



BS 5750: Part 1: 1987
 ISO 9001: 1987
 EN 29001: 1987
 QAS 3433/5B Issue 1A

CERTIFICATE NO. FM 12734

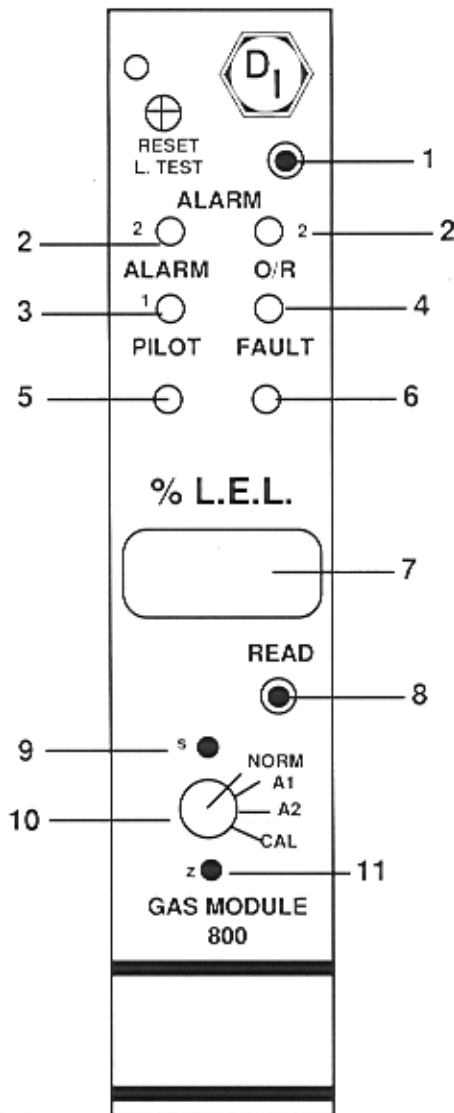
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CROWCON
 DETECTION INSTRUMENTS

FLAMMABLE GAS DETECTOR CONTROL CARD

DI 800



KEY:

1. RESET/LAMP TEST push button
2. Red ALARM 2 LEDs - illuminated at or above Alarm Level 2.
3. Red ALARM 1 LEDs - illuminated at or above Alarm Level 1.
4. Red OVER-RANGE LED - illuminated at readings over 99% LEL.
5. Green PILOT LED.
6. Amber FAULT LED - illuminated if fault in detector wiring/card circuitry.
7. % LEL digital display (0 - 99)
8. READ push button - illuminates display if blanked.
9. Access hole to SPAN potentiometer.
10. 4 position rotary switch.
 NORM - normal operation
 A1 - check Alarm 1 setting
 A2 - check Alarm 2 setting
 CAL - access to ZERO and SPAN potentiometers. Alarm outputs inhibited.
11. Access hole to ZERO potentiometer.

FEATURES

- Provides comprehensive output facilities for both Relay Contacts and logic signals for two stages of alarm and fault.
- Two digit LEL display.
- Two alarm levels adjustable between 5-99% LEL.
- ZERO and SPAN (calibrate) controls accessible through front panel only when card is in CAL mode.
- Display blanked below adjustable threshold to minimise power consumption.
- Over-range feature removes power from detector and illuminates O/R LED.

SPECIFICATION

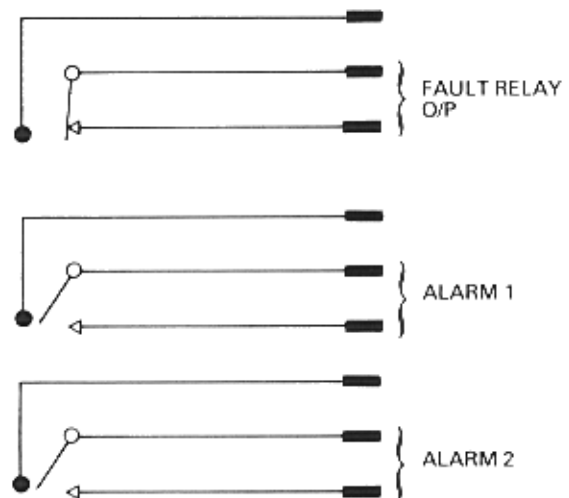
Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Power Consumption	Quiescent 200mA (395mA with display on) Alarm 545mA
Construction	Front panel 3u high x 25mm wide Card 220mm long
Weight	260 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

ELECTRONIC OUTPUTS

(For Each Alarm Level)
 Continuous Alarm Output = Logic 1
 Logic Levels: Logic 1 = 0.6V
 Logic 0 = 12V
 Pulse Alarm Signal.
 Flashing Alarm Signal, continuous on accept by Audio Card - DI 952.
 Analogue voltage output.

RELAY OUTPUTS

Two DPCO contacts on Alarm 1 and Alarm 2. One SPCO contact on fault.
 Contact Ratings 1A at 24VDC. Alarm Relays - normally de-energised. Fault Relays - normally energised.



