

ESPRIT[®]

Dual area automatic extinguishant release control panel

The Esprit extinguishant release control panels are fully configurable to control automatic extinguishant release scenarios.

The dual flood area control panel has 6 detection circuits and support for metron and solenoid type actuators. Programmable countdown timers are provided for Extinguishant Delay, Extinguishant Duration, Flooding Time and Extract Time. The control panel has a large graphical display with easy to navigate menus.

Remote status units are available as well as remote Hold Off & Abort Buttons.

Esprit-G panels support a large range of conventional detectors including, Apollo, Hochiki & Nittan.

The panels are supplied with a 3.4 amp internal switch mode power supply module. This module complies with the requirements of EN54-4 : 1988 and provides temperature compensated battery management charging.

Esprit-G panels are approved to European standards; EN12094-1, EN54-2 & EN54-4.



Features

Main Features

- Dual flooding areas
- 6 detection zones
- Approved to EN12094-1, EN54-2, EN54-4
- Fully configurable zone voting for gas release
- 6 programmable sounder circuits
- Configurable sounder delays
- Zero time delay option for manual call points
- Compatible with IS barriers
- Non-latching zone input option
- Extinguishant delay 0-60 seconds
- Extinguishant duration 1-300 seconds
- Flooding time 60-1800 seconds
- Extract time 1-900 seconds
- Graphical back lit LCD display
- Access controls via key switch or code entry
- Time and date stamped event log
- Alarm counter
- Company logo can be programmed in display
- RS 485 communications for remote status units
- Optional key switch status control
- Fire, fault & stage signal relays
- 1 amp actuator or 3 amp metron firing circuits
- Hold, abort, flow switch, manual release, mode control and pressure switch monitoring inputs
- 3.4 amp PSU for 18Ah batteries

Technical specifications

Enclosure	1.2mm Mild Steel IP30. Colour ref MW334E Interpon Powder coat
Cable entry	Via 20mm knockouts located in the top and rear of the cabinet
Dimensions back box	Back box: 450 W x 385 H x 100 D (mm), Lid: 463 W x 394 H x 25 D (mm)
Mains supply	3.4A universal switch mode PSU
Battery Capacity	Up to 18Ah 24V
Charger Current	700mA
Auxiliary supply	400mA aux supply output (21-28vdc)
Detection Zones	6 x conventional zones
Extinguishing Zones	2 x flooding/extinguishing zones support for metron & solenoid type actuators
Sounder Circuits	6 x 400mA 21-28vdc
On Board Relays	10 x 1A 30VDC relay outputs, (fire, fault, stage 1 & 2, extract, local) x2
Programmable outputs	Additional outputs via add on output card, ESG-2005. (1 card per flood zone)
Switch inputs	CC, PULS
Monitored inputs	Flow, Pressure, Release, Hold, Abort x 2
Countdown Timer	Extinguishant Delay: 0-60 secs, Extinguishant Duration: 1-300 secs, Flooding Time: 60-1800 secs, Extract Time: 1-90 mins, Reset Inhibit Time: 0-30 mins
Event log	255 events, time & date stamped
Earth fault monitoring	Yes
Intrinsically safe mode	Selectable for detection zones
Remote status units	Graphic display & Mini version via RS485 up to 16 assignable to area
Display	240 x 64 Graphical LCD backlight
Manual release button	Onboard under plastic release cover

Models

ESG-1003	Dual flood area extinguishant release control panel
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KM 663489
BS EN 54-2 & 54-4

Specifications

Electrical Specification Inputs & Outputs - PSU PCB

PSU Input +/-	29.5 vdc supply input. Diode protected for reversal and independent short circuit. Max current 5 amps.	Max input current 5 amps. Input voltage 29.5 vdc to 30 vdc.
28v+, Ov- power output	28vdc supply output for fire alarm accessory relays etc. Max continuous use = 400mA.	Fused @ 500mA. Fuse = 500mA resettable fuse.
Common fire relay	Fire relay contact. Clean C/O. Max 3A @ 30vdc.	Unfused
Common fault relay	Maintained fault relay contact. Clean C/O Max 3A @ 30vdc.	Unfused
Inputs; CC, PUL,	Switched -ve inputs, connect to Ov to trigger. Max input voltage = 30vdc. Non latching, max resistance 100R.	Protected via 10K Ohm impedance, 3v6 Zener diode.
SNDR1 - 2	28vdc polarity reversal monitored sounder outputs to fire alarm devices. 6K8 Ohm 5% 0.25W EOL resistor.	Monitoring current limit 28mA, fused @ 500mA. Typical max load 22 devices @ 18mA each per circuit.
PBUS output + / -	RS485	RSU Comms, fused @ 20mA
Temp sense input * *	Input for connection of battery temperature sensor, Attach to central point of sealed lead acid battery pair.	Thermistor TTC5103 10,000 Ohms @ 25 Deg C.

Electrical Specification Inputs & Outputs - GAS CARD PCB

Zone 1 - 6 +/-	Fire alarm zone circuits. Conventionally wired detection circuit. 6K8 Ohm 5% 0.25W EOL resistor.	Monitoring current limit 42mA. Max 32 devices per zone.
1st stage sounder output +/- 2nd stage sounder output +/-	28vdc polarity reversal monitored sounder output to fire alarm devices. 6K8 Ohm 5% 0.25W EOL resistor.	Monitoring current limit 28mA, fused @ 500mA. Typical max load 22 devices @ 18mA each per circuit.
Ext OP +/-	Extinguishant Release Output. 28vdc polarity reversal monitored output to Solenoids or Metron actuators. 1N4002 diode EOL, Circuit parameters learnt during commissioning.	21- 30 Vdc 1A continuous rated for solenoids 3A @ 450mS available for metron actuators
Monitored inputs, (6) Flow SW, Press SW, Man rel, Hold, Abort, Auto/Man (+/-)	End of line resistor 6K8, thresholds 8K to 1K2 normal, 1K1 to 150R active (nominal 470R), 150R to OR Short circuit	Monitoring current limit 14mA
1st stage relay, 2nd stage relay, extract fan, local fire relay C/NC/NO	Auxiliary relay contacts. Clean C/O. Max 3A @ 30vdc.	Unfused

Power Supply Specification

Mains supply	230vac +10% / -15% 50Hz max current 0.347Amp (35W) 1.08A (100W)	
Mains supply fuse	4 Amp (T4A 250V) 100W unit	Not accessible for servicing. Internal to switch mode power unit
Internal power supply rating	3.4 Amps total including battery charging	Maximum load shared between outputs = 3A
Power supply output voltage	19.8 - 29.7vdc	Tolerance +/- 0.1%
Maximum continuous load for battery standby (ImaxA)	ImaxA = 650mA	ImaxB not specified
Maximum ripple	150 mV p-p	Supply and charger fault monitored
Min/max battery size and type	2 x 3.2Ah 12v VRLA (min) - 2 x 18Ah 12v VRLA (max) Use Yuasa NP range batteries	
Battery charging voltage	27.3 vdc nominal at 20 deg C	Temperature compensated
Battery charging output current	700mA Current limited	Charging suppressed during alarm condition
Battery high impedance fault (Batt Hi Z)	Resistance > 1 Ohm	1 hour reporting time
Max current drawn from batteries	5 Amps with main power source disconnected. Battery fuse 5A (5x20 glass, quickblow)	
Min current supplied by PSU Imin	40mA	

Quiescent and Alarm Current Details for Standby Battery Calculations

Models	Standby Current	Alarm Current
ESG-1003 - dual area control panel	200mA	380mA