Fike®

TWINFLEX®pro
FIRE DETECTION SYSTEM

Fire Detection & Alarm System Repeater Panel

(Suitable for TWINFLEX®pro control panels from V2.00)

Repeater Panel User Manual

(TO BE RETAINED BY THE END USER)

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Due to the complexity and inherent importance of a life risk type system, training on this equipment is essential and commissioning should only be carried out by competent persons.

Fike cannot guarantee the operation of any equipment unless all documented instructions are complied with, without variation.

E&OE.

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Fike equipment is protected by one or more of the following patent numbers: GB2426367, GB2370670, EP1158472, PT1035528T, GB2346758, EP0917121, GB2329056, EP0980056, GB2325018, GB2305284, EP1174835, EP0856828, GB2327752, GB2313690

Contents

Introduction

This Manual is intended as a guide to the engineering and commissioning principles of the TWINFLEX®pro Repeater Panel and covers the system hardware information only.

Due to the complexity and inherent importance of a system covering a 'Life Protection Risk', training on this equipment is essential and commissioning should only be carried out by competent and approved persons. For further details of the availability of commissioning services, please contact your supplier.

System Design

This document does not cover Fire Alarm system design and a basic understanding is assumed.

A knowledge of BS5839: Pt 1: 2002: Fire Detection and Alarm Systems for Buildings is essential.

It is strongly recommended that a suitably qualified and competent person is consulted in connection with the Fire Alarm System design and that the entire system is commissioned in accordance with the current national standards and specifications.

Equipment Guarantee

The equipment carries no warranty unless the system is installed, commissioned and serviced in accordance with this manual and the relevant standards by a suitably qualified and competent person or organisation

Anti-Static Handling Guidelines

Immediately prior to handling any PCBs or other static sensitive devices, it is essential to ensure that a personal **connection to earth is made with an anti-static wrist-strap** or similar apparatus.

Always handle PCBs by their sides and avoid touching any components. PCBs should also be stored in a clean dry place, which is free from vibration, dust and excessive heat and is protected from mechanical damage.

Warning

Do not attempt to install this equipment until you have fully read and understood this manual.

Failure to do so may result in damage to the equipment and could invalidate the warranty.

For technical support please contact your distributor. Do not call the Fike Safety Technology support department unless your distributor has first given their advice and attempted to rectify the issue.

Technical support will **not** be available if the instruction manual has not been read and understood. Please have this instruction manual available whenever you call for technical support.

EMC

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This equipment when installed is subject to the EMC directive 2004/108/EC. It is also subject to UK Statutory Instrument 2006 No. 3418.

To maintain EMC compliance, this system must be installed as defined within this manual. Any deviation from this renders the installer liable for any EMC problems that may occur either to the equipment or to any other equipment affected by the installation.

The TWINFLEX®pro System

The TWINFLEX®pro system is an intelligent '2-wire' system utilising a conventional type cabling format.

The system is classed as 'Analogue non-addressable' due to the architecture used within the design. All field devices including sounders can be connected to the zone via a common 2-core screened cable. The devices communicate with the control panel using the 'TWINFLEX®' data protocol.

Repeater Panel, Remote Display Unit (RDU)

