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FRL700 LCD Repeater Installation Manual

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Contact information For contact information, see www. utcfssecurityproducts.eu..

Content

Important information

Regulatory information

The FRL700 LCD Repeater has been designed to conform to the requirements of Swedish Standard SS3654.

Limitation of liability

To the maximum extent permitted by applicable law, in no event will UTCFS be liable for any lost profits or business opportunities, loss of use, business interruption, loss of data, or any other indirect, special, incidental, or consequential damages under any theory of liability, whether based in contract, tort, negligence, product liability, or otherwise. Because some jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damages the preceding limitation may not apply to you. In any event the total liability of UTCFS shall not exceed the purchase price of the product. The foregoing limitation will apply to the maximum extent permitted by applicable law, regardless of whether UTCFS has been advised of the possibility of such damages and regardless of whether any remedy fails of its essential purpose.

Installation in accordance with this manual, applicable codes, and the instructions of the authority having jurisdiction is mandatory.

While every precaution has been taken during the preparation of this manual to ensure the accuracy of its contents, UTCFS assumes no responsibility for errors or omissions.

Introduction

This is the installation manual for the UTC Fire & Security FRL700 LCD repeater. Read these instructions and all ancillary documentation entirely before installing or operating this product.

Support

For assistance installing, operating, maintaining, and troubleshooting this product, please contact your local supplier.

Advisory messages

Advisory messages alert you to conditions or practices that can cause unwanted results. The advisory messages used in this document are shown and described below.

WARNING: Warning messages advise you of hazards that could result in injury or loss of life. They tell you which actions to take or to avoid in order to prevent the injury or loss of life.

Caution: Caution messages advise you of possible equipment damage. They tell you which actions to take or to avoid in order to prevent the damage.
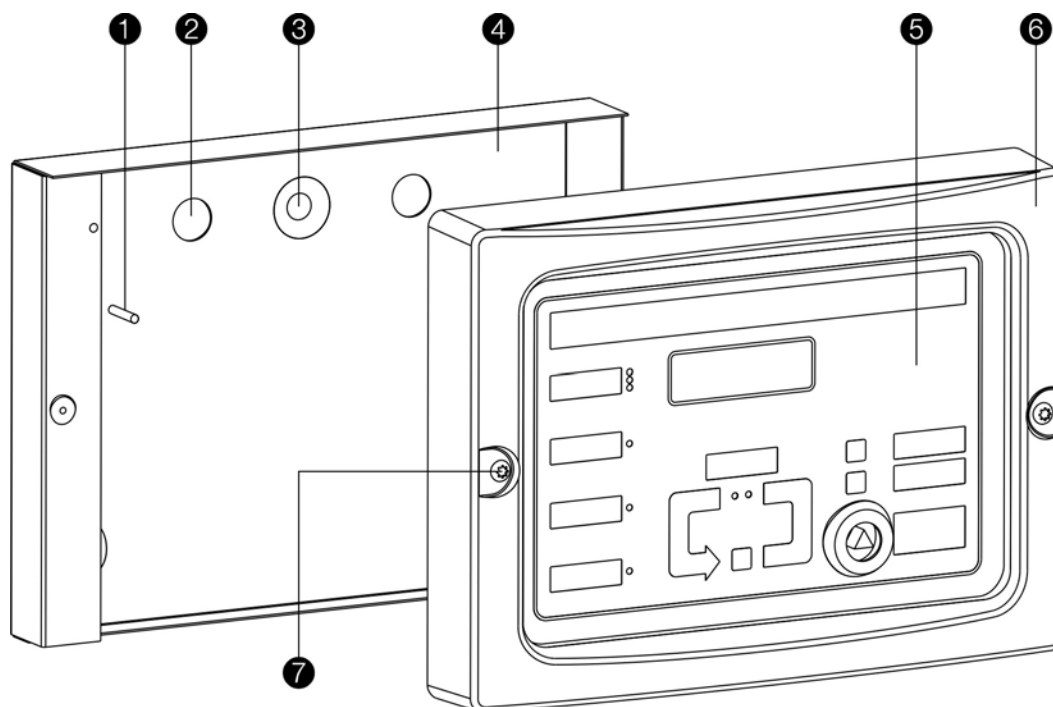
Note: Note messages advise you of the possible loss of time or effort. They describe how to avoid the loss. Notes are also used to point out important information that you should read.

Installation

WARNING: This is a Class A product and may cause radio interference if installed in a domestic environment.

Cabinet overview

**Figure 1: Cabinet overview**

1. Earth stud

2. 4 x 20 mm cable entry holes

3. 3 x 7 mm mounting holes

4. Base of cabinet

5. Panel interface

6. Front cover

7. 2 x front cover mounting screws

Cables must be fastened to the cabinet using the cable ties supplied. Use appropriate cable glands on all cable entry holes.

