

### SINAMICS V20 Smart Access (option)

The supported converter firmware version must be 3.93 or later. For more information on how to install and use the module, see *SINAMICS V20 Operating Instructions*.

This document is also available in the following language versions: Chinese Traditional, Turkish, Spanish, Korean, Russian, Serbian, and Ukrainian.

Scan the QR code to download SINAMICS V20 user documentations.



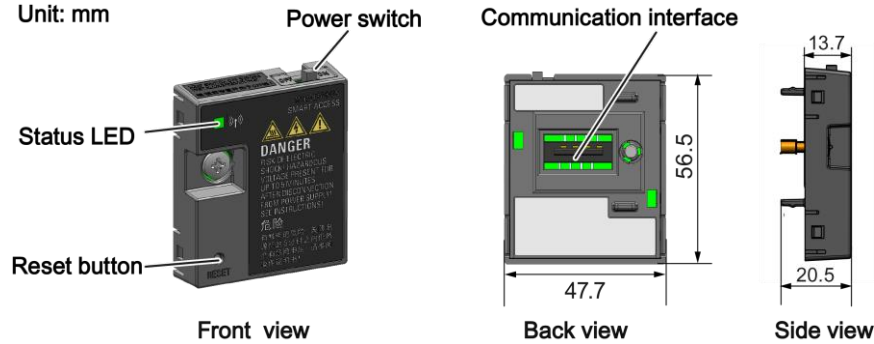
### Security information

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept. For more information about industrial security, please visit <https://www.siemens.com/industrialsecurity>.

### SINAMICS V20 Smart Access

Article number: 6SL3255-0VA00-5AA0

Unit: mm



### Functionality

The SINAMICS V20 Smart Access is a Web server module with integrated Wi-Fi connectivity. This module is only for commissioning and thus cannot be used with the converter permanently. It allows Web-based access to the converter from a connected device (conventional PC with wireless network adapter installed, tablet or smart phone) to realize converter operations including quick commissioning, converter parameterization, JOG, monitoring, diagnostics, backup and restore, etc.

### Connecting the device

Before fitting the module to V20, if RS485 communication is present, you must set P2010[1] = 12 via the BOP.

### Notice

#### Equipment malfunctions due to improper installing or removing

Installing or removing the SINAMICS V20 Smart Access when the V20 converter is in power-on state can cause malfunctions of the SINAMICS V20 Smart Access.

- Make sure that the V20 converter is powered off before installing or removing the SINAMICS V20 Smart Access.

| Device with wireless network adapter | Operating system | Recommended Web browser <sup>*)</sup>  |
|--------------------------------------|------------------|--|
| PC                                   | Windows 7        | <ul style="list-style-type: none"> <li>• ≥ Google Chrome 62.0</li> <li>• ≥ IE 11.0</li> <li>• ≥ Firefox 53.0</li> </ul>                        |
|                                      | Windows 10       | <ul style="list-style-type: none"> <li>• ≥ Google Chrome 62.0</li> <li>• ≥ IE 11.0</li> <li>• ≥ Firefox 53.0</li> <li>• ≥ Edge 42.0</li> </ul> |
|                                      | ≥ Mac OS 10.12.4 | <ul style="list-style-type: none"> <li>• ≥ Google Chrome 75.0</li> <li>• Safari</li> </ul>   |
| Smart phone/tablet                   | ≥ Apple iOS 12.2 | <ul style="list-style-type: none"> <li>• ≥ Google Chrome 73.0</li> <li>• ≥ Firefox 16.0</li> <li>• Safari</li> </ul>                           |
|                                      | ≥ Android 8.0    | <ul style="list-style-type: none"> <li>• ≥ Google Chrome 70.0</li> <li>• ≥ Firefox 67.0</li> </ul>   |

<sup>\*)</sup> Siemens recommends that you use the Web browsers listed above to achieve optimum browsing performance.

