

SPS100 configuration guide

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Revision history

Revision	Date	Author	Description
1.0	30/04/2024	Jasper Mariën	First release

1. Prerequisites

We use the app: “NFC TagWriter” from NXP in this guide, and recommend using the same app.

2. List of commands

We make a distinction between commands you can send without knowing the pin code, and those where you do need a pin code.

For the commands where you need a PIN, you need to send the command as following:

cmd=pinXXXXXXXX,[cmd]

where XXXXXXXX is the PIN code (default PIN is 12345678)

- List of commands you can send without needing a PIN code:
 - "on" : power on the device
 - "reset" : power cycle the device
 - "test": used as a ping to the device.
You can see the response "testrsp" by reading the NFC tag again afterwards.
 - "status": request the status of the device.
You can see the response by reading the NFC tag afterwards.
Possible responses:
 - generic SIM error
 - SIM PIN required
 - no SIM PIN retries left
 - no network found
 - NTP error
 - MQTT error

OPTION

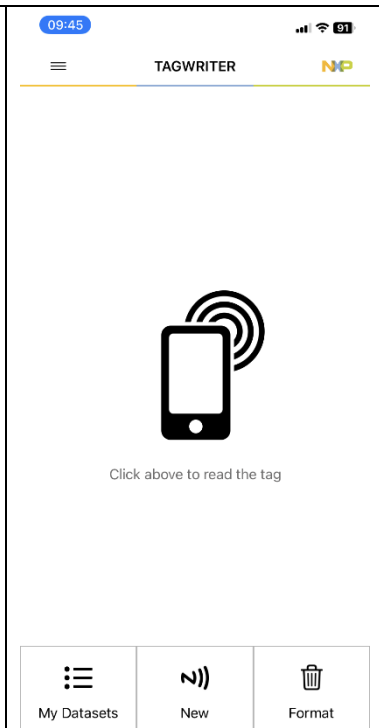
- List of commands for which you need the PIN code:
 - “off”: set the device in inactive state
 - “newpinxxxxxxx”: change the pin code to xxxxxxxx (Note, it is very important that you do not forget this pin code)
 - “clrp”: resets the pin to the default pin code (12345678)
 - “sim[PIN]:APN”: set the APN.
 - Example:
sim:"internet.proximus.be"
 - “sim?”: request the configured APN settings
You can see the response by reading the NFC tag afterwards.
 - Example:
cmd=pin12345678,sim?
 - “ntp”: set the NTP server:
 - Example:
cmd=pin12345678,ntp10.20.30.40:123
 - “ntp?”: request the currently configured NTP server:
You can see the response by reading the NFC tag afterwards.
 - Example:
cmd=pin12345678,ntp?
 - “mqtt”: set the MQTT broker:
 - Format:
IP:PORT:TOPIC:USERNAME:PASSWORD
username and password are optional.
 - Example:
cmd=pin12345678,mqtt10.20.30.40:1883:"spoton/devices/":"The Boss":"BornInTheUSA"
 - “mqtt?”: request the currently configured MQTT broker:
You can see the response by reading the NFC tag afterwards.
 - Example:
Cmd=pin12345678,mqtt?