WARNING: The panel must be connected to earth using the earth stud.

Internal layout

**Figure 2: Internal layout**
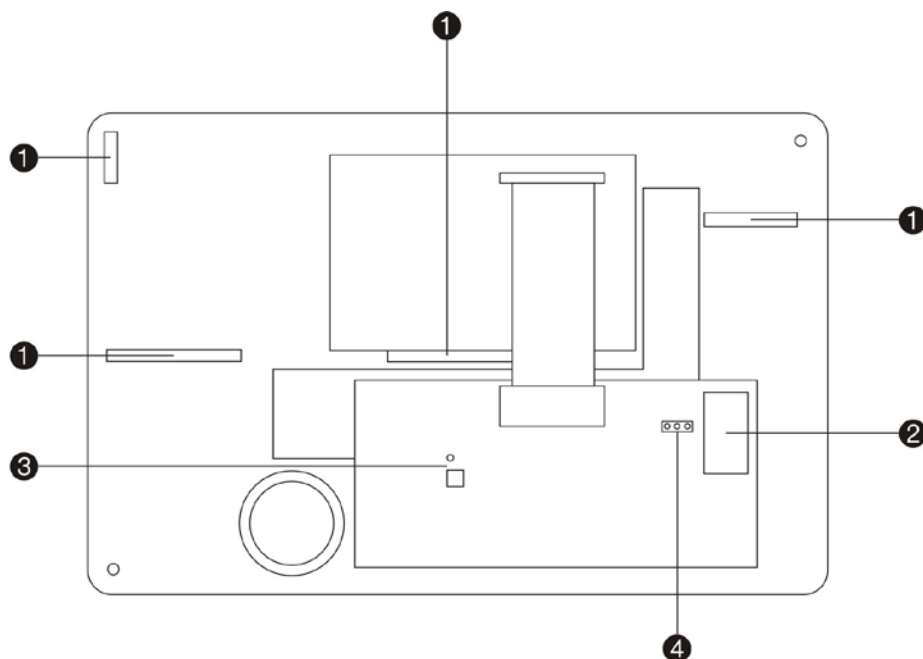
1. Slots for panel menus
2. P7 connector
3. Service switch and service LED
4. J2 jumper

Table 1: Connector and service switch / Service LED information

Component	Description
P7 connector (from top to bottom)	• P7.1: Earth • P7.2: Not used • P7.3: Ground (AUX24V-) • P7.4: 24V (AUX24V+) • P7.5: Data (polarity insensitive) • P7.6: Data (polarity insensitive)
Service switch	• Press **once** for installation (see fire panel installation manual). • Press **twice** to display the general information screen. • Press **three** times to display the keyboard test screen.
Service LED	This LED flashes to indicate an installation fault. **1 second ON - 1 second OFF:** Configuration error. **2 seconds ON - 2 seconds OFF:** The repeater cannot establish communication with the fire panel.

Connecting to the fire panel

Figure 3: Connecting to the fire panel
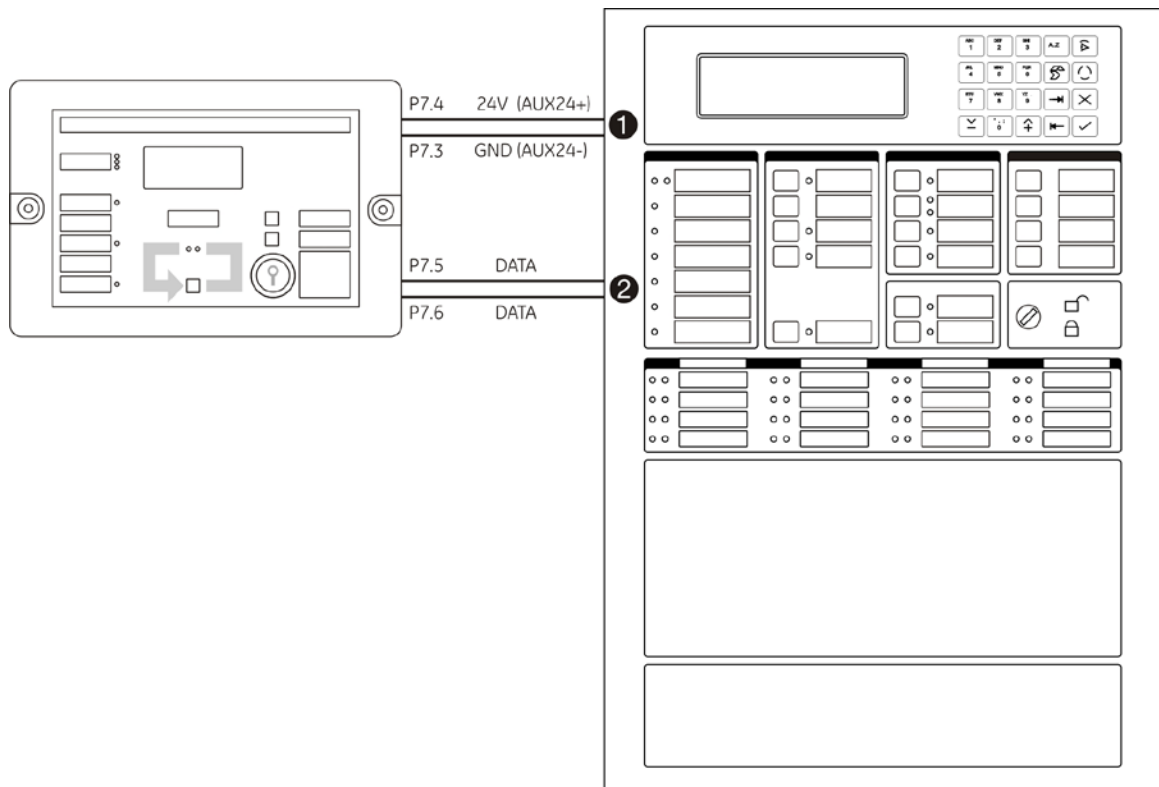
1. Connection to the 24V auxiliary power supply
2. Connection to the LON2000 interface module (polarity insensitive)

