

MANUAL

ADDRESSABLE MANUAL CALL POINT MCP-1 «RUBETEK»



Complies with
EN 54-11
EN 54-17

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Software version: 2022-2-1
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Introduction

This Manual is intended to describe the operating principle, configuration, installation and operation of the Addressable manual call point MCP-1 «RUBETEK» (hereinafter MCP).

You must read the instructions in the Manual before linking, configuring, operating or maintaining the MCP.

Installation and operation of the MCP must be carried out by technical personnel after reading this Manual.

List of abbreviations used:

- SCI-1 - short circuit isolator module;
- MCP - addressable manual call point;
- PLC - power line communication;
- CW - commissioning works;
- SW - software;
- CP - addressable fire alarm control panel;
- FA - fire alarm;
- DEVs - alarm and notification devices.

1. Description and operation

1.1 Function

MCP is designed to manually activate an alarm in fire alarm systems.

MCP operates under the control of a control panel (hereinafter referred to as CP) as part of «RUBETEK» wired fire alarm system.

Functionality of the MCP:

- protection against accidental activation;
- built-in short circuit isolator;
- automatic device detection in the system;
- functionality control;
- case opening control;
- status light indication;
- PLC voltage measurement at the installation site;
- setting in the service mode, without breaking the pairing and configuration;
- modern design.

1.2 Technical data

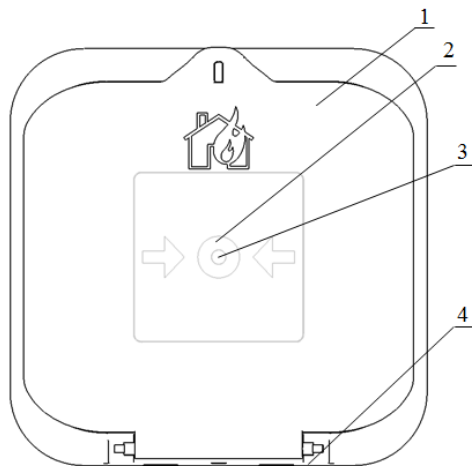
Table 1 - The main parameters of the MCP

Parameter	Value
Detector type	A
Link interface	PLC
Number of occupied address slots	1
Voltage supply	via PLC
Current consumption, mA	max 0,16 in standby mode max 0,2 in «Fire» mode
Triggering at the force of pressing the button, N, not less than	25
Built-in isolator	available
Operation temperature range, °C	from - 25 to + 55
Relative air humidity	up to 93% at +40°C
Case protection degree	IP20
Dimensions, mm	85 × 85 × 40
Weight, g, max	95
Tamper sensor	available
Average lifetime, years	10
Average time between failures, h	60000

Table 2 - PLC Built-in SC isolator parameters

Parameter	Value
Maximum voltage, V	24
Minimum voltage, V	12
Maximum current when the switch is closed, A	1
Maximum impedance, Ohm	0,12
Maximum leakage current, mA	1
Isolator activation, V	10
Recovery of the isolator, V	3

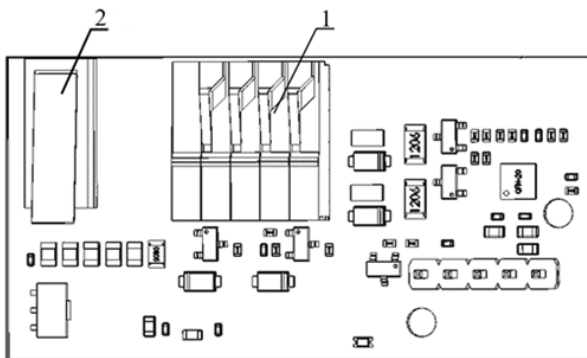
1.3 Appearance of the MCP



- 1 - MCP cover
- 2 - Actuator
- 3 - LED indicators
- 4 - Base

Figure 1 - Appearance of the MCP

1.4 Internal design of the MCP



- 1 - PLC connection terminals
- 2 - «Tamper» sensor

Figure 2 - Internal design of the MCP

1.5 Complete set

Table 3 - Complete set of the MCP

Item	Quantity, pcs.	Remarks
Addressable manual call point MCP-1 «RUBETEK»	1	
Key (extractor)	1	
Mounting kit	1	
Individual packing	1	

Datasheet	1*	
Group packaging	1*	

* Per shipping lot.

