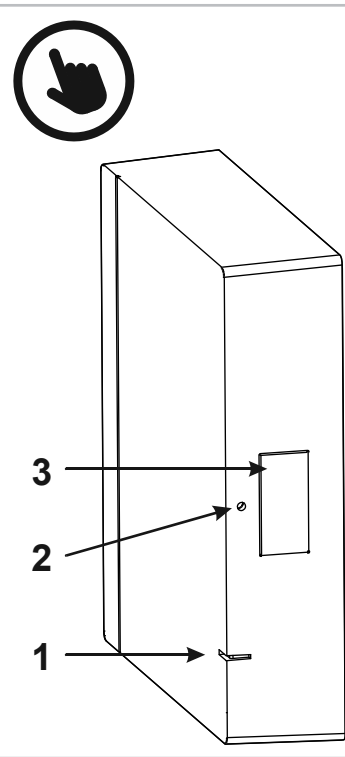
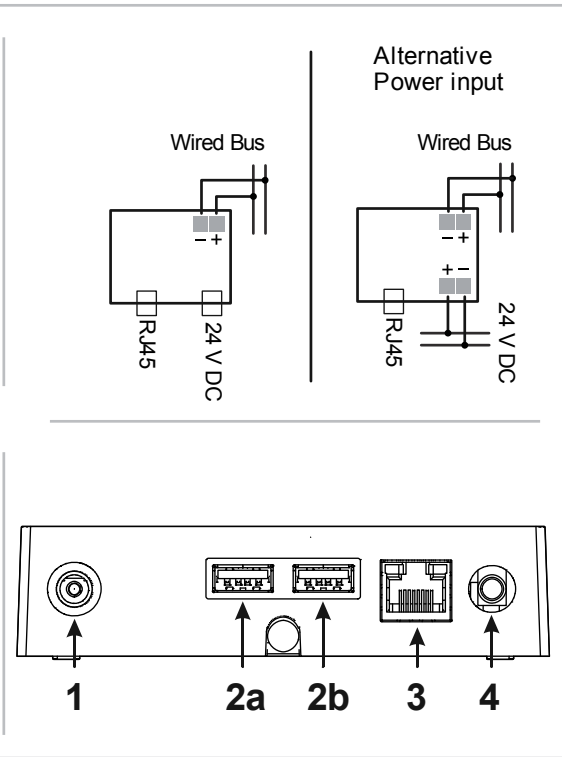
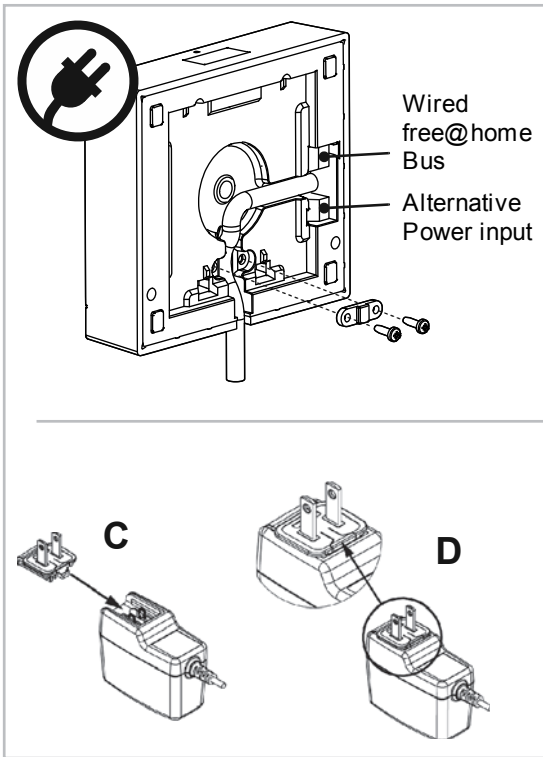
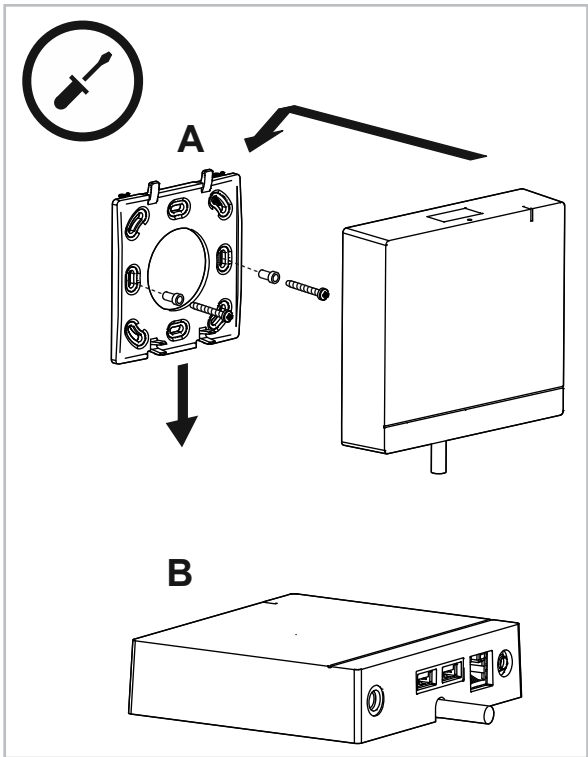