STOCK NO.
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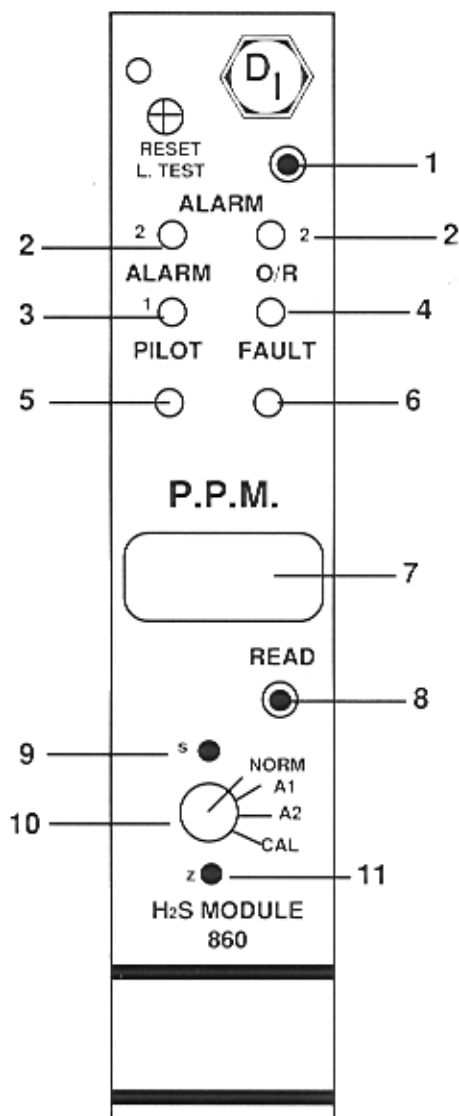
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CROWCON
 DETECTION INSTRUMENTS

TOXIC GAS DETECTOR CONTROL CARD

DI 860



FEATURES

- Provides comprehensive output facilities for both Relay Contacts and logic signals for two stages of alarm and fault.
- Outputs from DI 8 H₂S Detector (Sulphistor) or RGD90 Electro-chemical detectors.
- Two digit ppm display.
- Two alarm levels adjustable between 10 - 99 ppm.
- ZERO and SPAN (calibrate) controls accessible through front panel only when card is in CAL mode.
- Display blanked below adjustable threshold to minimise power consumption.
- Over-range feature removes power from detector head and illuminates O/R LED.

SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Power Consumption	Quiescent 250mA (445mA with display on) at 24V Alarm 595mA at 24V
Construction	Front panel 3u high x 25mm wide Card 220mm long
Weight	260 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

ELECTRONIC OUTPUTS

(For Each Alarm Level)
 Continuous Alarm Output = Logic 1
 Logic Levels: Logic 1 = 0.6V
 Logic 0 = 12V

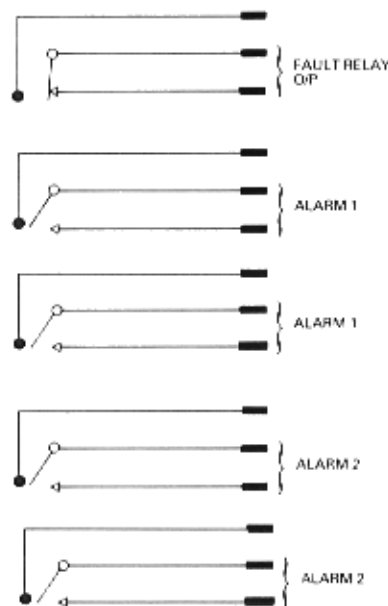
Pulse Alarm Signal.

Flashing Alarm Signal, continuous on accept by Audio Card - DI 952.

Analogue voltage output.

RELAY OUTPUTS

Two DPCO contacts for Alarm 1 and Alarm 2. One SPCO contact for fault.
 Contact Ratings 1A at 24VDC. Alarm Relays - normally de-energised. Fault Relays - normally energised.



KEY:

1. RESET/LAMP TEST push button
2. Red ALARM 2 LEDs - illuminated at or above Alarm Level 2.
3. Red ALARM 1 LEDs - illuminated at or above Alarm Level 1.
4. Red OVER-RANGE LED - illuminated at readings over 100 ppm.
5. Green PILOT LED.
6. Amber FAULT LED - illuminated if fault in detector wiring/card circuitry.
7. ppm digital display (00 - 99ppm)
8. READ push button - illuminates display if blanked.
9. Access hole to SPAN potentiometer.
10. 4 position rotary switch.
 NORM - normal operation
 A1 - check Alarm 1 setting
 A2 - check Alarm 2 setting
 CAL - ACCESS TO ZERO and SPAN potentiometers. Alarm outputs inhibited.
11. Access hole to ZERO potentiometer.

