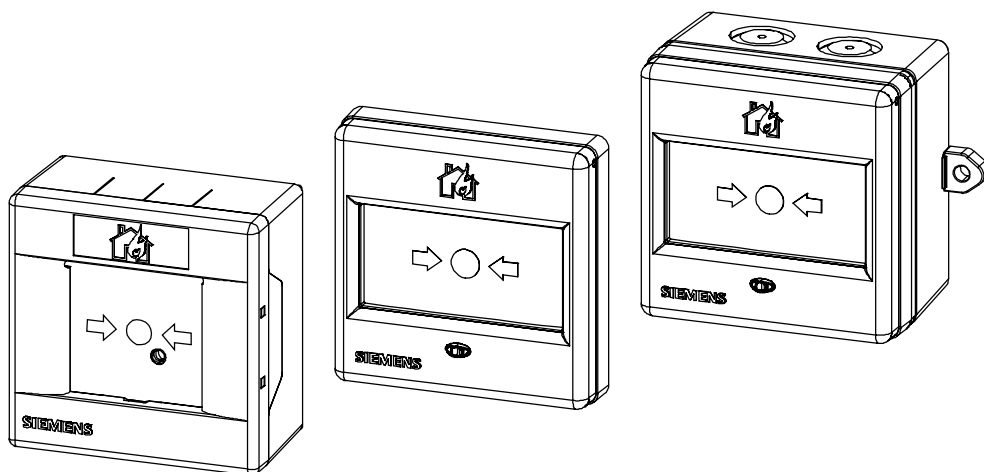


SIEMENS



FDM221, FDM225, FDM226

Manual call point

Technical Manual

Legal notice

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1 About this document

Goal and purpose

This document contains all information on the manual call points FDM221, FDM225 and FDM226. Following the instructions consistently will ensure that the product can be used safely and without any problems.



- Specialist electrical engineering knowledge is required for installation.
 - Only an expert is permitted to carry out installation work.
- Incorrect installation can take safety devices out of operation unbeknown to a layperson.

Intended use

The manual call points FDM221, FDM225 and FDM226 can only be used for the manual activation of a fire alarm in a fire detection system FS20, FS720 or FC360.

Target groups

The information in this document is intended for the following target groups:

Target group	Activity	Qualification
Product Manager	<ul style="list-style-type: none"> • Is responsible for information passing between the manufacturer and regional company. • Coordinates the flow of information between the individual groups of people involved in a project. 	<ul style="list-style-type: none"> • Has obtained suitable specialist training for the function and for the products. • Has attended the training courses for Product Managers.
Project Manager	<ul style="list-style-type: none"> • Coordinates the deployment of all persons and resources involved in the project according to schedule. • Provides the information required to run the project. 	<ul style="list-style-type: none"> • Has obtained suitable specialist training for the function and for the products. • Has attended the training courses for Project Managers.
Installation personnel	<ul style="list-style-type: none"> • Assembles and installs the product components at the place of installation. • Carries out a performance check following installation. 	<ul style="list-style-type: none"> • Has received specialist training in the area of building installation technology or electrical installations.
Commissioning personnel	<ul style="list-style-type: none"> • Configure the product at the place of installation according to customer-specific requirements. • Check the product operability and release the product for use by the operator. • Searches for and corrects malfunctions. 	<ul style="list-style-type: none"> • Has obtained suitable specialist training for the function and for the products. • Has attended the training courses for commissioning personnel.
Maintenance personnel	<ul style="list-style-type: none"> • Carries out all maintenance work. • Checks that the products are in perfect working order. • Searches for and corrects malfunctions. 	<ul style="list-style-type: none"> • Has obtained suitable specialist training for the function and for the products.

Document identification

The document ID is structured as follows:

ID code	Examples
ID_ModificationIndex_Language_COUNTRY -- = multilingual or international	A6V10215123_a_de_DE A6V10215123_a_en_-- A6V10315123_a_--_--

Date format

The date format in the document corresponds to the recommendation of international standard ISO 8601 (format YYYY-MM-DD).

Conventions for text marking

Markups

Special markups are shown in this document as follows:

>	Requirement for a behavior instruction
1. 2.	Behavior instruction with at least two operation sequences
–	Version, option, or detailed information for a behavior instruction
⇒	Intermediate result of a behavior instruction
⇒	End result of a behavior instruction
•	Numbered lists and behavior instructions with an operation sequence
[→ X]	Reference to a page number
'Text'	Quotation, reproduced identically
<Key>	Identification of keys
>	Relation sign and for identification between steps in a sequence, e.g., 'Menu bar' > 'Help' > 'Help topics'
↑ Text	Identification of a glossary entry

Supplementary information and tips



The 'i' symbol identifies supplementary information and tips for an easier way of working.

1.1 Applicable documents

Document ID	Title
007001	Data sheet Manual call points FDM221, FDM223, FDM224
007227	Technical manual Detector exchanger and tester FDUD292
007904	Installation Housing FDMH291, Call point unit FDME221, MTE320C, DMA1101, DMA1131, DMA1151
008331	List of compatibility (for 'Sinteso™' product line)
009023	Data sheet Manual call points FDM225, FDM226
009052	FS20 Fire detection system - Commissioning, Maintenance, Troubleshooting
009371	Installation Manual call point FDM225-xx / FDM226-xx
009718	Technical Manual Intelligent detector tester FDUD293
A6V10210416	FS720 Fire detection system - Commissioning, Maintenance, Troubleshooting
A6V10229261	List of compatibility (for 'Cerberus™ PRO' product line)
A6V10882301	List of compatibility (for 'FC360' product line)

1.2 Download center

You can download various types of documents, such as data sheets, installation instructions, and license texts via the following Internet address:

<http://siemens.com/bt/download>

- Enter the document ID in the 'Find by keyword' input box.



You will also find information about search variants and links to mobile applications (apps) for various systems on the home page.

1.3 Technical terms

Term	Explanation
ABS	Acrylonitrile-butadiene-styrene (plastic)
ASA	Acrylic ester-styrene-acrylnitrile (plastic)
FDnet/C-NET	Addressed detector line
LED	Light-emitting diode
MC link	Maintenance and commissioning link (proximity interface)
PC	Polycarbonate (plastic)

1.4 History of changes

The reference document's version applies to all languages into which the reference document is translated.



The first edition of a language version or a country variant may, for example, be version 'd' instead of 'a' if the reference document is already this version.

The table below shows this document's revision history:

Modification index	Edition date	Brief description
f	2016-08-23	<ul style="list-style-type: none"> Intended use added Supplementary note added to 'Installation' chapter for manual call point FDM221. Note regarding use with fire control panels FC361-xx added Editorial changes
e	2014-05-05	<p>Mounting height changed from 1.3...1.6 m to 0.9...1.6 m</p> <p>Data sheet updated in 'Applicable documents' chapter</p> <p>Editorial changes made. FDM221 included in the document (previously included in document 007002). List of compatibility for 'Cerberus PRO' product line added.</p> <p>Change to date format in line with ISO 8601 specifications (yyyy-mm-dd format).</p>
d	07.2008	<p>New housing FDM226; protection category IP66.</p> <p>New chapter: 'Connections', 'Display elements', 'Danger levels', 'Line separators', 'Test mode', 'Interface to service devices', 'Status query', 'Replacing broken glass insert', 'Spare parts' and 'Index'.</p>
c	08.2007	<p>VdS/LPCB approvals added.</p> <p>Air humidity changed.</p> <p>Diagnosis levels: Display texts changed.</p> <p>Types available for order added to 'Overview' chap.</p>
b	11.2006	<p>New chap. Diagnosis levels and Degraded mode in FDnet.</p> <p>Technical data: Data: 4 values corrected / new line separator.</p>
a	06.2006	First edition



The language versions and country variants produced by a local company have the same modification index as the corresponding reference document. They are not however included in the table below.

The table below shows the published language versions with the corresponding modification index:

Modification index	en_--	de_--	fr_--	it_--	es_--
f	X	X	X	X	X
e	X	X	X	X	X
d	–	X	–	–	–
c	X	X	–	–	–
b	X	X	X	X	X
a	X	X	X	X	X

X = published

– = no publication with this modification index

2 Safety

2.1 Safety instructions

The safety notices must be observed in order to protect people and property.

The safety notices in this document contain the following elements:

- Symbol for danger
- Signal word
- Nature and origin of the danger
- Consequences if the danger occurs
- Measures or prohibitions for danger avoidance

Symbol for danger



This is the symbol for danger. It warns of **risks of injury**.
Follow all measures identified by this symbol to avoid injury or death.

Additional danger symbols

These symbols indicate general dangers, the type of danger or possible consequences, measures and prohibitions, examples of which are shown in the following table:



General danger



Explosive atmosphere



Voltage/electric shock



Laser light



Battery



Heat


Signal word

The signal word classifies the danger as defined in the following table:

Signal word	Danger level
DANGER	DANGER identifies a dangerous situation, which will result directly in death or serious injury if you do not avoid this situation.
WARNING	WARNING identifies a dangerous situation, which may result in death or serious injury if you do not avoid this situation.
CAUTION	CAUTION identifies a dangerous situation, which could result in slight to moderately serious injury if you do not avoid this situation.
<i>NOTICE</i>	<i>NOTICE</i> identifies possible damage to property that may result from non-observance.


How risk of injury is presented

Information about the risk of injury is shown as follows:

	<p>⚠ WARNING</p>
	<p>Nature and origin of the danger Consequences if the danger occurs</p> <ul style="list-style-type: none"> • Measures / prohibitions for danger avoidance

How possible damage to property is presented

Information about possible damage to property is shown as follows:




	<p><i>NOTICE</i></p>
	<p>Nature and origin of the danger Consequences if the danger occurs</p> <ul style="list-style-type: none"> • Measures / prohibitions for danger avoidance

2.2 Safety regulations for the method of operation

National standards, regulations and legislation

Siemens products are developed and produced in compliance with the relevant European and international safety standards. Should additional national or local safety standards or legislation concerning the planning, mounting, installation, operation or disposal of the product apply at the place of operation, then these must also be taken into account together with the safety regulations in the product documentation.

Electrical installations

	<p>⚠ WARNING</p>
	<p>Electrical voltage Electric shock</p> <ul style="list-style-type: none"> • Work on electrical installations may only be carried out by qualified electricians or by instructed persons working under the guidance and supervision of a qualified electrician, in accordance with the electrotechnical regulations.
<ul style="list-style-type: none"> • Wherever possible disconnect products from the power supply when carrying out commissioning, maintenance or repair work on them. • Lock volt-free areas to prevent them being switched back on again by mistake. • Label the connection terminals with external voltage using a 'DANGER External voltage' sign. • Route mains connections to products separately and fuse them with their own, clearly marked fuse. • Fit an easily accessible disconnecting device in accordance with IEC 60950-1 outside the installation. • Produce earthing as stated in local safety regulations. 	
	<p>⚠ CAUTION</p>
	<p>Noncompliance with the following safety regulations Risk of injury to persons and damage to property</p> <ul style="list-style-type: none"> • Compliance with the following regulations is required.
	<ul style="list-style-type: none"> • Specialist electrical engineering knowledge is required for installation. • Only an expert is permitted to carry out installation work. <p>Incorrect installation can take safety devices out of operation unbeknown to a layperson.</p>

Mounting, installation, commissioning and maintenance

- If you require tools such as a ladder, these must be safe and must be intended for the work in hand.
- When starting the fire control panel ensure that unstable conditions cannot arise.
- Ensure that all points listed in the 'Testing the product operability' section below are observed.
- You may only set controls to normal function when the product operability has been completely tested and the system has been handed over to the customer.

Testing the product operability

- Prevent the remote transmission from triggering erroneously.
- If testing building installations or activating devices from third-party companies, you must collaborate with the people appointed.
- The activation of fire control installations for test purposes must not cause injury to anyone or damage to the building installations. The following instructions must be observed:
 - Use the correct potential for activation; this is generally the potential of the building installation.
 - Only check controls up to the interface (relay with blocking option).
 - Make sure that only the controls to be tested are activated.
- Inform people before testing the alarm devices and allow for possible panic responses.
- Inform people about any noise or mist which may be produced.
- Before testing the remote transmission, inform the corresponding alarm and fault signal receiving stations.

Modifications to the system design and the products

Modifications to the system and to individual products may lead to faults, malfunctioning and safety risks. Written confirmation must be obtained from Siemens and the corresponding safety bodies for modifications or additions.

Modules and spare parts

- Components and spare parts must comply with the technical specifications defined by Siemens. Only use products specified or recommended by Siemens.
- Only use fuses with the specified fuse characteristics.
- Wrong battery types and improper battery changing lead to a risk of explosion. Only use the same battery type or an equivalent battery type recommended by Siemens.
- Batteries must be disposed of in an environmentally friendly manner. Observe national guidelines and regulations.

Disregard of the safety regulations

Before they are delivered, Siemens products are tested to ensure they function correctly when used properly. Siemens disclaims all liability for damage or injuries caused by the incorrect application of the instructions or the disregard of danger warnings contained in the documentation. This applies in particular to the following damage:


- Personal injuries or damage to property caused by improper use and incorrect application
- Personal injuries or damage to property caused by disregarding safety instructions in the documentation or on the product
- Personal injury or damage to property caused by poor maintenance or lack of maintenance


2.3 Standards and directives complied with

A list of the standards and directives complied with is available from your Siemens contact.

2.4 Release Notes

Limitations to the configuration or use of devices in a fire detection installation with a particular firmware version are possible.

	⚠ WARNING
	<p>Limited or non-existent fire detection</p> <p>Personal injury and damage to property in the event of a fire.</p> <ul style="list-style-type: none"> • Read the 'Release Notes' before you plan and/or configure a fire detection installation. • Read the 'Release Notes' before you carry out a firmware update to a fire detection installation.

