



Fire Extinguishing Aerosol Systems

Marine Fire Suppression System FP-8350 Control Panel 24vDC

Owners & Operators Manual

GENERAL OPERATIONS



This compact, flush mount control panel provides operator interactive control of your fire alarm and fixed fire extinguishing system.

The FIP (fire indicator panel) incorporates-

- a supervised single zone fire alarm control,
- a supervised input for the Extinguisher Manual release switch circuit.
- the Manual release switch is flush mounted to prevent accidental activation. To activate the system PUSH and HOLD in the button until the system activates – approx 4 seconds.
- **When pressed then the manual release switch will immediately activate the Alarm and if installed, will shutdown the exhaust/ventilation system in the engine room immediately, and then the Fire System will activate in approximately 4 seconds later.**

- **Battery Power Supply Indicator -**
 - This will indicate green, when the system is receiving appropriate 24vDC supply. If power is not supplied the LED will not be lit. The panel/system will not operate or function.
 - The panel provides two terminals to allow for a redundant power supply.
 - Power may be connected to either input
- **Activation Switch -**
 - Switch Surround will glow Red once detectors go into alarm.
 - To Activate PUSH and HOLD Switch for approximately 4 Seconds.
 - On activation the switch surround will flash red.
- **FirePro Monitor Indicator -**
 - Green light – system ok & ready for activation.
 - Green light Flashing – system fault – system will not activate.
 - Red light – system activated.
- **Detection Circuit Indicators -**
 - Green light – system ok – Correct current is being supplied.
 - Green light Flashing – circuit fault detector(s) not operational.
 - Red light – detectors in alarm – panel & remote sounders will operate. **Note:** the Firepro Generators will not activate until the Manual switch is pushed.
 - Two types of detection are supported, conventional detectors and linear heat detection. **Note:** only one type of detection can be used in an installation.
- **The Reset Switch -**
 - Allows sounder alarms to be silenced after discharge. It does not reset the panel. To reset the panel you must turn off the power completely for 5 seconds.
- **The Light Sensor -**
 - Allows the panel to detect ambient light, LEDs are displayed at Full brightness during daylight, and dim to 50% brightness at low light levels, ensuring night vision is not impaired.
- **Shut Down -**
 - The panel utilises an auto relay option for shut down of the exhaust /ventilation system located in the engine room.
 - **It is the responsibility of the operator to ensure all other openings in the risk are closed, and the fuel supply is shut down to the engine.**

COMPONENT DESCRIPTION

	FP-8350 Control Panel Flush Mount Staninless Steel Panel. Utilises all shielded components to ensure no interference with other electronic devices, particularly navigation and radio. Specifications : Size Panel : 85 x 160mm Size Dash cutout : 65 x 130mm 100mm clearance required behind the dash cut out.		
	FirePro Aerosol Generator 100g – 500g Unit. Constructed from Stainless Steel. Comes with installed Deutsch Plug for easy install.		FP-6200 Heavy Duty Bracket 316 SS. Suits FP-100, 200, 500 FirePro Aerosol Generators.
	FirePro Aerosol Generator 1200g – 5700g Unit. Constructed from Stainless Steel. Comes with installed Deutsch Plug for easy install.		FP-6100 Heavy Duty Bracket 316 SS. Suits FP-1200, 2000, 3000 5700 FirePro Aerosol Generators.
	FP-8920 Marine Grade Thermal Detector 60°C Fixed. Other temperatures available on request.		FP-9510 Linear Heat Detection Cable (182° C)
	FP-8940 Sounder / Flashing Strobe light.		FP-9511 Linear Heat Detection Installation kit Mounting Clips, 2x Junction Boxes with strain relief cable glands and 1x EOL for monitoring.
	FP-9500 2 Hour Fire Rated Shielded Cable.		FP-8960 Signage for the System. Ashhet of different size labels.
	FP-8912 Wiring loom and Splitter Cable for installaion of multiple FirePro generators. Includes installed transorbs to ensure correct current flow in case of fault.		FP-8850 System Test Lamp – this unit simulates a FirePro generator.
	FP-8750 Inverter 12vDC to 24vDC		

