KIDDE

FIRE DETECTION AND CONTROL

FIREBETA EXTINGUISHING CONTROL PANEL (ECP)

- Three versions:
  - 2 areas of detection and 1 area extinguishing
  - 4 areas of detection and 1 area extinguishing
  - 4 areas of detection and 2 areas extinguishing
- Robust in construction, with precise information and simple operation
- Designed to comply with BS EN54 Parts 2 and 4 and BS7273 Part 1
- Microprocessor based system providing flexibility and reliability
- 10 levels of programming via membrane
- Integral power supply
- Supports remote status indicators

The ECP range of control panels is microprocessor based to provide the reliability and flexibility required to meet today's stringent requirements. The control panels have conventional detection zones and output circuit(s) with extinguishing release capability.

Designed, manufactured and tested under the stringent requirements of BS EN ISO9001, the ECP complements Kidde Fire Protection' extensive range of fire extinguishing systems. Ten levels of user definable programming provide complete flexibility of operation, ensuring that the ECP will more than adequately meet the demands of both simple and complex systems.

The ECP is housed in a high quality, mild steel enclosure designed to ensure ease of installation, accommodating all external cables without the need for drilling. All versions incorporate a membrane fascia as the user interface; this provides precise information using LED indications and user control switches. The panels have three access levels to restrict operation to the appropriate authority level (user, operator and engineering level).

The ECP design incorporates various safety features including:

- Critical circuit faults inhibit agent release
- Earth fault detection
- One man test mode
- Hold circuits
- Abort circuits

The integral power supply is rated at 3.1 amps and has temperature compensated charging circuitry to ensure that the standby batteries maintain their correct charging voltage.

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TECHNICAL SPECIFICATION

General

Mains supply input	220/240v AC 50 Hz +10% - 15%
1st Stage VFCO	30v dc rated at 1 amp (1 per release area)
2nd Stage VFCO	30v dc rated at 1 amp (1 per release area)
Actuator circuit	1 A 24v dc (1 per release area)
1st Stage open collector	45 mA at 24v dc (1 per release area)
2nd Stage open collector	45 mA at 24v dc (1 per release area)
Fail safe fault relay	30v dc rated at 1 A
Beam reset facility	30v dc rated at 1 amp
Common sounder	500 mA (1 per panel)
1st Stage sounder circuit(s)	500 mA (1 per release area)
2nd Stage sounder circuit(s)	500 mA (1 per release area)
Quiescent Current (no devices)	77 mA 2+1, 84 mA 4+1, 93 mA 4+2
Alarm Current	250 mA 2+1, 260 mA 4+1, 300 mA 4+2 (no sounder load)
Power supply capacity	3.1 Amp
Detection compatability	Apollo and Hochiki detectors with standard bases, 32 detectors per zone
Battery capacity	2 x 7 A/Hr sealed lead acid cells
Weight	8 kg excluding batteries
Dimensions	438mm w x 128mm d x 298mm h
Ingress protection	IP31 (BS/EN60529)

Monitored Circuits

- Detection zone A
- Detection zone B
- Detection zone C *
- Detection zone D *
- Hold per release area
- Abort per release area
- Manual Release per release area
- Discharged per release area
- Auto/manual key switch per release area
- Low Pressure per release area
- Common Sounder
- 1st Stage Sounder per release area
- 2nd Stage Sounder per release area

** 4+1 and 4+2 panels only*

Unmonitored Circuits

- Disabled input
- 1st Stage open collector output per release area
- 2nd Stage open collector output per release area
- Access Level 2 input
- Beam reset output
- Failsafe Fault output

External Controls

- Auto/Manual keyswitch (per extinguishing area)
- Manual Release (per extinguishing area)
- Silence Buzzer
- Reset
- Evacuate
- Programme
- Silence Alarms
- Isolate
- Test
- Spare

Internal Indications (on pcb)