System Access Point 2.0, ABB-free@home Installation and Operation Instructions



IMPORTANT: Carefully read all instructions and safety information about this device before operation. Please leave this document with the homeowner for future reference.



WARNING: Installation must be performed by a licensed electrician or electrical professional. Improper installation can cause property damage, personal injury, or loss of life.

Intended Use

The System Access Point 2.0 (SysAP) is the central controller hub of the free@home network. It is used to identify and configure free@home devices during installation. Once the devices are added to the network, the SysAP is able to automatically execute user-defined programs and facilitates manual interaction via the free@home app available on smartphones, tablets, and PCs. Only one SysAP may be active on a network at any time.

Additional Information

For more information on system integration or the range of functions, please scan the QR code or refer to the system manual at <http://new.abb.com/products/2CKA006200A0156/>

Box Contents

System Access Point 2.0	1 free@home Wired Bus Connection Terminal (Red/Black)
Mounting Base	1 Power Supply Connection Terminal (Yellow/White)
2 Wall Screws	1 Plug Power Supply with Adapter
2 Wall Anchors	1 Strain-Relief Bracket with 2 Screws

Optional Accessories:
External Antenna

SAP-S-3-US Technical Data

Operating Voltage	SAP-S-3-US External Wall Plug Power Supply (enclosed, SELV) 24 VDC / 300 mA NEC Class 2 (LPS) * Alternative DIN Rail Power Supply 24 VDC / 300 mA (SELV) NEC Class 2 (LPS) - Connection terminal: 0.8 - 1.0 mm (AWG 18 - AWG 20) - Line type: J-Y(St)Y, 2 x 2 x 0.8 mm - Wire stripping: 6 - 7 mm
free@home Wired Bus Voltage	24 VDC via separate power supply (sold separately)
free@home Wired Bus Connection	- Bus connection terminal: 0.8 - 1.0 mm (AWG 18 - AWG 20) - Line type: J-Y(St)Y, 2 x 2 x 0.8 mm - Wire stripping: 6 - 7 mm
Ethernet	RJ45
Protection Rating	IP20
Operating Temperature	23° F to 113° F (-5° C to 45° C)
Storage Temperature	-40° F to 158° F (-40° C to 70° C)
USB-Port	2.0 (High Speed) Total USB current: 500 mA
Wireless (WL)	
Transmission protocol	free@home wireless
Transmission frequency	2.400 - 2.483 GHz
Maximum transmission power WL (wireless)	< 20 dBm
WLAN	
WLAN standard	IEEE 802.11 a/b/g/n/ac
WLAN frequency range	2.400 - 2.483 GHz 5.100 - 5.725 GHz
Maximum transmission power, WLAN	< 20 dBm



WARNING: SHOCK HAZARD

Disconnect the main power supply prior to installation. Failure to turn off the power can cause electrical shock or equipment damage.