Termination resistors

Termination resistors must be mounted on both ends of the communication line:

- On the FRL700, set jumper J2 to ON.
- On the FP1200-2000, refer to the LON2000 Installation Sheet.

Recommended cable

Caution: To ensure correct operation of your system, you must follow the recommended cabling practices described below.

CAT5 FTP cable is recommended., Any cable used must be shielded, twisted-pair and have a characteristic impedance of 100–120Ω. Maximum cable length should not exceed 1200 m.

Commissioning

Follow these steps to ensure the repeater is correctly commissioned.

Before switching on the repeater

Perform the following checks before switching on the repeater:

1. Visually check the LCD repeater panel for any damage that might have occurred during installation.

2. Check that all harnesses are securely plugged into the correct plug positions on the printed circuit boards.

3. Ensure that there is no loose or bare wiring in the cabinet.

Switching on the fire panel and the repeater

Once the above checks have been completed, follow these steps to switch on the fire panel and the repeater:

1. Switch the mains power on at the fire panel's power supply. The green Power LED on the FRL700 turns ON.

2. Follow the procedure for installation of LON devices for the fire panel to which you are connecting the FRL700 (see your fire panel documentation).

3. If the device is already installed, the message "TOTAL ALARMS : 000" will appear. If the device is not installed, the following message will be displayed (where xx.xx is the revision of firmware in the panel:

   - FRL700 Ver.: xx.xx
   - No communication
   - Press any key For SERVICE

4. Press the Service switch. All front panel buttons react like the Service switch if there is no communication with the main panel.

5. The Service LED, situated on the back of the LCD repeater front panel, will turn OFF if communication is established. If no communication is established to the main panel the Service LED will continue to flash slowly.

Troubleshooting communication problems

If communication to the LCD repeater cannot be established, ensure that the LON bus is correctly terminated and that no tree-topology or t-offs are used. Measure the resistance of the communication lines.

If communication to the LCD repeater still cannot be established and another installed FRL700 LCD repeater panel is available, the following can be done to determine if the communication line is working properly:

1. Disconnect the communication cable from the newly-installed repeater.

2. Connect the same communication cable to the previously installed repeater.

If the panel starts up correctly and establishes communication then the communication cable is working correctly and the repeater is faulty (the unit must be returned to your local supplier).

Operation

This section outlines the FRL700 front panel LED indicators and controls.