	NOTICE
	<p>Incorrect planning and/or configuration</p> <p>Important standards and specifications are not satisfied. Fire detection installation is not accepted for commissioning. Additional expense resulting from necessary new planning and/or configuration.</p> <ul style="list-style-type: none"> • Read the 'Release Notes' before you plan and/or configure a fire detection installation. • Read the 'Release Notes' before you carry out a firmware update to a fire detection installation.

3 Setup and function

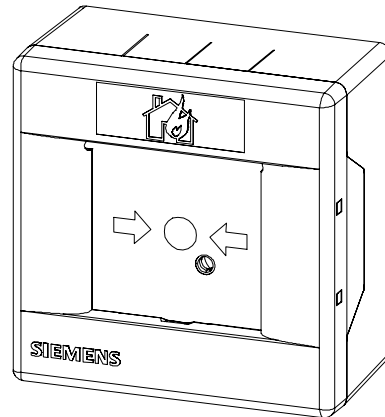
3.1 Overview

The manual call points are intended for use in places where a fire can be detected by people who can manually trigger an alarm.

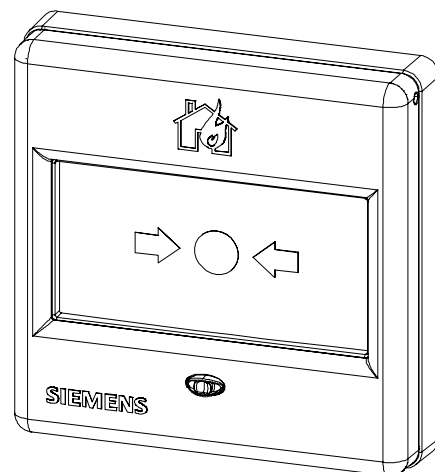
The manual call points FDM221, FDM225, and FDM226 consist of a housing and a switching unit. The manual call points have the following features:

- Manual call points with direct activation
- Two-wire installation for all cable types
- Individual detector addressing
- Indication of the condition (alarm, localization, or test) by means of an LED
- Integrated line separation function
- FDM221 and FDM225 for surface-mounted and recess-mounted cable entry with protection category IP44
- FDM226 for surface-mounted cable entry with protection category IP66
- FDM221 with glass insert
- FDM225 and FDM226 with glass insert or resettable plastic insert

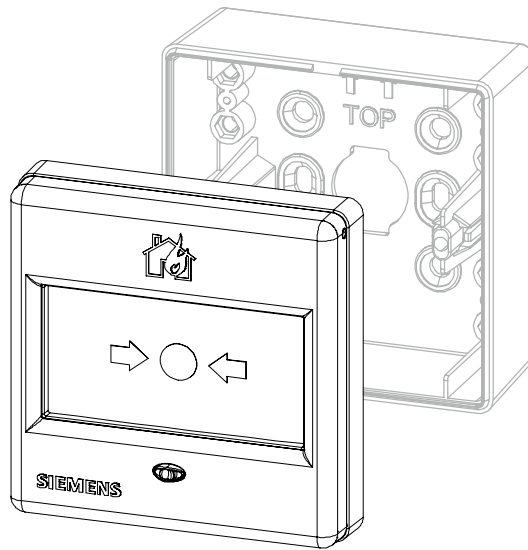
Manual call point FDM221 (housing FDMH291-x)



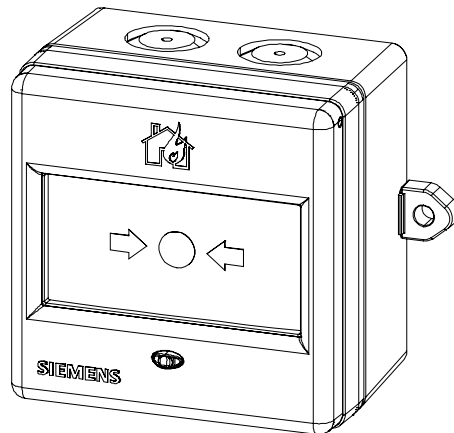
Manual call point FDM225-x



Manual call point FDM225 with back box FDMH295-x (accessories)



Manual call point FDM226-x



See also

- Manual call point FDM221 [→ 18]
- Manual call point FDM225 [→ 19]
- Manual call point FDM226 [→ 20]

3.1.1 Details for ordering

Manual call point FDM221:

Type	Order number	Designation
FDME221	A5Q00002451	Switching unit
FDMH291-R	A5Q00002217	Red housing, with key
FDMH291-Y	A5Q00004979	Yellow housing, with key
FDMH291-B	A5Q00004980	Blue housing, with key
FDMH291-G	A5Q00004981	Green housing, with key

Manual call point FDM225:

Type	Order number	Designation
FDM225-RG	A5Q00013434	Manual call point with glass element
FDM225-RP	A5Q00012020	Manual call point with plastic element
FDM225-RG (F)	A5Q00020274	Manual call point with glass element for 'France'
FDM225-RP (F)	A5Q00020273	Manual call point with plastic element for 'France'

When using the manual call point FDM225 with surface-mounted feed lines, you need a back box FDMH295-x. You will find the details for ordering the back box FDMH295-x in the 'Accessories [→ 27]' chapter.

Manual call point FDM226:

Type	Order number	Designation
FDM226-RG	A5Q00013435	Manual call point with glass element including back box
FDM226-RP	A5Q00013436	Manual call point with plastic element including back box

3.1.2 Product version ES

The product version ES provides the technical status of a device in terms of software and hardware. The product version is provided as a two-digit number.

You will find the details of your device's product version:

- On the packaging label
- On the product label or the type plate

Product version on the packaging label

Details of the product version can be found directly on the packaging label in the barcode:

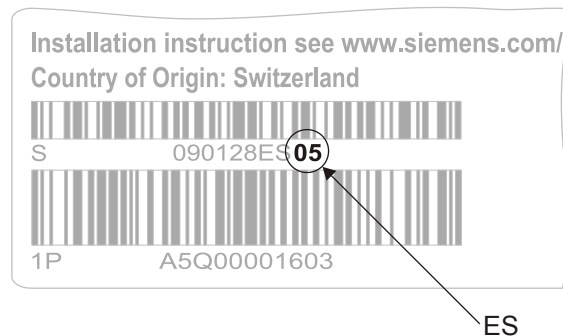


Figure 1: Example of a packaging label with details of the product version

Product version on the product label and the type plate

Details of the product version can be found after the device order number:

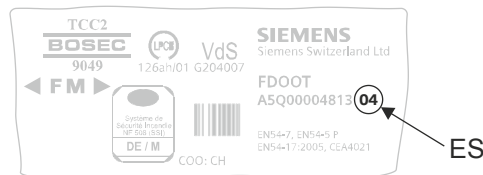


Figure 2: Example of a product label with details of the product version



Depending on the product and various approvals, the product labels may differ in terms of the information type and layout.

Look for your device's order number on the product label.

You will find the product version after the order number.

3.2 Setup

3.2.1 Manual call point FDM221

Manual call point FDM221 triggers an alarm when the glass insert is pushed in (direct activation). The alarm is immediately transmitted to the control panel.



To reset the manual call point FDM221 after an alarm, a new glass insert must be inserted.

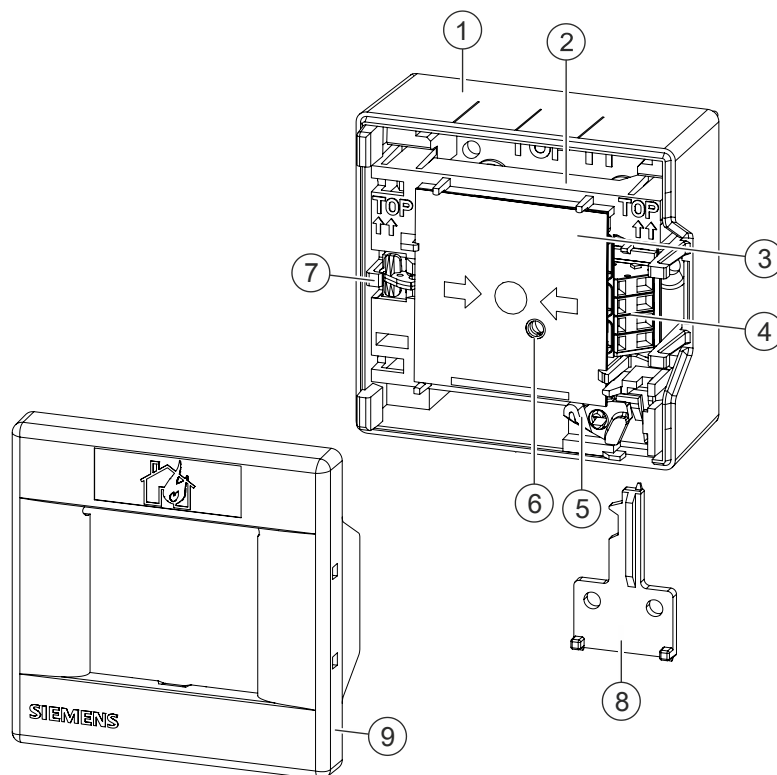


Figure 3: Components for manual call point FDM221

- | | | | |
|---|-------------------------------------|---|--|
| 1 | Back box | 6 | Internal alarm indicator |
| 2 | Switching unit | 7 | Alarm actuator |
| 3 | Glass insert | 8 | Key with double function: Function test and open housing |
| 4 | Connection terminals | 9 | Cover |
| 5 | Switching lever for test activation | | |

3.2.2 Manual call point FDM225

The manual call point FDM225-RG triggers an alarm when the glass insert is pushed in (direct activation).

The manual call point FDM225-RP triggers an alarm when you push on the plastic insert (direct activation).

The alarm is immediately transmitted to the control panel in the case of both devices.



To reset the manual call point FDM225-RG after an alarm, a new glass insert must be inserted.

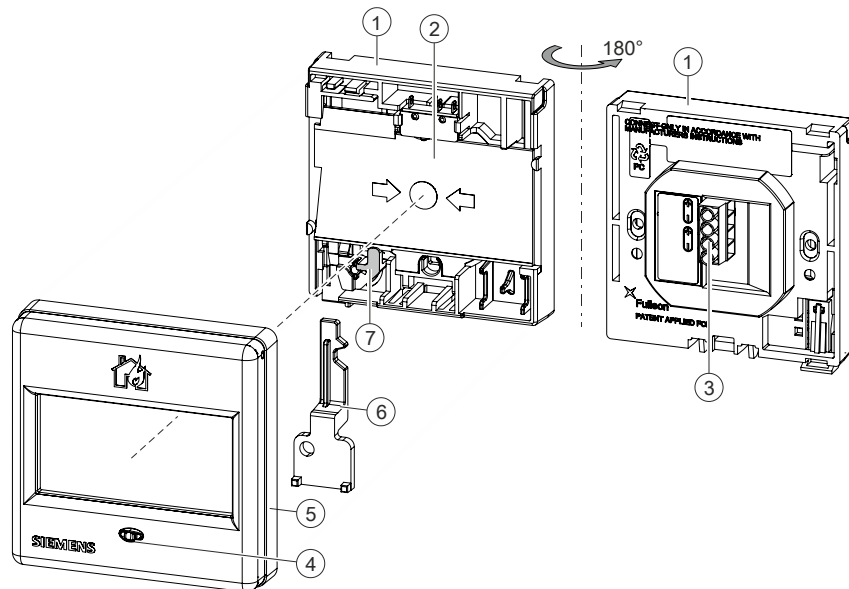


Figure 4: Components for manual call point FDM225

1	Switching unit	5	Housing cover
2	Glass insert or plastic insert	6	Key with double function: Function test and open housing
3	Connection terminals	7	Switching lever for test activation
4	Internal alarm indicator		

3.2.3 Manual call point FDM226

The manual call point FDM226-RG triggers an alarm when the glass insert is pushed in (direct activation).

The manual call point FDM226-RP triggers an alarm when you push on the plastic insert (direct activation).

The alarm is immediately transmitted to the control panel in the case of both devices.



To reset the manual call point FDM226-RG after an alarm, a new glass insert must be inserted.

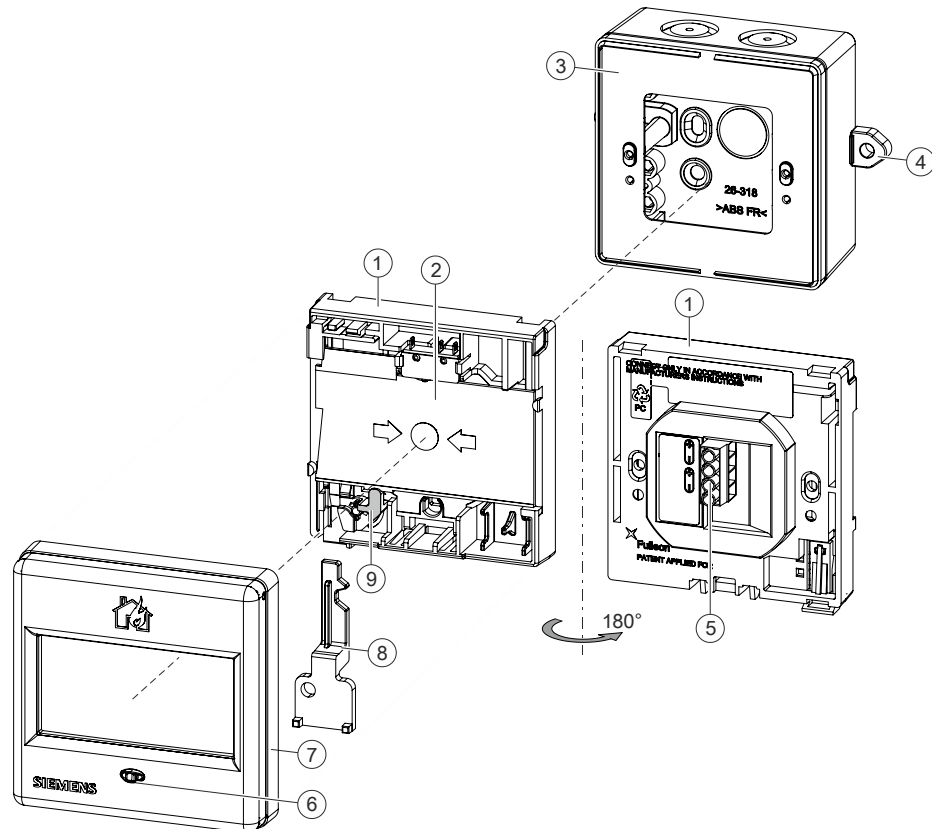


Figure 5: Components for manual call point FDM226

- | | | | |
|---|----------------------------------|---|--|
| 1 | Switching unit | 6 | Internal alarm indicator |
| 2 | Glass insert or plastic insert | 7 | Housing cover |
| 3 | Back box | 8 | Key with double function: Function test and open housing |
| 4 | Fastening tabs for wall mounting | 9 | Switching lever for test activation |
| 5 | Connection terminals | | |

3.2.4 Connections

Manual call point FDM221

The manual call point FDM221 has a socket strip for the detector line on the side of the switching unit.