2. Intended use

2.1. Preparation for use

! ***ATTENTION!** If MCP was in conditions of negative temperature, keep it at least 4 hours at room temperature (25 ± 10 °C) to prevent moisture condensation.*

Open the package, make sure that the completeness of the MCP corresponds to table 3. Conduct an external visual inspection, make sure that there are no visible mechanical damages (chips, cracks, dents) and traces of moisture.

Prepare the CP for operation (the complete connection algorithm can be found in the operation manual for the CP).

2.2. Location

Do not mount MCP:

1. outdoors, in places where there is a possibility of water getting on the MCP case;
2. in a room with a high content of dust, suspensions of building materials in the air, vapors and aerosols that cause corrosion;
3. in places with high air currents (for example, near fans, heaters and ventilation ducts);
4. near high-frequency communications, power cables, routes.

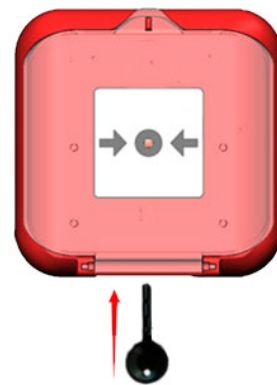
2.3. Installation

! ***ATTENTION!** Mount the MCP only after laying the PLC.*

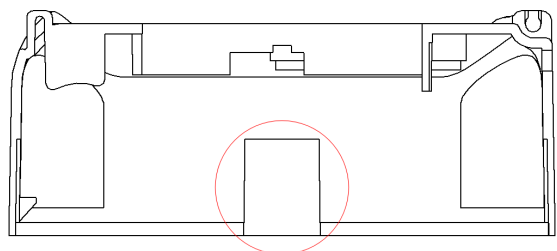
Open the MCP case by inserting the wards of the key (extractor) into the slots of the holes for the locking wards, as shown in the figure, and push it.

Place the MCP base on the selected mounting location and mark the mounting holes with a pencil.

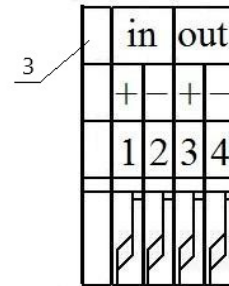
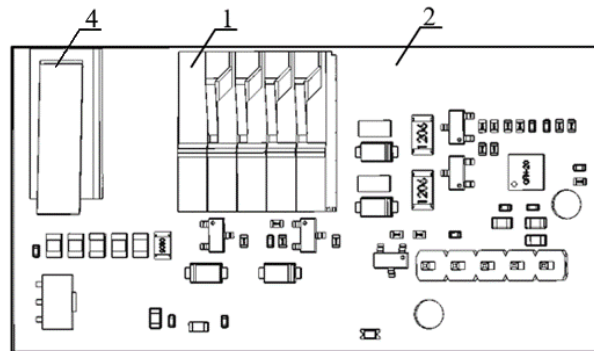
Drill holes and fix the MCP base using the mounting kit from the accessory kit.



When connecting the PLC through an external cable channel, it is necessary to break out the thinning in the side of the case through which the PLC will be connected.

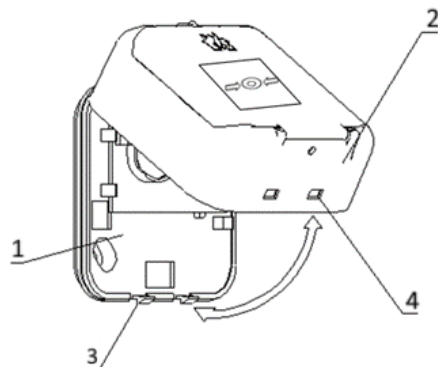


Connect power, link to the appropriate terminals.
Connect the MCP to the PLC following the sequence of the inputs on the terminals as shown in the figure.