ELECTRICAL INSTALLATION NOTES

1. All cabling in the FirePro Installation MUST be done using 0.75mm shielded Fire Rated Cable. This INCLUDES the power supply cable to the FP Control Panel.
2. Power requirements range – 24v DC. Power warning indicator on the panel will flash once power supply drops below 24vDC.
3. **RF Environments** – Installation in RF affected environments requires special consideration for grounding of the FirePro circuits. FP system is designed to create its own grounding system. **NO Additional grounding of any of the components or devices is allowed.**
Components and devices may be mounted to the bulkhead or hull, but CARE must be taken to ensure that all cables to these components are isolated, and that RF shielding on cable is stripped back to ensure that there is not accidental grounding.
If multiple grounding occurs earth loops may be created which will cause problems in the operation of the system.
4. Control panel mounting – Dashboard switch and indicator panel and the control box may be mounted directly to the hull or bulkheads.
5. All RF shielding from cables MUST be grounded in the terminal provided in the control box.
6. Cables are colour coded for easy identification. When installing system, cables should be only



Cable Stripped of Fire Rated Insulation and RF Shielding



Cable Stripped of Fire Rated Insulation SHOWING RF Shielding



Cable Stripped of Fire Rated Insulation and RF Shielding SHOWING RF Grounding Cable

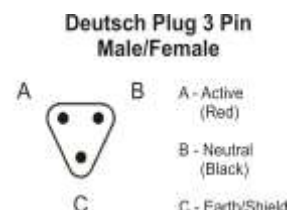
connected to the correctly coded cable. Colour Coding for cables is as follows:

Colour		Circuit
	Red	Power Supply
	Yellow	Activation
	Green	Detection
	Blue	Sounder