- Hold
- Abort
- Low Pressure
- Discharge
- Manual Release
- Actuator
- Disable

Internal Controls (on pcb)

- SW1 Common sounders constant/pulsed
- SW1 Access level 4 enabled/disabled
- SW2 Hardware reset
- SW3 Processor reset
- LK1 Internal/external power supply select
- R6 Battery charger output adjustment

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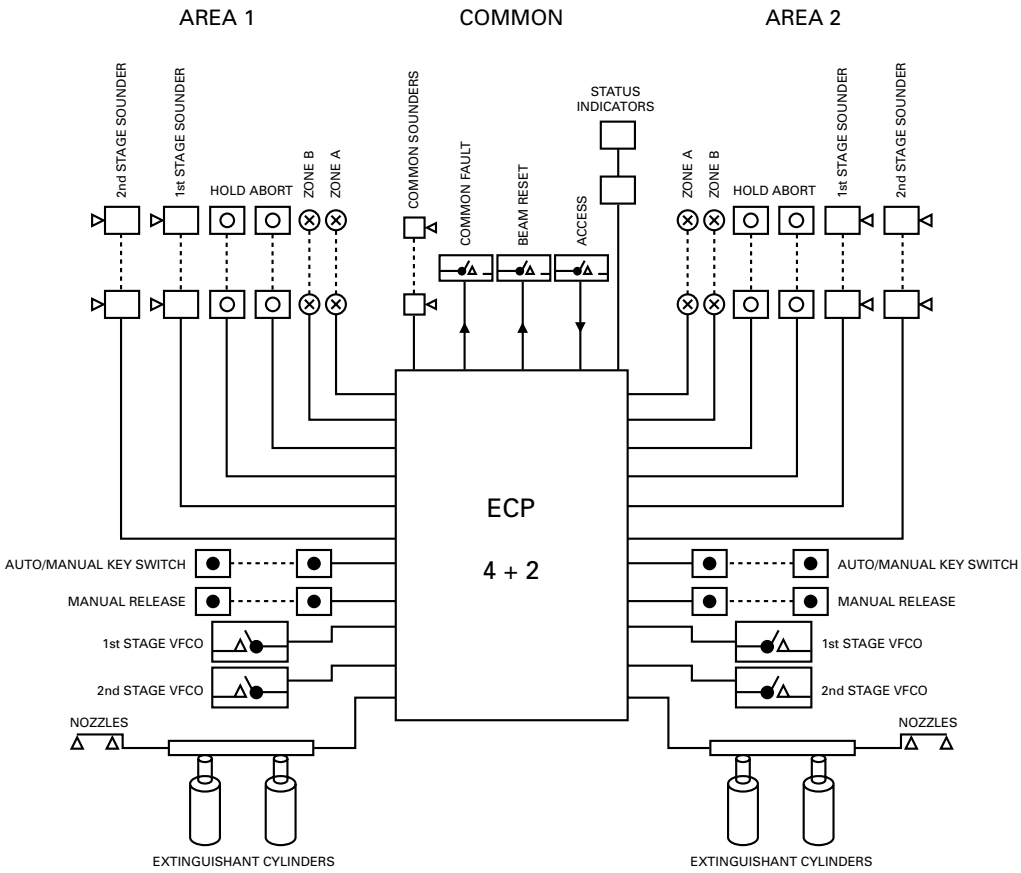
SYSTEM CONFIGURATION

Typical system configuration for a 4+2 ECP



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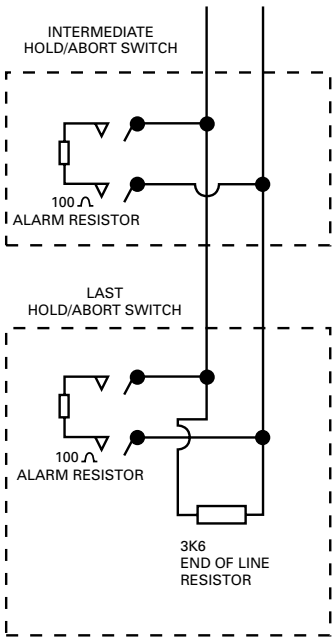
HOLD AND ABORT SWITCHES

The Hold and Abort Switches are housed in light grey RAL 7035 GW plastic enclosures incorporating a smooth anti static, self adhesive identification membrane and removeable lid, secured by 4 captive screws. The units are rated IP56 in accordance with IEC 529:1989.

