Natron MCP

Wireless addressable fire alarm manual call point

CE 23
2918
DoP No: 217

EN 54-11:2001/A1:2005
EN 54-25:2008
Type A

TELETEK

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ATTENTION: Read carefully this installation Instructions before installing the device!
This manual is subject to change without notice!

1. General Description and Working Principle

Natron MCP is a wireless addressable manual call point designed for operation with Natron series wireless expander modules*. In stand-by mode, the resettable (frangible) call point element is in a middle position and the status LED is off.

* Refer to the installation manuals of Natron WE-C, Natron WE-A and Natron WE-A/C wireless expander modules for detailed information about the programming menus and other details.

To initiate a fire alarm or evacuation event, press on the resettable element – it moves down and a color strip is shown on at its upper side. The call point is in "Fire alarm" condition and the status LED starts blinking fast. To reset the flexible element back in stand-by mode, use the special key tool included in the kit - fix the long side of the tool at the call point's bottom side and push it up until flexible element moves up in middle position – a click is heard. Then reset the fire alarm control panel.

***Attention**. In case of fire alarm event and no connection between the device and the expander module are applied the following working algorithms for conservation of the call point power battery:*
*   - **The connection between the device and the expander module is lost and after that the call point is activated.** In this case the status LED flashes 3 times and stops.*
*   - **The call point is activated, the status LED is blinking fast and after that the connection between the device and the expander module is lost.** In this case the status LED will proceed blinking fast for 5 minutes and after that will stop if the connection with the expander module is not restored during that period.*
When the connection between the expander module and the device is restored and the call point is still activated (the color strip is visible), the status LED will proceed blinking fast until resetting the call point.

2. Technical Specifications

Communication range with expander module 1500m
Battery power supply .... 1 x CR123A 3V
Battery life .... ~10 years
Radio frequency 868MHz
Communication type .... Bidirectional
Communication Protocol .... NATRON TTE
Radio signal modulation type .... GFSK
Number of frequency channels .... 6 pair channels
Radiated power .... ≤ 20 mW
Receiver category (EN300-220-1) 1.5
Trace attenuation .... ≥ -90dBm (during the installation)
Test transmission message period 300s
Type .... A
Type of the frangible element .... Resettable (flexible)
Operation temperature .... -10°C to +55°C
Related humidity resistance .... (93±3)% @ 40°C (no condensation)
Enclosure box type .... ABS
Dimensions 90x57x90mm
Color .... RAL 3020 (red)
Protection IP40
Weight (with battery) 158g
Mounting .... Wall, Indoor use
Standards .... EN 54-11; EN 54-25

3. Installation Place and Mounting
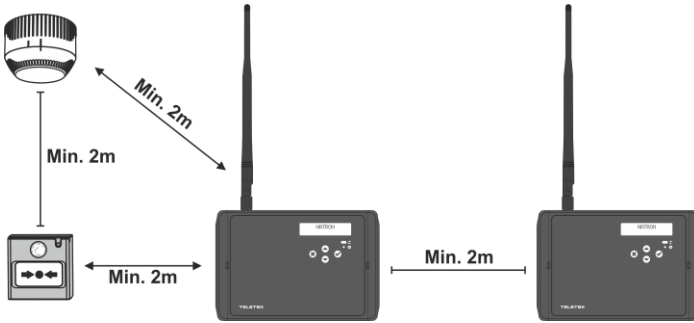
Attention:
For optimum operation, plan to ensure at least 2m distance between two Natron expander modules and the same minimal distance between each device and the expander module.

Dimensions	Mounting holes and orientation of the box bottom
57mm 90mm 90mm	37mm 52mm 37mm ✓ ✗

Front panel elements	Structure – Assembling and Disassembling
1 – Status LED (red): - Light off – Stand-by mode - Fast blinking – Fire Alarm event or Test - Slow blinking – Selected device from panel/module **2 –** Resettable frangible operation element.	**1 –** Special tool* to dismount the front cover from the carrier unit **2 –** Front cover **3 –** Frangible element **4 –** Carrier unit **5 –** Screws* for fixing the carrier unit to the bottom **6 –** PCB on the back side of the carrier unit **7 –** Box bottom ** Included in the supplied kit* **Note:** After final mounting of the box bottom and assembling back the call point components, the frangible element (position 3 above) is in activated position and the colour strip is shown.

	Reset the frangible element
	To avoid false alarms in the system during the installation, it is recommended to disable the call point's operation after enrolment to the expander module! **Enable the device only after finishing the mounting and the frangible element is reset to stand-by mode!**

4. PCB Elements

The PCB of the manual call point is factory mounted at the back side of the carrier unit.
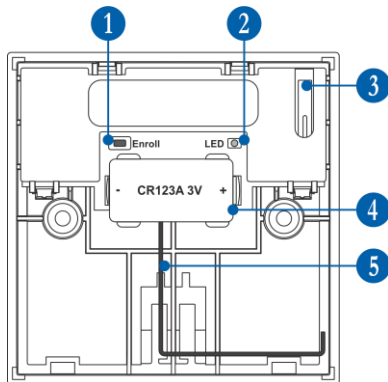
1 – Enroll button. The button is used for the following actions:
- Enrolling the device to the expander module.
- Checking the signal strength.
- Reset the device.

2 – Bi-color operation LED (green/red). The LED is used for following the actions during enrollment, reset and checking the signal strength.