3. How to read the NFC tag

1. When you open the app you will see the following screen:

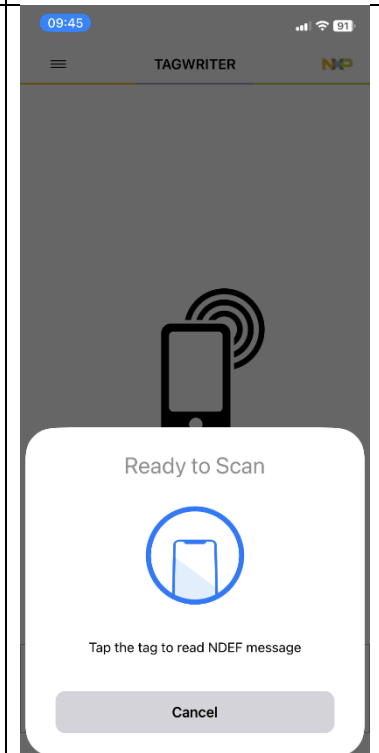


2. Press  to read the status of the NFC tag of the Parking Sensor.



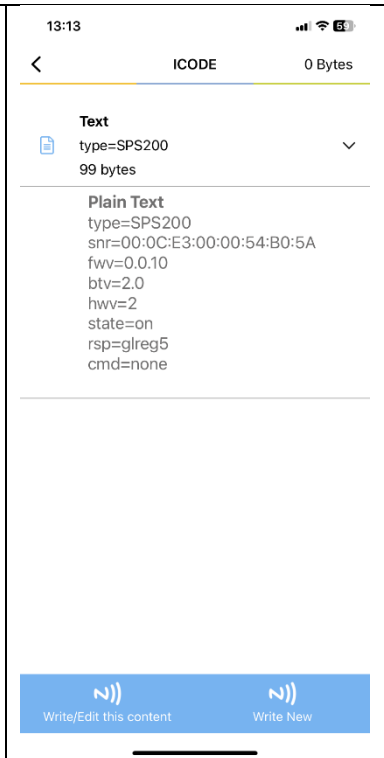
3. Tap the parking sensor with the back of your device.

Wait for the message "Tag read successfully" to appear. Try re-positioning your phone if nothing happens



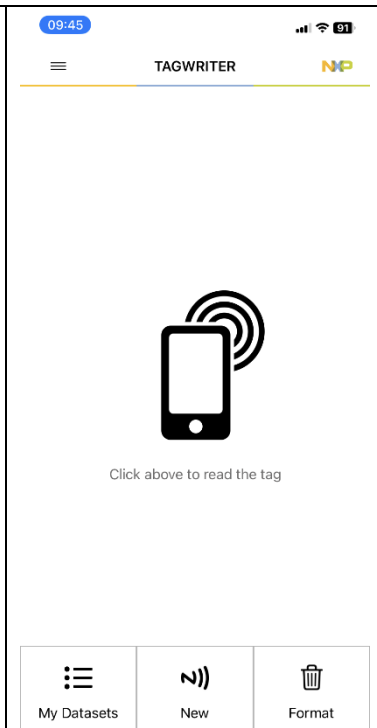
OPTION

4. You will now see the following screen. Press on the text field if you want to see the full content of the field.

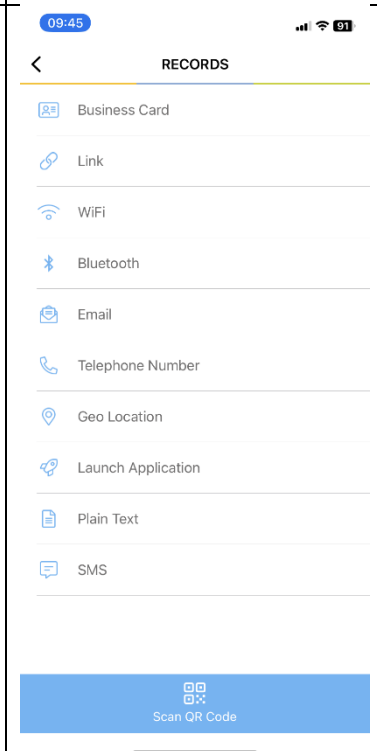


4. How to write the NFC tag

1. When you open the app you will see the following screen:
2. Press "New" on the bottom to read the status of the NFC tag of the Parking Sensor.



3. Press "Plain text".



OPTION

4. You can now type the command you wish to send in the text field, using the format as described above.

09:46 91%

Cancel TEXT

Plain Text 21 Bytes

cmd=on

Language en

Keyboard: "on", ons, onze, q w e r t y u i o p, a s d f g h j k l, z x c v b n m, 123, space, done

