User Manual and Installer Instructions for RFID Reader 4.683-250.0

1. Introduction

This RFID reader is designed for reading authorization codes for floor cleaning appliances from tags on user keys which can be inserted into a key receptacle in the control panel of the floor cleaning appliance. The keys and the key receptacle use a design which was specifically developed for Kärcher floor cleaning appliances.

2. Characterstics

Transmitter frequency:	13.56 MHz
Input voltage:	3.3 V
Input current:	0.3 A
Operating temperature:	-10°C to +70°C
Dimension of the PCB:	61 mm x 52 mm
RF chip:	NXP PN5120A0HN1/C1
Quartz oscillator:	27.12 MHz
Data buffer:	64 Byte
Connector (power/communication):	Pin 4, 5 (UART interface) Pin 1, 6 (power connection) Pin 2 (interrupt handling) Pin 3 (NRSTPD interface)
Antenna:	Printed antenna on the reader module PCB, no external antenna connector

3. Compliance information

The module complies with the following standards:

- FCC 47 CFR Part 15 Radio Frequency Devices (Subpart C)
- RSS-210, Issue 10 (2019-12) Licence-Exempt Apparatus: Category I Equipment
- RSS-Gen, Issue 5 (2018-04) General Requirements for Compliance of Radio Apparatus

4. Module integration instructions

The RFID module 4.683-250.0 is foreseen for installation in the control panel of Kärcher floor cleaning appliances. The RFID reader is connected to the HMI module in the control panel, which supplies 3.3 V DC voltage to the RFID reader.

This device is intended only for integration under the following conditions: (I) The module with the PCB antenna must be installed such that 20 cm is maintained between the antenna and users. (II) The transmitter must not be co-located or operating in conjunction with any other transmitter or antenna. (III) The module shall be only used with the internal antenna on the module PCB that has been originally tested.

Changes or modifications made to the equipment not explicitly approved by Alfred Kärcher SE & Co. KG may void the FCC / IC authorization to operate this equipment.

5. End product labeling

USA:
The final end product must be labeled in a visible area with the following:
Contains FCC ID: ZP946832500999

Canada:
The final end product must be labeled in a visible area with the following:
Contains IC: 9752A-46832500999
HVIN: 468325000304
PMN: 46832500

6. End product user manual

The user manual of the final end product shall include all required regulatory information/warning as shown in this manual. The user manual of the final end product may not contain any information about the way to install or remove the module from the final product.

7. FCC information

This device complies with part 15 of the FCC Rules. 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.
Changes or modifications not expressly approved by the party responsible for compliance voids the user's authority to operate this equipment.

8. Industry Canada information

This device contains licence-exempt transmitters/receivers that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L’émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d’Innovation, Sciences et Développement économique 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;
2) L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.