

Precept Marine Control Panel Application Guide

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The Precept Marine range of panels are approved to BS5839 Part 4 1988 by Lloyd's Register for marine and offshore applications in environment categories ENV1 and ENV2. [Certificate number 99/00089].

The Precept range of panels are approved to BS5839 Part 4 1988 by the Loss Prevention Certification Board, certificate numbers 018a, 018b and 018s.

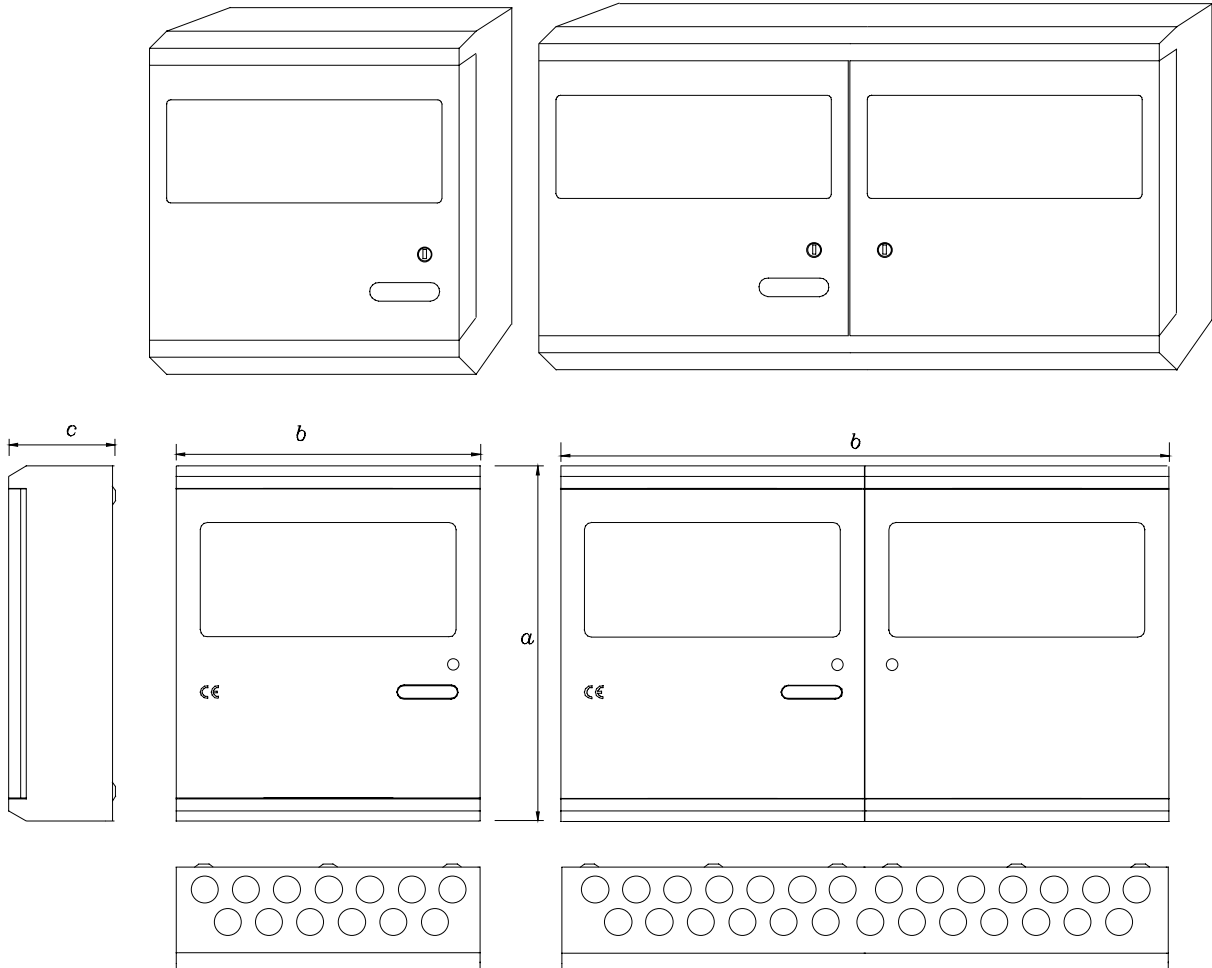
For full details, refer to the current edition of the Loss Prevention Certification Board 'List of Approved Products and Services'.

