

PC-KP20

User Manual

Revision History

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-31:FE2015	1.0	A	First Edition	K. Baumgart

¹⁾ A: Alterations due to faulty documents or improvement of the documentation

B: Alterations maintaining full or upward compatibility

C: Alterations limiting or excluding compatibility

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1 Information on this Document

1.1 Validity

This document is valid for the communication module PC-KP20.BG1 including the corresponding housing. You will find the type designation on the type label on top of the device.

1.2 Purpose

The purpose of this document is to summarize all for FCC and IC certification relevant technical information of the PC-KP20 as well as FCC and IC Compliance Information intended for the end user of the host product.

2 PC-KP20 Board

The intended use of the PC-KP20 is the integration as the central communication unit into solar inverters or similar devices (e.g. battery inverter), designed and manufactured by SMA Solar Technology AG. The use of this module by other manufacturers beside the SMA Solar Technology AG and affiliated companies (hereinafter referred as SMA Solar Technology AG) is not permitted. The PC-KP20 will be attached to the power unit where it will be supplied and communicates with the processor of the power unit.

For the wireless communication the PC-KP20 provides an IEEE802.11b/g/n for the 2.4 GHz band. This interface provides:

- 1x internal antenna for receiving and transmitting

- 1x external special antenna socket (SMB) for attaching an antenna kit which will be orderable at SMA Solar Technology AG or its retailers. Operation with other antennas than those specified by SMA Solar Technology AG for the use with PC-KP20 is not permitted.

Mechanical Data

Width x height x depth	212 mm x 112 mm x 63 mm
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Voltage supply

Voltage supply via	2x5 pole pin header (marked as X1)
Input voltage	14 VDC \pm 1V
Current consumption	< 200 mA

IEEE802.11b/g/n radio system in 2.4 GHz ISM band

Frequency	2.4 GHz ... 2.485 GHz
Used frequency channels	1 .. 11 ¹
Distance of frequency channels	5 MHz
Bandwidth of the radio signal	22 MHz (802.11b), 20 MHz (802.11g/n)
Transmitting power	< +20 dBm (e.i.r.p.)
Standard for radio transmission	IEEE 802.11b/g/n
Selection of antenna	Automatically on startup

External Antenna

Frequency range	2.4 GHz ... 2.485 GHz
Max Gain	1.5 dBi
Impedance	50 Ω

¹ The channels 12 and 13 are disabled for products in the USA and CA and are only available for products in the EU.

3 FCC and IC Compliance Information

This device complies with Part 15 of the FCC Rules and with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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 in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications made to this equipment not expressly approved by SMA Solar Technology AG may void the FCC authorization to operate this equipment.

Operation with other antennas than those delivered by SMA Solar Technology AG for the use with inverters including the module PC-KP20 is not permitted.

RF Exposure Statement

Radiofrequency Radiation Exposure Information:

This equipment complies with FCC radiation limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 8 in. (20 cm) between the radiator and your body.