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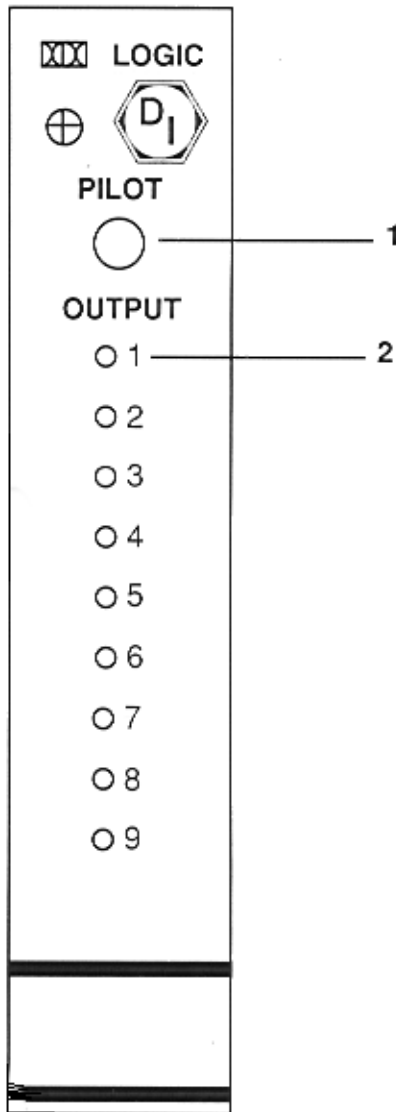
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LOGIC CARD

DI 943B



KEY:

- 1. Green PILOT LED.
- 2. Output operated LEDs.

FEATURES

- The DI 943B Logic Card is designed as system programmer, processing signals from detector cards giving outputs initiating executive or shutdown actions.
- Voting obtained by diode matrix.
- Large number of voting patterns available.
- Accepts up to fourteen inputs.
- Visual indication of output status.

SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Current Consumption	Quiescent 75mA at 24V Max. 300mA at 24V
Construction	Front panel 3u high x 25mm wide Card 220mm long
Weight	175 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

ELECTRONIC INPUTS/OUTPUTS

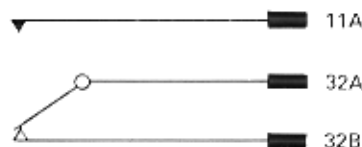
Inputs and outputs active low
 Logic Levels: Logic 1 = 0.6V
 Logic 0 = 12V

PROGRAMMING DETAILS

3 groups of 4 inputs.
 1 out of 4 or 2 out of 4 voting per group.
 Inter grouping available up to max. of 1 out of 12 or 2 out of 12.
 10 x 9 output diode matrix giving up to 9 outputs.
 2 inputs linked direct to programmed output.
 Expansion of voting to 2 out of n with additional cards.

RELAY OUTPUTS

(FAULT RELAY)



Contact Rating 1A at 24V DC SPCO Contact normally energised.

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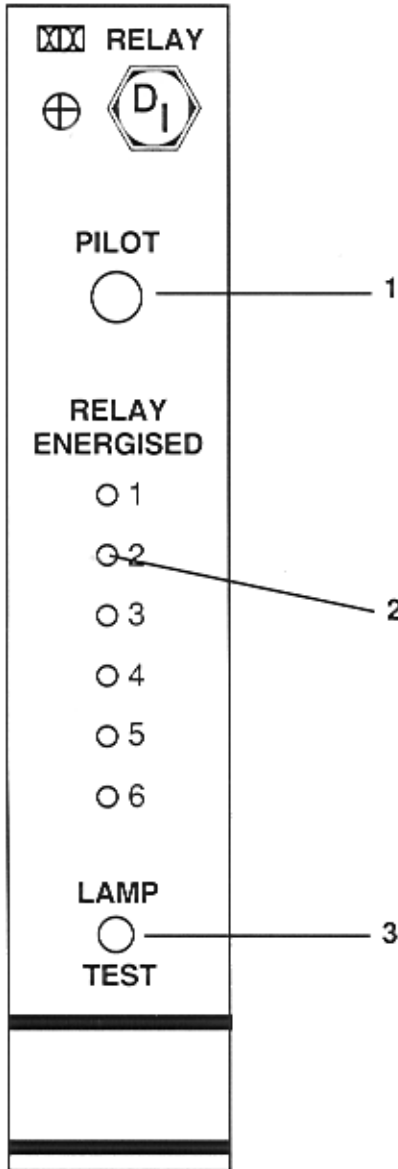
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 DETECTION INSTRUMENTS

RELAY CARD

DI 944C



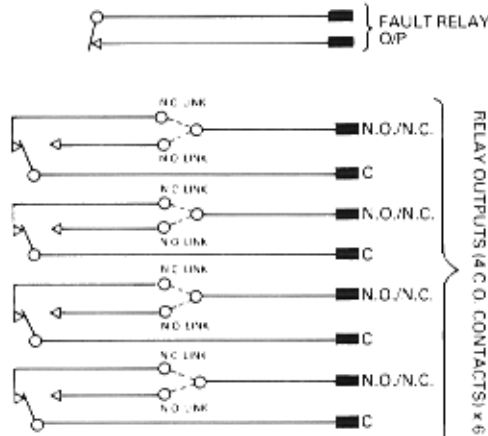
FEATURES

- The DI 944C Relay Card accepts and converts processed signals from a DI 943B Logic Card or Detector Control Card to volt free relay outputs.
- 6 relays, 4 sets of contacts each.
- Contacts programmed for either NO or NC operation by push-in links.
- Completely sealed relays available as standard.
- Rating 2A 24V DC.
- Input signal inverter option for greater system flexibility.

SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Current Consumption	Quiescent 70mA at 24V Max. 350mA at 24V
Construction	Front panel 3u high x 25mm wide Card 220mm long
Weight	270 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing
Relay Contact Ratings	1A at 24VDC

RELAY OUTPUTS



KEY:

1. Green PILOT LED
2. Green RELAY ENERGISED miniature LEDs
3. LAMP TEST push button

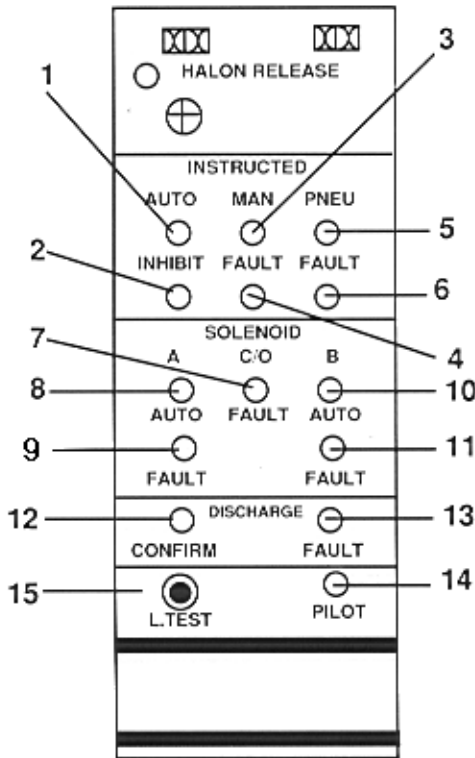
Contacts shown in normal operating, non-alarm condition - fault relay normally energised, other relays normally de-energised (normally energised if in inverter mode).

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EXTINGUISHANT RELEASE CARD

DI 947B



FEATURES

- Complete control of extinguishant release system.
- Main and Reserve capacity.
- Monitoring of all field wiring.
- Preset adjustable time delay for extinguishant release, duplicated and fault monitored.
- External lamp test facility.

GENERAL

- The DI 947B Extinguishant Release Card is the signal processor for signals relating to the extinguishing system, providing complete analysis of instructed, control and confirmed signals.

SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Current Consumption	Quiescent 150mA at 24V Alarm 600mA at 24V
Construction	Front panel 3u high x 50mm wide Card 220mm long
Weight	270 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

KEY:

1. Red AUTO RELEASE INSTRUCTED LED
2. Amber AUTO RELEASE INHIBITED LED
3. Red MANUAL RELEASE INSTRUCTED LED
4. Amber MANUAL RELEASE FAULT LED
5. Red PNEUMATIC RELEASE INSTRUCTED LED
6. Amber PNEUMATIC RELEASE FAULT LED
7. Amber CHANGE-OVER SWITCH FAULT LED
8. Green SOLENOID 'A' LED. Illuminated if solenoid A selected for auto release operation.
9. Amber SOLENOID 'A' FAULT LED
10. Green SOLENOID 'B' LED. Illuminated if solenoid B selected for auto release operation.
11. Amber SOLENOID 'B' FAULT LED
12. Red DISCHARGE CONFIRM LED. Illuminated on extinguishant release.
13. Amber PRESSURE SWITCH FAULT LED.
14. Green PILOT LED
15. LAMP TEST push button switch.



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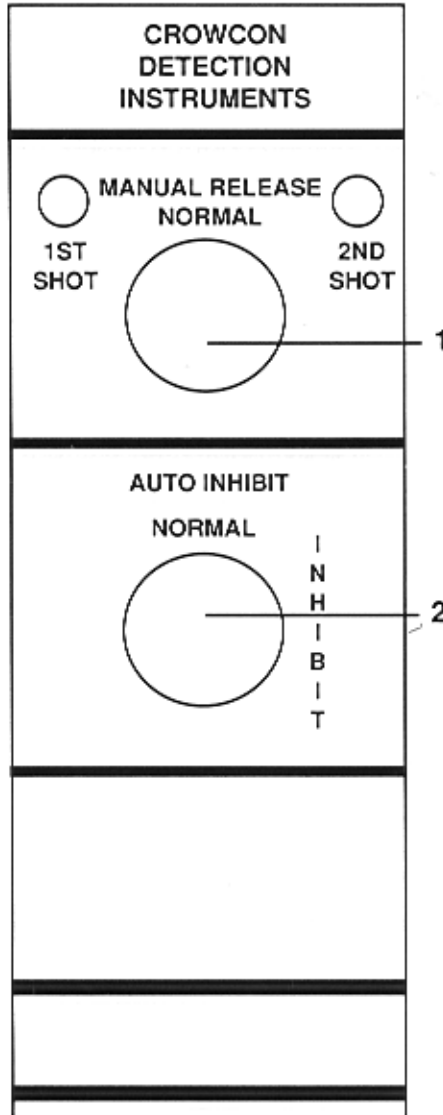
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KEYSWITCH CARD