1.0 Cabinet Specifications

1.1 Surface Cabinet

All cabinets are manufactured from 18 SWG sheet steel and finished in satin texture epoxy powder stove paint. Top entry grommets and rear entry knockouts are provided.

Cabinet colour: RAL7035 Textured (light grey)



	2-4 zone	8 zone	16 zone	32 zone	Repeaters*
Protection Plugs	7 off	13 off	13 off	27 off	13 off
a	310mm	370mm	445mm	445mm	370mm
b	290mm	325mm	405mm	811mm	325mm
c	106mm	106mm	109mm	109mm	106mm

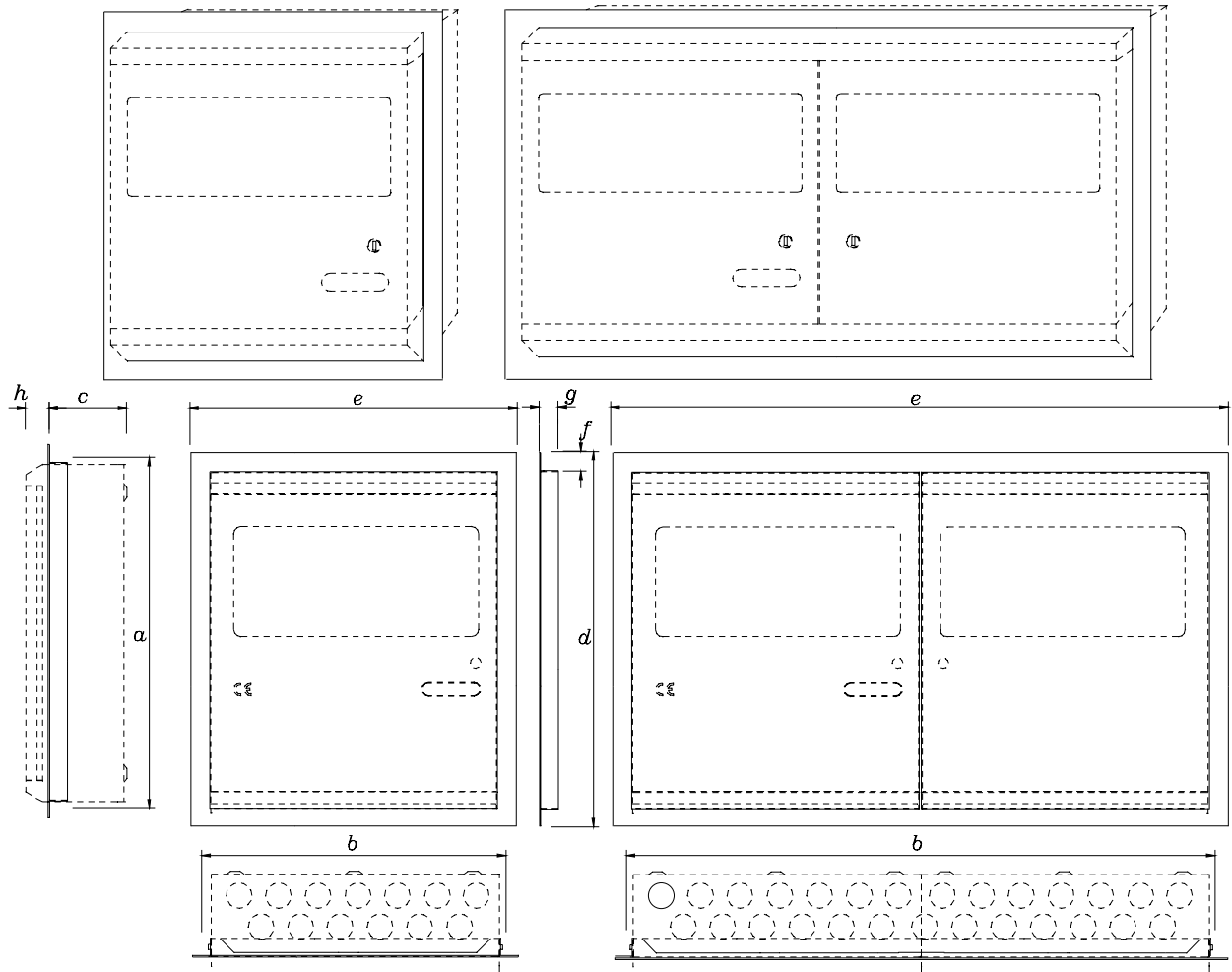
*Note: Repeater Panel Is Not Approved.