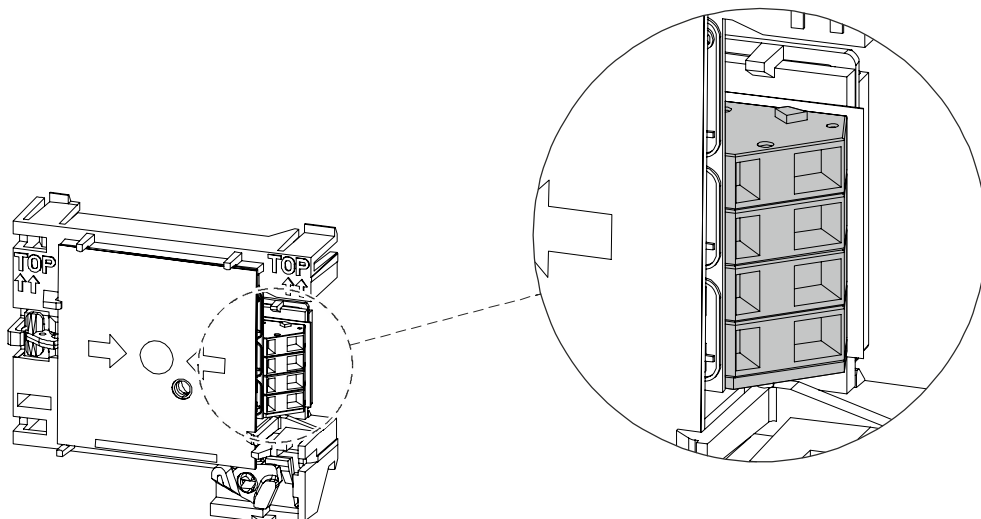


Figure 6: Socket strip on the switching unit of the manual call point FDM221

Manual call points FDM225 and FDM226

The manual call points FDM225 and FDM226 have four screw terminals for the detector line on the rear of the switching unit.

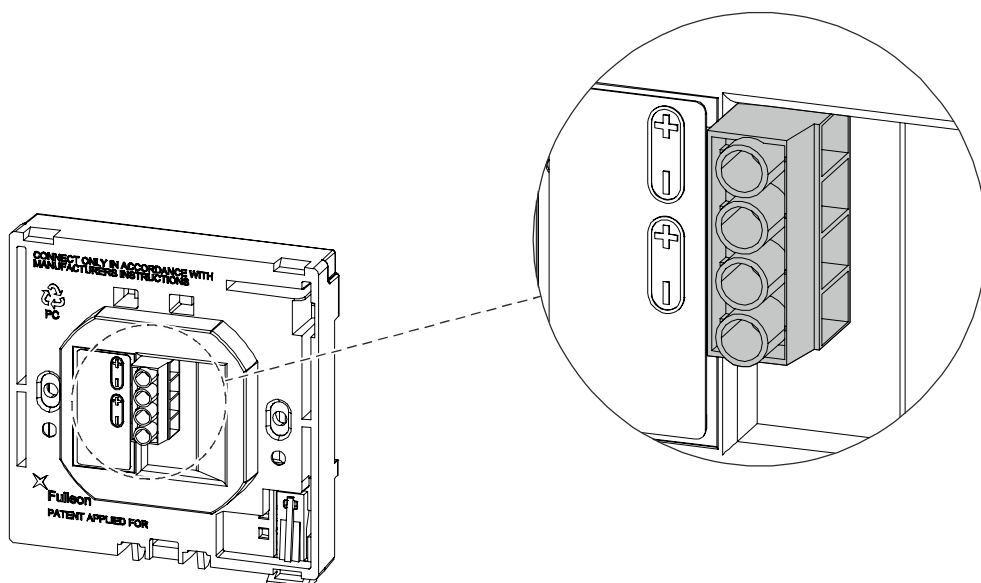


Figure 7: Screw terminals on the rear of the switching unit of the manual call points FDM225 and FDM226

The devices are also fitted with a proximity interface (MC link).

3.2.5 Indication elements

An LED is built into the switching unit as an internal alarm indicator.

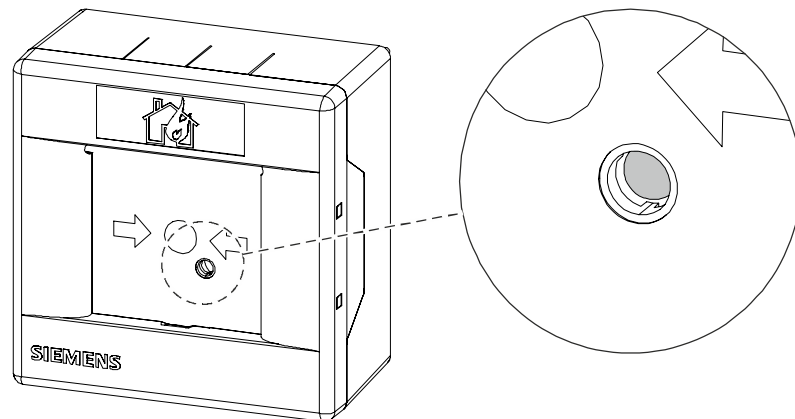


Figure 8: Internal alarm indicator in manual call point FDM221 with dichromatic LED (red/green)

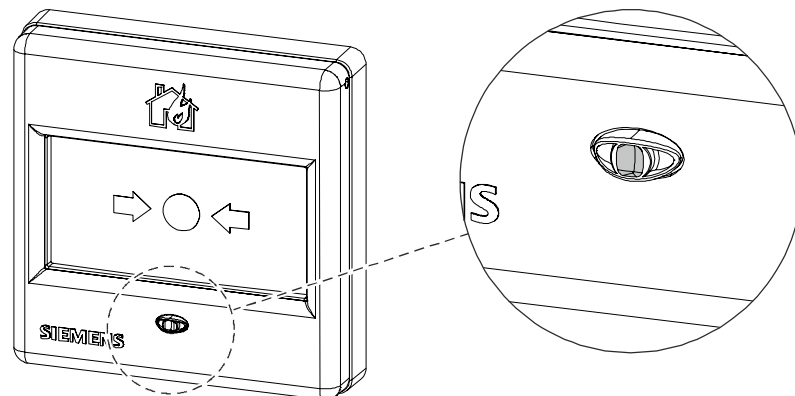


Figure 9: Internal alarm indicator in manual call points FDM225 and FDM226 with monochromatic LED (red)

See also

📄 Internal alarm indicator [→ 23]

3.3 Function

3.3.1 Danger levels

The manual call point can transmit the following danger levels to the control panel:

Danger level	Meaning
0	Normal state, no danger
3	Alarm

The evaluation of the danger level and the resulting measures (e.g. activation of remote transmission) are configured on the control panel.

3.3.2 Internal alarm indicator

The manual call point FDM221 has a dichromatic LED (red/green) as an alarm indicator.

The manual call points FDM225 and FDM226 have a monochromatic LED (red) as an alarm indicator.

You will find a description of the meanings of the indications by the internal alarm indicator in the tables below.

FDM221

The LED indicator of the alarm indicator has the following meanings:


LED indication	Meaning
Off	<ul style="list-style-type: none"> Normal condition
Green Flashes once per second	<ul style="list-style-type: none"> Test mode is active
Red Flashes once per second	<ul style="list-style-type: none"> Localization is active or Alarm is triggered
Red and green alternating Flashes twice per second	<ul style="list-style-type: none"> Alarm is triggered/localization is active and Test mode is active

FDM225 and FDM226

The LED indicator of the alarm indicator has the following meanings:

LED indication	Meaning
Off	<ul style="list-style-type: none"> • Normal condition
Red Flashes brightly once per second	<ul style="list-style-type: none"> • Localization is active o r • Alarm is triggered
Red Flashes weakly twice per second	<ul style="list-style-type: none"> • Test mode is active
Red Flashes twice per second, alternately weakly and brightly	<ul style="list-style-type: none"> • Alarm is triggered/localization is active a n d • Test mode is active

See also

 Indication elements [→ 22]

3.3.3 Line separator

All FDnet/C-NET devices are equipped with a line separator.


The FDnet/C-NET device is equipped with electronic switches which isolate the defective part in case of a short-circuit on the FDnet/C-NET detector line. The rest of the detector line remains serviceable. On a loop line, all FDnet/C-NET devices remain fully functional after a single short-circuit.

3.3.4 Test mode

The manual call points can also be tested with the key.

A test mode must be set on the control panel to test the manual call points. When in test mode, alarms from the manual call points are not forwarded by the control panel.

See also

 Checking function [→ 49]

3.3.5 Interface to service devices

A proximity interface (MC link) is available for commissioning and maintenance in order to communicate with the detector exchanger and tester FDUD292 and the intelligent detector tester FDUD293.

You will find more information in documents 007227 and 009718.

3.3.6 Diagnosis levels

The manual call point monitors its operation largely autonomously.

The following diagnosis levels are derived from the different control measurements:

- Normal
- Replacement necessary
- Fault

For details, see table below.

When an error occurs which impairs the correct functionality of the device, a fault message is reported to the control panel.

To remedy the cause, additional information is available in the manual call point. This can be displayed by the detector exchanger and tester FDUD292 or the intelligent detector tester FDUD293, for example.

You will find more information in documents 007227 and 009718.

Information displayed on the detector exchanger and tester	Meaning	Measures
'No deviation'	Normal, no fault is present The manual call point is fully functional	None
'needed excha.' ¹	Replacement necessary Key monitoring outside the tolerance range	Replace manual call point
Other fault message ²	Fault present <ul style="list-style-type: none"> • Alarming no longer guaranteed • Key monitoring outside the tolerance range or malfunctioning due to external influences 	Replace manual call point
	Supply error	<ul style="list-style-type: none"> • Check detector line voltage • Replace manual call point
	Software error (Watchdog error)	Replace manual call point
	Memory error	Replace manual call point
	Communication error between the manual call point and the control panel	Remedy cause

¹ The information displayed on the detector exchanger and tester is always in English; no translation into the corresponding language.

² This status can be displayed together with other statuses, e.g. 'needed excha.' (replacement necessary).

See also

 Applicable documents [→ 7]

3.3.7 Behavior in degraded mode

Applicable for the FDnet/C-NET:


When the main processor of the fire control panel fails, the control panel works in degraded mode operation. Depending on the control panel type, the fire control panel can continue to perform the most important alarming and signaling functions in degraded mode operation.

Behavior of control panels that support degraded mode operation:

- Alarming is still ensured in degraded mode operation. However, in degraded mode only collective alarming is possible. This means that in the event of an alarm, it is possible to identify the FDnet/C-NET detector line but not the exact location of the detector triggering the alarm.

Degraded mode operation on the FDnet/C-NET is not supported in the same way by all control panels. The information in the 'List of compatibility' and in the corresponding control panel documentation must be taken into account during project planning.

See also

 [Applicable documents \[→ 7\]](#)

3.3.8 Line tester


The line tester FDUL221 is able to recognize and localize the following errors on the FDnet/C-NET:

- Wiring error
- Open line
- Short-circuit
- Ground fault

In addition, the line tester recognizes the devices connected to the FDnet/C-NET detector line.

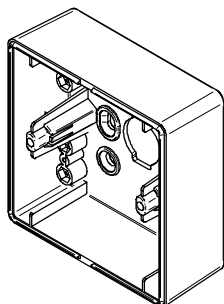
You will find more information in document 008250.

