication unit that enables stable and remote access via mobile connectivity to intelligent climate products and systems. This facilitates monitoring, configuration, troubleshooting, service and maintenance. Remote access occurs via the built in router's mobile connectivity, to the cloud-based INSIDE Portal platform.

INSIDE Connect is supplied preconfigured from the factory to use a fixed IP address. As standard, the product is equipped with one Ethernet port, however, if there is a need of more connections INSIDE Connect can be supplemented with a switch (see accessories).

Examples of products that can use INSIDE Connect are: GOLD, SuperWISE, BlueBox and other Swegon products with its own web server.

Hardware

The router is a 4G router with support for up top 100 Mbit/s download speed. It is supplied with a soldered SIM card and a subscription for a mobile connection (4G/3G/2G). On the front side of the router there is one Ethernet port with support to be powered via Power over Ethernet, one Micro USB 2.0 port and three status LEDs.

The router has a DIN rail adapter. The router has, among others, support for DHCP server, NAT (Network Address Translation), NAT-T and Port Forwarding. When connected to a local network, local IT security is taken into consideration and safeguarded. Connection to a local network occurs outside of INSIDE Connect and comes under the local IT-department's responsibility.

Accessories

Climate systems are often placed in areas with limited signal strength for mobile communication. In these cases, INSIDE Connect can be equipped with an external antenna with 1,5 , 3 or 6 metre cable for placement where a stronger signal can be obtained.

The external antennas are IP65/67-classified and can be installed both indoors and outdoors. If there is a need to connect additional products to the router, INSIDE Connect can be supplemented with a switch (max 7 devices in total). The switch is equipped with a DIN rail adapter. The Electrical cabinet accessory can be chosen when INSIDE Connect needs to mounted outdoors or in other harsh environments.

Fig. 2. Switch (accessory).

Fig. 3. Power supply unit (accessory).

Fig. 1. INSIDE Connect router.

Fig. 4. External antennas (accessories).
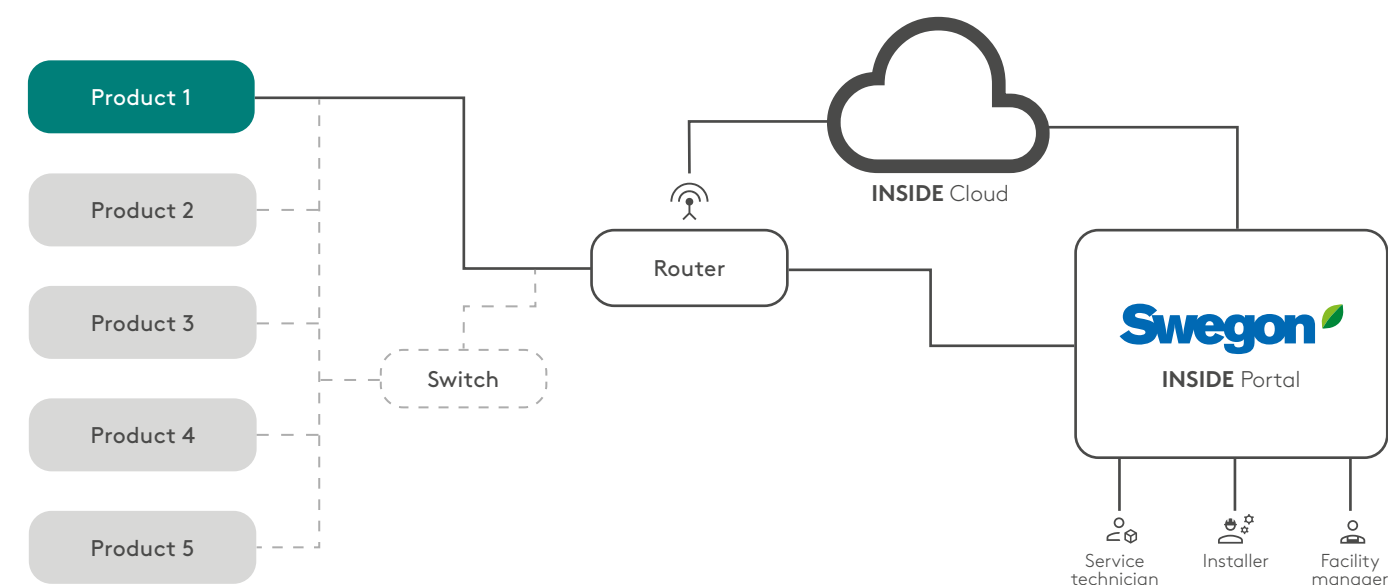
Technical description