1.1.1 Surface Panel Order Codes & Descriptions

Part No	Description
2500/774	Precept Marine 2 zone control panel - Lloyd's/LPCB approved; size - 310h x 290w x 100d
2500/775	Precept Marine 4 zone control panel - Lloyd's/LPCB approved; size - 310h x 290w x 100d
2500/776	Precept Marine 8 zone control panel - Lloyd's/LPCB approved; size - 370h x 325w x 100d
2500/777	Precept Marine 16 zone control panel - Lloyd's/LPCB approved; size - 445h x 405w x 105d
2500/778	Precept Marine 32 zone control panel - Lloyd's/LPCB approved; size - 445h x 810w x 105d

1.2 Semi Flush Bezels

The semi flush bezel locates to the rear of the bevelled edge of the back box, leaving the bevelled edge and door raised out from the wall. It is finished in the same colour as the back box and is fitted by means of pinch bolts, thus avoiding the need to drill the cabinet.



		2-4 zone	8 zone	16 zone	32 zone	Repeaters*
Hole height	<i>a</i>	315mm	375mm	450mm	450mm	375mm
Hole width	<i>b</i>	295mm	330mm	410mm	815mm	330mm
Hole depth	<i>c</i>	76mm	76mm	79mm	79mm	76mm
Max bezel height	<i>d</i>	375mm	435mm	510mm	510mm	435mm
Max bezel width	<i>e</i>	353mm	388mm	468mm	874mm	388mm
Bezel overlap	<i>f</i>	30mm	30mm	30mm	30mm	30mm
Bezel depth	<i>g</i>	30mm	30mm	30mm	30mm	30mm
Door protrusion	<i>h</i>	30mm	30mm	30mm	30mm	30mm

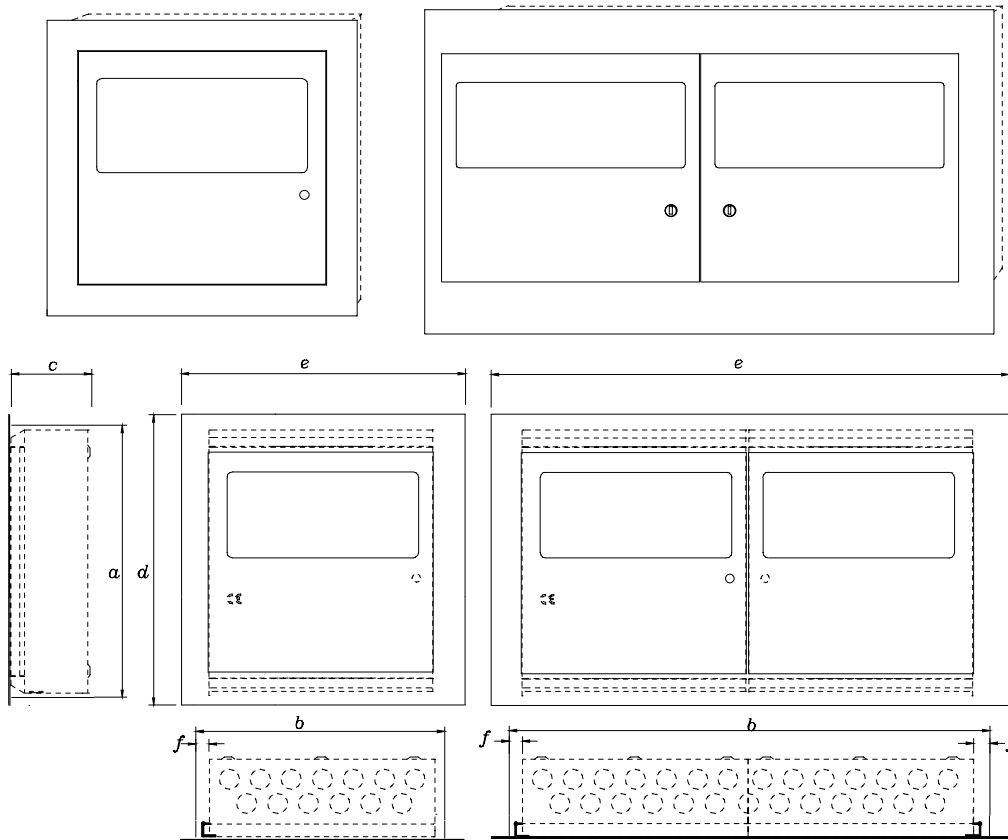
*Note: Repeater Panel Is Not Approved.

