Marine 2-4 Zone Marine Approved Conv. Fire Panel ESEN-R-(x)MAR

The Esento Marine 2-4 panel is available with 2 or 4 conventional zones. The programming features include programmable muster alarm zones and a false alarm management mode.

As standard, all Esento Marine 2-4 panels provide two monitored sounder circuits, Fire & Fault VFCO relays and inputs to ring and pulse the sounder circuits.

A seperate interface card is also available to connect the panel to a ships voyage data recorder system.

The panels are supplied with a 1.25 amp internal power supply module. This module complies with the requirements of EN54-4 : 1988 and provides temperature compensated battery management charging.

Esento Marine panels are approved to European standards EN54-2 & 4, Fire Detection and Alarm Systems – Control & Indicating Equipment.

MAIN FEATURES

- 2 or 4 zones
- Activate controls via keyswitch or code entry
- Compatible with Apollo Orbis Marine detectors
- Integral detector removal monitoring
- Earth fault monitoring
- 1.25 Amp switch mode power supply Nom 27V DC
- 2 monitored sounder outputs
- 2 Aux C/O relays (1 x Fire) (1 x Fault). voltage free
- Class change I/P
- Alert I/P
- Fire & fault switched-ve outputs
- False alarm mode
- Muster alarm feature
- Test mode, with or without sounders
- Disable zones, sounder O/Ps & aux O/Ps
- Alarm load, 800mA shared between all sounder outputs
- All sounder circuits are fused @ 500mA with resettable fuses.

TECHNICAL SPECIFICATION

Enclosure	1.2 mm Mild Steel IP30. Colour ref: MW334E interpon powder coat
Cable Entry	via 20 mm knockouts located in the top and rear of the cabinet
Dimensions	Back box: 300 x 250 x 80 mm (W x H x D) Lid: 308 x 260 x 23 mm (W x H x D)
Mains Supply	1.25 A internal switch mode power supply, norm 27 Vdc
Battery Capacity	2 x 3.2 Ah 12 V VRSLA
Detection Zones	2 or 4, EOL = 4K7R
On Board Relays	1 x Fire, 1 x Fault, 3 A, 30 V Volt free changeover
Switch Inputs	Class change & alert (pulsing)
False Alarm Mgmnt	Type A dependancy mode, approved by LPCB
Muster Alarm	Selectable per zone

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SPECIFICATION

Electrical Specification Inputs & Outputs - MAIN PCB		
PSU @ output	Power supply voltage control line.	For temperature compensation control.
PSU Input + -	28vdc supply input. Diode protected for reversal and independent short circuit. Max current 3 amps.	Max input current 3 amps. Input voltage 22vdc to 32vdc.
28v+, 0v- 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
Outputs; FR, FLT	Switched -ve voltage outputs for relay control.	Overload voltage protected to 52vdc. Current limited 680R. Max load = 40mA
Inputs; CC, PUL	Switched -ve inputs, connect to 0v to trigger. Max input voltage = 28vdc. Non latching, max resistance 100R.	Protected via 10K Ohm impedance, 3v6 zener diode.
SNDR 1 - 2	28vdc polarity reversal monitored sounder outputs to fire alarm devices. 4K7 Ohm 5% 0.25W EOL resistor.	Monitoring current limit 28mA, fused @ 500mA. Typical max load 22 devices @ 18mA each per circuit. Ensure 0.9A is not exceeded.
Zone 1 - 4	Fire alarm zone circuits. Conventionally wired detection circuit. 4K7 Ohm 5% 0.25W EOL resistor. Max 32 detectors per zone.	Maximum detector load 3.5mA per zone. Typical qty 40-50 Apollo marine optical detectors. Note:- max 32 detectors with line continuity diode bases fitted.

Power Supply Specification		
Mains supply	230vac +10% / -15% 50Hz max current 1A	
Mains supply fuse	2 Amp (T2A 250V)	Not accessible for servicing. Internal to switch mode power unit
Internal power supply rating	1.5 Amps total including battery charging	Maximum load shared between outputs = 0.9A
Power supply output voltage	19.92 - 30.09vdc	Tolerance +/- 0.1%
Maximum continuous load for battery standby (ImaxA)	ImaxA = 575mA	ImaxB not specified
Minimum current drawn by panel (example)	4 Zone I min = 85mA	2 Zone I min = 75mA
Maximum ripple	120 mV p-p	Supply and charger fault monitored
Min/max battery size and type	2 x 3.2Ahr 12volt VRLA Use Yuasa NP range batteries	Other equivalent batteries may be used but have not been tested for the purposes of EN54 approval.
Battery charging voltage	27.3 vdc nominal at 20 deg C	Temperature compensated
Battery charging output current	1.5A PSU 630mA Current limited 10 Ohms	
Battery high impedance fault (Batt Hi Z)	Resistance > 1 Ohm	1 hour reporting time
Max current drawn from batteries	1.5 Amps with main power source disconnected. Battery fuse 3A LBC 20mm.	

Quiescent and Alarm Current Details for Standby Battery Calculations		
Models	**Standby Current**	**Alarm Current**
ESEN-2MAR	75mA	116mA
ESEN-4MAR	85mA	133mA

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