



FireChase™ CNC Fire Detection and Actuation System

SKU: 107-CNC-FDDP



EC Declaration of Conformity

In accordance with EN 45014:1998

FireChase CNC Detection and Activation System Model ANCAFIP-1 in accordance with the following Directive:

73/23/EEC - The Low Voltage Directive and its amending directives

has been designed and manufactured to the latest issues of the following specifications:

ISO 7240-2	Detection and Alarm System
AS 3000	SAA Wiring Rules
AS 2546-3	Design and Use of Printed Boards
AS 1981	Stationary Batteries of the Lead-acid Pasted Plate Type

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1. Specifications

Equipment Box Dimensions	103mm high, 153mm wide, 83mm deep
Fascia Dimensions	180mm high, 180mm wide
External Power Supply	24V DC, 1.5A capable
Internal Standby Battery	12V, 1.3AH
Panel Normal Current on External Power Supply	1000mA
Panel Normal Current on Internal Power Supply	40mA
Suppressant Module Monitoring Current	1mA
Suppressant Module Discharge Current	1.0A
Battery Float Charge Voltage	13.75V
Battery Charger Current Limit	0.8A
Temperature Probe End-Of-Line Resistor	8K2 Ω , $\frac{1}{4}W$
External Breakglass End-Of-Line Resistor	8K2 Ω , $\frac{1}{4}W$
Time Duration for Battery Support After External Power Is Switch Off	5-6 minutes
Monitor Contact Outputs	<ul style="list-style-type: none"> • E-Stop, normally closed, 2 off • Fire System Ready, normally closed, fail-safe • Fire System Fault, normally closed • Panel Alarm, change-over

2. Pluggable Connectors Terminal Assignment

12-Way

1, 2	External power input, 24VDC: 1 = positive; 2 = negative
3, 4	Temperature probe input, 8K2 end-of-line
5, 6	Manual breakglass input, 8K2 end-of-line
7, 8	E-Stop output contact, normally closed, first set. This output is composed of 3 normally closed contacts in series, being the alarm relay contact of each input as well as the discharge relay contact
9, 10	Discharge output
11, 12	Safety door lock input, normally closed

6-Way

13, 14	Fire System Ready contact output, normally closed
15, 16	E-Stop output contact, normally closed, second set
17, 18	Fire System Fault contact output, normally closed

3-Way

19, 20, 21	Alarm contact output for monitoring, common, normally open and normally closed
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A schematic of a typical system layout is illustrated on the last page (**page 4**).

3. Front Panel Key Switch and LED's

When the key switch is turned to NORMAL, and provided the safety door is closed, and there is no fault in the system, the control panel is ready to function.

When the key switch is turned to ISOLATE, the discharge circuit is disabled. The alarm and fault sensing functions of the control panel are still active. The alarm sounder volume is reduced to 1/50th when the key switch is turned to this position. DO NOT turn the key switch back to normal if the OUTPUT ACTIVE LED is lit and the sounder is operated, indicating an alarm condition is present. Alarm conditions are not latched, and the panel will go back to normal when the alarm initiating situations are removed.

LED functions when lit:

Machine 24V Supply On	Green	External power supply is available to the panel
Safety Interlock	Amber	Safety door is NOT closed, or the key switch NOT on NORMAL
Output Fault	Amber	Open circuit on suppressant discharge
Input Fault	Amber	Open circuit on temperature probe or breakglass
Output Active	Red	An alarm condition exists
Normal	Green	Key switch is on NORMAL, safety door is closed and there is no fault
Isolate	Amber	Key switch is on ISOL, discharge circuit is disabled

4. Operation

The fire panel is switched on by the application of the external 24VDC power supply. When the external power is present, the 12V battery is under constant-voltage float charge condition. The battery is used to maintain the panel alive for 5 to 6 minutes after the external power is turned off. The switch-over from external power to internal battery power is seamless, and does not involve any relay operation. At the end of the battery backup period, the panel will be completely switched off, and no current will be drawn from the battery.

The continuity of the wiring to the temperature probe, the manual breakglass and the suppressant discharge are constantly checked for open-circuit fault. The suppressant discharge is prevented if a fault occurs, as indicated by the amber INPUT FAULT or OUTPUT FAULT LEDs. The sounder will not operate under a fault condition, but the FIRE SYSTEM FAULT output contact will change state from closed to open.

The fire system is ready for protection when no fault exists, the key switch is turned to NORMAL, and the safety door is closed. This is indicated by the green NORMAL LED, and by the FIRE SYSTEM READY closed contact output. When the safety door is open, or when the key switch is turned to ISOLATE, the amber SAFETY INTERLOCK LED will be lit, and the SYSTEM READY contact output is open, indicating the system is not ready for discharge.