1.2.1 Semi-flush Bezel Order Codes & Descriptions

Part No	Description
2501/120	Semi-flush bezel to fit Precept Marine 2 / 4 zone control panels
2501/121	Semi-flush bezel to fit Precept Marine 8 zone control panel
2501/122	Semi-flush bezel to fit Precept Marine 16 zone control panel
2501/123	Semi-flush bezel to fit Precept Marine 32 zone control panel

1.3 Fully Flush Bezels

The fully flush option is achieved by fixing a flat bezel/door assembly to the standard back box, replacing the standard door. Available in brass, stainless steel (polished or brushed), or painted to specifications. The panel comes with assembly already fitted (preferred) but can if necessary be supplied for later site fitting.



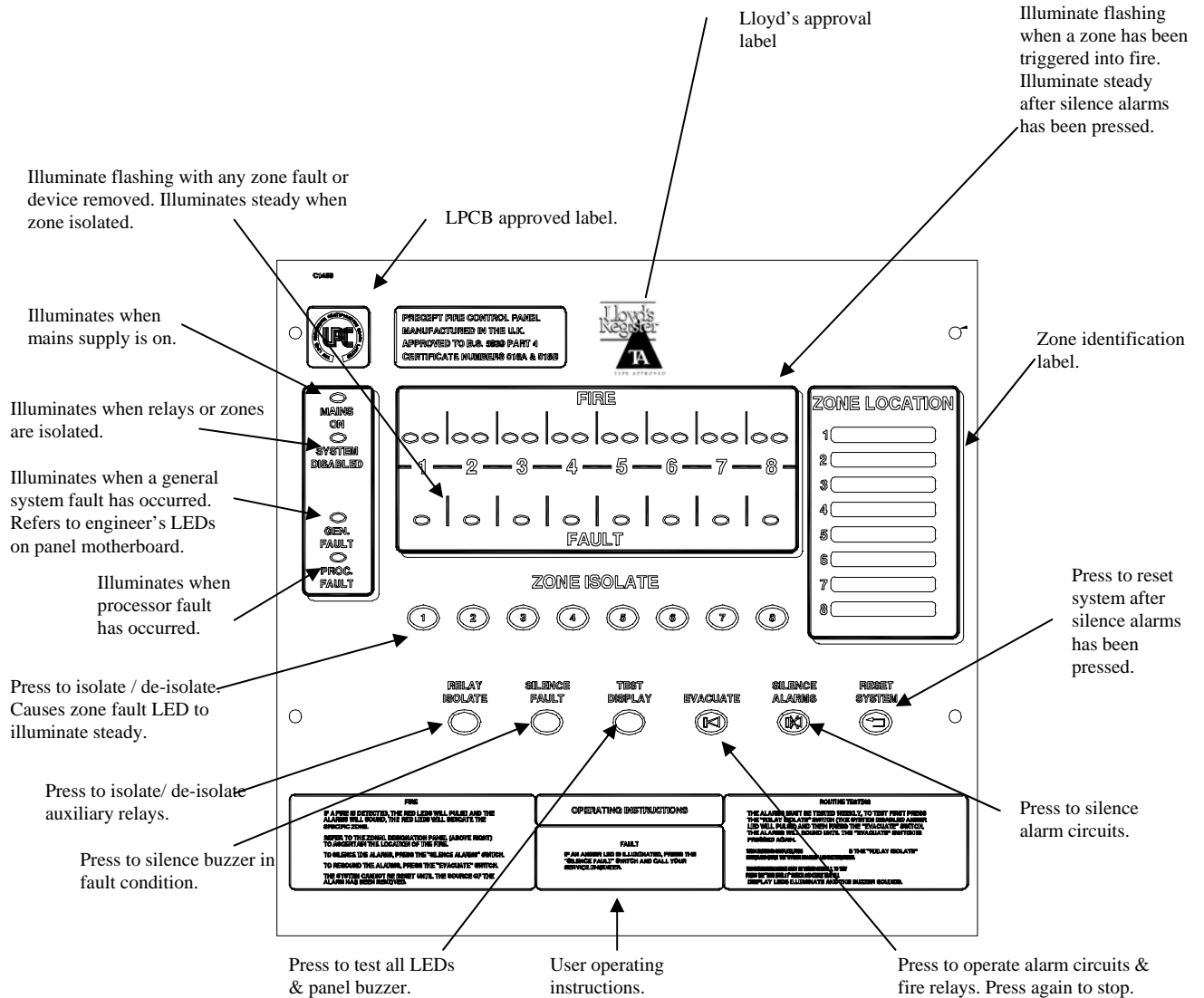
		2-4 zone	8 zone	16 zone	32 zone
Hole height	<i>a</i>	315mm	375mm	450mm	450mm
Hole width	<i>b</i>	320mm	345mm	425mm	851mm
Hole depth	<i>c</i>	106mm	106mm	109mm	109mm
Bezel height	<i>d</i>	349mm	411mm	485mm	483mm
Bezel width	<i>e</i>	388mm	423mm	507mm	887mm
Hinge protrusion	<i>f</i>	20mm	20mm	20mm	20mm