### LED status

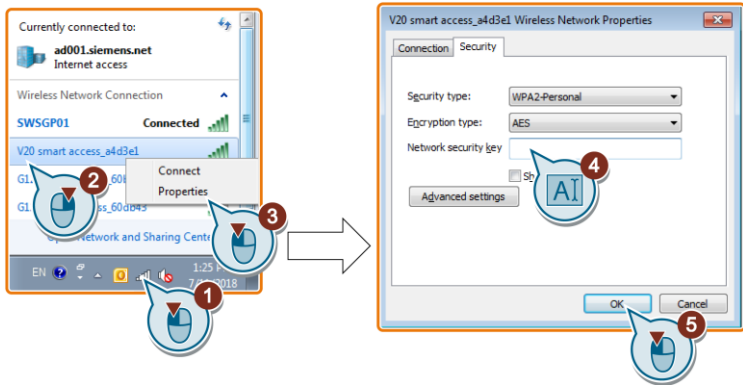
| LED color                           | Meaning   |  |
|-------------------------------------|---|--|
| Solid red                           | One client is connected to the module and USS communication between the module and the converter fails. |  |
| Solid green                         | The module is running and one client is connected to it.  |  |
| Solid yellow                        | The module is running and no client is connected to it.   |  |
| Flashing red                        | Flashing at 1 Hz  | No client is connected to the module and USS communication between the module and the converter fails. |
|                                     | Flashing at 0.5 Hz  | The module is starting.  |
| Flashing green                      | The module is running and one WebSocket channel is connected to it.                                     |  |
| Flashing yellow                     | Reminder of restarting the module.  |  |
| Flashing red & yellow alternatively | The Web application, firmware, or service package is upgrading.   |  |

### Operating sequence for first wireless network connection

1. Fit the module to the converter and power on the module by sliding its power switch to "ON".
2. Activate the Wi-Fi interface inside your PC or mobile device. If you desire to establish the wireless network connection on your PC, make sure that the automatic IP settings are activated.
3. Search the wireless network SSID of the SINAMICS V20, for example, "V20 smart access\_a4d3e1".
4. Enter the wireless password to launch the connection (default password: 12345678).
5. Enter this address (<http://192.168.1.1>) in the URL bar of the browser on your PC or mobile device to open the V20 Web pages.
6. Enter the new password (8 to 12 characters limited to the following three categories of characters: ① letters: A...Z, a...z; ② numbers: 0...9; ③ special characters: \_, -, ~, !, @, #, \$, %, ^, & and \*, the space character is not allowed). Confirm the password with the <OK> button, then the module restarts.
 

Note that this password setting page includes a password security level indicator. The indicator displays as follows with the complexity of the new password:

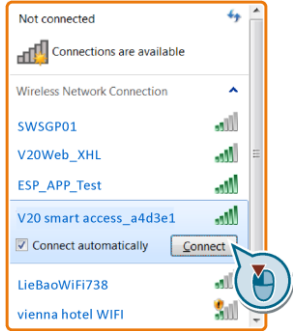
  - Low: weak password. The new password consists of only one category of characters.
  - Medium: middle-strength password. The new password consists of two categories of characters.
  - High: strong password. The new password consists of three categories of characters.
7. Enter the new Wi-Fi password to launch the connection. Repeat Step 5 to access the V20 Web pages.



## Wireless network connection examples

### Windows 7/Windows 10

1. Click the icon in the taskbar on your PC.
2. Select the target network and enter the wireless password to launch the connection.



### Android/iOS

1. Enter the Wi-Fi window of your tablet or smart phone, select the target network and enter the wireless password to launch the connection.



## Resetting Wi-Fi configuration

When the converter is in power-on state, pressing the reset button on the module resets the Wi-Fi configuration to defaults:

- Wi-Fi (SSID): V20 smart access\_xxxxxx, "xxxxxx" stands for the last six characters of the module MAC address.
- Wi-Fi password: 12345678
- Frequency channel: 1

### Note

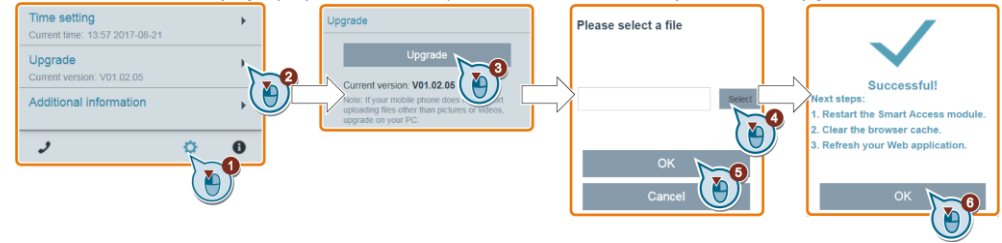
Before pressing the reset button to reset the Wi-Fi configuration, make sure that the status LED on the SINAMICS V20 Smart Access lights up solid green/solid yellow or flashes green. The Wi-Fi configuration is reset successfully when the status LED flashes yellow. After resetting Wi-Fi configuration, restart the SINAMICS V20 Smart Access.