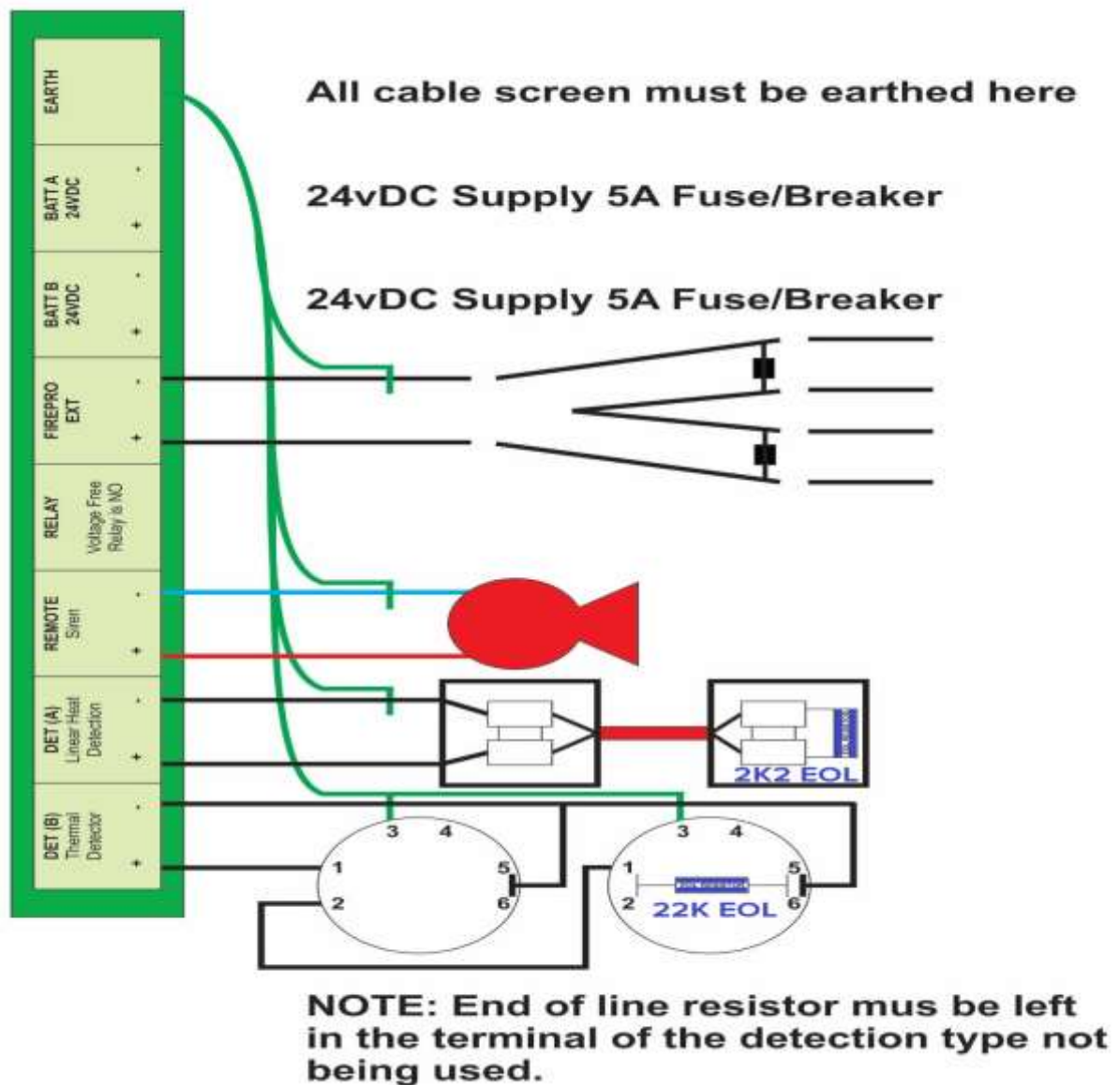
Extension Leads

When constructing extension leads for the system follow these instructions. The supplied Deutsch Plugs must be used to ensure water-proof connections are made throughout the installation.

1. Cut cable to required length and strip outer insulation to approximately 50mm.
2. Strip inner insulation to approximately 6mm and using a Deutsch Crimping tool, fix pins to the exposed ends of the cable, including the earth.
3. Place heat shrink or rubber boot over the end of the cable. Identify correct socket on plug by the numbers/letter on the side of the plug and push through the gasket at the bottom of the plug until a click is heard and the pin is locked in place.
4. Place the locking mechanism inside the plug to ensure pins remain secure. Male (PN:DP-3010) plugs the locking mechanism is orange. Female (PN:DP-3020) plugs the locking mechanism is green.
5. Using the heat shrink and rubber boot, seal the back of the plug.

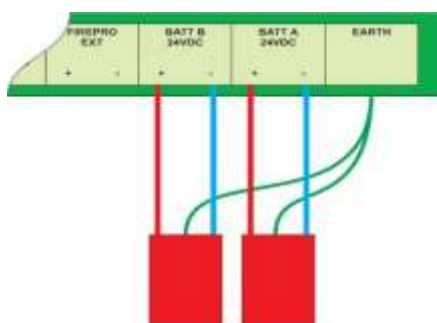


ELECTRICAL WIRING DIAGRAM



NOTES:

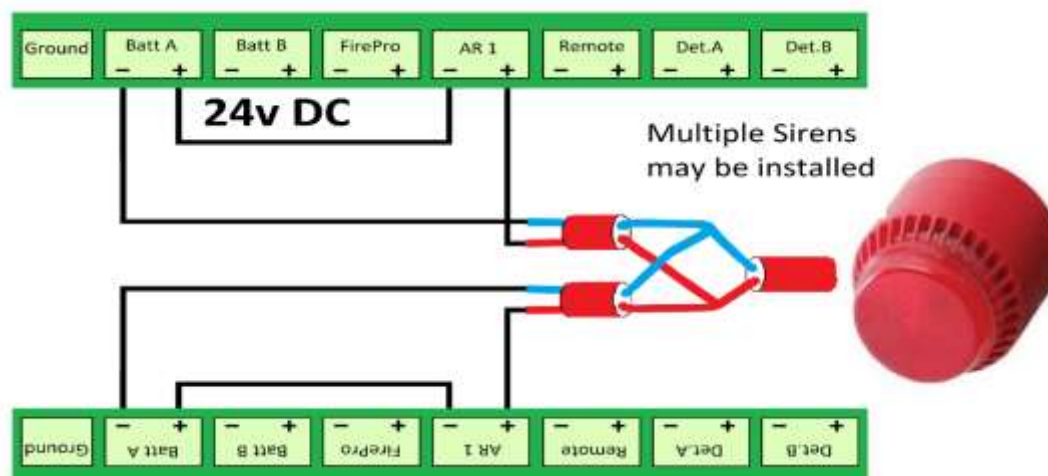
- All connections to Control panel should be using the colour coded Deutsch Plug patch leads
- End Of Line resistor must be used on both Detection circuits



Power Supply:


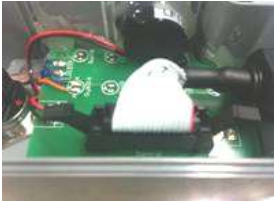


- 24vDC from 5A circuit breaker or fuse
- Power to ideally come from emergency supply on vessel. Emergency Batteries are normally backed up from internal systems and will make backup batteries unnecessary.
- Power Supply can be connected to either the Batt A or Batt B terminals or to both.