1.3.1 Fully-flush Bezel Order Codes & Descriptions

Part No	Description
2501/130	Fully-flush painted bezel to fit 2/4 zone panels (painted to customer's specification)
2501/131	Fully-flush stainless steel bezel to fit 2/4 zone panels (brushed or polished)
2501/132	Fully-flush brass bezel to fit 2/4 zone panels (brushed or polished)
2501/133	Fully-flush painted bezel to fit 8/12 zone panels (painted to customer's specification)
2501/134	Fully-flush stainless steel bezel to fit 8/12 zone panels (brushed or polished)
2501/135	Fully-flush brass bezel to fit 8/12 zone panels (brushed or polished)
2501/136	Fully-flush painted bezel to fit 16 zone panel (painted to customer's specification)
2501/137	Fully-flush stainless steel bezel to fit 16 zone panel (brushed or polished)
2501/138	Fully-flush brass bezel to fit 16 zone panel (brushed or polished)
2501/139	Fully-flush painted bezel to fit 32 zone panel (painted to customer's specification)
2501/140	Fully-flush stainless steel bezel to fit 32 zone panel (brushed or polished)
2501/141	Fully-flush brass bezel to fit 32 zone panel (brushed or polished)

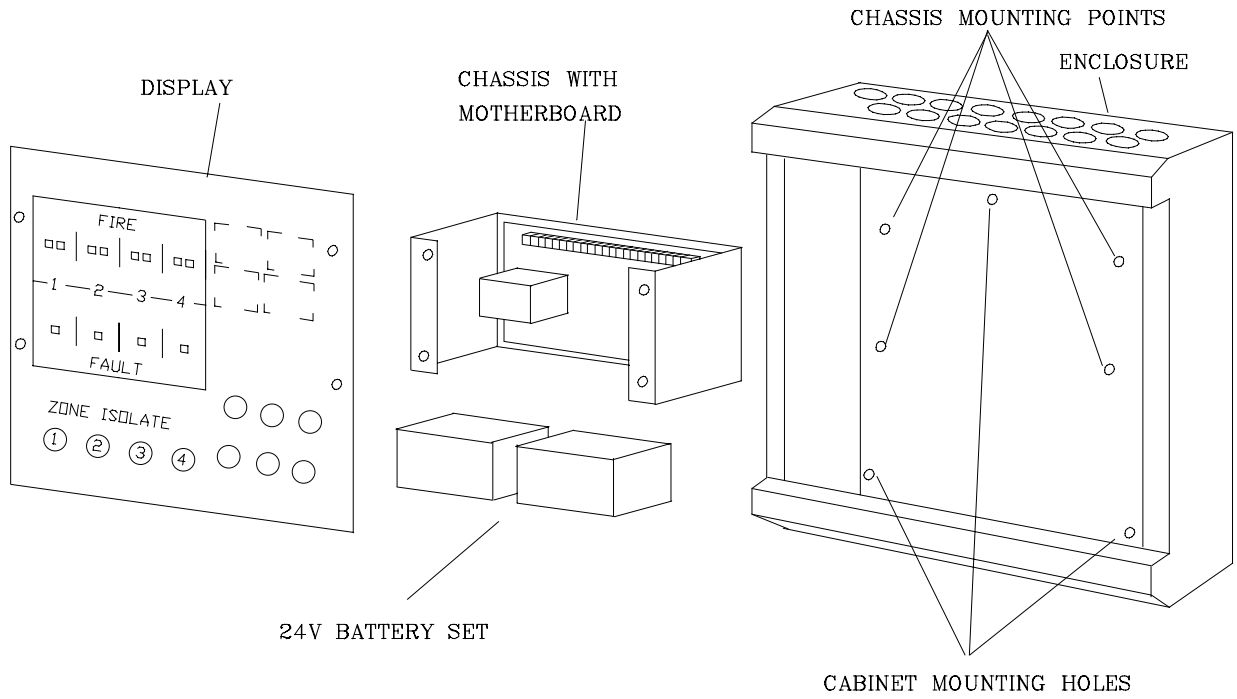
2.0 Panel Hardware Specifications

2.1 User Controls and Indications

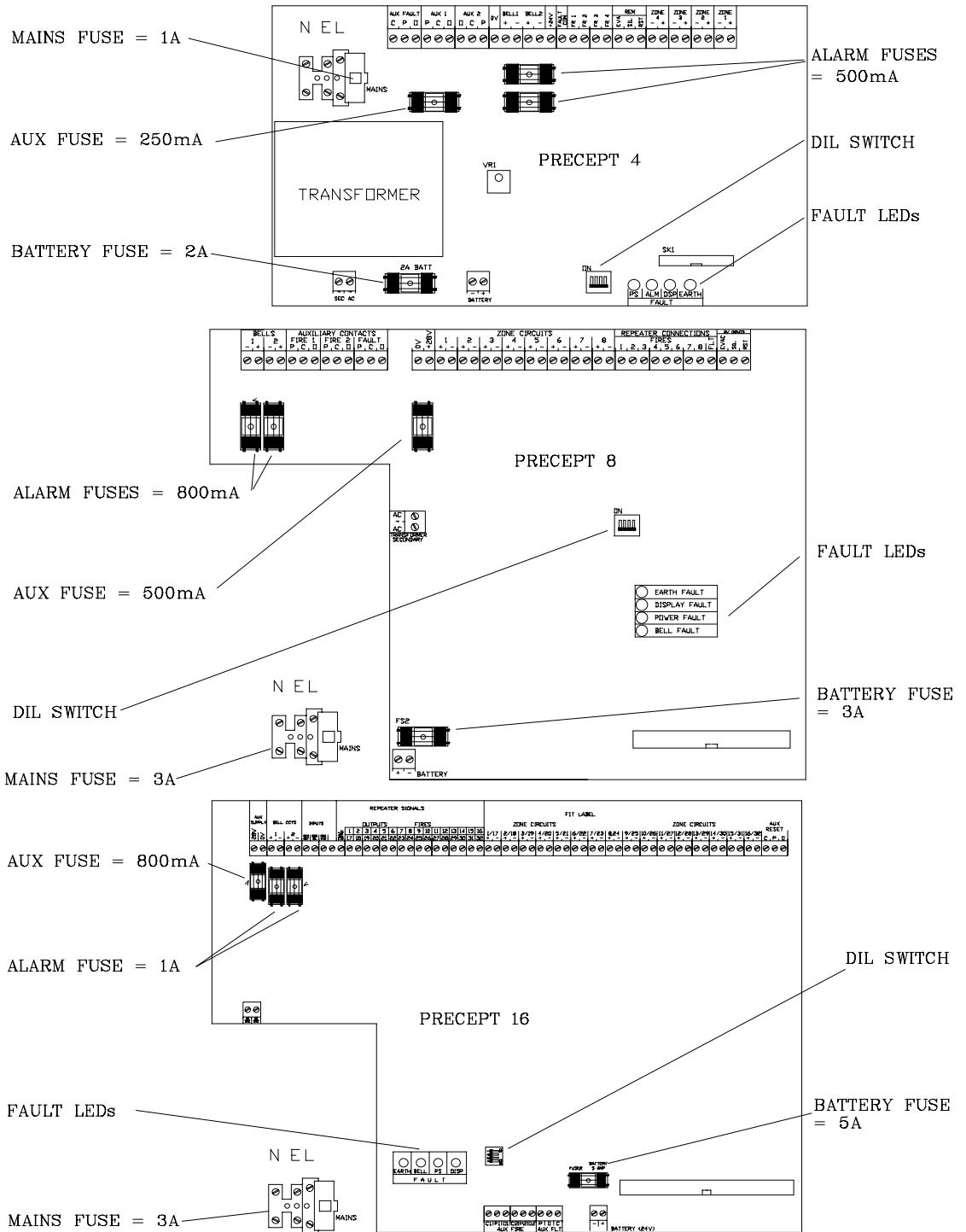


2.2 Engineer Facilities

2.2.1 Mechanical Assembly Illustration (door not shown for clarity)