See also

 [Applicable documents \[→ 7\]](#)

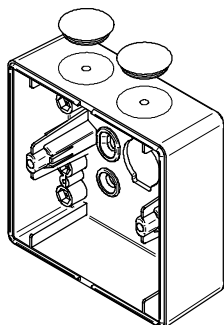
3.4 Accessories

3.4.1 Back box FDMH295-R



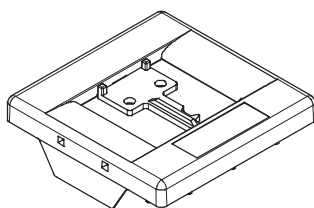
- For using manual call points with surface-mounted cable entry
- No pre-drilled holes for the feed lines
- Color: Red
- Compatible with:
 - Manual call point FDM1101-Rx
 - Manual call point FDM1101A-Rx
 - Manual call point FDM225-Rx
- Order number: A5Q00013437

3.4.2 Back box FDMH295-S



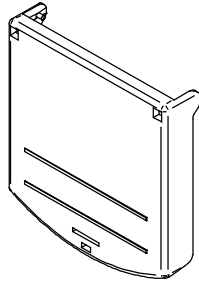
- For using manual call points with surface-mounted cable entry
- With two openings and grommets on the top
- Grommets for cable with a diameter of max. 5 mm
- Color: Red
- Compatible with:
 - Manual call point FDM1101-Rx
 - Manual call point FDM1101A-Rx
 - Manual call point FDM225-Rx
- Order number: A5Q00013438

3.4.3 Cover with key FDMK291



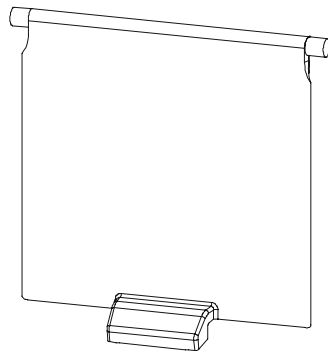
- Key to open the housing and for the function check
- Compatible with:
 - Manual call point FDM221
- Order number: A5Q00001643

3.4.4 Protective cover FDMC295



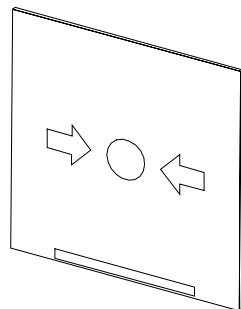
- For protection against unintended alarm activation
- Compatible with:
 - Manual call point FDM1101-Rx
 - Manual call point FDM1101A-Rx
 - Manual call point FDM225-Rx
 - Manual call point FDM226-Rx
 - Radio manual call point FDM275
- Order number: A5Q00013440

3.4.5 Protective cover FDMC291



- For protection against unintended alarm activation
- Compatible with:
 - Manual call point FDM221
- Order number: A5Q00001644

3.4.6 Glass insert FDMG291

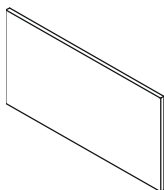


- For alarm activation and protection against soiling
- Compatible with:
 - Manual call point FDM221
- Order number: A5Q00002122

See also

- 📄 Replacing the glass insert or plastic insert [→ 52]

3.4.7 Glass inserts FDMG295-x

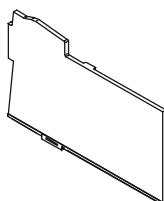


- For alarm activation and protection against soiling
- Available in country-specific designs
- Compatible with:
 - Manual call point FDM1101-Rx
 - Manual call point FDM1101A-Rx
 - Manual call point FDM225-Rx
 - Manual call point FDM226-Rx
 - Radio manual call point FDM275
- Order number for glass insert FDMG295, 'Neutral': A5Q00013442
- Order number for glass insert FDMG295-F, 'France': A5Q00013443

See also


 Replacing the glass insert or plastic insert [→ 52]

3.4.8 Plastic inserts FDMP295-x

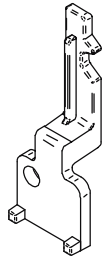


- For alarm activation and protection against soiling
- Available in country-specific designs
- Compatible with:
 - Manual call point FDM1101-Rx
 - Manual call point FDM1101A-Rx
 - Manual call point FDM225-Rx
 - Manual call point FDM226-Rx
 - Radio manual call point FDM275
- Order number for plastic insert FDMP295, 'Neutral': A5Q00013445
- Order number for plastic insert FDMP295-F, 'France': A5Q00013446

See also

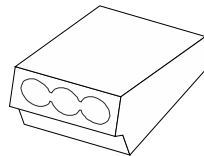
 Replacing the glass insert or plastic insert [→ 52]

3.4.9 Key FDMK295



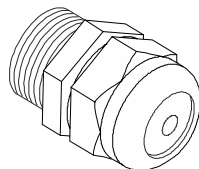
- For testing and resetting manual call points
- For removing the housing cover from the back box
- Compatible with:
 - Manual call point FDM1101-Rx
 - Manual call point FDM1101A-Rx
 - Manual call point FDM225-Rx
 - Manual call point FDM226-Rx
 - Radio manual call point FDM275
- Order number: A5Q00013448

3.4.10 Connection terminal DBZ1190-AB



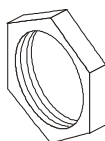
- Auxiliary terminal for connecting cables
- For T-branches of additional cabling, e.g., for cable shielding, detector heating units, sounder base, external alarm indicators, etc.
- For conductor cross-sections of 1...2.5 mm²
- 3 poles
- Order number: BPZ:4942340001

3.4.11 M20 x 1.5 metal cable gland



- For introducing a cable into a housing
- For cable diameters of 3.5...5.5 mm
- Temperature range: -40...+100 °C
- Allows for increased IP protection
- Compatible with:
 - M20 x 1.5 metal counter nut
 - Housing FDMH231-S-R
 - Housing FDMH292-x
 - Housing FDMH293-x
 - Housing FDMH297-R
 - Housing FDCH221
 - Manual call point FDM243H
 - Air sampling smoke detection kit FDBZ290
- Order number: A5Q00004478

3.4.12 M20 x 1.5 metal counter nut



- For use with metal cable gland M20 x 1.5
- Order number: A5Q00004479

4 Project planning

4.1 Compatibility

Compatible with control panels that support the FDnet/C-NET detector line.

Detector line	Control panel				
	FC20xx	FC72x	SIGMASYS	AlgoRex	FC361-xx
FDnet	X	-	-	1)	-
C-NET	-	X	-	-	X

X = compatible

1) = FDM221 is also compatible with AlgoRex control panels

- = not compatible

You will find detailed information in the 'List of compatibility'.

4.2 Fields of application

The manual call points are intended for use in places where a fire can be detected by people who can manually trigger an alarm.

4.3 Mounting site

The manual call points must be installed in easily accessible places at a height of 0.9...1.6 m on an even surface.



Observe the country-specific regulations for the exact mounting height!

4.4 Environmental influences

If the devices are used in industrial applications, consultation with the project manager is required, since plastics do not withstand certain environmental conditions.

The following factors must be taken into consideration:

- Chemicals
- Temperature
- Moisture

5 Mounting / Installation

The manual call points are mounted and installed in three steps:

1. Preparation (see the chapter 'Preparation [→ 32]')
2. Installation (see the chapter 'Installation [→ 36]')
3. Electrical connection (see the chapter 'Installation [→ 39]')

5.1 Preparation

Depending on the cabling (surface-mounted cable entry or recess-mounted cable entry), the housing must be prepared for cable entry.

Manual call point FDM221

1. Break out the key from the housing cover.
 2. Press the two key knobs into the recesses as shown in the diagram.
 3. Pull the housing cover forward while keeping the key pressed down.
 4. **NOTICE! Keep the key in a safe place.**
 5. Determine the entry opening(s) in the housing:
 - Recess-mounted cable entry: Breakout point at the back of the back box
 - Surface-mounted cable entry: Markings on the top and bottom of the housing for the drill hole(s), with a diameter of max. 20 mm
 6. Clamp the back box in a bench vice.
 7. **NOTICE! Improper use of tools! Risk of injury! Observe the tool manufacturer's safety notices.**
 8. Drill the entry opening(s).
- ⇒ The manual call point FDM221 is now prepared for mounting.

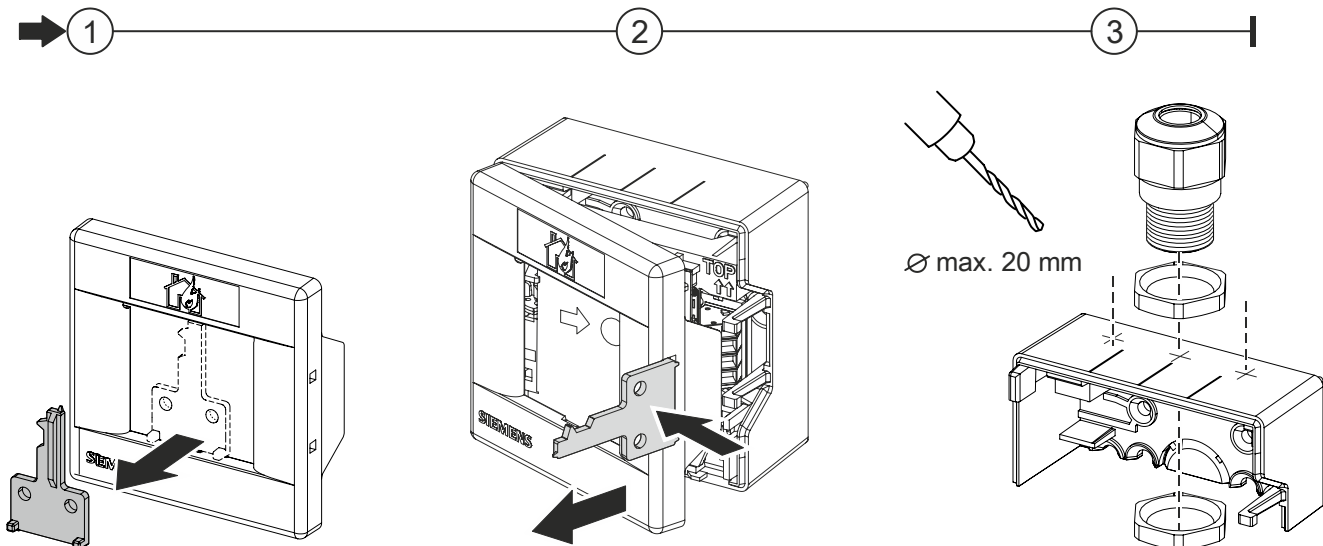


Figure 10: Opening the manual call point FDM221 and drilling the opening(s) for the cable gland

Manual call point FDM225

1. Open the manual call point as shown in the diagram.
 - Insert the key into the opening on the bottom of the manual call point.
 - Use the key to pull the housing cover forward and off the switching unit.
 2. If you are using a back box FDMH295-R for surface-mounted cable entry (installation step 3 in the diagram), then it is necessary to perform the following additional steps:
 - Mark the drill hole(s) with a diameter of max. 20 mm on the back box. You will find a drilling jig (1) in the 'Dimensions [→ 56]' chapter.
 - Clamp the back box in a bench vice.
 - **NOTICE! Improper use of tools! Risk of injury! Observe the tool manufacturer's safety notices.**
 - Drill the entry opening(s).
- ⇒ The manual call point FDM225 is now prepared for mounting.

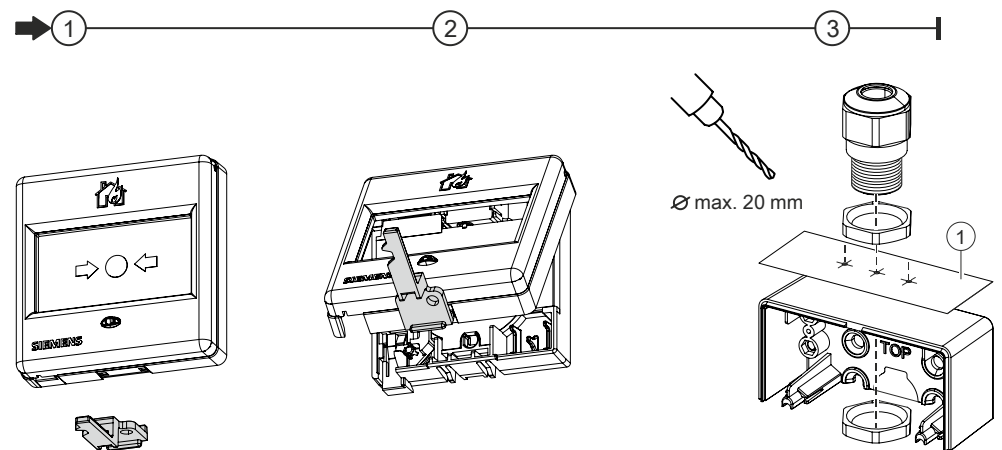


Figure 11: Opening the manual call point FDM225 with the key

Manual call point FDM226

The back box has openings for cable feeds at the top and bottom. When delivered, the openings are sealed with plastic parts.

The scope of supply for the manual call point FDM226 includes two fastening tabs and two screws for fitting the fastening tabs.

1. Open the manual call point as shown in the diagram.
 - Insert the key into the opening on the bottom of the manual call point.
 - Use the key to pull the housing cover forward and off the back box.
 2. Remove the plastic parts from the necessary openings for the cable entry.
 3. Install the metal cable glands M20 x 1.5 at the openings using metal counter nuts.
 4. **NOTICE! Leaky housing! Manual call point damaged and malfunctioning. Do not drill any holes through the rear wall of the back box! Only use the intended openings in the back box!**
 5. On the rear of the back box (1), remove the bars (2) for the two fastening tabs (3) at the sides.
 6. Working from the rear, install the fastening tabs (3) on the rear panel of the back box (1) using the screws supplied (4), as shown in the diagram.
- ⇒ The manual call point FDM226 is now prepared for mounting.