- 1 - Terminal block
- 2 - MCP PCB
- 3 - Terminal block pinout
- 4 - «Tamper» sensor

Connect the MCP parts according to the drawing.
Attach the MCP cover to its base using the locking wards, entering holes.



- 1 - MCP base
- 2 - MCP cover
- 3 - Locking latches
- 4 - Holes for locking latches



ATTENTION! Cable lines must be made with using fire-resistant cables with copper cores, flame retardant for group laying, low-smoke fire-resistant (LSFR) or halogen-free (HFFR) with a cross section of up to 1.5 sq. mm.

2.4. MCP connection

When connecting wired devices, to take into account the maximum length of the PLC from the CP to the end device, which should not exceed 800 meters.



ATTENTION! Pairing of wired devices is done in sequence.



ATTENTION! Before pairing devices, install all PLC lines and device bases.

Open the **Fire Alarm Network** menu on the CP screen by pressing the «✓» button on the keyboard. Select item **1.Browse network** and press the **OK** button. Select the required CP. Press the **OK** button.

In the main menu of the CP:

- select **3.DEVs** and press **OK**.
- select **3.Device pairing** submenu.

Press **OK**.

- select **1.Wired DEVs**. Press **OK**.

CP will go to automatic device search.

After the search is completed, the CP will display a list of found devices.

Select the required device. Press **OK**. The name of the device is followed by its serial number.

CP automatically pairs a new wired device to the first free slot.

The device configuration menu will open. After making all the configurations, press **OK**

Fire Alarm Network
1.Browse network
2.Active alarms
3.Alarm causes
4.Faults
5.Bypassed DEVs

Browse network
[122] CP-1
96 faults

Main menu
1.Information
2.Configuration
3.DEVs
4.Events and reactions
5.Firefighting

DEV
1.Devices list
2.Device zones
3.Device pairing
4.Configuration
5.PLC status:

Device pairing
1.Wired DEVs
2.Wireless DEVs

Processing query
Please wait.
Remote CP query is in progress.

Pairing PLC devices
1. Manual call point

Device configuration

If you are making configurations for a previously paired and configured device, then you need to:

- select **3.DEVs** and press **OK**
- select **1.Devices list** submenu. Press **OK**.
- select **2.By number**. Press **OK**.
- select the required slot. Press **OK**.

If configurations are made during pairing, the settings menu will be available immediately.

Main menu
1.Information
2.Configuration
3.DEVs
4.Events and reactions
5.Firefighting

DEV
1.Devices list
2.Device zones
3.Device pairing
4.Configuration
5.PLC status:

Devices list
1.By zone
2.By number

Devices list
1.pls-type-1 (#1)
2.pls-type-2 (#2)
3.pls-type-3 (#3)
4.pls-type-20 (#4)
5.pls-type-21 (#5)

The following options are available in the list that opens.

- **Name** – device name;
- **Zone** - allows you to group the devices of one fire zone. The CP has 32 zones;
- **Device type*** - determined automatically;
- **Status*** - current status of the device (normal, Fire 1, Fire 2, no link);

DEV #1
Name:
pls-type-1
Zone:
No zone
Device type:

DEV #1
Manual call point
Status:
link fault
Bypass mode:
no

DEV #1	DEV #1
Link:	123400
	Firmware version:
PLC line:	---
	Device menu
Serial number:	Delete

- **Bypass mode** - bypass mode on/off;
- **Link*** - time since last link;
- **PLC line*** - PLC line voltage;
- **Serial number*** - device serial number;

#1: pls-type-1
Device configuration
Reaction configuration
Send test

- **Firmware version*** - device firmware version;
- **Device menu** - device additional submenu;
 - **Device configuration** - device additional configuration (inactive for MCP);
 - **Reactions configuration** - reactions configuration on the device;
 - **Send test** – sending test command to device.
- **Delete** – device deleting from CP.

! *ATTENTION! Options marked with * are not configurable and are for informational purposes only.*

In the **Reaction configurations** menu it is possible to set the reactions for the MCP.

Items are activated using the ← → arrows on the CP keyboard. After configuring the required reactions, press **Ok** to save the changes.