Electrical Wiring Diagram – Shared Siren/Sounder



Disconnecting the Control Cable

When installing the control panel, it may be necessary to disconnect the control cable connecting the dash panel to the control panel (see labels on units). In the event that this cable needs to be disconnected, it must be done carefully, following these steps:

1		Ensure the power to the system is turned off. Remove the cover from the Dash Panel. Control Cable CAN ONLY be disconnected from the Dash Panel	2		Undo the clasps on the connector and disconnect the cable. This must be done before disassembling the cable gland.
3		Completely undo the cable gland at both ends, moving it out of the outlet and up the cable. Note: the cable gland is NOT to be removed from the cable. Attempting to pull the cable through the gland will damage the connections.	4		Fold the cable over the connector and gently twist the overhanging cable to pull it through the nut and outlet. Note: DO NOT force the cable through the nut or outlet as the connections will be damaged.

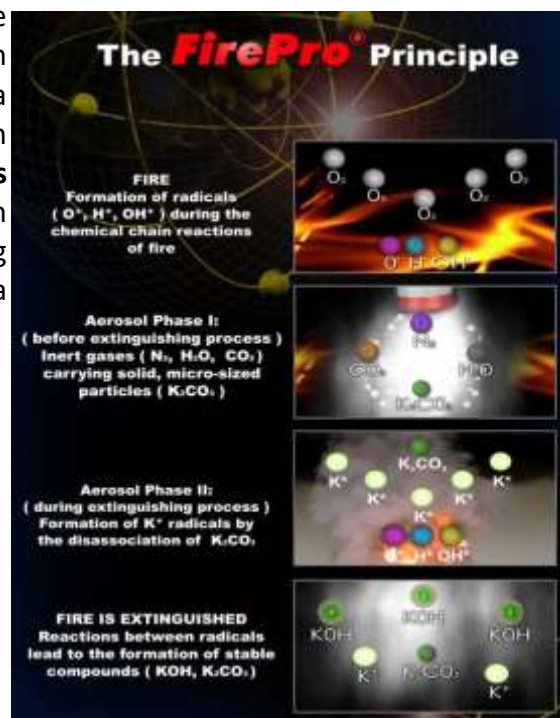
When reconnecting this cable please note that the cable uses a connector that will only go in one way. **DO NOT** force the connector in as this will damage the connections.

Extension Leads (FP-9550) are available for lengths up to 10 metres and will be made to order. Connections between the extension lead and the control cable must be contained in a junction box that will be provided.

Operation of the FirePro Aerosol Generators

All **FirePro** Fire Extinguishing Aerosol Generators use the latest generation SBK solid compound. Upon activation the solid compound is transformed into a rapidly expanding, highly efficient gas, based on Potassium salts. It does not deplete oxygen levels. **Its built-in fail-safe activation system** ensures operation of the generators when required, even if everything else fails. At 300°C the SBK block changes to a potassium based gas to extinguish the fire.

Ozone Depletion Potential (O.D.P.) = 0
Atmospheric Life Time (A.L.T.) = 0
Global Warming Potential (G.W.P.) = 0
Non-corrosive & Non-toxic



ACTIVATION :

1. Detection will initiate an alarm on the FirePro Marine System and the sounder will activate.
2. Evacuate all personnel from the protected areas before activation.
3. Close all hatches and openings, and shutdown engines and any extraction fans or vents.
4. Press & hold the activation switch continuously for 4 seconds to discharge the system.
5. Keep the FirePro aerosol within the risk until the fire is extinguished and not able to re-ignite.
6. Do not start engine or fans until the fire is extinguished – otherwise the exhaust fans will restart and gas will escape and could allow the fire to re-ignite.
7. Recommended cleanup after discharge is with soapy water.

SYSTEM MAINTENANCE

MAINTENANCE

FirePro® Aerosol Generators are to be maintained in accordance with AS 1851 Section 12.

- **Monthly** - visual Inspections of all major components. (20 Mins)
- **Annual** - Testing, cleaning of all components and detailed review of system. (1 Hour)
- Backup Battery pack is replaced annually
- Log Book required for each system
- The 8350 panels continuously monitor the activation and detection circuits.
- System test equipment is required to perform annual testing.

During the period that the **FirePro®** units are in use the following inspections and maintenance procedures must be carried out.

Inspection	FirePro® Aerosol Generators to ensure that they are free from dust and other debris. Periodic inspection of the metal container (see life) of the solid extinguishing agent must be carried out to check whether the material is intact or has been damaged by chemically aggressive materials or corrosion.
	Mounting Brackets and Bolts All the metal brackets and connecting bolts must be inspected.
Logbook	Update the logbook
Expected Life	A - 3 years for very aggressive chemical environments B - 5 years for aggressive chemical environments C - 10 years for commercial and industrial environments D - 15 years for offices, computer rooms, shopping centres, areas with air cond.