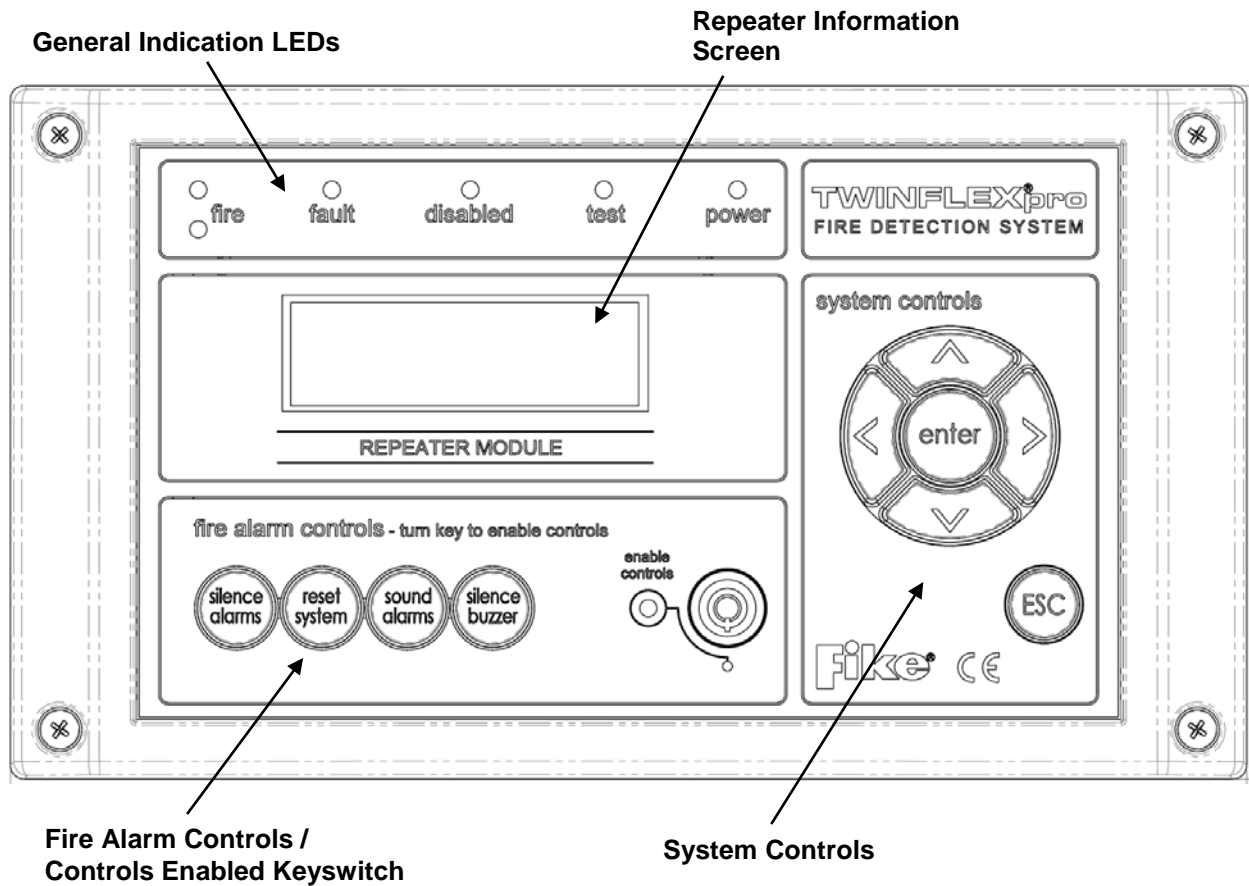The TWINFLEX®pro repeater panel is smaller than the TWINFLEX®pro control panel.

It does not itself connect to or control detection devices. Instead, it connects to a control panel and reports events which occur on the control panel.

It can also perform system controls over the network (i.e. Silence Alarms, Reset, Sound Alarms & Silence Buzzer).

A maximum of 8 repeater panels can be connected to a single control panel.

General Operation of Repeater Panel

Control Panel Front

LED Indication

The operation of the LED indication on the front of the repeater panel is described below. The LED indication on the repeater panel can also be confirmed by checking the message displayed in the repeater information screen or by accessing the relevant event log from the repeater menu.

Description	Colour	State	Reason
FIRE	Red	Continuous	The control panel is in the fire state. Display will show the zone of origin.
FAULT	Yellow	Continuous	The control panel is in the fault state. Display will show the origin.
DISABLED	Yellow	Continuous	This indicates that a disablement action is in place.
TEST	Yellow	Continuous	This indicates that a test routine is in place.
POWER	Green	Continuous	This indicates that power is being supplied to the panel.