Reactions
<input type="checkbox"/> Fire 1 from DEV
<input checked="" type="checkbox"/> Fire 2 from DEV
<input checked="" type="checkbox"/> Tamper
<input checked="" type="checkbox"/> Test button
<input type="checkbox"/> Main low

! *ATTENTION! List of required active reactions:*

- **Fire2 from DEV.** - issuing a message to the CP when the chamber is filled with smoke with saving the record in the archive.
- **Test button** - issuing a message to the CP upon activation of the «Test» mode with saving the record in the archive.

After making all the configurations, press **Ok**. Device configuration is completed.

Check the connection of the device to the CP. Activate the **TEST** mode on the device using the **TEST** button on the MCP or using the **Send Test** command from **Device menu**.

A message about testing the sensor will appear on the CP within 3 seconds, indicating the slot to which it is bound, and the ID (name) of the device.

Attention!
Testing DEVs
Slot: 5
ID: DEVs 2 floor
Group: there is no group
24.02.2000 16:14:56

2.5. Device LED indication

To control the connection and operation process, use the MCP LED indication shown in Table 4.

After completing the connection of the MCP, make sure that no signals are issued for 255s: «Fire», «Link fault», «Signals fault on the line». MCP LED indication must correspond to the standby mode.

Table 4 - MCP LED indication

MCP status	Indication
Standby mode	1 pulse every 10 seconds
Fire	1 pulse every 1 second

2.6. MCP deactivation

It is recommended that the MCP be put into deactivation mode during installation and maintenance work. While the pairing of the device to the CP is preserved, all MCP reactions become inactive, including the «Fire1» and «Fire2» signals from this MCP.

This mode is used for single deactivation of MCPs. To disable all DEVS connected to this CP, use the bypass mode described in paragraph 2.7.

Open the **Fire Alarm Network** menu on the CP screen by pressing the «✓» button on the keyboard. Select item **1.Browse network** and press the **OK** button. Select the required CP. Press the **OK** button.

Fire Alarm Network
1.Browse network
2.Active alarms
3.Alarm causes
4.Faults
5.Bypassed DEVS

Browse network
[122] CP-1
96 faults

To deactivate the device:

- select **3.DEVS** of the main menu. Press **OK**.
- select **1.Devices list** submenu. Press **OK**.
- select **2.By number**. Press **OK**.

Main menu
1.Information
2.Configuration
3.DEVS
4.Events and reactions
5.Firefighting

DEV
1.Devices list
2.Device zones
3.Device pairing
4.Configuration
5.PLC status:

! *ATTENTION! Only «occupied» slots are displayed in the list of devices. To quickly jump to a specific slot, press «0» on the keyboard and enter the slot number.*

Devices list
1.By zone
2.By number

Devices list
1.pls-type-1 (#1)
2.pls-type-2 (#2)
3.pls-type-3 (#3)
4.pls-type-20 (#4)
5.pls-type-21 (#5)

- select the required device. Press **OK**.
- select **Bypass mode**. Press **OK**.
- set **bypass** value.

Press **OK** to save.

To activate the device, set the value to **no**.

DEV #1
Manual call point
Status:
link fault
Bypass mode:
no

Bypass mode:
no
bypass

To view the list of deactivated DEVS on a CP, you need to:

- select **1.Information** in the main menu. Press **Ok**.
- select **5.Bypassed DEV list**. Press **Ok**.

The following displays a list of DEVS that are deactivated in the system with slot number #X.

Main menu	Information
1.Information	1.Active alarms
2.Configuration	2.Active signals
3.DEVs	3.Faults
4.Events and reactions	4.Fire sources
5.Firefighting	5.Bypassed DEV list
Bypassed DEVs	
1."pls-type-1" (No group) #1	
2."pls-type-20" (No group) #4	
3."pls-type-27" (No group)	

2.7. CP sensor bypass mode

The sensor bypass mode is used to simultaneously disable all DEVS connected to a given CP. At the same time, the pairing and configuration of devices is preserved. The reactions of disabled devices are not displayed on the CP and do not trigger events. «Fire1» and «Fire2» signals are transmitted from the MCPs, but are inactive on the CP.