DI 948



FEATURES

- Prevents unauthorised access to executive action and extinguishant release.
- Custom design to suit customer requirements.
- Able to give access to:
 - extinguishant manual release
 - extinguishant auto release
 - isolation of output relays for executive or shutdown signals enabling full system test.
- Normally customer built with up to 3 keyswitches or 2 keyswitches and 2 push switches etc.

GENERAL

- Gives extinguishant release from control panel, auto release inhibited and system test without disabling receipt of visual signals.

SPECIFICATION

Construction	Front panel 3u high x 50mm wide Card 220mm long
Weight	350 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	-10 to +40°C
Humidity	95% R.H. Non-condensing

KEY (TYPICAL):

1. 2 position keyswitch for Halon release.
2. Keyswitch to inhibit automatic Halon release.

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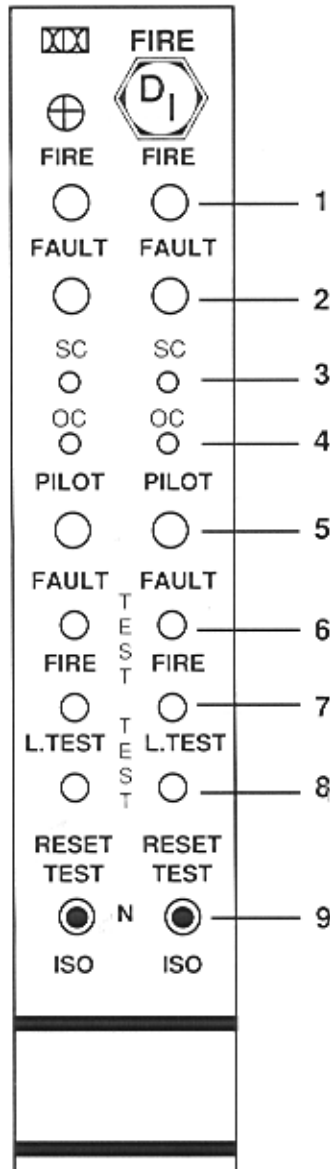
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TWIN ZONE FIRE CARD

DI 950C



FEATURES

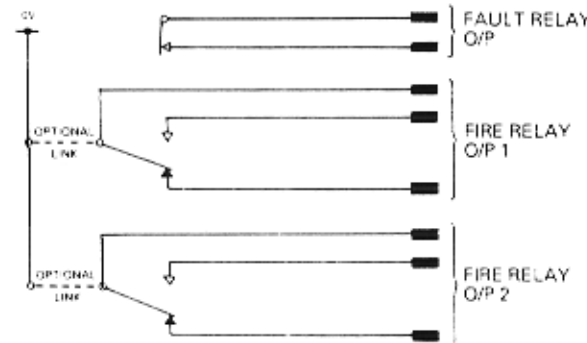
- The DI 950C Twin Zone Fire Card contains two identical, independent, fire control circuits on one plug-in card.
- Controls most heat, smoke, U.V. and infra red flame detectors.
- Open and short circuit monitoring.
- Relay and electronic outputs.
- Accept, lamp test, isolate and reset functions.
- Remote test facility for full functional check of alarm circuitry.

SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Current Consumption per zone	Quiescent 55mA at 24V Alarm 110mA at 24V
Construction	Front panel 3u high x 25mm wide Card 220mm long
Weight	220 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

RELAY OUTPUTS

(Each Zone)



Two DPCO contacts for Alarm. One SPCO contact for fault.
 Contact Ratings 1A at 24VDC. Alarm Relays - normally de-energised.
 Fault Relays - normally energised.

KEY:

1. Red FIRE LED - illuminated on fire alarm.
2. Amber FAULT LED - illuminated if fault in detector wiring/card circuitry.
3. Amber SC Fault LED - illuminated on detector wiring short circuit.
4. Amber OC Fault LED - illuminated on detector wiring open circuit.
5. Green PILOT LED.
6. Push button FAULT TEST simulates fault condition.
7. Push button FIRE TEST simulates fire condition.
8. Push button LAMP TEST and RESET.
9. Toggle switch.

TEST enables use of Test Fire/Fault push buttons. Initiates fault alarm.
 N normal operation. ISOLATE as TEST except following output signals inhibited:-
 Continuous Alarm, Pulse Alarm, Fire Relay outputs.

