



# ADR-833

## ANALOG ADDRESSABLE EXTINGUISHING CONTROL UNIT

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### Technical Manual

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31 October 2002  
Rev.: 1.12

## General

The ADR-833 Automatic Extinguishing Control Unit is intended to supervise, control and activate automatic extinguishing systems.

The ADR-833 is a multi-input/output control unit connected and supervised by the analog addressable control panel ADR-3000.

The fire detectors belonging to the automatic extinguishing system are monitored from the analog addressable control panel. The extinguishing control and command are performed by the ADR-833, via the analog detection loop.

The ADR-833 contains 3 supervised outputs, 2 relays and 3 supervised inputs. The outputs activate: (a) the automatic extinguishing cylinders, (b) the fire alarm horn and (c) the evacuation annunciators. The relays are: one for trouble and the other for alarm. The inputs are: (a) manual extinguishing release – electrically, (b) extinguishing inhibit and (c) extinguishing cylinder pressure switch (refer to figure 1).

The ADR-833 operates on 24Vdc supply fed directly from the control panel or from a remote power supply such as Telefire's ADR-34A Analog Addressable Power Supply or ADR-9090P Analog Addressable Power Supply.

The ADR-833 is an analog addressable device controlled by the analog addressable control panel and occupies only one address, even with the several inputs and outputs.

## Keypad and Display

The ADR-833 has an LCD display consisting of two rows of 20 characters each, in addition to the LED Lamps that indicate alarm, trouble or normal operation statuses.

The keypad contains four buttons:

1. Extinguishing inhibit button – to abort the automatic extinguishing process during the countdown.
2. Bell or buzzer silence – to silence alarm or trouble signals.
3. Reset button.
4. Menu button – reserved for future use.

## Inputs and Outputs

In the ADR-833 all input and output lines are supervised and protected against short circuit and disconnection. They are terminated with an End-Of-Line (E.O.L.) resistor of 5.1 K at the end of each line.

In case of trouble in one of the lines, the yellow Trouble LED will turn on and the trouble description will be displayed on the LCD screen. For example, short on the extinguisher's pressure switch line will be displayed as –

TROUBLE
PRESSURE SW. SHORT

A message is sent to the analog addressable control panel and from the control panel to the RM-4005 Remote Panels – if any are installed.

In addition, the local trouble buzzer will sound. To silence the buzzer, use the silence button. The trouble buzzer is silenced only on the ADR-833 unit. This does not affect the trouble signaling, either on the main control panel, or on the remote panels.

After the silencing, the word SILENCED blinks on the LCD. Fixing the trouble will automatically cancel the trouble display and restore the unit to normal operation.

## Unit Operation

### Programming and Installation

Prior to the ADR-833 installation and connection, you should program the address using the PROG-4000 Analog Addressable Programming Unit.

Connect all the input and output devices while the ADR-833 is not energized from the power source (refer to figure 2).

Before connecting the automatic extinguishing, perform a test by connecting a dummy load to perform a simulation and system testing. It is recommended to leave the system with the dummy load for up to one week, to ensure the system's proper operation and sensitivity adjustment.

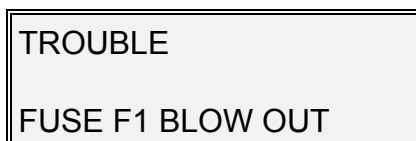
After concluding the test period, remove the dummy load and connect the automatic extinguishing cylinders.

### Fuses

The ADR-833 Automatic Extinguishing Control Unit operates on 24Vdc and is protected by a 1A fuse, located on the printed circuit board.

In case of a blown fuse, the ADR-833 continues to operate only in the supervision mode powered from the detection line.

The trouble message is displayed on the LCD as follows –

A rectangular LCD display with a double-line border. The text is centered and reads "TROUBLE" on the top line and "FUSE F1 BLOW OUT" on the bottom line.

TROUBLE  
FUSE F1 BLOW OUT

The trouble LED does not light and a trouble message is sent to the main control unit.

Replace the blown fuse with a new one of the same specifications and value.

### Extinguishing Inhibit

Extinguishing inhibit can be done in two cases:

1. In normal operation, before performing system maintenance.
2. When receiving a fire alarm and after deciding to abort the automatic extinguishing process during the countdown.

Pressing the extinguishing inhibit button, will stop the automatic extinguishing process and will display the following message on the LCD screen –

TROUBLE
EXTINGUISHER INHIBIT

The yellow trouble LED will light and a trouble message will be sent to the main control unit.

To silence the local buzzer use the silence button.

Press the reset button to cancel the extinguishing inhibit condition and restore the system normal operation.