The installation should be maintained by an accredited person and a logbook must be kept, recording all the relevant events concerning the installation

Monthly inspection of the installation must be carried out to check that the system is intact. All the cables and connections of the **FirePro®** units to the control panel or the switch must and checked. Test detector circuits with an appropriate heat tester to ensure the detector is operational and instigates an alarm. Test sounders operate and are audible.

Logbook

The logbook contains the items required that give a picture and provide for the recording of various things during the life of the installation. In the logbook you will find the following:

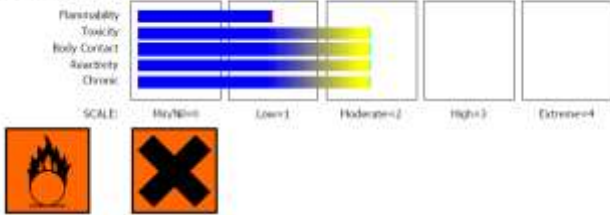
Content of logbook: General details Devices used Date of each Inspection Comments re outcome of each inspection	In the appendices of the Logbook: Schematic diagrams Photos of the Original FirePro Installation Inspection reports
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Safety Data Sheet (SDS) FirePro

This is an EXTRACT ONLY from the full SDS. The SDS is prepared by Chemwatch - to view the full SDS go to www.chemwatch.com.au.



CHEMWATCH 4697-26 NC317TCP

<p>CHEMICAL PRODUCT AND COMPANY IDENTIFICATION</p> <p>PRODUCT NAME CELANOVA FIREPRO</p> <p>PRODUCT USE Fire extinguishing agent.</p>	<p>HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.</p> <p>CHEMWATCH HAZARD RATINGS</p> 
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POISONS SCHEDULE - None

RISK	SAFETY
<ul style="list-style-type: none"> • Contact with combustible material may cause fire. • Harmful if swallowed • Irritating to eyes and skin. • May cause SENSITISATION by skin contact. • Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment. • Cumulative effects may result following exposure • May produce discomfort of the respiratory system* • Possible respiratory sensitiser*. • May possibly affect fertility*. * (limited evidence). 	<ul style="list-style-type: none"> • Keep away from combustible material • Avoid exposure - obtain special instructions before use. • To clean the floor and all objects contaminated by this material use water and detergent. • Keep away from food drink and animal feeding stuffs. • In case of contact with eyes rinse with plenty term of water and contact Doctor or Poisons Information Centre. • If swallowed IMMEDIATELY contact Doctor or. Poisons Information Centre (show this container or label). • This material and its container must be disposed of as hazardous waste.


FIRST AID MEASURES

SWALLOWED	<ul style="list-style-type: none"> • If swallowed do NOT induce vomiting. • If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. • Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. • Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. • Seek medical advice.
EYE	<ul style="list-style-type: none"> • If this product comes in contact with the eyes: • Wash out immediately with fresh running water. • Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. • Seek medical attention without delay; if pain persists or recurs seek medical attention. • Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
SKIN	<ul style="list-style-type: none"> • If skin contact occurs: • Immediately remove all contaminated clothing, including footwear. • Flush skin and hair with running water (and soap if available). • Seek medical attention in event of irritation.
INHALED	<ul style="list-style-type: none"> • If dust is inhaled, remove from contaminated area. • Encourage patient to blow nose to ensure clear passage of breathing. • If irritation or discomfort persists seek medical attention.

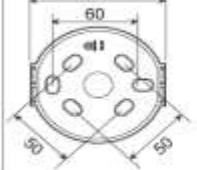
FIB Firmware Version Notes Type M5 24vDC