## Upgrading

Upgrading on the SINAMICS V20 Web page upgrades the firmware version of the module.

## Conventional upgrading

1. Open the following Web site and click "Sales release for SINAMICS V20 Smart Access VXX.XX.XX" (VXX.XX.XX represents the firmware version number of the SINAMICS V20 Smart Access) to download the target upgrade file (\*.bin file) to your local drive (recommended on PC): <https://support.industry.siemens.com/cs/ww/en/ps/13208/pm>
2. Access the V20 Web page (<http://192.168.1.1>). Proceed as follows to perform the upgrade.



3. Restart the module, clear the browser cache and refresh your Web application.

## Basic upgrading

Basic upgrading is applicable only when conventional upgrading fails. For more information about basic upgrading, see SINAMICS V20 Converter Operating Instructions.

## Technical specifications

|   |   |
|---|---|
| Rated voltage                             | 24 V DC                                       |
| Wireless technology and working frequency | Wi-Fi 2400 MHz ... 2483.5 MHz                 |
| Wireless modulation type                  | 802.11 b/g                                    |
| Modulation technology                     | 802.11b: CCK, DSSS<br>802.11g: OFDM           |
| Maximum radio frequency power             | 17.5 dBm (Effective Isotropic Radiated Power) |
| Maximum wireless communication distance   | 140 m   |
| Antenna gain                              | 1.9 dBi                                       |
| Extreme temperature range                 | -10 °C ... 60 °C                              |
| Operating ambient temperature             | 0 °C ... 50 °C (according to UL requirement)  |

## Regulatory information and certification marks

(For detailed information, please turn over.)

### SINAMICS V20 智能连接模块（选件）

模块支持变频器固件版本 3.93 及以上。

模块的安装使用详情，参见《SINAMICS V20 操作说明》。

本《产品信息》还提供以下语言版本：繁体中文、土耳其语、西班牙语、韩语、俄语、塞尔维亚语和乌克兰语



### 安全性信息

为了防止工厂、系统、机器和网络受到网络攻击，需要实施并持续维护先进且全面的工业信息安全保护机制。

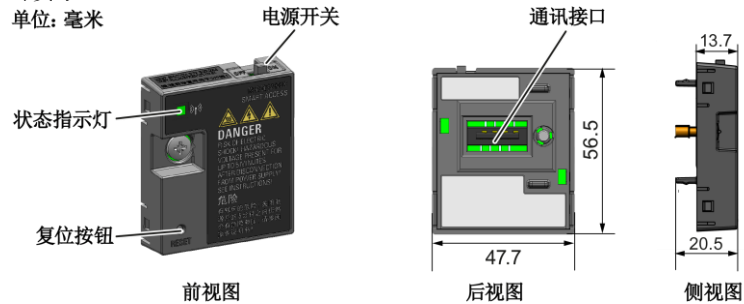
Siemens 的产品和解决方案构成此类概念的其中一个要素。更多有关工业信息安全的信息，请访问

<https://www.siemens.com/industrialsecurity>。

### SINAMICS V20 智能连接模块

订货号：6SL3255-0VA00-5AA0

单位：毫米



### 功能

SINAMICS V20 智能连接模块是一款集成了 Wi-Fi 连接功能的 Web 服务器模块。该模块仅供调试使用，不可长期与变频器共用。通过此模块可实现从所连设备（带无线网卡的传统 PC、平板电脑或者智能手机）对变频器的基于 Web 的访问，从而对变频器进行快速调试、参数设置、JOG、监控、诊断、数据备份与恢复等操作。