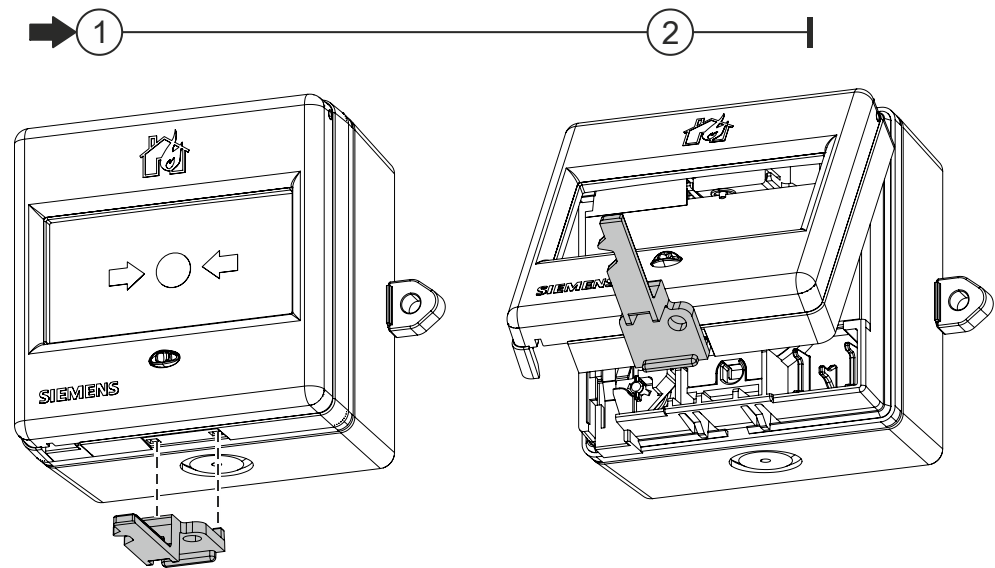


Figure 12: Opening the manual call point FDM226 with the key

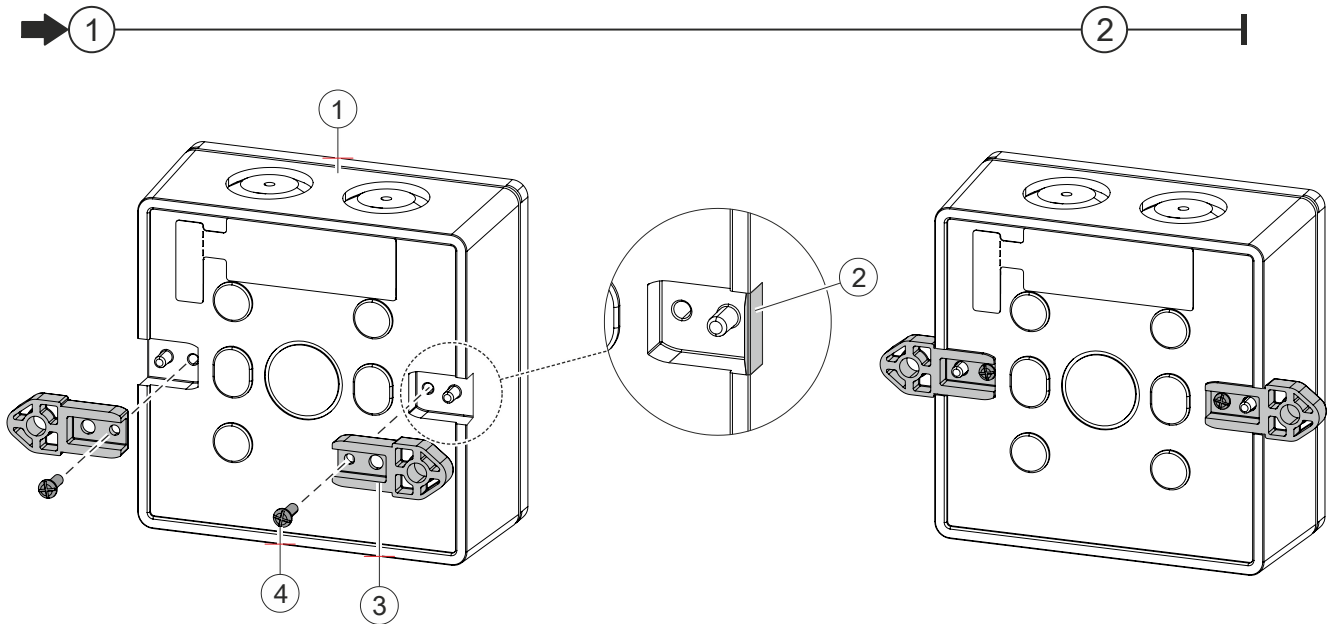


Figure 13: Installing the fastening tabs on the rear of the housing

- 1 Back box
- 2 Bars at the opening for the fastening tabs
- 3 Fastening tab
- 4 Screws for installing the fastening tabs

5.2 Installation

Manual call point FDM221



Observe the country-specific regulations for the exact installation height!

- ▷ The manual call point FDM221 is prepared for installation. See the chapter 'Preparation [→ 32]'.
 1. Secure the back box at a height of 0.9...1.6 m on an even surface.
 2. Pull the cables through the entry opening(s) into the back box.
 3. For surface-mounted cable entry, use metal cable glands M20 x 1.5 with metal counter nuts M20 x 1.5 (accessories).
- ⇒ The manual call point FDM221 is now prepared for electrical connection.

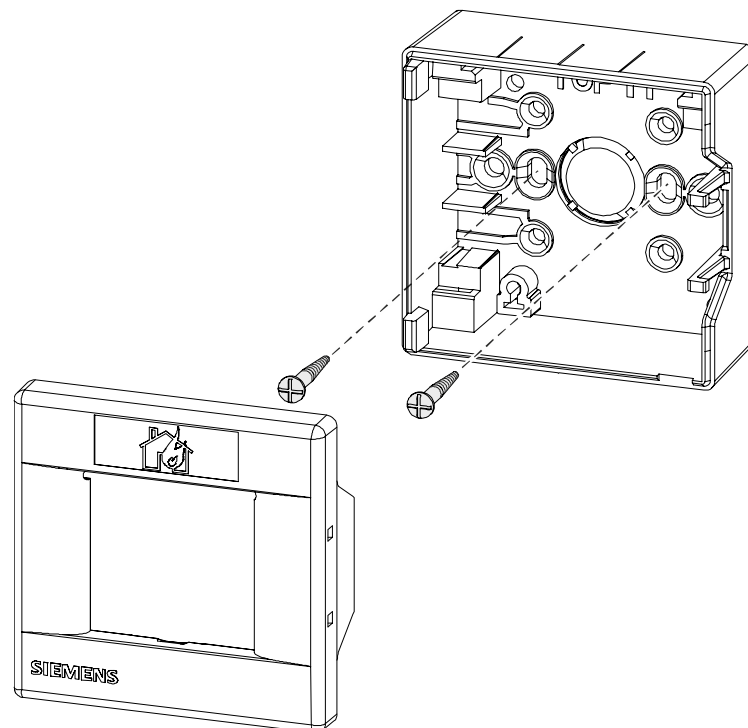


Figure 14: Housing cover and back box for manual call point FDM221

Manual call point FDM225 with back box



Observe the country-specific regulations for the exact installation height!

The manual call point FDM225 can be installed in a recessed box or with a back box FDMH295-x (accessories).

If you are installing the manual call point in a recessed box, you can go directly to the 'Installation [→ 39]' chapter.

If you are installing the manual call point with a back box, proceed as follows:

- ▷ The manual call point FDM225 is prepared for installation. See the chapter 'Preparation [→ 32]'.
 1. Pull the cables through the entry opening(s) into the back box.
 2. Secure the back box at a height of 0.9...1.6 m on an even surface.
- ⇒ The manual call point FDM225 is now prepared for electrical connection.

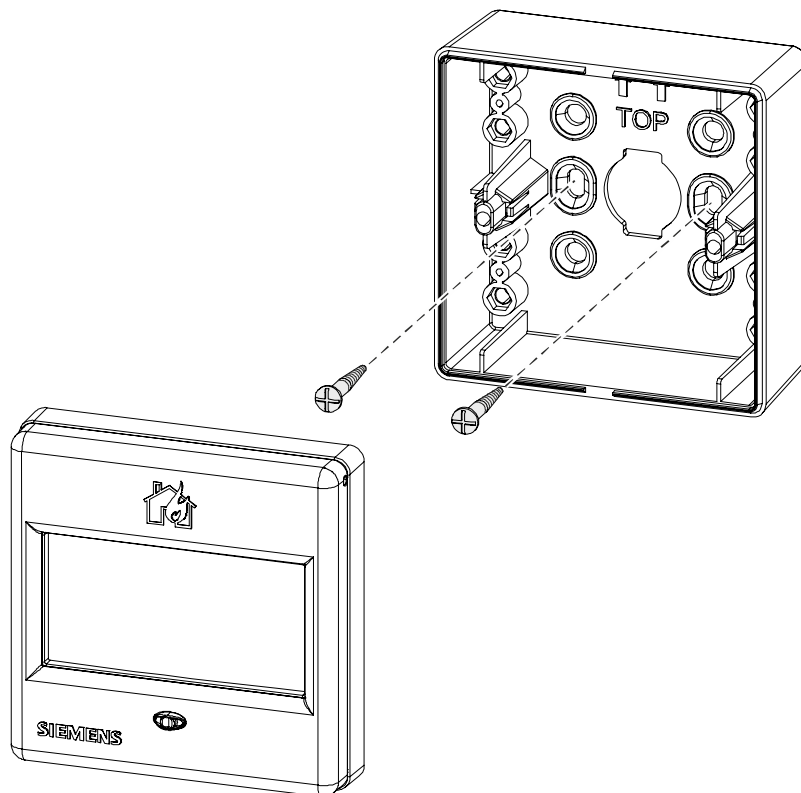


Figure 15: Installing the manual call point FDM225 with a back box FDMH295-x

Manual call point FDM226



Observe the country-specific regulations for the exact installation height!

- ▷ The manual call point FDM226 is prepared for installation. See the chapter 'Preparation [→ 32]'.
 1. Pull the cables through the entry opening(s) into the back box. Use metal cable glands M20 x 1.5 (accessories) with metal counter nuts (accessories).
 2. Using the fastening tabs, secure the back box at a height of 0.9...1.6 m on an even surface.
- ⇒ The manual call point FDM226 is now prepared for electrical connection.

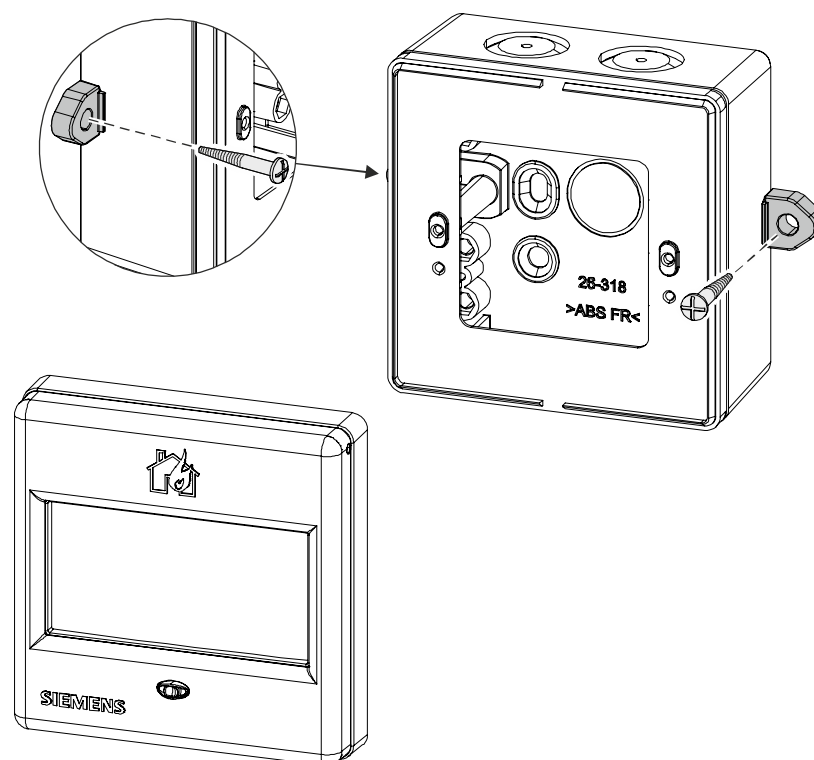





Figure 16: Installation of manual call point FDM226

5.3 Installation

Notes on work on electrical installations

	<ul style="list-style-type: none"> • Specialist electrical engineering knowledge is required for installation. • Only an expert is permitted to carry out installation work. <p>Incorrect installation can take safety devices out of operation unbeknown to a layperson.</p>
---	---

	<p>⚠ CAUTION</p> <p>Electrical voltage on lines Risk of injury due to electric shock</p> <ul style="list-style-type: none"> • During mounting and installation work, electrical voltage must not be applied to the lines.
---	--

	<p>⚠ WARNING</p> <p>Deactivating the manual call points prevents alarms from being forwarded. The alarm is not triggered.</p> <ul style="list-style-type: none"> • Mark deactivated manual call points or those which are not fully functional with the notice 'NOT IN USE'!
---	---

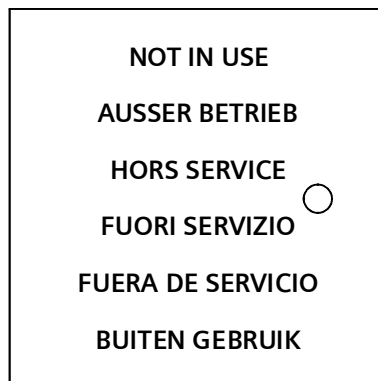


Figure 17: 'NOT IN USE' label



Note the positive and negative poles.
Only connect one wire per terminal. This is the only way to ensure the connection is failure-free for the entire service life of the device.

Manual call point FDM221

- ▷ The manual call point FDM221 is prepared for electrical connection. See chapters 'Preparation [→ 32]' and 'Installation [→ 36]'.
1. Connect the feed line to the connection terminals in the switching unit (3), in accordance with the connection diagram.
 2. If using shielded cables:
 - Connect the shielding for the detector line cables (LINE) to an auxiliary terminal in the back box (5).
 - **NOTICE! The shielding must not touch any external potentials.**
 3. Pay attention to the feed line when inserting the switching unit (3) into the back box (5).
 4. Push the switching unit (3) into the back box (5) with the word 'TOP' facing upward (terminals on the right) until the locking device snaps into place.
 5. Install the glass insert on the switching unit. See the chapter 'Replacing the glass insert or plastic insert [→ 52]'.
 6. Close the back box (5) with the housing cover (1).
- ⇒ The manual call point FDM221 is now electrically connected.