Fig. 5. System overview and connections.

Application areas

INSIDE Connect makes it possible to remotely connect to climate products and systems without access to the network. It is possible to configure and optimise devices via the remote connection. Using INSIDE Connect, Swegon can quickly provide support and solve certain tasks remotely. In addition to time savings, the environment also benefits thanks to fewer trips. When a technician still needs to be on site, a solution can be identified in advance, enabling the correct measures to be taken immediately.

INSIDE Connect works for Swegon products with a built-in web page, for example:

- GOLD
- SuperWise
- BlueBox Chiller/Heat pumps

INSIDE Connect is approved for outdoor installation with the Electrical cabinet accessory.

Fig. 6. INSIDE Connect in electrical cabinet with switch.

INSIDE portal

INSIDE Portal is the hub for all connected Swegon products. This cloud-based platform displays all your connected products and it is from here that you can utilise direct access to your product using the INSIDE Connect router.

In addition to direct access to your products, there are several smart features in the INSIDE Portal such as live values, alarm management and the ability to create energy reports. From the portal you can also manage access rights to all your devices and systems.

To learn more about the INSIDE Portal and to request access, visit

https://www.swegon.com/support/software/connected-products/

Safety

INSIDE Connect offers several different security levels and functions to guarantee a secure connection, without access for unauthorised persons. Login is conducted via the INSIDE Portal website using a unique username and password. Connected products are also protected by separate login procedures. Each router is equipped with a unique certificate for the highest security.
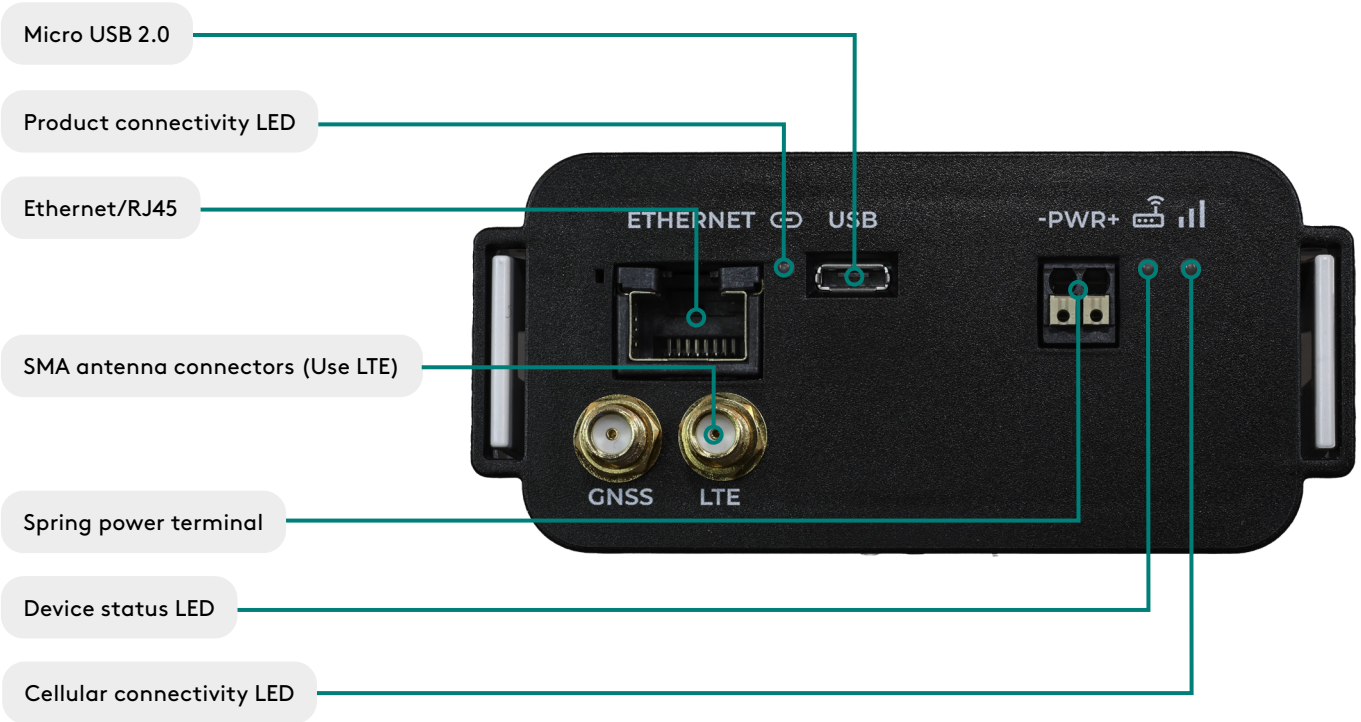
Technical data