### 连接设备

将模块安装至 V20 之前，如果存在 RS485 通讯，必须先通过 BOP 将 P2010[1] 设置为 12。

| 带无线网卡的设备  | 操作系统             | 推荐使用的 Web 浏览器 <sup>*)</sup>  |
|-----------|------------------|--|
| PC        | Windows 7        | <ul style="list-style-type: none"> <li>≥ Google Chrome 62.0</li> <li>≥ IE 11.0</li> <li>≥ Firefox 53.0</li> </ul>                      |
|           | Windows 10       | <ul style="list-style-type: none"> <li>≥ Google Chrome 62.0</li> <li>≥ IE 11.0</li> <li>≥ Firefox 53.0</li> <li>≥ Edge 42.0</li> </ul> |
|           | ≥ Mac OS 10.12.4 | <ul style="list-style-type: none"> <li>≥ Google Chrome 75.0</li> <li>• Safari</li> </ul>   |
| 智能手机/平板电脑 | ≥ Apple iOS 12.2 | <ul style="list-style-type: none"> <li>≥ Google Chrome 73.0</li> <li>≥ Firefox 16.0</li> <li>• Safari</li> </ul>                       |
|           | ≥ Android 8.0    | <ul style="list-style-type: none"> <li>≥ Google Chrome 70.0</li> <li>≥ Firefox 67.0</li> </ul>   |

<sup>\*)</sup> 为了保证最佳网络浏览性能，西门子推荐使用以上浏览器进行操作。

### 注意

不恰当地安装或移除可导致设备故障

V20 变频器通电状态时安装或移除 SINAMICS V20 智能连接模块可导致 SINAMICS V20 智能连接模块故障。

- 安装或移除 SINAMICS V20 智能连接模块前必须确保 V20 变频器已断电。

### LED 状态

| LED 颜色    | 含义                            |                            |
|-----------|-------------------------------|----------------------------|
| 红色常亮      | 客户端已连接至模块，模块与变频器 USS 通讯失败。    |                            |
| 绿色常亮      | 模块正在工作，客户端已连接至模块。             |                            |
| 黄色常亮      | 模块正在工作，无客户端连接至模块。             |                            |
| 红色闪烁      | 1 Hz 频率闪烁                     | 无客户端连接至模块，模块与变频器 USS 通讯失败。 |
|           | 0.5 Hz 频率闪烁                   | 模块正在启动。                    |
| 绿色闪烁      | 模块正在工作，一个 WebSocket 通道已连接至模块。 |                            |
| 黄色闪烁      | 模块重启提醒。                       |                            |
| 红色和黄色交替闪烁 | Web 应用程序、固件、或者服务包正在更新。        |                            |

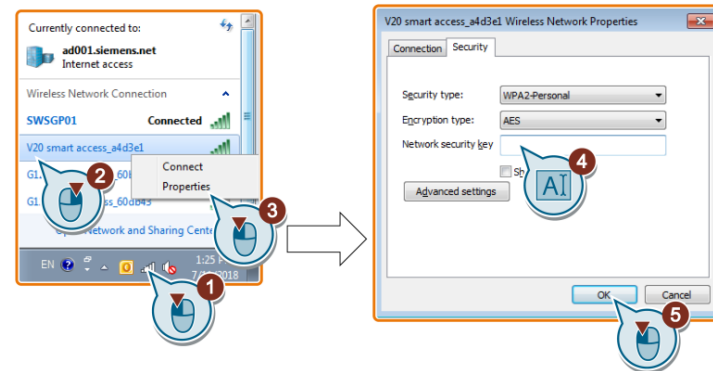
### 首次无线网络连接的操作步骤

1. 将模块安装至变频器，并将模块的电源开关滑动至“ON”档给模块上电。
2. 启用 PC/移动设备内的 Wi-Fi 接口。如需在 PC 上建立无线网络连接，确保自动 IP 设置已启用。
3. 搜索 SINAMICS V20 的无线网络 SSID，例如：“V20 smart access\_a4d3e1”。
4. 输入无线网络密码启动连接（默认密码：12345678）。
5. 在 PC 或移动设备浏览器的地址栏中输入网址（<http://192.168.1.1>）打开 V20 网页。
6. 输入新密码（8 至 12 个字符，仅限于以下三类字符：① 字母：A..Z、a..z；② 数字：0..9；③ 特殊字符：\_、-、~、!、@、#、\$、%、^、& 及 \*，不可使用空格），按下 <OK> 按钮确认，模块自动重启。