MOUNTING

- The transmitter and receiver communicate via RF signals. The transmission range depends on the structural conditions. Walls, ceilings, and electrical equipment can affect wireless communication, especially steel reinforcements or other large metal objects. Electrical devices that send high-frequency signals (such as computers, wireless routers, audio systems, and video systems) should be at least 3-feet from this device.
- If the System Access Point 2.0 is installed within a closed metallic housing (i.e. breaker box), the external antenna should be connected for WL operation and fed outside the box.
- Stationary surface-mounting in interior, dry rooms only. Observe all state and local regulations for installation.

Ways to Mount the SysAP:

- Option A - Wall:** Screw the mounting base directly onto the wall. Set the SysAP on the top and push it downwards.
- Option B - Flat Surface:** Place the SysAP on a flat surface (i.e. on a table).

CONNECTION

- Cat5 or Cat6 wires are connected directly via the Ethernet port.
- IMPORTANT: Use only shielded Cat5 or 6 wires.**
- For installations with a plug-in connection, the socket outlet must be mounted close to the SysAP and be easy to access.
- Use the enclosed power supply with the correct adapter to power the SysAP. To connect the adapter to the power supply, simply slide it down the rails on the power supply until it locks in place (See diagram C & D). All other devices on the network (free@home wired bus) must be powered by a separate NEC Class 2 (LPS) power supply.
- Alternative: 24 V power cord, supplied by the DIN Rail Power Supply (See mounting diagram) instead of enclosed power supply.



WARNING: Do not attempt to power the device using both the DC power jack and the alternative DC power connection. Use only a single connection.

Connection Diagram

- Use the adapter for the enclosed DC power jack
- 2a USB-Port
- 2b USB-Port
- Ethernet Connection (RJ45)
- External Antenna

Setup

- All the devices of the system must be correctly wired and powered ON.
- Connect to the SysAP with a smartphone, tablet, or PC via WLAN.
- For additional connection options see the technical reference manual. (Scan QR code in this instruction manual).
- Detailed information about setup, network connection and configuration is available in the technical reference manual at <http://new.abb.com/products/2CKA006200A0156/>

Establishing Connection via WLAN

- Connect to the System Access Point 2.0 with WLAN (For password see backside of the device)
- Open the web-based configuration tool
 - Automatic within free@home app
 - Via UPnP (network settings - double click on device)
 - Via browser (enter IP address: 192.168.2.1)
- Settings page will appear

OPERATION

1 - LED Light

Green - Briefly	Power is ON
Green - Flashing	Device is booting
White	Device is ready for operation
Blue	Access Point mode, (WLAN)
2 x Red Flashing	Failed to join Network
White/red flashing	No connection to myABB
OFF	No power

2 - ACTIVATED/DEACTIVATED Access Point mode (WLAN on/off);
LED ON/OFF: active/inactive

3 - RESET by using a pin - press down and hold for 40 seconds or longer

Cleaning:

To clean, wipe with a clean damp cloth. DO NOT use any chemical cleaning solutions.

FCC/IC Information

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause unwanted operation. Modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in an installation. If this equipment does cause harmful interference to radio or television reception, which can be tested by turning the equipment off and on, the user is encouraged to try to correct the interference by doing one or more of the following:

- Reposition or move the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to an outlet on a different circuit (not the circuit used by the receiver).
- Consult the dealer or an experienced radio/TV technician for help.

This radio transmitter IC:23736-SAPS3US has been approved by ISED Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

The device operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

This device contains WLAN Module IC 23736-SPB209A, HVIN SPB209A-BN.

External Antenna (optional):

- ABB SAP-1-WL
- gain: 1.5dBi
- connector: reverse SMA

A minimum separation distance ≥ 20 cm is required between the antenna and radiating structures of the device and nearby persons to qualify for mobile exposure limits.

Customer Service
800-816-7809
7:00 am - 5:30 pm, CST, Monday - Friday
elec_custserv@tnb.com

Technical Support
888-385-1221, Option 1
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