

Premier EX8

COMBINED FIRE & EXTINGUISHING CONTROL PANEL
COMPLIES WITH BS EN 12094 PART 1 & EN54 PARTS 2 & 4



USER MANUAL



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INTRODUCTION

The Premier EX 8 is a combined 2 zone , 1 area extinguishing panel, and 4 zone conventional fire alarm panel.

It has 2 zones dedicated to the extinguishing section. These are known as crossed or co-incidence zones. Both circuits will need to be triggered in order to activate the extinguishing circuit. This kind of operation also referred to as “double – knock”

It has 4 zones for fire detection (referred to as peripheral zones, or fire zones). These will not trigger the extinguishing circuit.

The Extinguishing section is designed to BSEN12094-1:2003.

The fire alarm section is designed to EN54-2:1998 A1 + A2.

The Power Supply section is designed to EN54-4:1998 A1 + A2

This design allows the same panel to protect an extinguishing area, and also monitor the rest of the site for a fire.

The panel has an integral Manual Release call point fitted to the front of the panel.

The panel has monitored inputs for field connections, such as manual release, emergency hold, etc.

The panel has relay outputs for first & second stage alarms, fault & gas fired.

The panel has remote inputs for Start/Stop Sounders, Silence & Reset, to allow the panel to be controlled remotely.

The panel has Open collector repeat outputs for most panel status indications (eg 1st stage alarm, 2nd stage alarm, Automatic mode, Manual mode etc)

The panel has a connection for a serial repeater unit (4 wire)

The Premier EX8 can be in any of the following conditions:-

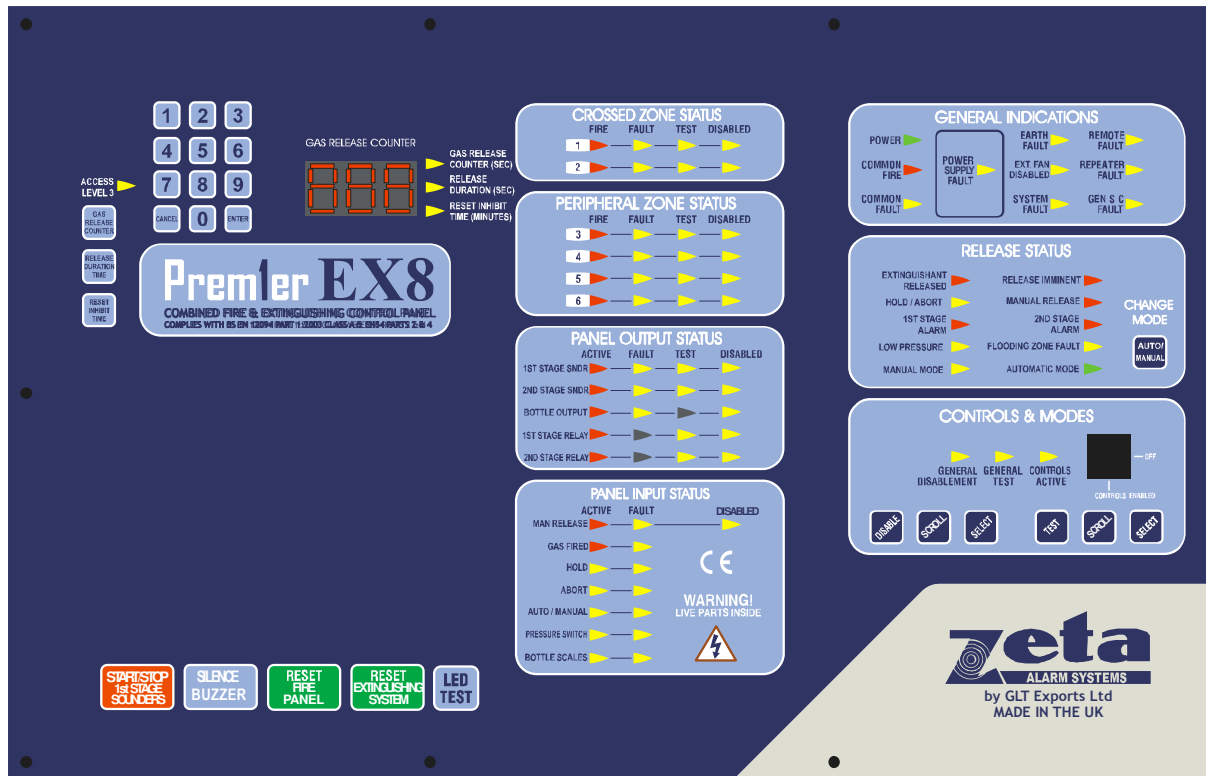
- Quiescent condition – ie System Normal
- Fire condition – ie a fire on one of the peripheral zones
 - The Premier EX8 will enter the fire condition within 1 second of a detector on a peripheral zone signalling an alarm.
- Fault condition
- Disabled condition
- Test condition
- Pre-activated condition
 - The Premier EX8 will enter the pre-activated condition (first stage alarm) within 1 second of a detector on one of the crossed zone signalling an alarm.
- Activated condition
 - The Premier EX8 will enter the activated (second stage alarm) condition within 1 second of the second crossed zone signalling an alarm.
- Released condition
 - The Premier EX8 will enter the released condition (bottle output activated) within 1 second of establishing the activated condition, OR after the delay configured in the bottle output timer.