! ***ATTENTION!** On the CP home screen, a quick bypass transfer of «in-fire» devices is available by entering a pin code. PIN code is set by the administrator.*

To set the «sensors bypass» mode on the CP at CW stage, you need to:

- In the device **Main menu** select **7.Mode** and press **Ok**.
- In the list that opens, select the mode: **sensors bypass** - this mode allows the CP to ignore alarm signals from the devices. Click **Ok**.

! ***ATTENTION!** In this mode, the «Automation off» indicator flashes, and the «Sensor off» indicator is lightened yellow.*

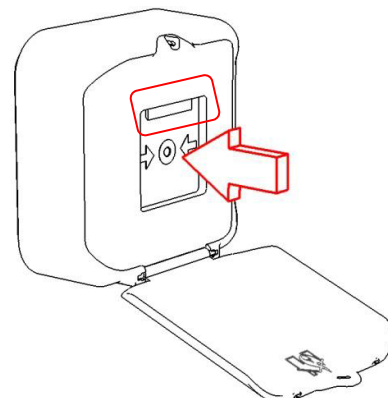
To return to automatic mode, in the main CP menu select **7.Mode**, press **Ok**, select **Automatic** submenu.

Main menu
6.Archive
7.Mode:
automatic
8.Sound:
on
Mode:
automatic
manual
sensors bypass

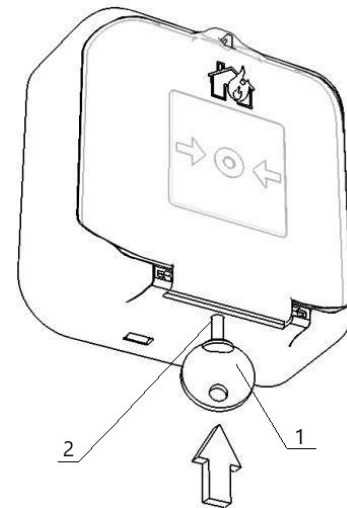
2.8. Starting and turning off the «Fire 2» signal

To start the «Fire2» signal, you need to open the protective glass and press the button, with a little effort, until it clicks. The button must fit into the MCP case. The drop-down element that appears after pressing the button will be an indicator of its activation.

The message «Fire2» will appear on the CP within 3 seconds and all the configured events and reactions in the system will be triggered.



To turn off the «Fire 2» signal started from the MCP, you must insert the key (extractor) into the key hole and press until it clicks, as shown in the figure, then press the **Faults** key on the CP. MCP and CP must go into standby mode.



1 – Key extractor
2 – Key hole

3. Maintenance

3.1. Safety precautions

3.1.1 When operating the device, you must be guided by the requirements hereof.

3.1.2 During the repair work in the room where the MCP, is installed, protection against mechanical damage and ingress of building materials (whitewash, paint, dust, etc.) must be provided.

3.2. Functional test

3.2.1. MCP functional test should be carried out during scheduled or other functional checks, but at least once every 6 months.

3.2.2. Functional test includes:

- checking the status of the devices on the CP:

Open the **Fire Alarm Network** menu on the **CP** screen by pressing the «✓» button on the keyboard. Select item **1.Browse network** and press the **OK** button. Select the required **CP**. Press the **OK** button.

Fire Alarm Network
1.Browse network
2.Active alarms
3.Alarm causes
4.Faults
5.Bypassed DEVs

Browse network
[122] CP-1
96 faults

Open the main menu on the CP. Select **3.DEVs**. Press **OK**. Select **1. Devices list** submenu. Press **OK**. Select **2.By number**. Press **OK**. Select MCP from the list and press **OK**.

Main menu
1.Information
2.Configuration
3.DEVs
4.Events and reactions
5.Firefighting

DEV
1.Devices list
2.Device zones
3.Device pairing
4.Configuration
5.PLC status:

In the opened menu **DEVS #X** select **Status**.
If there are faults on the MCP, they will be displayed.

Devices list
1.By zone
2.By number

Devices list
1.pls-type-1 (#1)
2.pls-type-2 (#2)
3.pls-type-3 (#3)
4.pls-type-20 (#4)
5.pls-type-21 (#5)

DEV #1
Status: link fault
Bypass mode: bypass
Link:

- PLC supply voltage test:

Open the main menu on the CP.
Select **3.DEVs**. Press **OK**. Select **1.Devices list** submenu. Press **OK**.
Select **2.By number** submenu. Press **OK**.
Select MCP from the list and press **OK**.
In the opened menu **DEVS #X**, select **PLC line**.