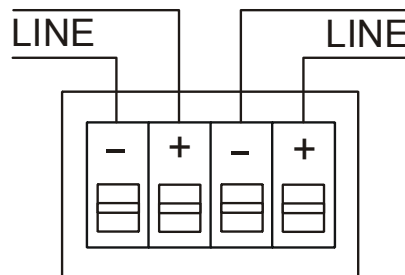


Figure 18: Connection diagram for the manual call point FDM221

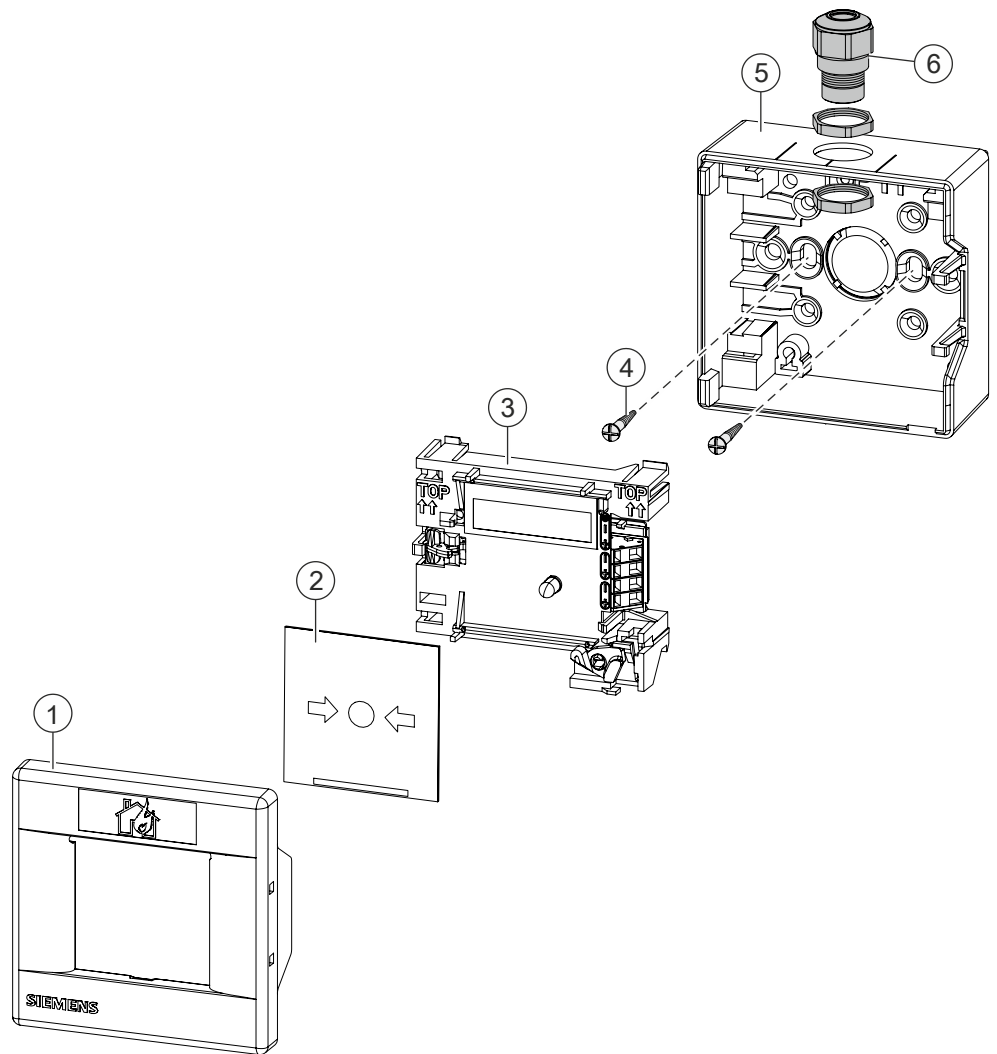


Figure 19: Mounting and installing the manual call point FDM221

- | | |
|------------------|---|
| 1 Housing cover | 4 Screws for wall mounting |
| 2 Glass insert | 5 Back box |
| 3 Switching unit | 6 Metal cable gland with two metal counter nuts |



To comply with EN54-11:
'Ensure the frangible element has been solidly mounted on the switching unit of the MCP with no gap between the element and the switching unit when installing the device or replacing the glass element'.

Manual call point FDM225

- ▷ The manual call point is prepared for electrical connection. See chapters 'Preparation [→ 32]' and 'Installation [→ 36]'.
1. Connect the feed line to the screw terminals in the switching unit (3), in accordance with the connection diagram.
 2. If using shielded cables:
 - Connect the shielding for the detector line cable (LINE) to a connection terminal DBZ1190-AB (accessories).
 - **NOTICE! The shielding must not touch any external potentials.**
 3. Install the switching unit.
 - When installing in a recessed box: Secure the switching unit (3) to the recessed box with the screws (6).
 - When installing with a back box: Secure the switching unit (3) to the back box (4) with the screws (6).
 - Pay attention to the feed line when inserting the switching unit (3).
 4. Install the glass insert or plastic insert (2) on the switching unit. See the chapter 'Replacing the glass insert or plastic insert [→ 52]'.
 5. Push the housing cover (1) onto the switching unit (3) until the locking device snaps into place.
- ⇒ The manual call point FDM225 is now electrically connected.

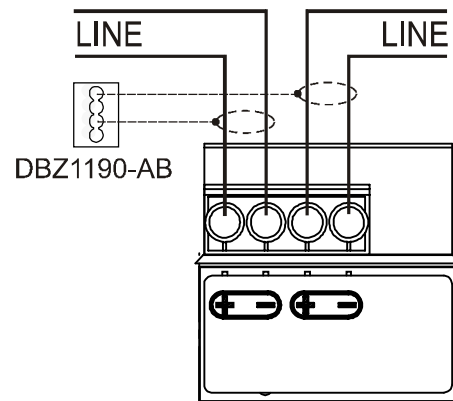


Figure 20: Connection diagram for manual call point FDM225

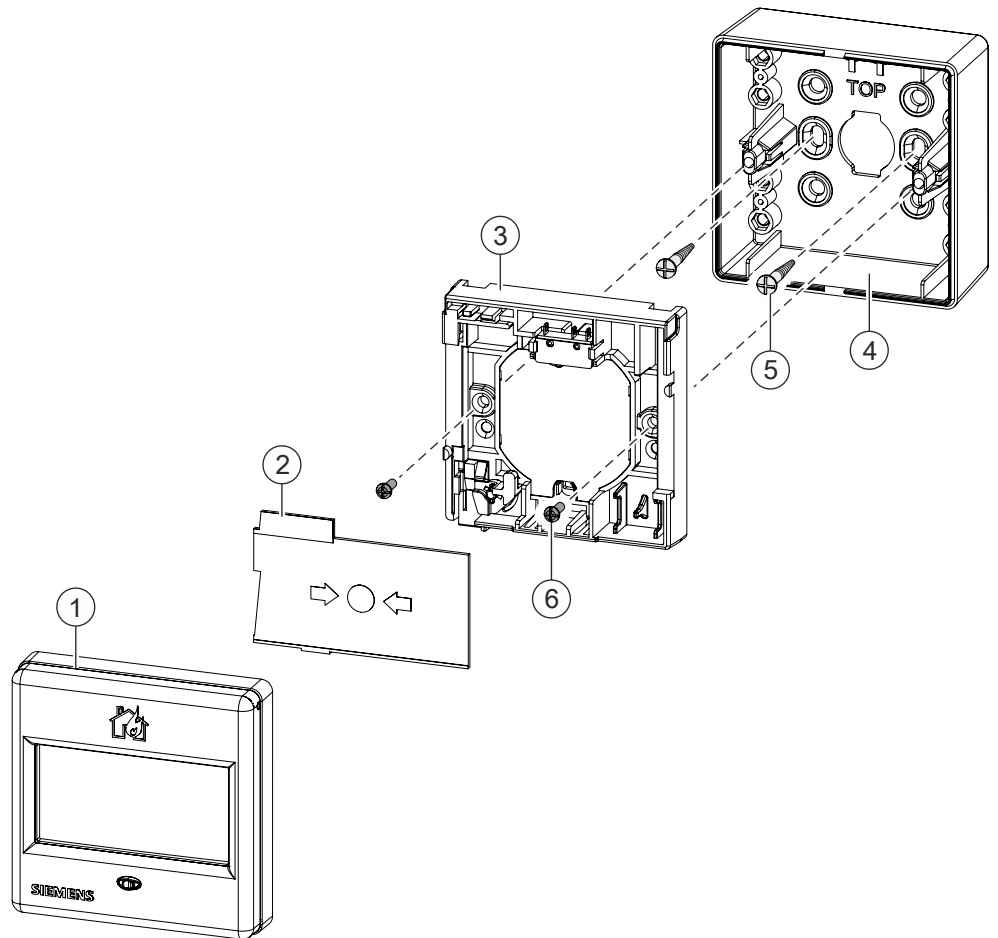


Figure 21: Mounting and installing the manual call point FDM225

- | | |
|------------------|--|
| 1 Housing cover | 4 Back box |
| 2 Glass insert | 5 Screws for wall mounting |
| 3 Switching unit | 6 Screws for securing the switching unit in the back box |

Manual call point FDM226

- ▷ The manual call point is prepared for electrical connection. See chapters 'Preparation [→ 32]' and 'Installation [→ 36]'.
1. Connect the feed line to the screw terminals in the switching unit (3), in accordance with the connection diagram.
 2. If using shielded cables:
 - Connect the shielding for the detector line cable (LINE) to a connection terminal DBZ1190-AB (accessories).
 - **NOTICE! The shielding must not touch any external potentials.**
 3. Pay attention to the feed line when inserting the switching unit (3) into the back box (6).
 4. Secure the switching unit (3) to the back box (4) with the screws (9).
 - Install the glass insert or plastic insert (2) on the switching unit. See the chapter 'Replacing the glass insert or plastic insert [→ 52]'.
 5. Push the housing cover (1) onto the switching unit (3) until the locking device snaps into place.
- ⇒ The manual call point FDM226 is now electrically connected.

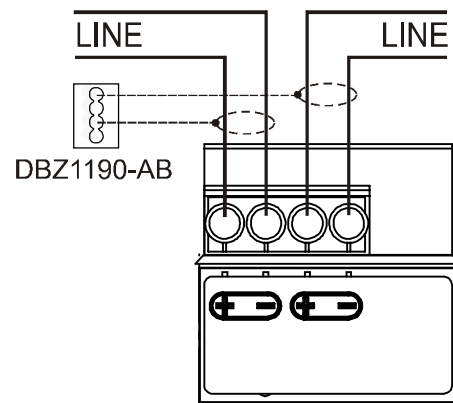


Figure 22: Connection diagram for manual call point FDM226

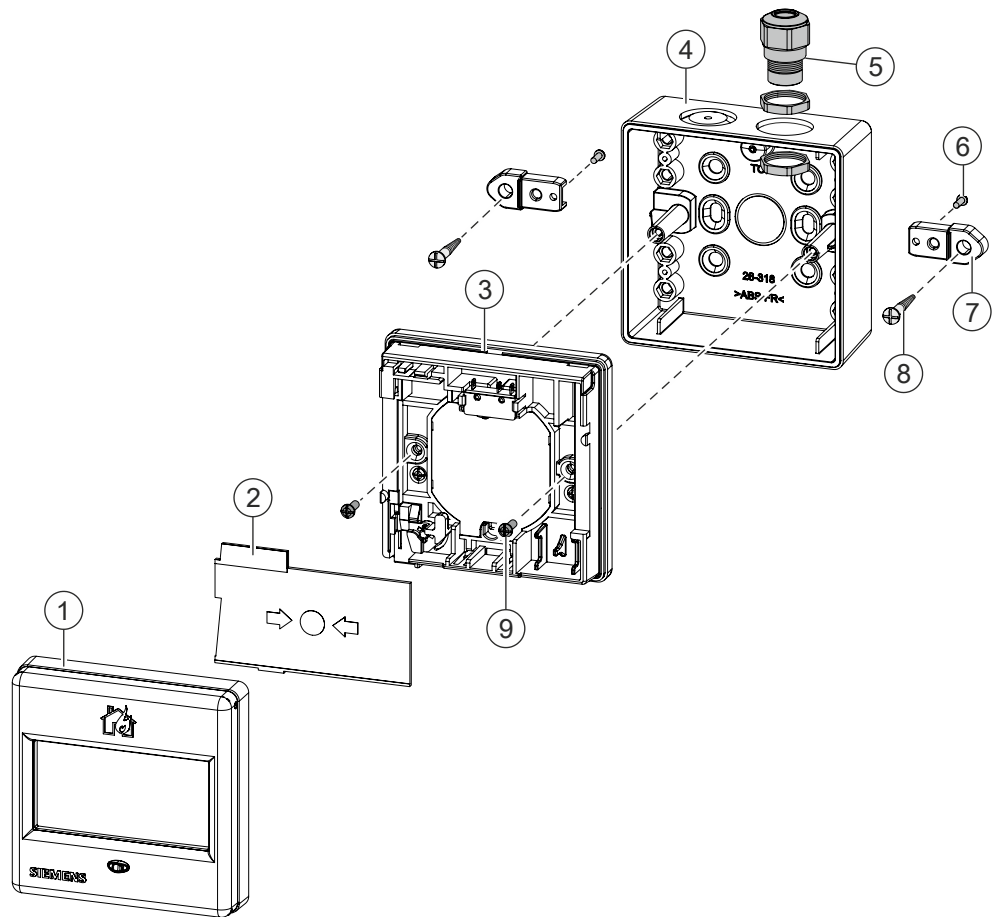


Figure 23: Mounting and installing the manual call point FDM226

- | | |
|---|--|
| 1 Housing cover | 6 Screws for installing the fastening tabs |
| 2 Glass insert | 7 Fastening tab |
| 3 Switching unit with seal | 8 Screws for wall mounting of the back box |
| 4 Back box | 9 Screws for installing the switching unit |
| 5 Metal cable gland with metal counter nuts | |

5.4 Installing the protective cover

If a protective cover (accessories) is being used, proceed as described below:

Manual call point FDM221

- ▷ The housing cover has been removed from the back box. See the chapter 'Preparation [→ 32]'.
 - ▷ A compatible protective cover is available. See the chapter 'Protective cover FDMC291 [→ 28]'.
 1. Remove the glass insert. See the chapter 'Replacing the glass insert or plastic insert [→ 52]'.
 2. Guide the protective cover (2) through the opening in the housing cover (1) from the front, as shown in the diagram.
 3. Insert the pivot pins for the protective cover (2) in the two recesses on the rear side of the housing cover (1), as shown in the diagram.
 4. Install the glass insert. See the chapter 'Replacing the glass insert or plastic insert [→ 52]'.
 5. Install the housing cover (1) on the back box.
 - ⇒ The protective cover is installed.