WARNING: Access to live components inside this fire alarm enclosure. The key to open the door to gain internal access should be held by authorised personnel only.

INDICATIONS & CONTROLS

Indications

Here is the fascia for the Premier EX8 panel.



Each function has its own indication LED. There are Alarm (Active), Fault, Test & Disablement LEDs for most panel inputs & outputs. Some of these indications are not applicable for certain functions (EG a fault on the 1st or 2nd stage relays). In such cases, the LEDs are not present on the matrix (See white outlines above)

For most functions, more than one LED will light (eg zone 1 fire & COMMON ALARM)

The second stage sounder is pulsed, and it's sounder active LED will also pulse in time with the actual sounder output.

The panel also has a 3 digit 7 segment display. This is used to display the countdown timers during a second stage alarm.

The Premier EX8 has the following LED indicators:-

LED	COLOUR	FUNCTION / MEANING
POWER	GREEN	The panel is supplied with power, either battery, mains or both
COMMON FIRE	RED	There is an alarm on the system. Check which zone caused the alarm
COMMON FAULT	YELLOW	There is a fault on the system. Another LED(s) will be lit to indicate the specific fault
BATTERY FAULT	YELLOW	There is a problem with the batteries. Rectify or replace.
CHARGER FAULT	YELLOW	The panel is not charging the batteries (usually mains fail or low mains)
LOW BATTERY	YELLOW	The batteries are below their final voltage & should be replaced
EARTH FAULT	YELLOW	Problem in system wiring. At least one cable is shorting to earth.
EXT.FAN DISABLE	YELLOW	The external equipment relay has been disabled
SYSTEM FAULT	YELLOW	The CPU has crashed, (Or CPU reset has been pressed & held)
REMOTE FAULT	YELLOW	The panel has received a fault input from external equipment
REPEATER FAULT	YELLOW	The panel has lost communication with the repeater panel
GEN S/C FAULT	YELLOW	Indicated that a line fault is caused by a short circuit
EXTINGUISHANT RELEASED	RED	The bottle output has been activated & the gas released
RELEASE IMMINENT	RED	The panel has started the release timer and will activate bottle imminently
HOLD/ABORT	YELLOW	An emergency hold OR emergency abort input has been activated.
MANUAL RELEASE	RED	A manual release call point has been activated
1 st STAGE ALARM	RED	One of the crossed zones is in alarm
2 nd STAGE ALARM	RED	Both of the crossed zones are in alarm
LOW PRESSURE	YELLOW	A drop in bottle pressure has been detected
FLOODING ZONE FAULT	YELLOW	There is a fault relating to the flooding zone 1 (ie the extinguishing section of the panel)
MANUAL MODE	YELLOW	The panel is in manual only mode (ie will not be triggered by detectors)
AUTOMATIC MODE	GREEN	The panel is in automatic or manual mode
GENERAL DISABLEMENT	YELLOW	Lights when any section of the system is disabled
GENERAL TEST	YELLOW	Lights when any section of the panel is in test mode
CONTROLS ACTIVE	YELLOW	Lights when controls enabled keyswitch is on
ZONE 16 FIRE	RED	Lights when one of the detection zones is in alarm