The rear of the enclosure has four 4 mm diameter fixing centres accessed by removing the plastic knockouts.
The units can be semi flush mounted, in a 104mm x 104mm x 70mm recess.



HOLD SWITCH

The Hold Switch will delay the release of extinguishant whilst held in the "on" position. When released, the hold switch will reset the extinguishing system to alarm stage 1. The switch should be located within the risk area. Audible and visual confirmation of the operation of the switch will be indicated on the ECP. If the switch is operated in any other condition than alarm stage 2, a fault condition will be initiated for out of sequence operation.

ABORT SWITCH

Operation of the abort switch will cancel release of extinguishant, which can then only be discharged by resetting the panel or performing a mechanical discharge. The abort switch should be located within the risk area. Audible and visual confirmation of the operation of the switch will be indicated on the ECP. If the switch is operated in any other condition than alarm stage 2, a fault condition will be initiated for out of sequence operation.

TECHNICAL SPECIFICATION

Hold Switch

- 35 mm red, mushroom type, configured as a non latching switch with two sets of single pole single throw contacts rated 5A @ 30 vDC.
- The screw type terminals can accept conductors up to 4 mm^2.
- The contacts house a 100 ohm alarm resistor which is introduced into the circuit when the switch is operated.

Dimensions

- 108 (w) x 108 (h) x 85 (d) mm to the top of the switch.

  (59 mm deep to the top of the enclosure)

Hold Switch

- Kidde Fire Protection Part No 53836-K179

Abort Switch

- 40 mm red, mushroom type switch, configured as a latching switch, twist to release, with two sets of single pole single throw contacts, rated 5A @ 30 vDC.
- The terminals are screw type and can accept conductors up to 4 mm^2.
- The contacts house a 100 ohm alarm resistor which is introduced into the circuit when the switch is operated.

Dimensions

- 108 (w) x 108 (h) x 85 (d) mm to the top of the switch,

  (59 mm to the top of the enclosure)

Abort Switch

- Kidde Fire Protection Part No 53836-K180

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STATUS INDICATORS

The status indicators are housed in mild steel enclosures, painted ash grey. External dimensions are 123 x 123 x 46mm. (143 x 143mm for flush mounted units). Each unit comprises a back box, detachable lid with membrane fascia and internal pcb.

There are 3 types of status indicators:

- Type 1: Indication only
  – Part No 53836 – K178/01
- Type 2: LED indication and auto/manual keyswitch
  – Part No 53836 – K178/02
- Type 3: LED indication, manual release and auto/manual keyswitch
  – Part No 53836 – K178/03

A maximum of six status indicator units can be connected to an ECP over a maximum distance of 1km.

Open collector outputs are also provided, for internal use only (0v dc at 60mA). All outputs operate in constant mode.

TECHNICAL SPECIFICATION

Connection Terminals

- **Receive**
  RS 485 communications from ECP and out to next Status Indicator
- **0v/24v dc**
  Power supply from external source
- **Manual Release**
  Input and OutputTerminals
- **Auto/Manual keyswitch**
  Input and Output Terminals

LED indications

RED – Discharged
YELLOW – Auto/Manual mode
GREEN – Manual only

Open Collector Outputs

1 Discharged
2 1st Stage
3 2nd Stage
4 Disabled
5 Abort
6 Hold
7 Auto/Manual
8 Manual only

Kidde Fire Protection

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