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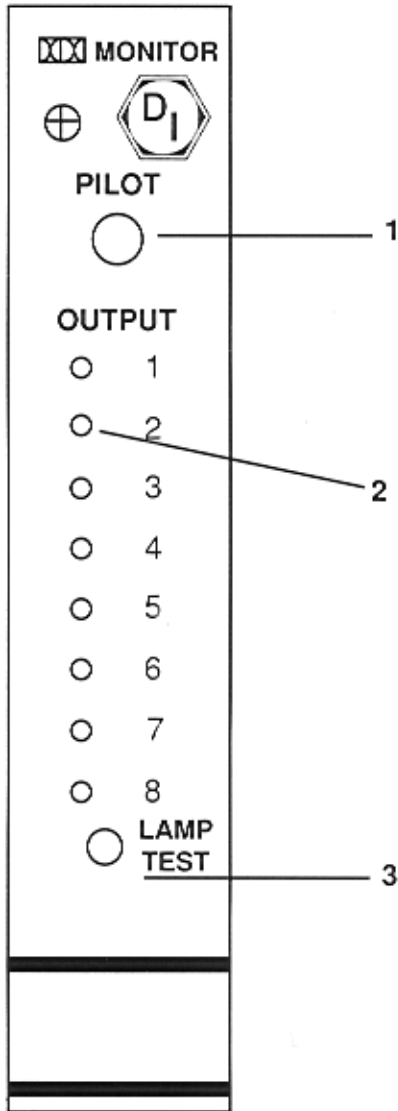
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MONITOR CARD

DI 951



KEY:

- All LEDs optional
- 1. Green PILOT LED.
- 2. Green OUTPUT miniature LEDs.
Individual channel alarm indication.
- 3. LAMP TEST push button.

FEATURES

- The DI 951 monitor card is designed to monitor up to eight field circuits for alarm or fault conditions. The circuits can be terminated in field switch devices (e.g. heat detectors, pressure switches etc.) or coils (e.g. Halon release solenoids, bells etc.).
- Alarm/Fault monitoring for up to 8 separate circuits.
- Monitors both switch and coil field devices.
- Card programming by PCB mounted switches.
- Visual status optional.

SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Current Consumption	Quiescent 130mA at 24V Max. 160mA at 24V
Construction	Front panel (optional) 3u high x 25mm wide Card 220mm long
Weight	270 grams (twin card)
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

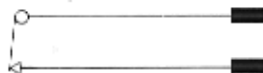
ELECTRONIC OUTPUTS

Logic Levels: Logic 1 = 0.6V (360mA sink)
 Logic 0 - open collector

For each channel:
 Logic outputs for alarm and fault.
 Logic 1 when active.

RELAY OUTPUTS

FAULT RELAY



Shown in normal operating condition - relay normally energised.
 Rated at 1A at 24V DC

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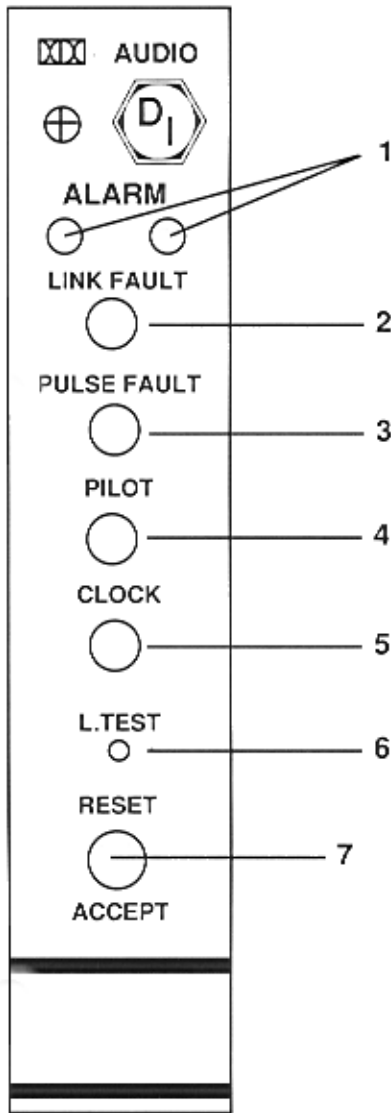
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AUDIO CARD

DI 952B



FEATURES

- The DI 952B Audio Card is designed as the central audio and visual alarm signal processor for all Detector Modules.
- Alarm and Fault signal update facility.
- Audible Alarm and Fault signal generator.
- Link and Pulse Fault indication.
- Flashing LED confirming counter operation.
- Other manufacturers inputs accepted for alarm update.

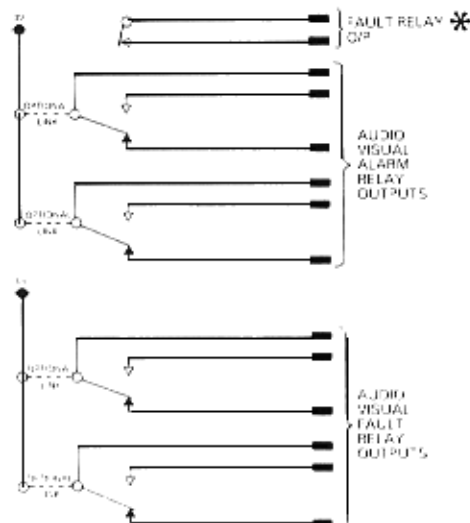
SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Current Consumption	Quiescent 60mA at 24V Alarm 700mA at 24V
Construction	Front panel 3u high x 20mm wide Card 220mm long
Weight	180 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

ELECTRONIC OUTPUTS

- One second clock pulse
- System reset
- System accept
- Outputs active low
- Logic Levels: Logic 1 = 0.6V
Logic 0 = 12V

RELAY OUTPUTS



Contact Rating 1A at 24V DC.
 Contacts shown in normal operating, non-alarm condition.
 * Fault relay normally energised, other relays normally de-energised.