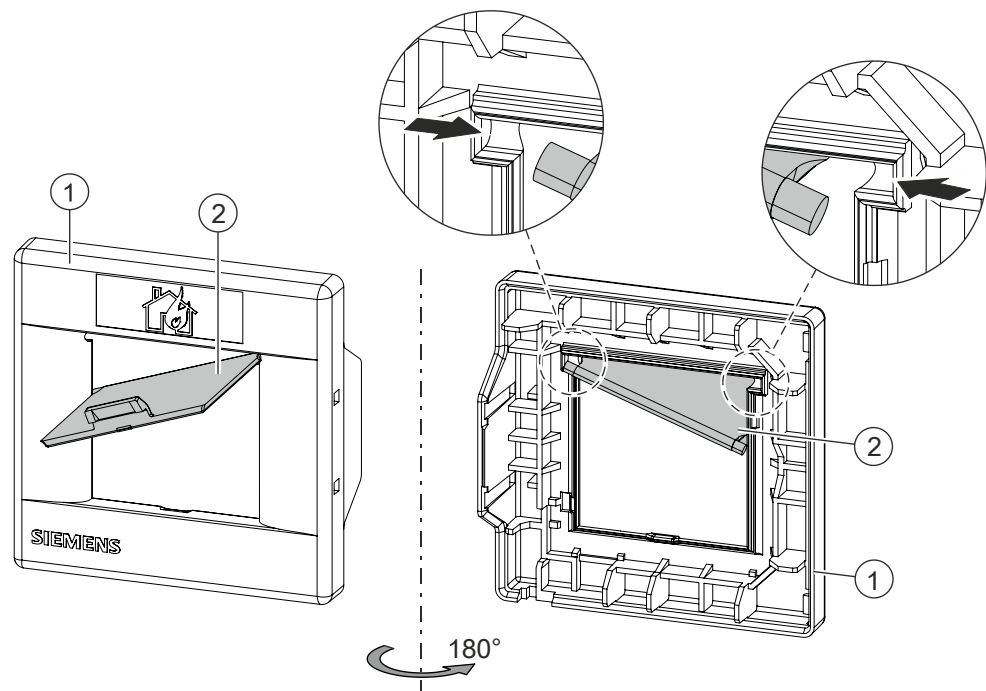


Figure 24: Installing the protective cover FDMC291

1 Housing cover

2 Protective cover

Manual call points FDM225 and FDM226

- ▷ The manual call point is installed and electrically connected. See the chapter 'Installation [→ 39]'.
▷ A compatible protective cover is available. See the chapter 'Protective cover FDMC295 [→ 28]'.
● Snap the protective cover FDMC295 (2) into place in the recesses in the housing cover (1) intended for this purpose.
⇒ The protective cover is installed.

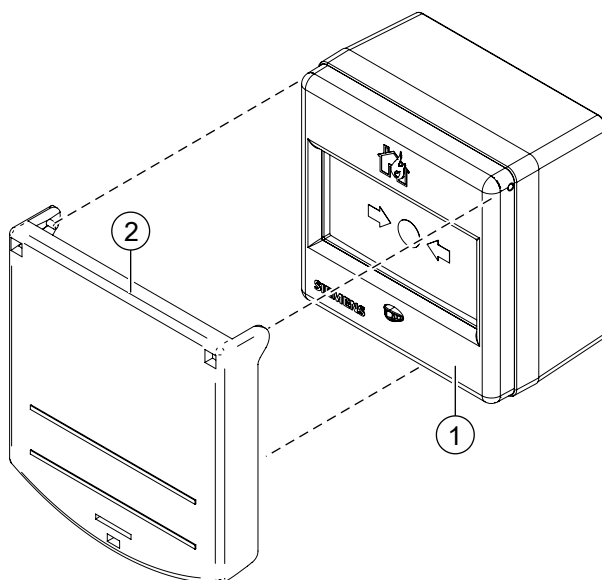


Figure 25: Installing the protective cover FDMC295

1 Manual call points FDM225,
FDM226

2 Protective cover

See also

- 📄 Protective cover FDMC295 [→ 28]
- 📄 Protective cover FDMC291 [→ 28]

6 Commissioning

The devices are commissioned via the control panel. The exact procedure is described in the control panel documentation.

Conduct a performance check once commissioning is complete.

6.1 Localization and device testing

The manual call points have an internal alarm indicator. This internal alarm indicator may also be activated from the control panel for localization and device testing.

FDM221

The LED indicator of the alarm indicator has the following meanings:

LED indication	Meaning
Off	<ul style="list-style-type: none"> Normal condition
Green Flashes once per second	<ul style="list-style-type: none"> Test mode is active
Red Flashes once per second	<ul style="list-style-type: none"> Localization is active o r Alarm is triggered
Red and green alternating Flashes twice per second	<ul style="list-style-type: none"> Alarm is triggered/localization is active a n d Test mode is active

FDM225, FDM226

The LED indicator of the alarm indicator has the following meanings:

LED indication	Meaning
Off	<ul style="list-style-type: none"> Normal condition
Red Flashes brightly once per second	<ul style="list-style-type: none"> Localization is active o r Alarm is triggered
Red Flashes weakly twice per second	<ul style="list-style-type: none"> Test mode is active
Red Flashes twice per second, alternately weakly and brightly	<ul style="list-style-type: none"> Alarm is triggered/localization is active a n d Test mode is active

See also

- 📄 Indication elements [→ 22]
- 📄 Internal alarm indicator [→ 23]

6.2 Checking function

- ▷ The manual call point is installed and electrically connected.
- 1. Set the detector line to 'Test' on the control panel.
- 2. Insert the key into the housing from below, as shown in the diagram.
 - ⇒ The glass insert or plastic insert falls down and activates the alarm actuator in the switching unit.
 - ⇒ The LED flashes.
- 3. Pull off the key.
 - ⇒ The glass insert or plastic insert is pushed back into its original position.
 - ⇒ The manual call point is ready for operation again.
- 4. Set the detector line to 'Normal operation' on the control panel.
- ⇒ The detector line is ready for operation again.

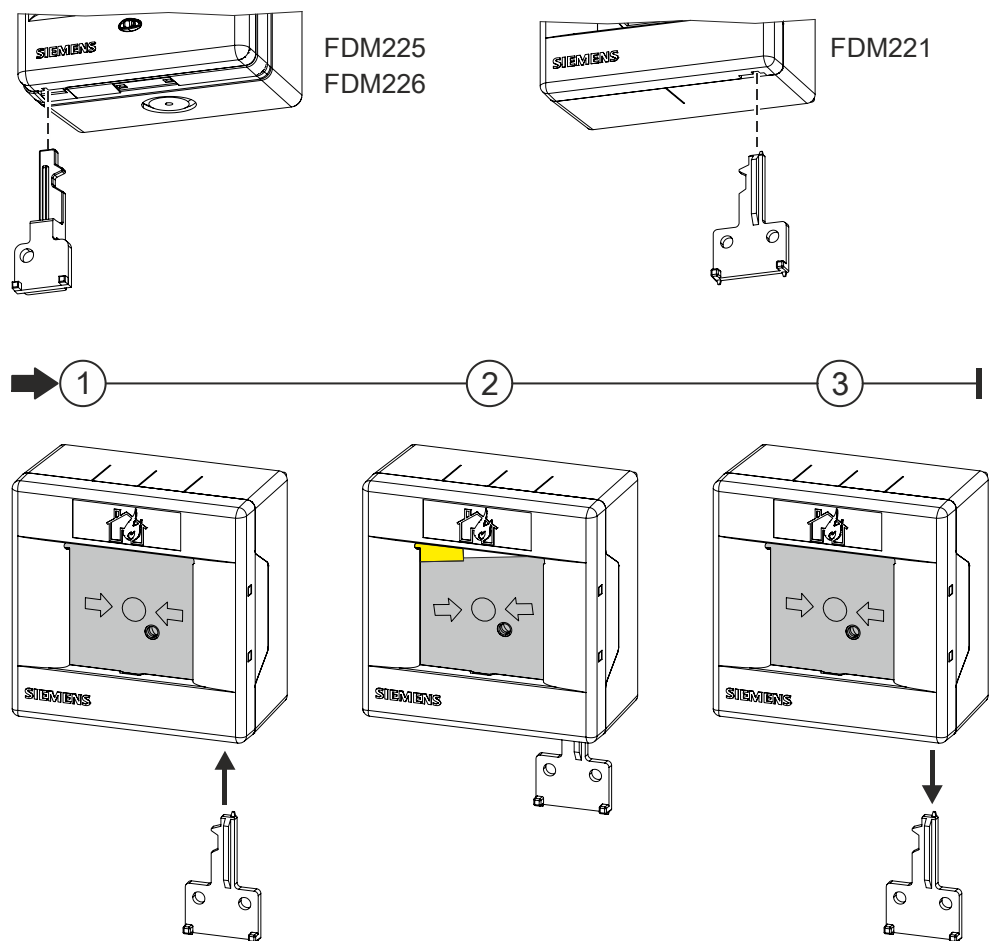


Figure 26: Testing the manual call point FDM221 with the key

7 Maintenance / Repair

7.1 Resetting after an alarm

After an alarm is activated, the manual call point must be reset to a state in which it is ready for operation.



⚠ CAUTION

Sharp remains of glass

Risk of cutting injuries when removing the remains of the glass insert

- Remove the remains of the glass carefully

The procedure used for resetting the manual call point after an alarm is the same as the one used when replacing the glass insert or plastic insert. You will find all the necessary information for manual call points FDM221, FDM225, and FDM226 in the chapter 'Replacing the glass insert or plastic insert [→ 52]'.

See also

📄 Preparation [→ 32]

7.2 Status query

Status query on the detector exchanger and tester

Each manual call point for FDnet/C-NET features a proximity interface (MC link).

Using this interface, it is possible to read out data from the device in a proximity method over short distances with the detector exchanger and tester FDUD292 or the intelligent detector tester FDUD293.

To ensure correct communication between the testing device and the manual call point, the alarm indicator on the manual call point must be aligned with a sensor on the testing device. For this purpose, turn the testing device 45 degrees and push it down by approx. 1 cm.

You will find more information in documents 007227 and 009718.

Status query on the control panel

Depending on the authorization level of the user and the control panel type, different actions can be performed from the control panel.

Observe the notices in the control panel documentation.

Document 009052 applies to fire control panels FC20xx.

Document A6V10333448 applies to fire control panels FC72x.

7.3 Performance check

The devices are automatically subjected to a performance check during the self-test. Nevertheless, it is necessary to check the devices on site at regular intervals.


Recommendation:

- Check the devices every year.
- Replace heavily soiled or damaged devices.

No other special maintenance work is necessary.

You will find more detailed information in the fire detection system documentation.

See also

 Checking function [→ 49]

7.4 Replacing the glass insert or plastic insert

Manual call point FDM221

The glass insert is numbered and covered by foil. This foil holds the glass splinters together when the glass insert is pushed in, making it possible to remove the glass insert easily.

Replace the glass insert as follows:

- ▷ The housing cover of the manual call point is removed. See the chapter 'Preparation [→ 32]'.
 1. Completely remove the old glass insert.
 2. Position the new glass insert (2) so that the number is at the bottom and can be read from the front.
 3. Place the glass insert (2) onto the guides (3) and slide it against the alarm actuator (4).
 4. Push the retainer (5) to the right until the glass insert (2) is below it.
 5. Install the housing cover on the back box (1).
 6. Check the function of the manual call point. See the chapter 'Checking function [→ 49]'.
 - ⇒ The glass insert has been replaced.

