EP range

3 ZONE EN 12094-1 automatic extinguisher control panel

LPCB Ref. 176c
to EN 12094-1 (2003)
EN 54-2/A2 (2007)
EN 54-4/A2 (2006)

CE 0832-CPD-0794

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EP range

With the growing emphasis on safeguarding property as well as people, the market for automatic fire suppression systems is booming. The EP203 three zone automatic extinguisher panel from C-TEC has been specifically designed to meet this demand.

Third-party approved to EN 12094 part 1 (Fixed Firefighting Systems - Components for Gas Extinguishing Systems) and EN54 parts 2 & 4 by the LPCB, the panel epitomises quality, durability and reliability and is ideal for use in any area housing expensive, dangerous or irreplaceable items of equipment.

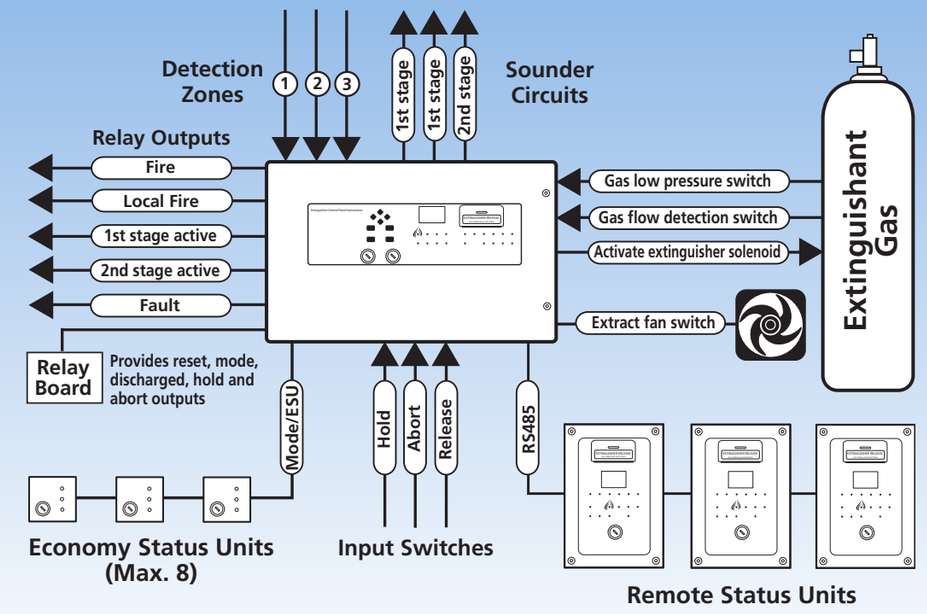
Featuring an intuitive 128 x 64 pixel two-colour graphic display that gives clear and concise feedback to the user, installer and commissioning engineer, the panel also includes six monitored inputs (including hold and abort), a time stamped log, adjustable flood times and volt-free changeover relays for fire, local fire, 1st stage active, 2nd stage active, extractor fan and fault.

The panel is supplied in an elegantly styled, durable enclosure with all of its electronics - apart from its powerful 3A EN54-4 switch mode PSU - mounted on a detachable metal bridge plate for ease of installation. A wide range of ancillaries are also available including remote status units, hold-off and abort buttons, line terminators and output expansion relay boards.

- LPCB approved to EN 12094 part 1 and EN54 parts 2 & 4
- Functions as a standard three zone fire panel with additional circuitry for controlling the release of fire-suppressing gas into protected areas
- Unique 128 x 64 pixel graphical display facilitates straightforward system programming
- Any combination of activated zones can be programmed to automatically start the panel's extinguishant release sequence
- Includes a pull-down front-panel manual release button and two keyswitches for accessing the panel's functions and toggling between auto/manual mode
- Three conventional sounder circuits (two x 1st stage, one x 2nd stage)
- Powerful 3A EN54-4 compliant switch mode PSU
- Low quiescent current - less than 40mA on mains fail
- Wide range of monitored inputs and auxiliary outputs (see schematic)
- Abort and hold inputs allow the panel's release sequence to be cancelled or suspended at any time
- Time-stamped event log
- RS485 connections for up to eight flush or surface remote status units with their own LCDs, manual release and mode (auto/manual) switches. Single gang economy status units (without an LCD) are also available.
- Extensive range of commissioning and engineering functions
- Optional relay expansion boards and single gang abort and hold buttons
- Ideal for use in computer rooms, telecommunication centres, archive storage areas, chemical plants, generator rooms, museums, etc..
- System line terminator included with all panels