ZONE 16 FAULT	YELLOW	Lights when one of the detection zones has a fault
ZONE 16 TEST	YELLOW	Lights when one of the detection zones is in test mode
ZONE 16 DISABLED	YELLOW	Lights when one of the detection zones is in disablement mode
1 st STAGE SNDR ACTIVE	RED	Lights when the first stage sounder is on
1 st STAGE SNDR FAULT	YELLOW	Lights when the first stage sounder has a wiring fault
1 st STAGE SNDR TEST	YELLOW	Lights when the first stage sounder is in test mode
1 st STAGE SNDR DISABLED	YELLOW	Lights when the first stage sounder is disabled
2 nd STAGE SNDR ACTIVE	RED	Lights when the second stage sounder is on
2 nd STAGE SNDR FAULT	YELLOW	Lights when the second stage sounder has a wiring fault
2 nd STAGE SNDR TEST	YELLOW	Lights when the second stage sounder is in test mode
2 nd STAGE SNDR DISABLED	YELLOW	Lights when the second stage sounder is disabled
BOTTLE OUTPUT ACTIVE	RED	Lights when the bottle output is on
BOTTLE OUTPUT FAULT	YELLOW	Lights when the bottle output has a wiring fault
BOTTLE OUTPUT DISABLED	YELLOW	Lights when the bottle output is disabled
1 st STAGE RELAY ACTIVE	RED	Lights when the first stage relay is on
1 st STAGE RELAY TEST	YELLOW	Lights when the first stage relay is in test mode
1 st STAGE RELAY DISABLED	YELLOW	Lights when the first stage relay is disabled
2 nd STAGE RELAY ACTIVE	RED	Lights when the second stage relay is on
2 nd STAGE RELAY TEST	YELLOW	Lights when the second stage relay is in test mode
2 nd STAGE RELAY DISABLED	YELLOW	Lights when the second stage relay is disabled
MANL RELEASE INPUT ACTIVE	RED	A manual release call point connected to the remote input has been activated
MAN RELEASE INPUT FAULT	YELLOW	Fault in wiring to Manual release call point
MAN RELEASE INPUT DISABLED	YELLOW	Manual release call point circuit is disabled
GAS FIRE INPUT ACTIVE	RED	The panel has received a signal from the cylinder to say the gas has been released.
GAS FIRE INPUT FAULT	YELLOW	There is a wiring fault to the bottle's sensor
EMERG HOLD INPUT ACTIVE	YELLOW	The emergency hold input has been activated
EMERG HOLD INPUT FAULT	YELLOW	Fault in wiring to Emergency hold switch
EMERG ABORT INPUT ACTIVE	YELLOW	The emergency abort input has been activated
EMERG ABORT INPUT FAULT	YELLOW	Fault in wiring to Emergency abort switch
AUTOMANUAL INPUT ACTIVE	YELLOW	The panel has been set to manual mode by a remote input
AUTOMANUAL INPUT FAULT	YELLOW	Fault in wiring to Auto / Manual switch
PRESS SWITCH INPUT ACTIVE	YELLOW	The bottle's pressure switch output has been activated
PRESS SWITCH INPUT FAULT	YELLOW	Fault in wiring to bottle's pressure switch
BOTTLE SCALES INPUT ACTIVE	YELLOW	The bottle's scales switch has been activated
BOTTLE SCALES INPUT FAULT	YELLOW	Fault in wiring to bottle's scales switch
ACCESS LEVEL 3	YELLOW	Access level 3 selected
GAS RELEASE COUNTER	YELLOW	Gas release counter is being displayed on 3 digit display
RELEASE DURATION TIME	YELLOW	Release duration time is being displayed on 3 digit display
RESET INHIBIT TIME	YELLOW	Reset inhibit time is being displayed on 3 digit display