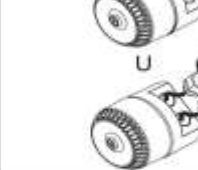
1. The single engine room version of the marine controller is powered from the vessel's 24 volt DC system via a 5A fuse or Circuit Breaker. The Power supply should be a dedicated Supply with no other devices connected.
2. FirePro Marine V5 (24v) operating voltages
 - a. Max volts 30vDC
 - b. Min volts for Panel Start up 21vDC
 - c. Min volts for operation once panel started 15vDC
 - d. Operating Current – Normal - Day time 70mA
 - e. Operating Current – Normal - Night time 50mA
 - f. Detectors will operate and FirePro can be discharged between these voltages.
 - g. If supply falls below 15vDC the unit switches off and will not restart until supply reaches 21VDC. Power light begins flashing at 21vDC and will continue until 15vDC or until supply rises to 21vDC
3. Power supply to come from Emergency Power Supply, which should be backed up by systems installed on the vessel. Power can be supplied from 2 sources and the panel will operate as normal, provided at least one supply is delivering the correct voltage.
4. Detector is for monitoring the risk locations. Maximum Number of Detectors is 2. In accordance with the manufacturer's instructions and a 22k end of line resistor fitted to the last detector in each circuit. DET-A is a NO Circuit, which goes into alarm if circuit is closed. DET B is a change of resistance circuit, and quiescent state is 35 μ A, with alarm state between 35-55mA.
5. The firing circuit can activate up to 4 FirePro extinguishers. To ensure correct operation they MUST be installed in series and a suitable Transorb fitted directly across each FirePro unit.
6. When the FirePro circuit is intact the LED will be green. If the circuit is open or short to ground the LED will flash on and off until the problem is resolved.
7. When the detectors are correctly installed and they are in standby mode, the detector LEDs will be green. If a detector circuit is open, short or short to ground the relevant LED will flash on and off until problem is resolved.
8. When a detector goes into alarm the Red LED will light. The green status LED will go out and the red status LED will light. The local sounder will commence beeping and the remote sounder will be powered.
9. If either detector is in alarm, pressing the Reset button will reset the detectors, provided the risk has passed. If the detector is still in alarm the detector LED will alternate red and green until the alarm has passed.
10. The Discharge button may be pressed at any time. This will activate both the local and the remote sounders and cause the AR1 relay contacts to close to enable engine room fans etc. to be switched off. The contact is rated at 10 amps.
11. There is a delay of approximately 4 seconds during which time if the Discharge button is released the system will go back to normal. After holding for 4 seconds the FirePro circuit will be energised with a controlled current of about 2.5 amps for about 2 seconds.
12. The FirePro LED will go red and the red status LED will flash. Both of the sounders and the relay will remain on until the Reset button is pressed.
13. The detection circuit will now continue to function as before except the red status LED will flash even if detector(s) are in standby to indicate that the system has been discharged and go to steady red on an alarm.
14. The FirePro extinguishers, the detectors and all relevant wiring must now be checked and replaced as required by the relevant standards.
15. All power must be removed from the controller for at least one minute to correctly reset the system.

ROSHNI (RO) & ROSHNI LP (ROLP)





Roshni (RO) - 0832-CPD-0131 (18-28V)
Roshni L P (ROLP) - 0832-CPD-0138 (9-15V & 18-28V)
EN54-3 Fire Alarm Device - Sounder
Dispositif d'alarme incendie EN54-3 - Avertisseur d'incendie
EN54-3 Feueralarmgerät - Töner
Dispositivo de alarma antincendio a norma EN54-3 - Sirena
EN54-3 Brandalarm - sounder
Dispositivo de alarma de incendios EN54-3 - Timbre de alarma
EN54-3 Brandwarner - Signalgeber
EN54-3 Urządzenie sygnalizacji BAP - Sygnalizator






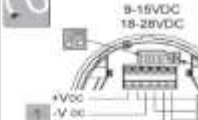
EN54-3		ROLP/Roshni		Roshni	
9 = 15VDC	18 = 28VDC	110 = 230VAC			
32mA max	30mA				
0.2Watt - 2 Watt	0.7Watt - 2 Watt				
20% - 70%	10% - 55%				
ABS V2	ABS V0				
9 = Type A = (PS4)	90A = G				
CU = Type B = (PS4)	90B = CU				






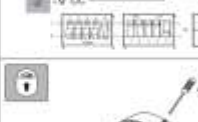
*Product exceeds minimum requirements of EN54-3
See www.fulcon.com
Le produit dépasse les exigences minimum de EN54-3
Vor www.fulcon.com
Das Erzeugnis erfüllt die Mindestanforderungen von EN54-3.
Siehe www.fulcon.com
Il prodotto supera i requisiti minimi previsti dalla norma EN54-3
Vedi www.fulcon.com
Product overtreft de minimale vereisten van EN54-3.
Zie www.fulcon.com
El producto excede los requisitos mínimos de la norma EN54-3
Véase www.fulcon.com
Produkten överträffar minsta krav enligt EN54-3
Se www.fulcon.com
Parametry techniczne produktu przekraczają minimalne
wymagania normy PN EN54-3, szczegóły na www.fulcon.com







Installation should be in accordance with relevant national wiring regulations or codes for the relevant jurisdiction and voltage supplied.
L'installation doit être conforme à la réglementation en vigueur, en vue de l'application des lois de la sécurité applicables.
Das Gerät ist zu den entsprechenden Anordnungs- und Anschlussvorschriften gemäß den nationalen Bestimmungen für die jeweilige Versorgungsspannung zu installieren.