Fir*e Alarm Controls*

The main Fire Alarm Controls may be enabled by turning the key switch to the controls enabled position to go from access level 1 to access level 2.

System Controls

The menus may be navigated to by using the **UP** / **DOWN** keys to move the required selection to the top and pressing **ENTER** to select the chosen one.

In the example below pressing enter will select current faults.

```
Current  Events
2.  Current  Faults
3.  Current  Disables
Select ↑/↓/Enter / ESC
```

Press the **ESC** key to exit to the previous menu.

Access Levels

The menu system is divided into two access levels in order to restrict access to those who require it. For simple indication, the status of the **Controls Enabled** light will show the level selected as follows;

Access Level	Description	Controls Enabled LED	Key Operation
1 – NORM	Normal	OFF	N/A
2 – USER	User	ON	YES

Access to the Controls requires the operation of the **enable controls key**, Access Level 2 (User) in order to protect against unauthorised access to the system.

Access Level 1 (Normal): Controls Enabled LED off

Note: When in the normal mode, the quiescent screen will automatically change to display any fires or faults on the system.

Pressing the enter button when in level 1 will show the Current Events Menus and may be scrolled through by pressing the **UP** and **DOWN** keys. Press the **ESC** key to exit the menu.

Option 1. Current Fires
Option 2. Current Faults
Option 3. Current Disables
Option 4. Current warnings

Events are displayed in text format and may be scrolled through by pressing the **UP** and **DOWN** keys. Press the **ESC** key to exit the menu.

Access Level 2 (user): Controls Enabled LED on

Pressing the enter button when in level 2 will show the Main Menu and may be scrolled through by pressing the **UP** and **DOWN** keys. Press the **ESC** key to exit the menu.

Option 1. Current Events
    1. Current Fires
    2. Current Faults
    3. Current Disables
    4. Current warnings

Option 2. Test Repeater
    1. Test LEDs
    2. Test Keypad
    3. Test Buzzer
    4. Test LCD
    5. Test Backlight

Option 3. Repeater Details
    1. Buzzer
    2. Software Version
    3. Repeater Panel #
    4. Display Baudrate

End User Training

A Fire Alarm System is of little use if the end user and/or the responsible persons who will be present in the building do not know how to operate and respond to the system. It is therefore essential that commissioning includes training for the users of the system and responsible persons.

User instructions and a Zone Chart should be left adjacent to the control panel. As access to the system must be controlled by responsible persons, it would be unusual to display the access codes on this notice. These codes must however be available for the responsible persons, so ensure that they know and record them in a secure place.

The **TWINFLEX®pro User Guide** should be explained and left with the responsible person on site, for storage in an accessible and known location, in order that the responsible person and the service engineer may keep information records up to date.

A single page user instruction sheet is included at the end of this manual. A copy of this should be mounted adjacent to the control panel.
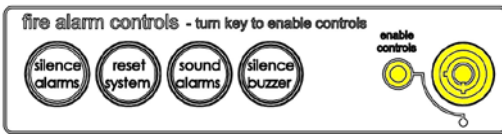
Maintenance

The repeater panel does not require user maintenance, however periodic functional checks should be carried out by an engineer or responsible persons.

Technical Data

Repeater Panel Specification

Dimensions (mm)	250 x 140 x 85
Weight	650 grams
Construction	UL94-V0 rated ABS
Cable Entry	6 x 20mm knockouts, 4 x double 20mm knockouts
Cable type	2 core 1.5mm^2 screened fire rated cable
Operating voltage	Nominal 24V DC (Range 21 - 32V DC)
Operating current Quiescent @ 24V DC	16 mA (back light off)
Operating current Max @ 24V DC	50 mA (controls enabled, back light on)
Communications	Multi-drop RS-485
Total peripheral bus length	500m (max)
IP rating	20
Maximum number of repeaters per control panel	8
Operating temperature	5°C to 50°C

Fire Alarm System Notice

To Enable the Control Panel Keys

You may gain access to the fire alarm controls by inserting the key turning ¼ turn. The 'Controls Enabled' LED should then be illuminated.