KEY:

1. Red ALARM LEDs flash on receipt of system alarm signal.
2. Amber LINK FAULT LED. Closed circuit loop fault indication.
3. Amber PULSE FAULT LED. Updateable fault indication.
4. Green PILOT LED.
5. Green CLOCK LED. Flashes to confirm counter operative.
6. LAMP TEST/RESET push button.
7. Red ACCEPT push button.

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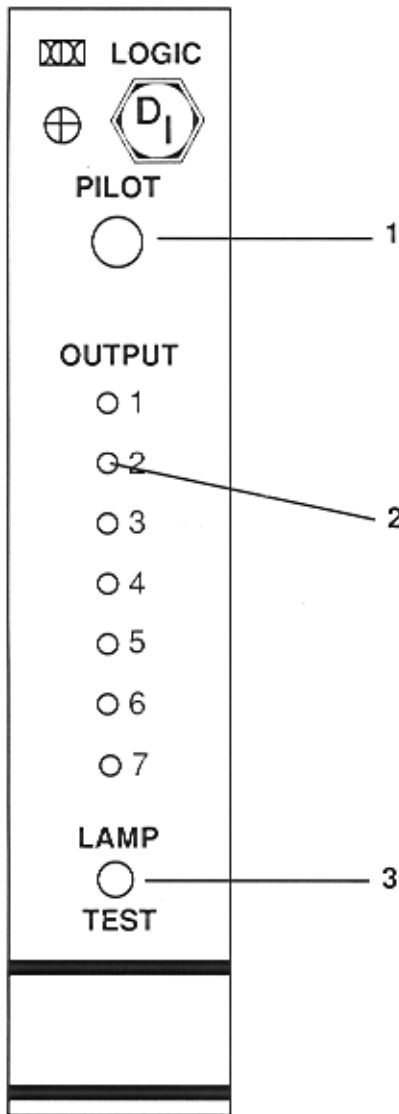
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SWITCH PROGRAMMED LOGIC CARD

DI 965A



KEY:

- 1. Green PILOT LED.
- 2. Output operated LEDs.
- 3. Lamp test.

FEATURES

- The DI 965A Logic Card processes signals from Detector Control Cards giving outputs for initiating executive or shutdown actions.
- Voting obtained by board mounted switches.
- Six outputs for ANY TWO voting and one for ANY ONE voting.
- Accepts up to thirteen inputs.
- Visual indication of output status.
- Green PILOT LED.
- Green RELAY ENERGISED miniature LEDs.
- LAMP TEST push button.

SPECIFICATION

Power Supply	Nominal 24V DC Range 18V - 35V
Fused Power Inputs	
Current Consumption	Quiescent 40mA at 24V Max. 150mA at 24V
Construction	Front panel 3u high x 25mm wide Card 220mm long
Weight	180 grams
Connector	64 way DIN 41612 3 Micron Gold plating (min)
Temperature Range	0 to 50°C
Humidity	95% R.H. Non-condensing

ELECTRONIC OUTPUTS

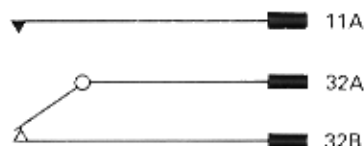
Inputs and outputs active low
 Logic Levels: Logic 1 = 0.6V (O/P 360mA sink)
 Logic 0 = 12V (O/P open collector)

PROGRAMMING DETAILS

13 inputs/7 outputs.
 Any number of the 13 inputs can be directed on to a given output channel (from 1-6). The output is activated if any two of the selected inputs are true. Output 7 is reserved for any one voting (i.e. active when any input active).
 N.B. each input can only be used once in programming.

RELAY OUTPUTS

(FAULT RELAY)



Shown in normal operating condition - relay normally energised.
 Relay Contact Rating 500mA max. 100V DC max. (10 watts max.)