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								Main Application		RoHS1 L.P. (RoSLP)				
1	2									*12Vdc on axis @1M	EN54-3 15Vdc see notes		*24Vdc on axis @1M	EN54-3 23Vdc see notes
		12345	Pattern	Frequency Hz	Rate	Description				mA	(dB(A))	(dB(A))	mA	(dB(A))
1	1A	11111	Alternating	900 & 970	2Hz (250ms-250ms)	BS Fire				8	95	-	13	101
2	1A	11110	Swamp	900 to 970	7Hz (75s)	BS Fire				8	94	-	12	100
3	1A	11101	Swamp	900 to 970	1Hz (75s)	BS Fire				8	95	22	12	102
4	1A	11100	Continuous	2850	Squally	General Purpose				16	99	-	32	105
5	4	11011	Swamp	2400 to 2850	7Hz	General Purpose				16	103	-	32	109
6	4	11010	Swamp	2400 to 2850	1Hz	General Purpose				16	102	-	32	112
7	1A	11001	Slow whoop	900 to 1200	3s swamp, 0.5 s silence, then repeat	Dutch fire (NEN 2476)				6	97	23	12	103
8	1A	11000	Swamp (DPA)	1200 to 900	1Hz	German fire (DIN 33 490)				6	96	23	15	103
9	4	10111	Alternating	2400 & 2850	2Hz (250ms-250ms)	General Purpose				16	99	-	31	105
10	1A	10110	Intermittent	970	0.5Hz (1s On/1s Off)	PFER alert				6	95	-	8	101
11	1A	10101	Alternating	900 & 970	1Hz (500ms-500ms)	BS Fire				6	95	-	12	101
12	4	10100	Intermittent	2850	0.2Hz (1s On/1s Off)	General Purpose				9	99	-	17	106
13	1A	10011	Intermittent	970	0.4Hz (250ms On/1s Off)	General Purpose				3	94	-	7	102
14	10010	Continuous	970	Squally	PFER voice msg				4	95	24	105	95	
15	1A	10001	Alternating	554 & 440	150ms-400ms	French fire (NF 32-001)				8	96	-	17	102
16	16	10000	Intermittent	960	3.3Hz (150ms On/150ms Off)	Swedish Air Raid				4	94	-	6	100
17	17	01111	Intermittent	960	0.2Hz(1.1s On/1.8s Off)	Swedish local warning				4	95	-	7	101
18	18	01110	Intermittent	960	0.2Hz(1.13s On/1.8s Off)	Swedish (ITS-mess)				3	95	-	6	101
19	19	01101	Continuous	960	Squally	Swedish (AI clear)				6	95	-	10	101
20	20	01100	Alternating	554 & 440	0.2 Hz (1s On/1s Off)	Swedish (TUD 94)				7	99	-	9	102
21	21	01011	Intermittent	960	1Hz (500ms-500ms)	Swedish general purpose				4	94	-	6	101
22	1A	01010	Intermittent	2850	4Hz (110ms On/100ms Off)	Pescan crossing				12	98	-	27	104
23	14	01001	Swamp	900 to 970	50Hz	BS Fire				6	93	-	12	100
24	4	01000	Swamp	2400 to 2850	50Hz	General Purpose				16	102	-	32	108
25	25	00111	Intermittent	970	1 x 600ms pulses, 1.5s silence, then repeat	ISO 5201				4	95	-	7	101
26	26	00110	Intermittent (1")	970 to 970	1 x 500ms pulsed messg, 1.5s silence, then repeat	ISO 5201				4	95	-	8	102
27	27	00101	Intermittent (1")	970 to 900	1 x 500ms pulsed swamp, 1.5s silence, then repeat	ISO 5201				3	94	-	6	101
28	10	00100	Alternating	900 & 970	2Hz (250ms-250ms)	BS Fire				6	95	-	12	101
29	850Hz	00011	Alternating	990 & 550	2Hz (250ms-250ms) (Samarahhi tone)	BS Fire				10	99	22	20	105
30	810Hz	00010	Alternating	410 & 410	2Hz (250ms-250ms) (Squashy Micro tone)	BS Fire				8	94	21	16	100
31	00001	Swamp	900 to 1200	1Hz	General Purpose				10	96	-	14	103	
32	1010Hz	00000	Alternate	510	1Hz (100ms On/100ms Off)	General Purpose				10	96	-	16	103