EP203 Automatic Extinguisher Panel & EP RANGE Ancillaries

AN OVERVIEW OF THE EP203'S INPUTS AND OUTPUTS



This diagram is provided for illustration purposes only.
Always refer to the relevant instructions before installation.

COMMISSIONING & ENGINEERING FUNCTIONS

- **Zone selection:** Selects the zone combination that starts the extinguishant release sequence
- **Extinguishant delay:** Sets the countdown duration before extinguishant release
- **Extinguishant duration:** Sets the duration of the firing signal to the extinguishant output
- **Flooding time:** Sets the duration for the release of extinguishant
- **Extract option:** Enables/disables the ventilation extract option
- **Extract time:** Sets the duration for the ventilation extract fan operation
- **Sounder delay:** Sets the delay duration before the fire sounders are activated
- **Remote status unit learn:** Finds all remote status units and updates the panel's database
- **Extinguishant output EOLS:** Selects the number of extinguisher circuit terminations
- **Mode exceptions:** Selects the default setting mode when the mode input is in Fault and/or Disabled
- **Earth fault:** Disables/enables the panel's earth fault monitoring circuitry
- **Manual release mode:** Selects either delayed or immediate release of extinguishant
- **Zone trigger:** Enables a short circuit condition on the three detection zones
- **Clean start:** Clears the panel's memory back to its default factory settings
- **Walk test:** Puts detection zone(s) into walk test mode
- **Test relays:** Tests the panel's auxiliary relay outputs
- **Test sounders:** Tests the panel's sounder circuits
- **Monitoring:** Applies a constant monitoring voltage
- **Show PSU stats:** Displays the status of the panel's power supply & standby battery

EP203
3 Zone Automatic Extinguisher Panel
Includes all of the circuitry for controlling the extinguishant release, a pull-down manual release button, a 128x64 pixel LCD display plus all of the features listed left.
W467 x H293 x D100 mm

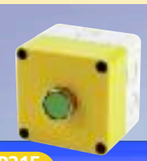
EP212
Output Expansion Relay Board
Mounts inside the EP203 panel to provide volt-free changeover relay contacts for reset, mode, discharged, hold and abort. Max. 1 per EP203.
W162 x H70 x D20mm

EP210F
Flush Mounting Remote Status Unit
Includes a status LCD, manual release and mode (auto/manual) switches. Max. 8 EP210F/EP210S per EP203. Weatherproof enclosure also available, order code BF359/1.
W175 x H250 x D53mm

EP210S
Surface Mounting Remote Status Unit
Includes a status LCD, manual release and mode (auto/manual) switches. Max. 8 EP210F/EP210S per EP203. Weatherproof enclosure also available, order code BF359/1.
W160 x H240 x D51mm

EP211
Single Gang Economy Status Unit
Includes a keyswitch operated mode (auto/manual) switch and three status LEDs. Max. 8 per EP203.
W87 x H87 x D35mm

EP214
System Line Terminator
Allows the EP203's extinguishant release output to be terminated to a gas release solenoid. Max. 2 per EP203 (one EP214 is supplied with the EP203)
W55 x H55 x D22mm



EP215
Extinguishant Hold Off/Abort Button
An IP66 rated button that can be used to delay (hold off) or cancel (abort) the extinguishant release sequence depending on how it is connected.
W93 x H93 x D88mm

BF372
Yellow Extinguishant Release Call Point
A surface mounting manual call point that can be used to remotely trigger the EP203's extinguishant release sequence
W89 x H93 x D59mm (without cover)

BC286/2
24V 7.0AHr VRLA Battery Pack
2 x 12V 7.0AHr valve regulated lead acid batteries and a link wire for use as the EP203's standby battery supply.
W150 x H100 x D64mm (x2)

Why are automatic extinguisher systems required?