### ***Fire Alarm***

During a fire alarm, the fire red LED will light, the alarm message will be displayed on the LCD screen, the unit's buzzer will sound and the alarm horn will sound – if connected.

Silencing the alarm will affect the local alarm devices only, and will not affect the rest of the alarm devices belonging to the main system.

### ***Automatic Extinguishing***

After receiving a fire alarm signal from the detectors belonging to the automatic extinguishing system and performing the ADR-833 activation conditions as programmed in the main control unit, the unit will start the automatic extinguishing process.

At the beginning, the evacuation output will be activated and after the pre-set time delay, the automatic extinguisher will be activated.

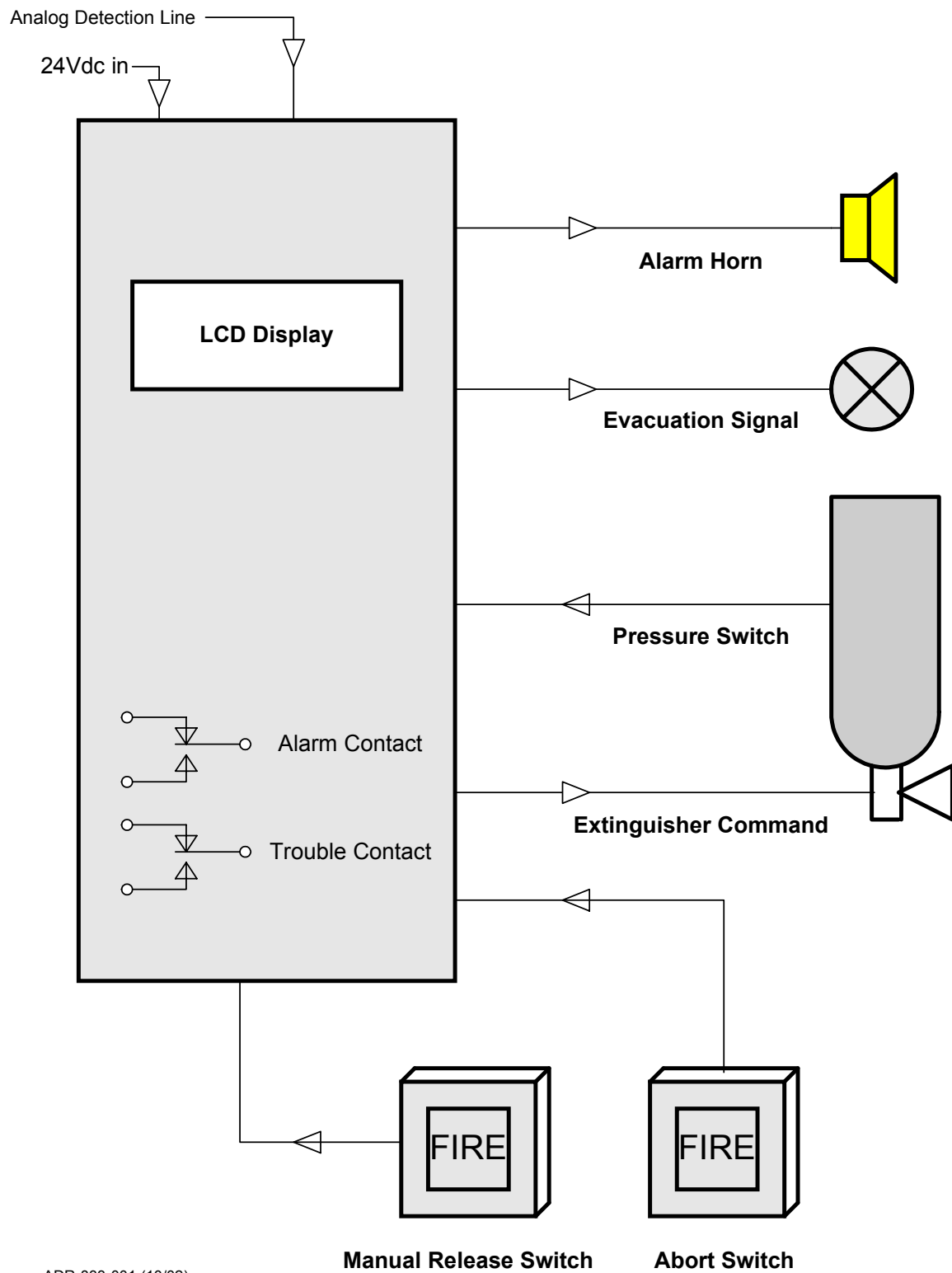
The following message will be displayed on the LCD screen:

ALARM
EXTING. ACTIVATED

Even after pressing the reset button, the message will remain on the LCD screen and a trouble message will be sent and displayed on the main control panel, to ensure replacing the empty extinguishing cylinder.