Controls

The Premier EX8 has the following controls:-

LABEL	USE
START/STOP 1 ST STAGE SOUNDER	Used to silence the sounders in an alarm, or to manually start the FIRST STAGE sounders to evacuate building
SILENCE BUZZER	Used to silence the panel's internal buzzer in a fault or alarm condition.
RESET FIRE PANEL	Used to reset the Fire detection section of the Control panel (ie Zones 1 to 6)
RESET EXTINGUISHING SYSTEM	Used to Reset the extinguishing section of the Control panel.
LED TEST	To check that all indicator LEDs are working. Use as part of the daily / weekly fire alarm inspection.
DISABLE	Used to access Disablement mode
DISABLE – SELECT	Used to scroll to select which part of the system to disable
DISABLE – CONFIRM	Used to confirm disablement of the highlighted part of the system.
TEST	Used to access test mode
TEST – SELECT	Used to scroll to select which part of the system to test
TEST – CONFIRM	Used to confirm test mode of the highlighted part of the system.
AUTO / MANUAL	Used to toggle between automatic & manual only mode
GAS RELEASE COUNTER	Used to view or alter Gas Release Counter
RELEASE DURATION TIME	Used to view or alter Release Duration Time Counter
RESET INHIBIT TIME	Used to view or alter Reset Inhibit Time Counter
0-9	To enter access code & timer values
ENTER	To confirm new timer setting
CANCEL	To Save an edited time and exit from the timer set-up.
TERMINATE DURATION TIMER	Used to terminate the release duration timer (Bottle output Active). Internal button. Used during commissioning only.

Note that the controls can only be used after the keyswitch has been turned to the CONTROLS ENABLED (ON) position.

As the Premier EX8 is a combined Extinguishing & fire alarm control panel, it is possible that both the extinguishing section, and the fire alarm section are in alarm at the same time. If this occurs, the reset Fire Panel button can be used to reset the Zone alarms, leaving the extinguishing section active. After the pre-programmed Reset Inhibit delay, the reset Extinguishing System button can then be used to reset the extinguishing section.

If the Extinguishing system has been through its release cycle, and the zones that triggered the release are still in alarm, the reset fire panel button must be pressed first to reset the zones in alarm, before the reset extinguishing system button can be pressed.

PANEL OPERATION

Normal Operation

With the "CONTROL" Key in the "OFF" position and under normal conditions the system will be silent and the green "POWER LED" illuminated.

The system may either be in "Automatic" or "Manual" mode of operation. This will be evident by the illumination of either the "Automatic" or "Manual" LED. In Manual Mode, the bottle output will not be activated automatically. It must be started manually by pressing a manual release call point.

Fire Alarm Condition (Peripheral Zones)

The Premier EX8 signals an alarm by the following:-

- Turn on the General Fire LED
- Turn on the Zonal Fire Indicator
- Turn on internal buzzer
- Start any sounders connected to the panel's sounder circuits
- Activate the fire relay

What to do in the event of a fire.

1. Follow the building evacuation procedure, and check that everyone has left the building safely.
2. The building fire officer or suitably trained responsible person should CAREFULLY enter the building, and locate the area of the alarm from the fire alarm panel.
3. Investigate to determine the cause of the alarm. Look for the detector in the zone in alarm that signalled the fire. The detector that signalled an alarm will have its RED ALARM LED on.
4. If a small fire is found, a suitably trained person could tackle this with a suitable fire extinguisher.
5. If a larger fire is found, leave the building immediately, and contact the fire brigade.
6. If no fire is found, make a note of the detector that signalled fire, and look for anything nearby that could be the cause of the activation, eg cooking, or use of a hot air gun etc.
7. Record findings in the fire alarm log book.

Resetting from an alarm condition

After the relevant action has been taken, the Premier EX8 fire alarm panel can be reset by the following:-

- 1 Press Start/Stop sounder button, This will silence the external sounders.
- 2 Press Silence Fault Tone button. This will silence the panel's internal buzzer.
- 3 Press the Reset button. This will return the panel to it's normal condition.

If the panel goes straight back into alarm, then the cause of the alarm has not been cleared. This could be a detector still exposed to smoke, or a call point still in the active position. Press Start/Stop Sounder button, followed by silence buzzer button on the panel, then investigate for a call point, or detector that still has it's RED ALARM LED on. Reset the call point, or clear the smoke. If the problem persists, contact an engineer.

First Stage Alarm

On detection of a "FIRE" in either Zone 1 or Zone 2, the zone fire LED will be illuminated and the internal buzzer will be on. The first stage LED and first stage sounder will be on. The first stage relay output will be active.

To silence the sounder, turn the keyswitch to ON position, and press silence button. The panel's internal tone and fire LEDs will remain active until the cause of the alarm has been removed, and the panel has been reset

A first stage alarm can be created manually by turning the keyswitch to the on position and pressing the 1st STAGE ALARM button.