注意，该密码设置页包含一个密码安全级别指示器。指示器会根据新密码的复杂程度给出如下提示：

- 低：弱密码。新密码仅包含一类字符。
- 中：中等强度密码。新密码包含两类字符。
- 高：强密码。新密码包含三类字符。

7. 输入新的 Wi-Fi 密码启动连接。重复执行第 5 步访问 V20 网页。



## 无线网络连接示例

### Windows 7/Windows 10

1. 点击 PC 任务栏中的  图标。
2. 选择目标网络并输入无线网络密码启动连接。



### Android/iOS

进入平板电脑或智能手机的 Wi-Fi 界面，选择网络并输入无线网络密码启动连接。



V20 smart access\_a4d3e1

## 复位 Wi-Fi 配置

变频器处于上电状态时，按下模块上的复位按钮可将 Wi-Fi 配置恢复至默认设置：

- Wi-Fi (SSID): V20 smart access\_xxxxxx  
“xxxxxx”代表模块 MAC 地址最后六个字符。
- Wi-Fi 密码: 12345678
- 频率通道: 1

## 说明

在按下复位按钮复位 Wi-Fi 配置之前，确保 SINAMICS V20 智能连接模块上状态指示灯的状态为绿色长亮/黄色长亮或绿色闪烁。状态指示灯的状态为黄色闪烁表示 Wi-Fi 配置复位成功。复位后，重启 SINAMICS V20 智能连接模块。

## 升级

在 SINAMICS V20 网页上进行升级可升级模块的固件版本。

### 常规升级

1. 打开以下网站 (<https://support.industry.siemens.com/cs/ww/en/ps/13208/pm>)，点击“Sales release for SINAMICS V20 Smart Access VXX.XX.XX”（VXX.XX.XX 代表 SINAMICS V20 智能连接模块的固件版本号），下载目标升级文件 (\*.bin 文件) 至本地磁盘（推荐在 PC 上操作）。
2. 访问 V20 网页 (<http://192.168.1.1>)，按下图进行升级操作。



3. 重启模块，清除浏览器缓存并刷新 Web 应用程序。

## 基本升级

若常规升级失败，可进行基本升级。有关基本升级的详情，参见《SINAMICS V20 变频器操作说明》。

## 技术规格

|           |                                     |
|-----------|-------------------------------------|
| 额定电压      | 24 V DC                             |
| 无线技术和工作频率 | Wi-Fi 2400 MHz ... 2483.5 MHz       |
| 无线调制制式    | 802.11 b/g                          |
| 调制技术      | 802.11b: CCK, DSSS<br>802.11g: OFDM |
| 最大发射功率    | 17.5 dBm (等效全向辐射功率)                 |
| 最大无线通信距离  | 140 m                               |
| 天线增益      | 1.9 dBi                             |
| 极限工作温度范围  | -10 °C ... 60 °C                    |
| 运行环境温度    | 0 °C ... 50 °C (根据 UL 要求)           |

## 规范/Regulatory information

### 无线电设备指令/Radio Equipment Directive

SINAMICS V20 智能连接模块符合无线电设备指令 2014/53/EU。可以从以下链接下载证书：

The SINAMICS V20 Smart Access complies with Radio Equipment Directive 2014/53/EU. You can download the certificate from the following link: <https://support.industry.siemens.com/cs/ww/en/ps/13208/cert>

### 巴西/Brazil

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

ANATEL 证书号/ANATEL certificate number: 05956-18-00199

### 中国台湾/Taiwan, China

根據低功率電波輻射性電機管理辦法規定：

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

### 韩国/South Korea

이 컴퓨터는 전자파 적합성평가(인증)를 받은 내장구성품을 사용하여 조립한것으로 완성품에 대한 전자파 적합성평가는 받지 않은 제품입니다.

### 泰国/Thailand

เครื่องโทรคมนาคมและอุปกรณ์นี้มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.

## 证书标记/Certification marks

以下仅列出认证所要求的标记/The following marks are listed because of the certificate requirements:



Complies with  
IMDA Standards  
[DA104037]

IFETEL ID: RCPSI6S18-1816

MOT.: 4667 / E&M / 2019