Electric data	
Supply voltage	12-56 VDC
Supply current	Maximum 1 A
Power rating	Maximum 6W
Enclosure class	IP40 (IP65 with Electrical cabinet)

Radio data	
Frequency bands	**LTE:** B1/B3/B7/B8/B20/B28 **WCDMA:** B1/B8 **GSM/EDGE:** B3/B8

Technical reference	
MCU	ARM Cortex M7
RAM	1MB
Flash	4MB
Modem	LTE Cat 4
SIM	SIM Soldered MFF2 supporting eUICC
Plastic SIM holder	No
Input power	12-56 VDC or 24/48 VDC Power over Ethernet
GNSS	GNSS embedded in cellular modem.
Onboard sensors	Accelerometer, Temperature
Onboard antennas	Cellular, GNSS
Main dimensions	85,7 x 93,7 x 42,8 mm
Material	Polycarbonate + ABS

Connection	
RJ45 Connector	Ethernet incl. PoE
Micro USB (AB)	USB 2.0
Power Connector	Spring terminal
Status LEDs	LEDs to indicate integration and device status, and cellular signal strength.
Antenna connectors	SMA for Cellular and GNSS

Environmental requirements	
Operating temperature	-30 °C to + 65 °C
Storage temperature	-40 °C to + 85 °C

Connections

INSIDE Connect uses a mobile connection for remote connection. The climate system is connected to INSIDE Connect via Ethernet for additional access to each product's website. For detailed Information about how underlying climate products and systems are interconnected, see the documentation and information on www.swegon.com

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Device status LED

Device status LED	Status
Off	No power
Red, blinking	Device is booting
Red, fixed	Device is waiting for connectivity
Orange, blinking	Connectivity available, enrolment in progress
Orange, fixed	Local swap in progress
Green, fixed	Normal operation
Green, blinking	Firmware download in progress
Cellular connectivity LED	**Status**
Off	No network
Red, blinking	Searching for network
Red, fixed	No network available
Orange, fixed	Connection established, low quality
Orange, blinking	Connection established, low quality, activity
Green, fixed	Connection established, good quality
Green, blinking	Connection established, good quality, activity
Product connection LED	**Status**
Off	No connection
Green, fixed	Connected
Green, blinking	Connected, activity

Troubleshooting

Symptom	Remedy
No connectivity	• Move the device to a different location • Configure the device with an external antenna • Reboot the device
Low quality on the cellular connectivity	• Move the device to a different location • Configure the device with an external antenna
No LEDs are lit	• Verify the power connection

Contact us to get more information

If you have any questions regarding the service, please let us know.

digitalservices@swegon.com

https://www.swegon.com/support/software/connected-products

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