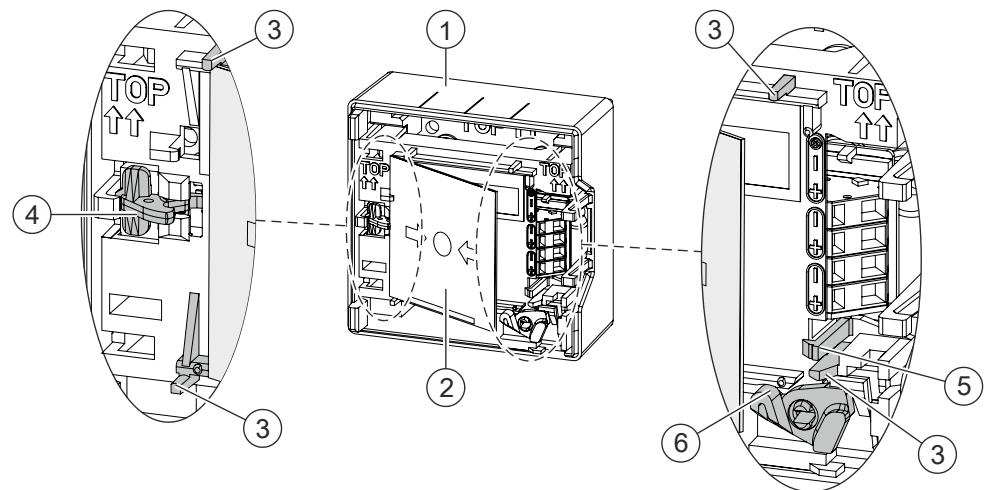


Figure 27: Replacing the glass insert on manual call point FDM221

- | | |
|-------------------------------|---------------------------------------|
| 1 Back box | 4 Alarm actuator |
| 2 Glass insert | 5 Retainer |
| 3 Guides for the glass insert | 6 Switching lever for test activation |



To comply with EN54-11:

'Ensure the frangible element has been solidly mounted on the switching unit of the MCP with no gap between the element and the switching unit when installing the device or replacing the glass element'.

Manual call points FDM225 and FDM226

The glass insert is covered by a foil. This foil holds the glass splinters together when the glass insert is pushed in, making it possible to remove the glass insert easily.

Replace the glass insert or plastic insert as follows:

▷ The housing cover of the manual call point is removed. See the chapter 'Preparation [→ 32]'.

1. Completely remove the old glass insert or plastic insert.
2. Place the glass insert or plastic insert (7) onto the guides (3) and slide the glass insert or plastic insert (7) against the alarm actuator (2), as shown in the diagram.
⇒ This pre-stresses the spring (5).
3. Install the housing cover on the back box.
4. Check the function of the manual call point. See the chapter 'Checking function [→ 49]'.
⇒ The glass insert has been replaced.

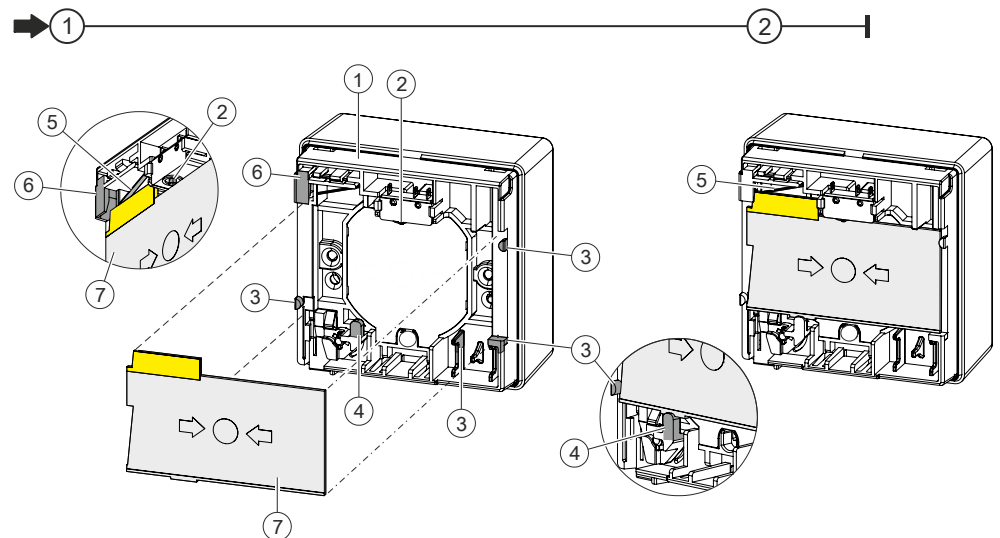


Figure 28: Replacing the glass insert on manual call points FDM225 and FDM226

- | | |
|---------------------------------------|------------------------------|
| 1 Switching unit | 5 Spring |
| 2 Alarm actuator | 6 Guide for the glass insert |
| 3 Guides for the glass insert | 7 Glass insert |
| 4 Switching lever for test activation | |

See also

- 📄 Glass insert FDMG291 [→ 28]
- 📄 Glass inserts FDMG295-x [→ 29]

8 Specifications

8.1 Technical data

You will find information on approvals, CE marking, and the relevant EU directives for this device (these devices) in the following document(s); see 'Applicable documents' chapter:

- Document 007001
- Document 009023

Detector line

Operating voltage:

- FDM221 DC 12...33 V
- FDM225/FDM226 DC 13...33 V

Operating current (quiescent):

- FDM221 0.20 mA
- FDM225/FDM226 0.18 mA

Maximum current connection factor 1

Quiescent current connection factor 1

Address connection factor 1

Separator connector factor 1

Protocol FDnet/C-NET

Compatibility See 'List of compatibility'

Line separator

Line voltage:

- Nominal DC 32 V (= V_{nom})
- FDM221 minimum DC 12 V (= V_{min})
- FDM225 and FDM226 minimum DC 13 V (= V_{min})
- Maximum DC 33 V (= V_{max})

Voltage at which the separator opens:

- Minimum DC 7.5 V (= $V_{SO min}$)
- Maximum DC 10.5 V (= $V_{SO max}$)

Permanent current when switches are closed Max. 0.5 A (= $I_{C max}$)

Switching current (e.g., in the event of a short-circuit) Max. 1 A (= $I_S max$)

Leakage current when switches are open Max. 1 mA (= $I_L max$)

Serial impedance when switches are closed Max. 0.5 Ω (= $Z_C max$)

Connections	Detector line:		
	<ul style="list-style-type: none"> • Design: Socket strip (FDM221) Screw terminals (FDM225/FDM226) • Cable cross section: 0.20...1.5 mm² (FDM221) 0.28...1.5 mm² (FDM225/FDM226) 		
	MC link	Proximity interface	
Ambient conditions	Operating temperature	-25...+70 °C	
	Storage temperature	-30...+75 °C	
	Air humidity	≤95 % rel.	
	Protection category according to IEC 60529:		
	<ul style="list-style-type: none"> • FDM221, housing FDMH291-x IP44 • FDM225 IP44 • FDM226 IP66 		
	Environmental category according to EN 54-11	In buildings	
	Electromagnetic compatibility:		
	<ul style="list-style-type: none"> • 1 MHz...1 GHz 50 V/m • 1 GHz...2 GHz 30 V/m (FDM221) 10 V/m (FDM225/FDM226) 		
	Mechanical data	Model according to EN 54-11	Type A (direct activation)
		Material	ABS PC ASA
Color		~RAL 3000 flame red	
Dimensions (L x W x H):			
<ul style="list-style-type: none"> • FDM221 87 x 87 x 47 mm • FDM225 87 x 87 x 20 mm • FDM225 with FDMH295-x 87 x 87 x 53 mm • FDM226 87 x 113 x 57 mm 			
Weight:			
<ul style="list-style-type: none"> • FDM221 0.16 kg • FDM225 0.116 kg • FDM226 0.200 kg 			
Standards		European standards	EN 54-11 EN 54-17

8.2 Dimensions

Manual call point FDM221

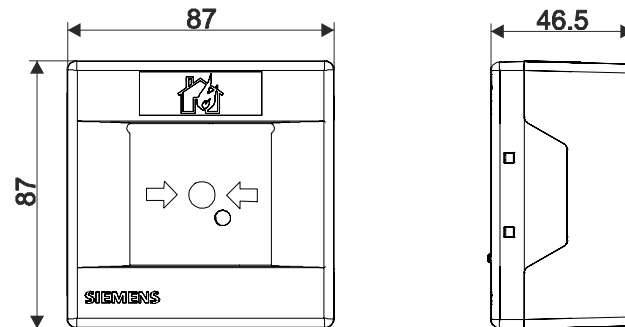


Figure 29: Dimensions for manual call point FDM221

Manual call point FDM225

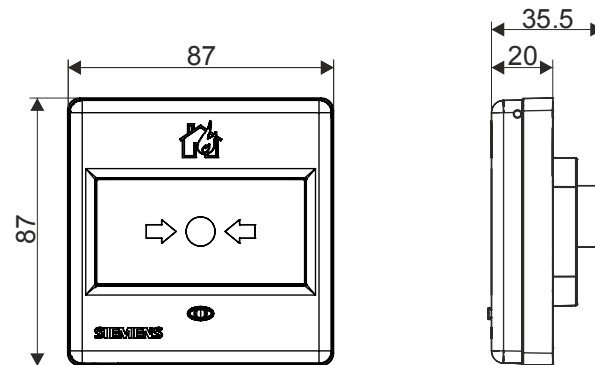


Figure 30: Dimensions for manual call point FDM225

Manual call point FDM225 with back box FDMH295-x

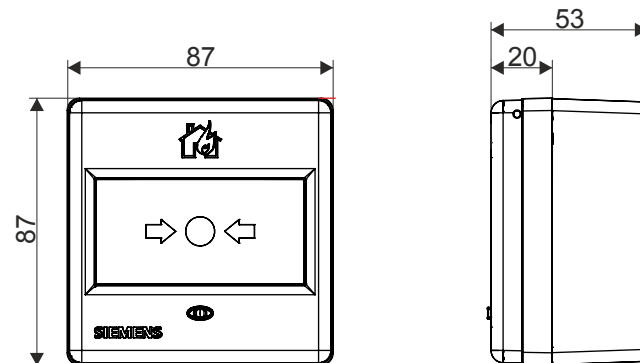


Figure 31: Dimensions of the manual call point FDM225 with back box FDMH295-x

Drilling jig for cable glands for FDM225

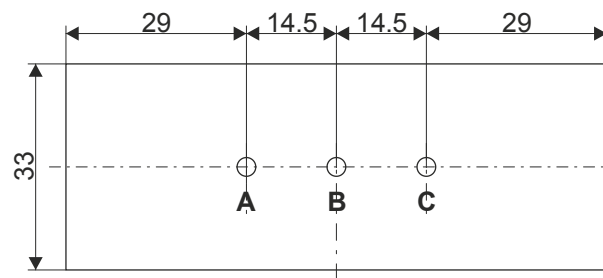


Figure 32: Drilling jig for manual call point FDM225



The drilling jig is not true to scale.

Manual call point FDM226

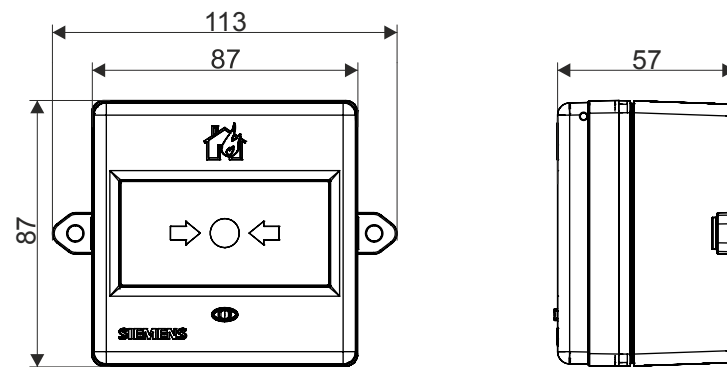


Figure 33: Dimensions for manual call point FDM226

8.3 Environmental compatibility and disposal



This equipment is manufactured using materials and procedures which comply with current environmental protection standards as best as possible. More specifically, the following measures have been undertaken:

- Use of reusable materials
- Use of halogen-free plastics
- Electronic parts and synthetic materials can be separated

Larger plastic parts are labeled according to ISO 11469 and ISO 1043. The plastics can be separated and recycled on this basis.

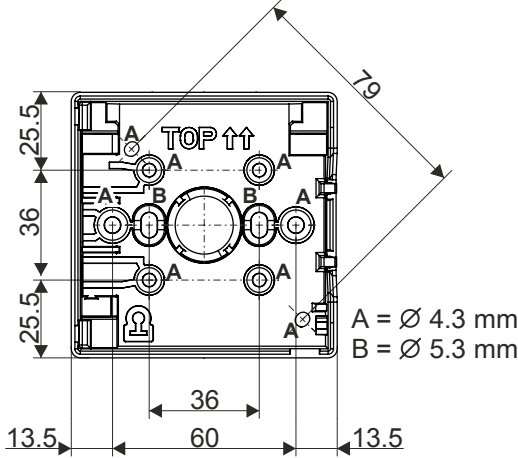


Electronic parts and batteries must not be disposed of with domestic waste.

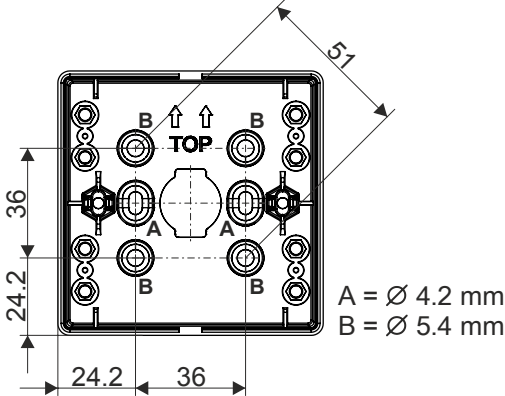
- Take electronic parts and batteries to local collection points or recycling centers.
- Contact local authorities for more information.
- Observe national requirements for disposing of electronic parts and batteries.

8.4 Master gauges for holes

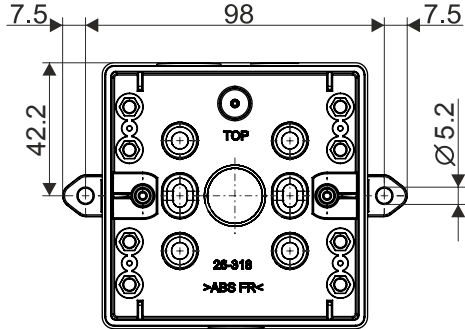
Manual call point FDM221



Manual call point FDM225 with back box FDMH295-x



Manual call point FDM226



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