To disable the control panel keys, turn the key switch off. When disabled, the 'Controls Enabled' LED should then be extinguished.

To prevent unauthorised operation, the controls should be kept disabled and the key kept secure under the control of the responsible person.

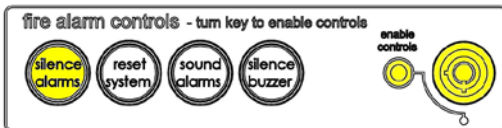## To Manually Operate the Fire Alarm Sounders

Enable the controls and then press 'SOUND ALARMS'.

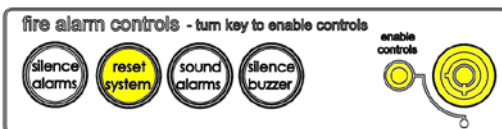To silence the alarm sounders press 'SILENCE ALARMS'.

Following a Fire Alarm Operation

The red 'FIRE' LED will illuminate. The fire alarms and the internal buzzer will operate as programmed. Take appropriate action as defined by the emergency plan for the premises.

To silence the alarm press 'SILENCE ALARMS', then establish the cause of the alarm and enter the details in the log book.

Reset any Manual Call Points which may have been operated, or if a detector has been operated be sure that the cause of the alarm has been removed, before resetting the system by pressing 'RESET SYSTEM'.

Following a Fault Condition

The fault LED will illuminate. The internal buzzer will sound. To mute the internal buzzer press 'SILENCE BUZZER'. Investigate and rectify the appropriate fault (competent persons). Once the fault has been rectified the fault indication will clear automatically.

Important Notes

FIRE ALARM COMPANY:

ADDRESS:

FOR SERVICE CALL: (Working hours)   (Call Out)

FIRE ALARM COMPANY: _____

ADDRESS: _____

For Service Phone: _____ (During Working Hours) _____(Out of Working Hours)

Fire Alarm User Notice

Note

The Fire alarm system installed in this building has 'Alarm Confirmation' technology to help eliminate false alarms.

Please read and understand the following information in order to make the most use of the system.

Operation

When the detector within your area activates it will initially only operate the sounders within your own area for a predetermined 'Confirmation' time.

At the end of the 'Confirmation' time the system will check the detector again to see if the activation has cleared. If so, the sounders will silence and no further action need be taken.

If, however, the detector is still activated, the entire system will go into alarm, operating all the sounders on the system.

Action Required

If you think that you may have accidentally set off the fire alarms, then check the following:

If the fire alarm within your area only is sounding, then check your own area for the cause of the alarm. If this proves to be a false alarm due to dust, cooking fumes, steam, cigarette smoke, etc, then clear the smoke from the area in order to allow the system to reset itself after a few minutes. If this happens then no further action is required. If the fire alarms in the communal areas are also sounding, then follow the building's fire procedures for evacuation.

If you discover a genuine fire, then follow the building's fire procedures for evacuation, activating the nearest Fire Alarm manual call point on the way out if the alarms are not already sounding.

Do not attempt to put out the fire unless it is safe to do so.

Further Information

Further information will be located adjacent to the Main Fire Alarm Control Panel, or may be obtained from either the person responsible for building maintenance or from the Fire Alarm Company responsible for maintaining the Fire Alarm System.

Engineers Notes

Technical Support

Contact your distributor for technical support on this product.

Do not call the Fike Safety Technology technical support department unless your distributor has first given their advice and attempted to rectify the issue.

Technical support will not be available if the instruction manual has not been read and understood. Please have this instruction manual available whenever you call for technical support.

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