Main menu
1.Information
2.Configuration
3.DEVs
4.Events and reactions
5.Firefighting

DEV
1.Devices list
2.Device zones
3.Device pairing
4.Configuration
5.PLC status:



ATTENTION! If the value of 15V or less is displayed in the «PLC line» field, this indicates a drop in the supply voltage and you must carry out:

- external inspection of the MCP for signs of mechanical damage;
- inspection of PLC wires and their connections;
- voltage measurement at PLC terminals of CP.

Devices list
1.By zone
2.By number

Devices list
1.pls-type-1 (#1)
2.pls-type-2 (#2)
3.pls-type-3 (#3)
4.pls-type-20 (#4)
5.pls-type-21 (#5)

DEV #13
T:4431s
PLC line: 0.0 V
Serial number: 12340C

If the value is less than 12V, the device stops working. System operation prohibited.

- visual inspection of the MCP for traces of moisture and mechanical damage;
- MCP indication check: «Standby mode» according to table 4.

4. Storage

- 4.1. MCP storage conditions:
 - ambient temperature from plus 5 °C to plus 40 °C;
 - relative air humidity up to 60% at a temperature of plus 20 °C.
- 4.2. Store the MCP on racks in a packaged form.
- 4.3. The distance from the walls and floor of the storage to the MCP packages must be at least 0.1 m.
- 4.4. The distance between the heaters and the MCP packages must be at least 0.5 m.
- 4.5. The room must be free of vapors of aggressive substances and conductive dust.

5. Transportation

- 5.1. The packaged MCP can be transported by all means of transport in covered vehicles and in pressurized aircraft compartments.
- 5.2. The conditions of transportation:
 - ambient air temperature from minus 50 °C to plus 50 °C;
 - relative air humidity up to 95% at a temperature of plus 40 °C.
- 5.3. The period of transportation and intermediate storage should not exceed 3 months. It is allowed to increase the period of transportation and intermediate storage of the MCP during transportation due to the storability time in stationary conditions.

6. Disposal

- 6.1. Dispose the MCP when there are no toxic components in it.
- 6.2. The content of precious materials does not require record during storage, issue, disposal.

7. Manufacturer's warranty

- 7.1. The manufacturer guarantees the compliance of the MCP with the technical specifications, provided that the consumer observes the rules of transportation, storage, installation and operation.
- 7.2. Warranty period of operation is 12 months from the date of commissioning, but not more than 24 months from the date of manufacture.
- 7.3. During the warranty period, the replacement of failed MCPs is carried out by the manufacturer free of charge, provided that the consumer observes the instructions for installation and operation.
- 7.4. When sending the MCP for repair, it must be accompanied by an act describing its malfunctions.
- 7.5. The warranty does not take effect in the following cases:
 - 1.non-compliance with this User Manual;
 - 2.mechanical damage of the MCP;
 - 3.repair of the MCP by a person other than Manufacturer.
- 7.6. The warranty applies only to the MCP. All third-party equipment used in conjunction with the extender is covered by their own warranties.

8. Claims

- 8.1. Warranty claims are made to the supplier in case the defects and malfunctions are detected which lead to the failure of the MCP within the warranty period.
- 8.2. In the certificate of defect indicate: device type, defects and malfunctions, conditions under which they were detected, time since the start of operation of the MCP.
- 8.3. A copy of the payment document for the MCP must be attached to the certificate.

9. Certification

- 9.1. Addressable manual call point MCP-1 «RUBETEK» complies with the European standard EN 54-11 «Fire detection and fire alarm systems. Part 11: Manual call points» and EN 54-17 «Fire detection and fire alarm systems. Part 17: Short-circuit isolators».

10. Manufacturer

- 10.1. Name of the manufacturer's organization: DEVICE FACTORY L.L.C

- 10.2. Legal address: 302020, Ippodromny ln 9/24, Orel, Russian Federation
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