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| <p>Les Tons émis under the CPD (Fire Alarm Application) are shown in the column marked EN54-3</p> <p>(a) All other SPL measurements are taken at 4m & are not tested/verified</p> <p>(b) Detected EN54-3 tone SPL measurements are available in M05-04</p> <p>(c) Les tons certifiés dans la table de la DPC (application alarme incendie) sont indiqués dans la colonne intitulée EN54-3</p> <p>(d) Toutes les autres mesures SPL sont prises à 4 m et ne sont pas vérifiées par un tiers</p> <p>(e) Les mesures SPL des tonalités EN54-3 sont disponibles dans M05-04</p> <p>(f) Die nach CPD (Feuermelder-Anwendung) aufgenommene Töne sind in Spalte EN54-3</p> <p>(g) Alle anderen Schalldruckmessungen wurden vom akkreditierten Mittelpunkt abgelesen und sind keiner unabhängigen Stelle vorzulegen</p> <p>(h) Die gemessenen Power-SPL-Messungen gemäß EN54-3 sind ebenfalls in M05-04</p> <p>(i) Les tons des tonalités certifiées CPD (application alarme incendie) sont indiqués dans la colonne intitulée EN54-3</p> <p>(j) Toutes les autres mesures SPL sont prises à l'extérieur "à l'air libre" et n'ont pas été vérifiées par un tiers</p> <p>(k) Les mesures SPL des tonalités EN54-3 sont disponibles en M05-04</p> | | <p>(a) Los sonidos certificados por el CPD (aplicación para alarmas de incendio) se muestran en la columna marcada con EN54-3</p> <p>(b) Cualquier otra medida del SPL (nivel de intensidad acústica) se toma "al aire libre" y no está verificada por terceros</p> <p>(c) Los medidos certificados del SPL, para el EN54-3 están disponibles en M05-04</p> <p>(d) Si cualquier otro SPL (nivel de intensidad acústica) se toma "al aire libre" no está verificado por terceros</p> <p>(e) Alle anderen Schalldruckmessungen wurden vom akkreditierten Mittelpunkt abgelesen und sind keiner unabhängigen Stelle vorzulegen</p> <p>(f) Die gemessenen Power-SPL-Messungen gemäß EN54-3 sind ebenfalls in M05-04</p> <p>(g) Les tons des tonalités certifiées CPD (application alarme incendie) sont indiqués dans la colonne intitulée EN54-3</p> <p>(h) Toutes les autres mesures SPL sont prises à l'extérieur "à l'air libre" et n'ont pas été vérifiées par un tiers</p> <p>(i) Les mesures SPL des tonalités EN54-3 sont disponibles en M05-04</p> <p>(j) Si cualquier otro SPL (nivel de intensidad acústica) se toma "al aire libre" no está verificado por terceros</p> <p>(k) Les mesures SPL des tonalités EN54-3 sont disponibles en M05-04</p> |
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MARINE DETECTOR SPECIFICATIONS



Features

- ▶ Electronic linear heat detection
- ▶ Remote Indicator output
- ▶ Wide voltage range (9.5 ~ 30Vd.c.)
- ▶ Twin fire LED's allow 360° viewing
- ▶ Range of mounting bases
- ▶ Approved by LPCB, LRS, MCA and GL

Description

Model DCD-AE3M is a Marine Approved Rate of Rise Heat Detector with a 60°C fixed temperature element using a thermistor and linearising circuit to provide an accurate linear response Heat Detector.

The DCD-AE3M is ideal for use where medium ambient temperatures exist, such as drying rooms or where Smoke Detectors are unsuitable because of the presence of steam or cooking fumes such as in a kitchen/galley.

The DCD-AE3M is supported on the majority of conventional systems. A third terminal provides remote indicator output.

Specification	
Ordering Code	DCD-AE3M
Operating Voltage	9.5 - 30Vd.c.
Quiescent Current (typ)	35µA
Maximum Current in Alarm (typ)	40mA
Remote Indicator Drive	20mA (max) / 9.5-14mA (typ)
Operating Temperature Range	-10°C to +50°C
Storage Temperature Range	-30°C to +70°C
Maximum Humidity	95%RH - Non Condensing (at 40°C)
Ingress Protection Rating	IP63
Colour / Case Material	Ivory White / Polycarbonate
Weight (g) / Diameter (mm) / Height (mm)	76 / 100 / 38
Compatible Base	YBN-R/6M
Base Fixing Centres (mm)	48 ~ 74
Approvals to (EN54:2000) Class A1 & A1R	LPCB, Lloyds Register, Germanischer Lloyd, MCA