The user interface

Figure 4: FRL700 user interface
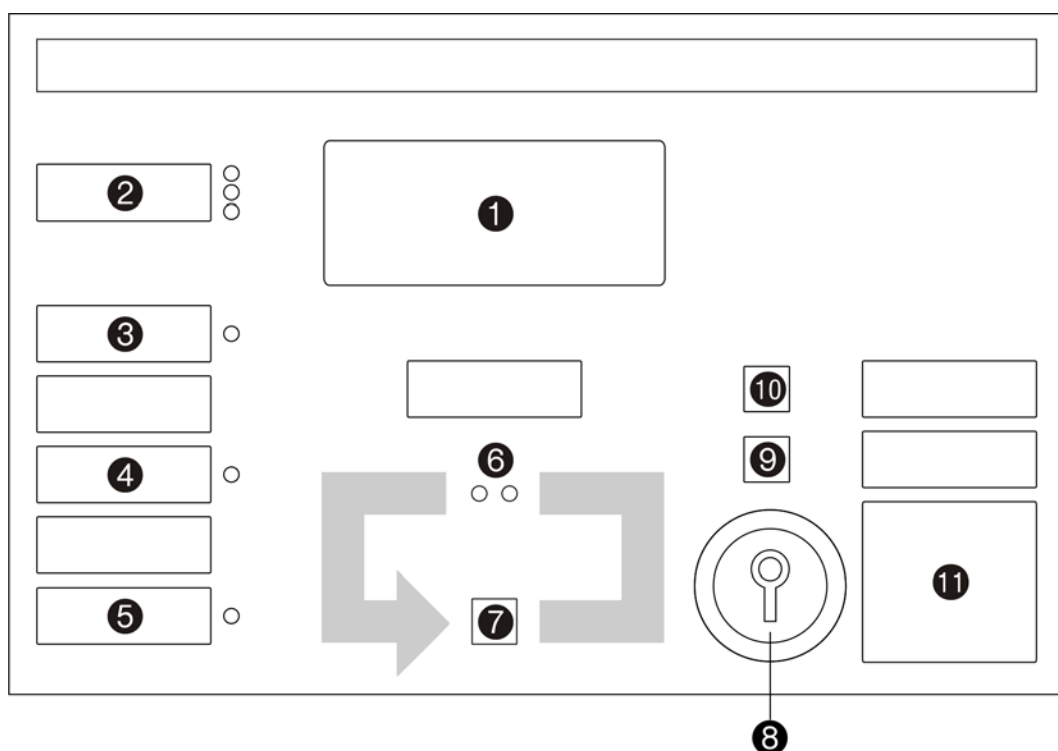
1. LCD screen
2. General alarm LED indicators
3. Fault LED indicator
4. Functions disabled LED indicator
5. Power supply LED indicator
6. Several alarms LED indicator
7. Next alarm
8. Key switch (enable/disable)
9. Reset / LED test*
10. Silence alarm device(s) / Silence buzzer*
11. Alarm code (if indicated)

* The function of these items depends on the position of the key switch.

Indicators and panel operation

The FRL700 LED indicators and standard operation are detailed in the following table.

Table 2: FRL700 LED indicators and operation

Name	Indication / button	Description
LCD display	---	Displays details of fire alarms etc.
		In the event of several alarms, press Next Alarm to scroll through the details of each alarm.
General alarm	3 red LEDs	The LEDs turn ON, flashing each time a fire alarm is reported at the fire panel.
		Turning the key switch will enable the FRL700 controls and the flashing LEDs will become steady.
		The LEDs flash again when a new alarm occurs. The LEDs turn OFF when the fire panel is reset.
Fault	1 yellow LED	The LED is ON when there a fault is reported at the fire panel. The internal buzzer will be activated intermittently.
		If the buzzer was silenced and the fault is still present on the system, subsequent faults will not reactivate the buzzer.
		Any fire-alarm will override the fault.
Functions disabled	1 yellow LED	The LED is ON when a least one function of the fire panel is disabled
Power supply	1 green LED	The LED is ON when the device is powered up.
Several alarms	2 red LEDs	The LED is ON when there are several fire alarms.
Next alarm	Blue button	Press this button to scroll through alarm details on the LCD screen.
Key switch	---	The control panel interface is active when the key switch is turned clockwise.
		The key switch must be activated using a fireman's key to enable the LED test and Silence Alarm Devices buttons
Reset	Grey button	Resets the fire panel (fire alarm and fault conditions).
		If one or more alarms remain after the reset, the internal buzzer will sound again and the device will re-enter the fire alarm condition.
		This feature is only available when the key switch is enabled.
LED test	Grey button	When the key switch is in the disabled position, pushing this button will perform a LED test.
Silence alarm device(s)	Grey button	Stops the LCD repeater's internal buzzer and the fire panel's alarm devices.
		This feature is only available when the key switch is enabled.

Name	Indication / button	Description
Silence buzzer	Grey button	When the key switch is in the disabled position, pressing this button will stop the internal buzzer.
Internal buzzer	Buzzer	The internal buzzer is on constantly for each new alarm and intermittently during the first fault.
		The internal buzzer is silenced by pressing the Silence Buzzer button or by turning the key switch to the enabled position.
Alarm code	---	The alarm receiver's alarm code (if indicated by the installer).

Technical specifications

Power supply	
Supply voltage	24 VDC
Current consumption	Max. 100 mA at 12 V
Mechanical	
Dimensions	320 x 240 x 60 mm
Weight	1.5 Kg
Cable entry holes	4 x Ø 20 mm
Environmental	
IP rating	IP54
Working temperature	−5°C to +40°C
Storage temperature	−20°C to +60°C
Relative humidity (noncondensing)	10% to 95%
Networking	
Communication ports	1 LonWorks port for connection to FP1200-2000 panels
Cable	CAT5 FTP
Maximum cable length	1200 m

Figure 5: Cabinet dimensions and measurements