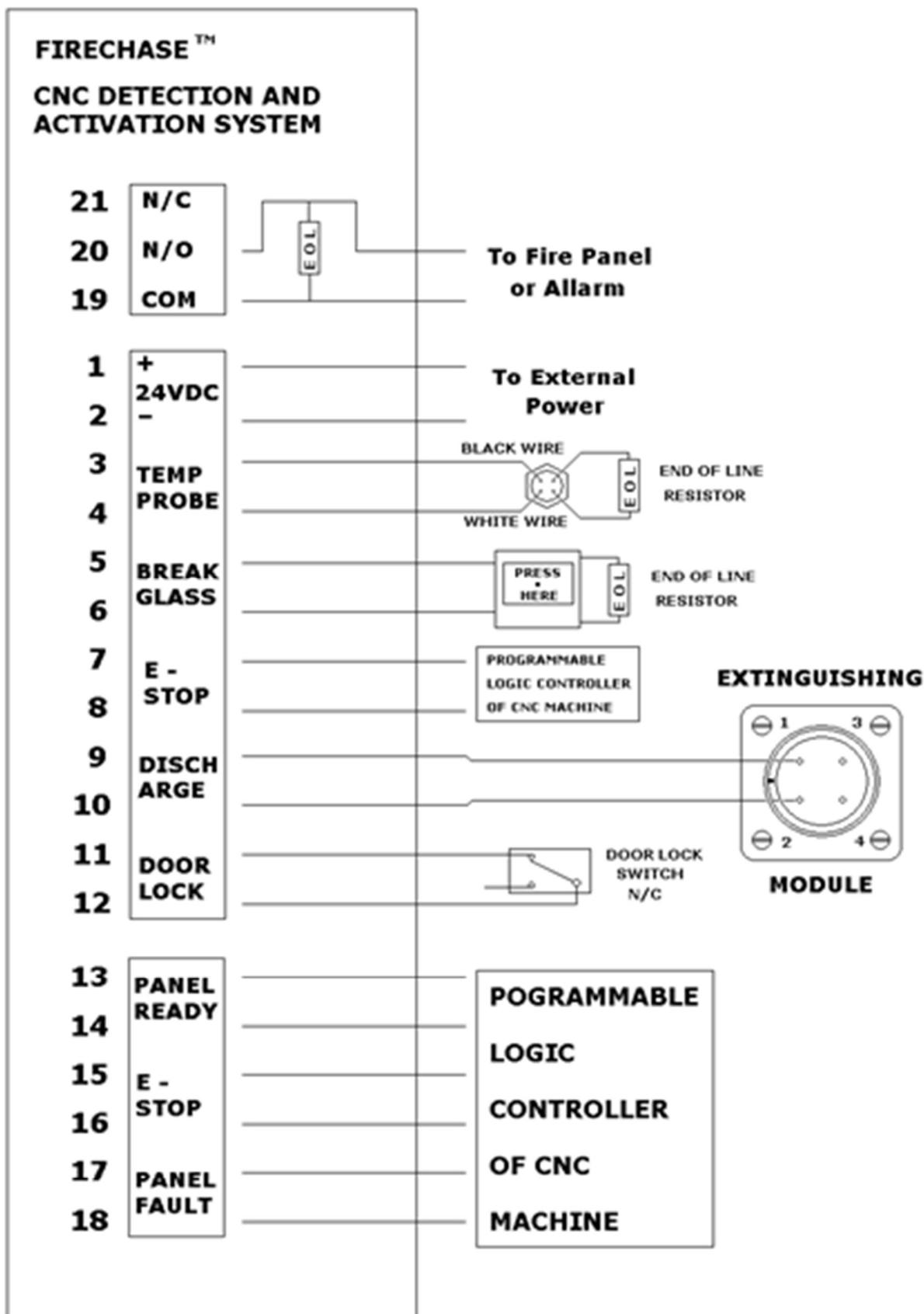
An alarm condition exists when the temperature probe threshold is exceeded, or when the manual breakglass is operated, producing a short-circuit across their respective terminals, and indicated by the OUTPUT ACTIVE red LED, and the sounder. The alarm is not latched, so that if the alarm condition has passed, the panel will go back to normal. The suppressant discharge will occur instantaneously if the fire system is ready.

The sounder volume is reduced to a very low level, if the key switch is turned to ISOLATE, and an alarm condition exists with the panel. During periodic tests of the temperature or the breakglass, this low-level sound is useful as a reminder NOT to turn the key switch to NORMAL until the alarm condition is removed.

5. Maintenance

The fire panel is designed to be as maintenance-free as possible. There are no fuses, and all external connections are current-limited, so that accidental short-circuits will not harm the system. The critical alarm sensing and discharge circuitry contains no electronics. Active components are only used for voltage regulation, fault sensing and battery backup timing. There is no earthing; the complete system is isolated from the metal enclosure.

Wiring Diagram:



6. Contact Information:

Website: artek.net.au

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