A first stage alarm can be silenced & reset when the panel is in automatic or manual mode.

Second Stage Alarm

As soon as a "FIRE" is detected in the second Zone, the second stage alarm is initiated. The second stage sounder will be pulsed on for 1 second, then off for 1 second. This will be repeated as the timer counts down. The two-zone alarm LEDs will be illuminated as well as first stage alarm, second stage alarm and Gas Imminent LEDs. The second stage cannot be silenced and after a delay period, (Set by the the installer) the extinguishing output will be initiated releasing the extinguishing agent, and the second stage sounder will now be on constantly. This will be followed by the "GAS FIRED" indication, indicating that the extinguishing agent has been released.

Once the second stage alarm has been initiated, it is advisable to evacuate and Seal the protected area prior to the release of the extinguishing agent.

Also, the operation of the Yellow "Manual Release" call point will initiate the second stage alarm. To do this, lift the flap and push the operating element.

A second stage alarm can only be silenced & reset when the panel is in manual mode.

Hold / Abort a Second Stage Alarm

If the hold input is activated during a second stage alarm, the second stage sounder will now pulse on for 0.5 seconds, then be off for 2 seconds, and will repeat. The counter will be reset to it's programmed value and the panel will restart it's programmed countdown when the input is released. If an abort input is used, the panel will abort the gas release, and the panel will need to be reset.

Manual Mode

In this mode operation, Zone Fire and Fault alarms are still in operation, and first & second stage sounders will operate, but the bottle output to the extinguishing agent will not operate.

Reset

To reset panel from an alarm condition, press Start/Stop Sounders, Silence Buzzer, then Reset. If the panel enters the second stage alarm (while in automatic mode), the panel cannot be reset until the reset inhibit timer has finished its countdown.

The panel can NOT be reset from a fault condition. All faults are non latching, so when a fault clears from the panel it will be automatically cleared from the display.

Faults

The relevant LED will illuminate and the internal tone will sound. Pressing the "Silence buzzer" button, with the control key "ON", will silence the tone. If there are any faults, call an Engineer.

DISABLEMENT

The Premier EX8 allows any of the following to be disabled to aid commissioning and assist routine maintenance work:-

- Crossed zones
- Peripheral Zones
- First stage sounders
- Second stage sounders & Bottle output (Disabled together)
- First Stage Relay
- Second Stage Relay
- External Equipment Relay

When an zone is disabled, the panel will not respond to any fault or fire signals it receives from that input. When an output is disabled, the panel will not activate that output.

This might be used if the system requires routine maintenance, and the customer needs the system to continue running, but doesn't want spurious false alarms or fault signals.

The panel will respond in the usual manner to any events in any non-disabled inputs.

To Programme an Input or Output as Disabled

Any number of inputs or outputs can be disabled, but it is good practice to only disable the minimum requirement at a time.

Insert and turn control key to enabled position;

Press DISABLE button and the GENERAL DISABLEMENT LED will come on (flashing fast, 4 flashes then off, repeated);

Press SELECT button. The GENERAL DISABLEMENT LED will light steady, and the Crossed Zone 1 Disabled LED will flash 4 quick flashes & off. The panel is now in SELECT DISABLEMENT MODE.

The select button is used to highlight (flash) the section that needs to be disabled. Press select button until the correct LED is flashing, then press confirm. The LED will now flash 4 quick flashes & on, to indicate that this section is disabled.

If more than one section needs to be disabled, then press SELECT button again until the required zone is selected. (The previously disabled section will now have its disabled LED lit steady.)

If the panel needs to be taken out of SELECT DISABLEMENT MODE (eg to silence a fault on another part of the system), turn the keyswitch off, then back on again.

Once all the work has been done the zones need to be enabled again. If the panel is not in SELECT DISABLEMENT MODE, turn the keyswitch to controls enabled, press DISABLE button.

Press the scroll button until the disabled section has been selected. Press CONFIRM button to re-enable. Scroll to any other disabled section and enable in the same way. When all sections are enabled again, turn the keyswitch to off to return the system to normal.

NOTE: During a Disabled condition, sections of the fire alarm system will be inoperative. Extra caution should be used in the disabled part of the premises.