Although safeguarding people is an obvious mandate for any fire alarm system, protecting property and the systems that allow businesses to function comes a close second. Few enterprises can now operate without an IT department, so it is essential the technology they use is sufficiently protected from fire. A small, unattended blaze in a server room can destroy thousands of pounds worth of equipment and cause hours of downtime from which it can be difficult to recover. In areas such as chemical plants the consequences of a fire can be even worse, so it's no wonder the provision of extinguishant systems is on the increase.

How do automatic extinguisher systems work?

Automatic extinguisher systems work by controlling the release of fire-suppressing gas into areas where fires need to be put out quickly, with minimal damage to the equipment being protected. A typical automatic extinguisher system comprises the fire suppressing agent – usually an inert gas such as Argonite – storage containers, release valves, fire detectors, the control panel (and ancillaries), delivery piping and dispersion nozzles.

How difficult is an extinguisher system to install?

Fitting an extinguising system clearly requires a degree of expertise. However, the EP203 is incredibly easy to install. It is the first EN 12094 part 1 compliant extinguisher panel to feature an intuitive 128 x 64 pixel display that gives clear and concise feedback to the user, installer and commissioning engineer. This allows engineers to commission with confidence without having to refer to complicated LED arrays, convoluted 7-segment displays and look-up sheets ... everything is in plain English.

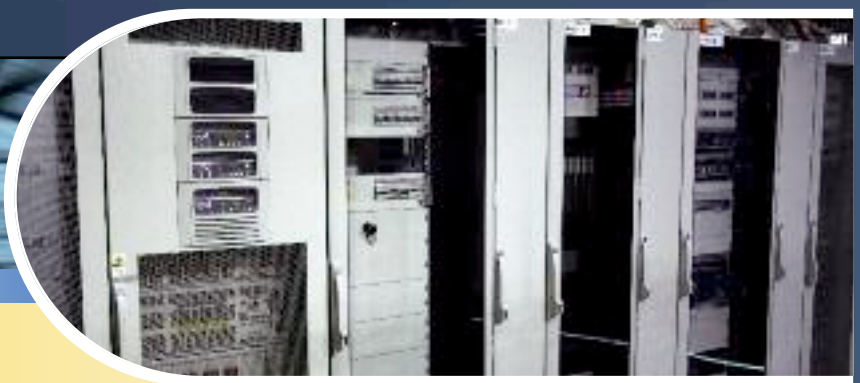
A plethora of features

Despite the EP203's ease of programming, it is one of the most powerful extinguisher panels on the market. It includes three conventional detector circuits and three conventional sounder circuits (2 x 1st stage, 1 x 2nd stage), all of which are line monitored for open and short circuit faults. Any combination of activated detector zones can be programmed to automatically activate the panel's extinguishant release sequence, which can be set to operate with or without a delay. No less than six monitored inputs are also provided, including Hold and Abort for suspending or cancelling the release sequence at anytime. An optional relay expansion board can also be fitted to provide reset, mode, discharged, hold and abort outputs.

Other features include adjustable flood times, an alarm counter that records the number of occasions the panel has been in alarm, a time-stamped log, support for up to two solenoids or multiple Metrons and volt-free changeover relay contacts for fire, local fire, first stage active, second stage active, extract fan and fault.

System expansion

For additional flexibility, up to eight flush or surface remote status units, each with their own displays, manual release mechanisms and mode switches, can be connected to the EP203 via a monitored RS485 bus. Single gang economy status units without a display are also available (8 per system). The availability of these and a host of other ancillary devices including system line terminators and hold off/abort buttons, makes the EP203 ideal for use in computer rooms, telecommunication centres, archive storage areas, chemical plants, generator rooms, museums and more.