Only after initiating the unit on the main control panel by an authorized person, the ADR-833 will resume to normal operation.

The initiating process is done by entering the device program menu on the control panel, entering the access code, selecting the ADR-833 address and pressing the Program button.



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FIGURE -1: Extinguishing devices connected to the adr-833 control unit

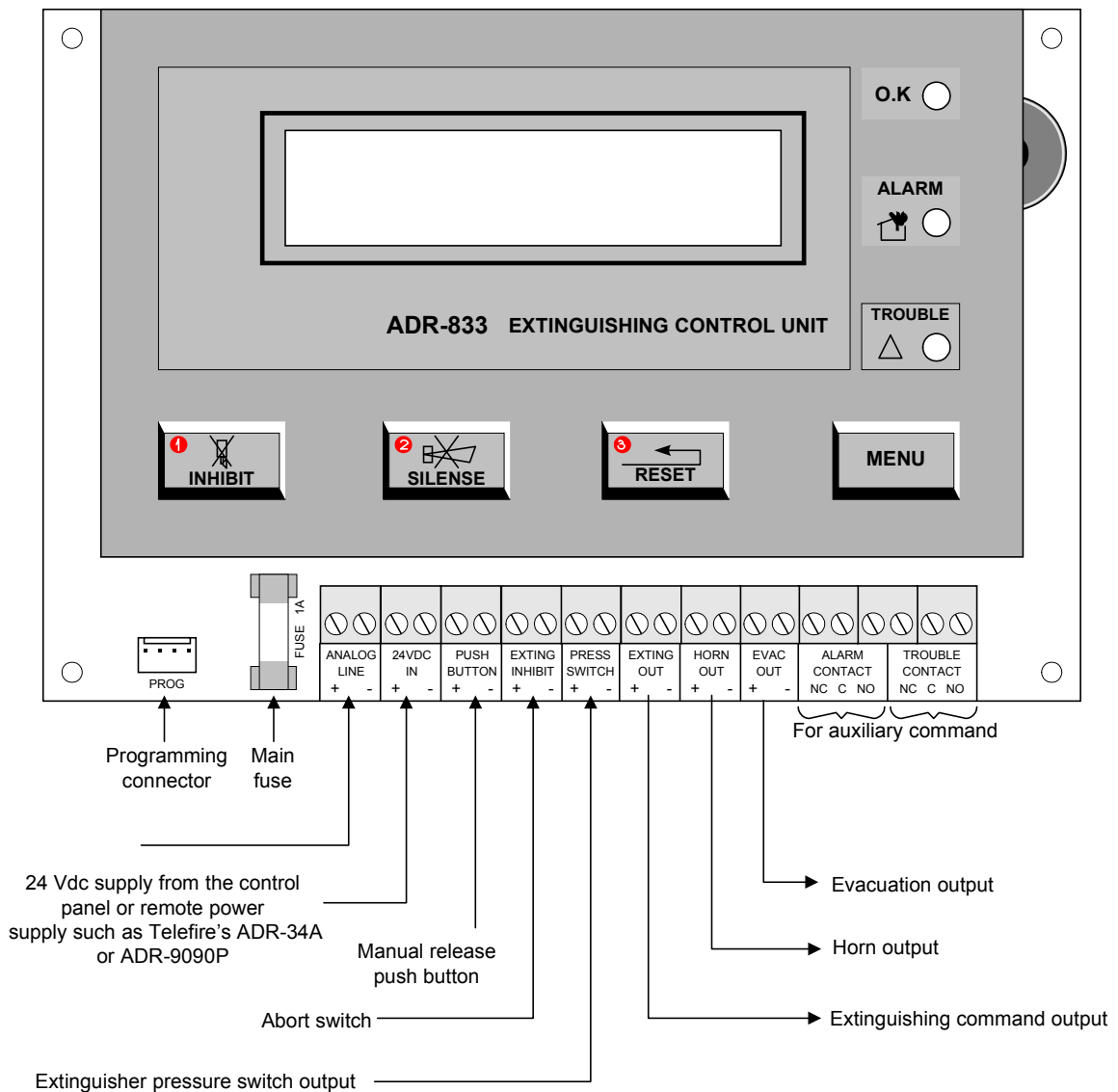


FIGURE -2: Extinguishing field connections

### Certification

Telefire's ADR-833 Analog Addressable Extinguishing Control Unit has the following approvals:

- SI 1220 Approved
- EN54 Approved