5. Press "Save & Write".

09:46 91%

< RECORDS

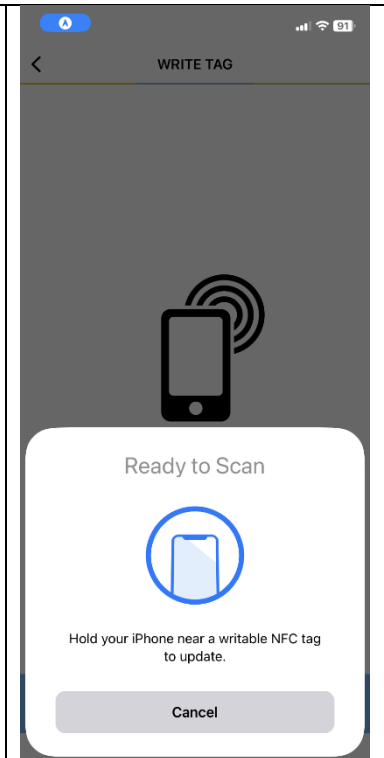
Text cmd=on 19 bytes

Add Record Save & Write

OPTION

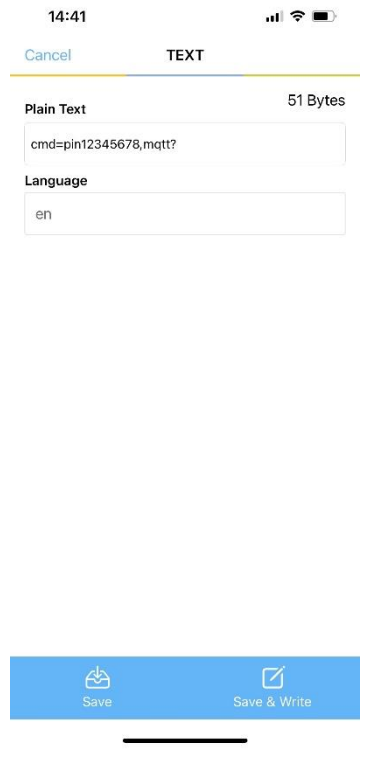
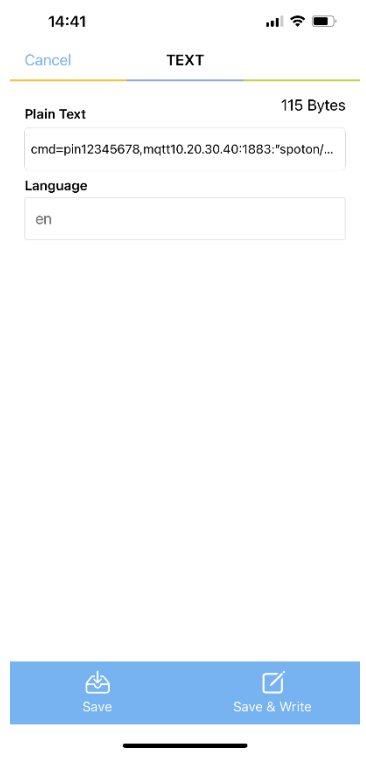
6. Tap the parking sensor with the back of your device.

Wait for the message "Write NDEF message successful" to appear. Try re-positioning your phone if nothing happens



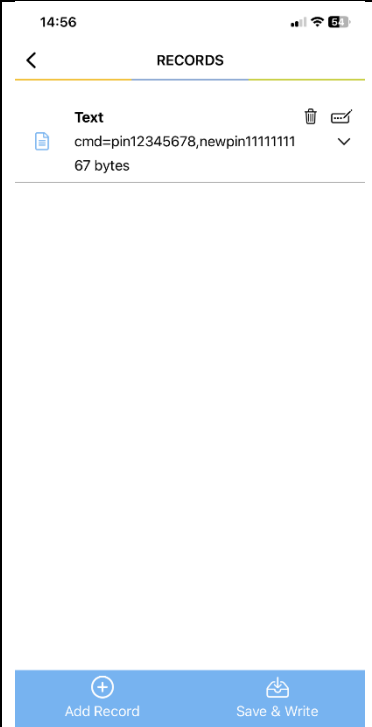
5. How to configure the device

Bellow you can find a step by step guide on what you should do to configure and turn on the device using the commands from section 2.

<ol style="list-style-type: none"> 1. Check the current configuration of the device using the "sim?", "mqtt?" and "ntp?" commands. After sending this command, you can read the tag again to see response from the sensor. 	
<ol style="list-style-type: none"> 2. [OPTIONAL] set the APN using the "sim" command as described in section 2. 3. [OPTIONAL] change the mqtt broker using the "mqtt" command as described in section 2. 4. [OPTIONAL] change the NTP server using the "ntp" command as described in section 2. 	

OPTION

5. [OPTIONAL BUT RECOMMENDED] Change the pin using the newpin command. Make sure that you remember this pin as there is no convenient way of recovering/resetting this pin.



6. Turn on the device by using the command "cmd=on"