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EP203 Automatic Extinguisher Panel Technical Specifications

Power Supply Specification

Mains supply voltage	230Vac, 50/60Hz
Internal power supply	24Vdc nominal
Max. output current	3A@230Vac
Power rating (including charging)	1.5A cont., 3A peak
Battery type	2 x 12Vdc, 7Ahr VRLA type, connected in series
Battery charge current	0.7A
Earth fault monitoring	YES
Mains supply/battery charger monitored for failure	YES
Batteries monitored for disconnection and failure	YES
Quiescent current drain on mains fail	40mA approx.

Detector Circuit Specification

Number of conventional detector circuits	3 @ 21-28Vdc
Line monitored for open and short circuit faults	YES
Max. cable length per circuit	250m
Max. no. of smoke/heat detectors per circuit	20
Max. combined no. of detectors & manual call points per circuit	32
Zone quiescent current	2mA max.
End-of-line resistor value	6K8 ohm ± 5%, 0.25W

Sounder Circuit Specification

No. of conventional circuits	3 (two x 1st stage, one x 2nd stage)
Line monitored for open and short circuit faults	YES
Sounder outputs rating	21-28Vdc, fused @200mA per circuit
Max. sounder cable length per circuit	50m
Max. number of polarised sounders per circuit	10 @ 20mA each
End-of-line resistor value	6K8 ohm ± 5%, 0.25W

Auxiliary outputs

No. of auxiliary outputs *	6 (Fire, Local Fire, Extract Fan, 1st Stage, 2nd Stage, Fault)
Relay contact rating	30Vdc, 1A max.

* Note that 5 additional relay outputs (Reset, Mode Switch, Discharged, Hold, Abort) are available on the EP212 relay output expansion card

Extinguishant release outputs

Extinguishant release output	21-28Vdc, rated at 1A for 5mins.
Extinguishant release time delay	Adjustable 0-60 seconds (1 second steps)
Extinguishant release duration	Adjustable 1-300 seconds (1 second steps)
Extinguishant release flooding time	Adjustable 60-1800 seconds (1 second steps)
Extinguishant output end-of-line	"Terminator" circuitry EOL (Part No. EP214)

Monitored Inputs

Number of monitored inputs and type	6 (Manual Release, Flow Switch, Low Pressure, Mode, Hold, Abort)
Thresholds	8k to 2k ohms (normal); 1.8k to 200 ohms (active), 150 to 0 ohms (short circuit)
End-of-line resistor value	6K8± 5%, 0.25W

Controls & Indicators

Status Display Unit	128 x 64 pixel graphic LCD unit, two-colour backlight
LCD 'Access Level 1' Menus:	• Display Faults • Display Disablements • Zones in Test • Lamp Test • Alarm Counter
LCD 'Access Level 2' Menus:	• Display Faults • Display Disablements • Zones in Test • Lamp Test • Alarm Counter • Set Time/Date • Event Log • Display Contrast • Disablements
LCD 'Access Level 3' Menus:	• Display Faults • Display Disablements • Zones in Test • Display RSUs • Disablements • Commissioning • Engineering
Controls (2 x keyswitches)	• Accessed • Manual Only or Manual & Automatic
Controls (push buttons)	• Menu • Silence Internal Sounder • Control Panel Reset • Silence/Resound Sounders • Scroll up • Scroll down • Escape • Accept • Extinguisher Release (housed in yellow casing).
Indicators (LEDs)	• General Fire • Fire Zones (x3) • General Disablement • Zone Fault/Disable/Test (x3) • Hold • First Stage Output • Release Imminent (x2) • Extinguishant Released • Abort • Disablements (Extinguishant Release, Manual Release, First Stage Output, Second Stage Output, Sounder) • Manual Only • Manual & Automatic • Supply Present • PSU Fault • Accessed • Test • General Fault • System Fault • Delays • Sounder Fault • Flooding Zone Fault • Low Press Fault.
Internal control (push button)	Access Level 3 Switch (located on Main Control PCB)

Dimensions (W x H x D)

Dimensions	Back box = 439mm x 276mm x 70mm approx. (metal); Lid = 467mm x 293mm x 29mm approx. (plastic)
Weight	4.65kg (without batteries)

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