3 – Tamper switch

4 – Power Battery CR123 A 3V
Attention: Use only batteries from the same type!

5 – Antenna
Attention: Do not touch or bend the antenna!

5. Enrolling to Expander Module

1. Remove the box bottom to access the PCB with the battery compartment. If the device is not new, perform reset as described in item 7.
2. Enter in programming mode of the Natron expander module. Select ADD DEVICE menu and press ENTER button. A list with already enrolled devices is shown on the screen with an order number and type of the device.
3. Scroll down to find a free address to enroll the call point. Every free address is labeled as EMPTY.
4. Press ENTER button. Message SEARCHING >>> (arrows are blinking) appears on the screen showing that the module is scanning for signals from wireless device in its covering range.
Note: *If there is no signal from the device in 2-minute period, the expander module will exit automatically the programming mode.*
5. Power on the call point. If the device is new just remove the protective folio from the battery – the enrolling process starts automatically. If the device is powered and reset - single press the ENROLL button. The operation LED on the PCB starts flashing in red.
6. In case of successful enrolment, the operation LED flashes 3 times in green and message DONE appears for a while on the screen of the module. The call point is added to the list as MCP type.
7. Test the signal strength between the call point and the expander module. Single press the ENROLL button and wait for the LED indication:
 - 3 flashes in green – excellent signal strength;
 - 3 flashes in orange – good signal strength, but, if possible, change the place of installation;
 - 3 flashes in red – poor signal strength and it is obligatory to change the place of installation.
You can also check the signal quality for the device in DEVICE RSSI menu of the module - item 8.
8. If the signal quality and strength are excellent or good, you can proceed with mounting.
9. Disable the operation of the call point from the module's menu DEVICE SETUP (expander module Natron WE-C to conventional fire alarm panel); or addressable panel's menus (expander module Natron WE-A to addressable fire alarm panel). Thus, you will avoid the false alarms during mounting.
10. Disassemble the call point and mount it to the installation place – see item 3.
11. Reset the frangible element to normal position in stand-by mode and enable the operation of the call point.

6. Testing the Call Point

Start testing procedure for the fire zone to which the call point is associated - follow the given instructions in the operation manual of the addressable/conventional fire alarm control panel. Press the frangible element of the call point to initiate test fire alarm or evacuation event. The status LED starts blinking fast and the color strip of the frangible element is shown on at its upper side. After finishing the testing, reset the frangible element of the call point (see item 7) and then reset the fire alarm control panel.

7. Reset the Call Point

If the call point is not new, you have to reset it before enrolment to the expander module. Check the battery condition. It is recommended to change it with a brand new.

To reset the Natron MCP, power it on with the battery and after that press and hold ENROLL button for 5-7 seconds. The reset is complete when the operation LED on the PCB of the call point flashes 3 times in green, followed from 1 long flash in red and 1 long flash in green. Next pressing of ENROLL button will start the enrolment procedure to expander module.

8. Checking the Signal Quality (RSSI)

The quality of the signal between the call point and the expander module is checked at DEVICE RSSI menu of the module. The signal quality is assessed in [dB].

1. Enter in programming mode of the module. Scroll to menu DEVICE RSSI and press ENTER button. A list with present enrolled devices is shown on the screen with an order number and type of the device.
2. Find in the list the call point number.
3. Press ENTER button. Refer to the table below to read the signal quality on the screen:

Signal quality	Level RSSI	Description
< -90 dB	Loss	Bad signal or no connection.
-90 ÷ -70 dB	Good	The signal is satisfactory but needs improvement. It is recommended to change the installation place of the device.
> -70 dB	Excellent	Excellent signal.

4. You can exit the menu at any time with pressing CANCEL button.

9. Finding the Call Point Installation Place

This is a procedure that helps the engineer to find the exact location of every wireless device in the fire installation and test the connection with module.

1. Enter in programming mode of the module. Scroll to menu FIND DEVICE and press ENTER button. A list with present enrolled devices is shown on the screen with an order number and type of the device.
2. Find in the list the call point number which you want to locate in the fire installation.
3. Press ENTER button. Message FINDING >>> (arrows are blinking) appears on the screen showing that the module is scanning for signals from the selected wireless device. The message will change for a while to FINDING DONE in case of success.
4. The call point will respond with blinking status red LED on the front panel.
5. The module will exit automatically the finding procedure after 70-80 seconds. You can also stop the procedure at any time with pressing CANCEL button.

10. Replacing Batteries

It is recommended to change the battery after 10 years of operation regardless of it indicated discharge level. Always use only batteries approved by the manufacturer - Panasonic CR123A 3V or other with similar characteristics.

Attention: After indication from the panel/expander module for low battery of a device, the user/ installer must replace the discharged battery with new one within one month. The remaining shelf time of the new battery must not be less than 8 years.

1. Disable the call point operation to avoid fault messages.
2. Disassemble the call point as described in item 3.
3. Remove the old battery and place the new as observe the +/- polarity.
4. Assemble the call point elements back in place.
5. Reset the frangible element.
6. Enable the call point operation.
7. Check the signal quality in DEVICE RSSI menu of the expander module.
8. Test the call point operability.

CAUTION: *Do not expose used batteries to fire, hot ovens, or mechanical crushing/cutting as this can result in an explosion. Exposing batteries to extremely high environmental temperatures or low air pressure can result in explosion or the leakage of flammable liquid or gas.*
DISPOSAL: *Follow local regulations regarding disposal of the batteries.*