

NFC Reader

User Guide

FCC ID: 2A7AASONSPR1MM

IC: 28664SON1SPRMM

Revision 1.4, Jan 20, 2022



Federal Communication Commission (FCC) Compliance Notice

CAUTION



This device complies with part 15 of the FCC Rules. The User should be aware that changes and modifications to the equipment not expressly approved by Master Meter could void warranty and the user's authority to operate the equipment.

Professionally trained personnel should use the equipment.

ATTENTION



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 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.

This device complies with Part 15 of 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.

Industry Canada (IC) Compliance Notice

This device complies with FCC Rules Part 15 and with 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 undesired operation of the device.

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.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent Isotropically radiated power (EIRP) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

- This Class B digital apparatus complies with Canadian ICES-003.
- Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radiation Exposure Statement:

This equipment complies with FCC and IC RF radiation exposure limits set forth for an uncontrolled environment.

Introduction

The NFC reader is used to interface to Arad meters Sonata model.

The reader enables to access the meter for Configuration/diagnostics and downloading logs using the NFC technology and an external Laptop or PC.



Figure 1 – NFC Reader



Figure 2 - NFC Reader connection

LED indicators

	LED	Color	Off	On	Flash (1/sec)
1	Link	Green	No Power from USB	Reader powered by USB	Traffic
2	Data	Blue	No NFC detected	NFC link	Traffic
3	Error	Red		Low USB power	Error detected on USB or NFC

Technical Data

Electrical Characteristics:

Parameter	Value
Input Voltage	5.0V (Via USB)
Control interface	USB 1

Radio Characteristics:

Transmitter	
Parameter	Value
Transmit Frequency	13.56 MHz
Number of channels	1
Modulation	ASK
Transmit power	< 123dBuV/m at 3m.
Antenna type	PCB Loop Antenna

Environmental Characteristics:

Parameter	Value
Operating Temperature	-10°C ÷ +50°C
Storage Temperature	-20°C ÷ 70°C
Protection class	IP54