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Module

Ditech

DI-800UN

Gas detector control card

Product code: S011164 (mA) / S011165 (pellistor)



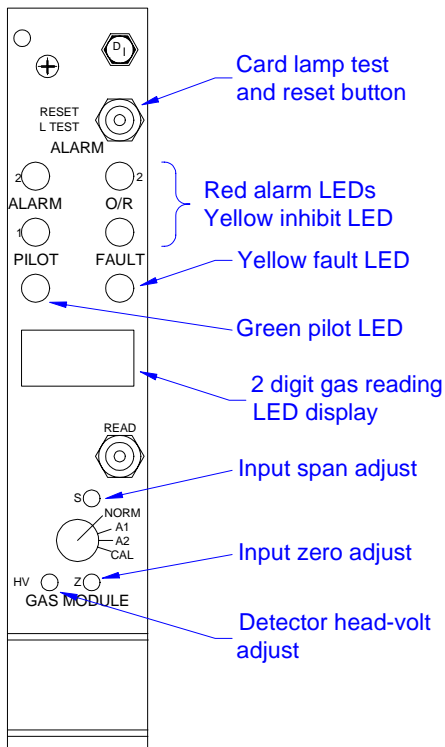
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Features

- Designed to be connected to all Crowcon gas detectors
- Plug-in personality modules for catalytic detectors, and 2-wire and 3-wire 4-20 mA devices
- Two levels of alarm, field inhibit discrimination and over range indication
- Automatic self-test facility
- Monitoring for line faults including open circuit, short circuit and earth leakage
- Fail-safe alarm relay operation (selectable)
- Dual-redundant power supply capability
- Front panel indications for alarm and fault conditions, and gas reading
- Analogue output 1-5 V or 4-20 mA (selectable)

Complete gas and fire protection solutions from Crowcon

Panel Layout



Specification

Mechanical

Width	25.4 mm (5 HP)
Height	128 mm
Depth	247 mm

Connections

DIN41612 64 way A/B male connector

Electrical

Logic outputs 500 mA sink to 0 V when active
12 V dc when inactive

Output Relay 2 A at 24 V dc or 0.5 A at 240 V ac
Normally energised/de-energised
2 alarm levels (DPCO) + fault (SPCO)

Analogue o/p 0-20 mA or 4-20 mA into a 300Ω load
0-5 V dc or 1-5 V dc

Power 18-35 V dc
132 mA maximum operation
102 mA during lamp test
41 mA minimum

Links and Adjustments

Pellistor Module:

Link 401: Earth fault enabled

4-20 mA Module:

Link 201: Earth fault enabled

Link 202: 3-wire head option

Link 203: 3-wire head option

Main Board (when not fitted):

Link 1: Decimal point disable

Link 2: Falling alarm 1 (O₂)

Link 3: Analogue current o/p

Link 4: Analogue o/p zero offset

Link 5: Analogue o/p floating

Link 6: Alarm 1 norm-energised

Link 7: Alarm 2 norm-energised

Link 8: Enable flashing alarm

Link 9: Enable continuous alarm

Link 10: Enable pulse alarm

Link 11: Enable alarm relays

VR1: Input signal span

VR2: Input signal zero

VR3: Head volt (pellistor only)

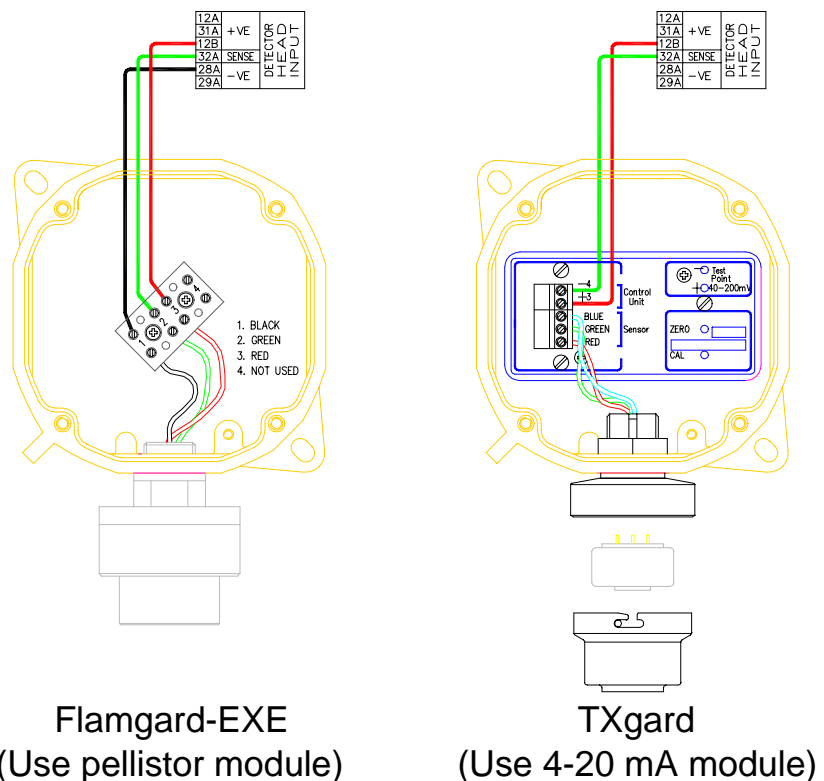
VR4: DVM adjust

VR5: Alarm 1 adjust

VR6: Alarm 2 adjust

For full details of card functions and operations refer to the manual

Typical Field Configuration



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Gas Detection You Can Trust

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