2.2.2 Motherboards Showing Essential Engineering Components



3.0 Panel Configuration

The Engineer's Controls are located on the bottom of the control board. They are in the form of a four way DIL switch. The function of the switches is described below:

- Switch 1 - Pulsing or continuous alarms
- Switch 2 - Non-latching zone (zone 1) (Disallowed under BS5839 part 4) Does not operate fire relays
- Switch 3 - One man test facility
- Switch 4 - Operates the processor fault counter in accordance with BS5839 part 4 (8, 16 and 32 zone panels only)
or Disable aux. fire relay on evacuate (4 zone panel only)
- Switch 2 & 4 - Shop Unit Specification (4 zone panel only)

With switches 2 & 4 ON together, operation of zone 1 will be non-latching - indication only (i.e. no alarm sounding). Fire buzzer will operate and the aux. fire relays will function as above.

3.1 Processor Program Changes

NOTE: Processor programme changes will invalidate approval status.

The microprocessor can be re-programmed to provide special functions. All the functions available, either via the user controls or the terminal connections can be accessed or ignored by the main processor. Some typical examples are listed below: -

- Zone 1 non-latch indication only, no alarms to operate
- Auxiliary fire relays to reset upon "Silence Alarms"
- Zones 7-19 no alarms but latching inputs
- Extended reset delay - 15 seconds
- All zones non-latching - pulsed alarms, auxiliary relays to operate
- Zones 1,2 non-latching - auxiliary relays to operate but no alarms
- Zones 1,2,3 non-latching - no alarms or auxiliary relays to operate

4.0 Technical Specifications

4.1 Precept Marine 2 zone control panel

Max. power supply output	1.5A
Mains failed current - alarm	175mA (plus alarm load)
Mains failed current - standby	65mA
Integral charger output	500mA
Auxiliary 24V supply	250mA
Alarm circuit output	2 at 500mA each
Battery size	2 x 12V 3.2AH sealed lead acid
Weight (excluding batteries)	5 kg

4.2 Precept Marine 4 zone control panel

Max. power supply output	1.5A
Mains failed current - alarm	190mA (plus alarm load)
Mains failed current - standby	80mA
Integral charger output	500mA
Auxiliary 24V supply	250mA
Alarm circuit output	2 at 500mA each
Battery size	2 x 12V 3.2AH sealed lead acid
Weight (excluding batteries)	5 kg

4.3 Precept Marine 8 zone control panel

Max. power supply output	3.0A
Mains failed current - alarm	270mA (plus alarm load)

Mains failed current - standby	150mA
Integral charger output	1A
Auxiliary 24V supply	500mA
Alarm circuit output	2 at 800mA each
Battery size	2 x 12V 6.2AH sealed lead acid
Weight (excluding batteries)	8kg

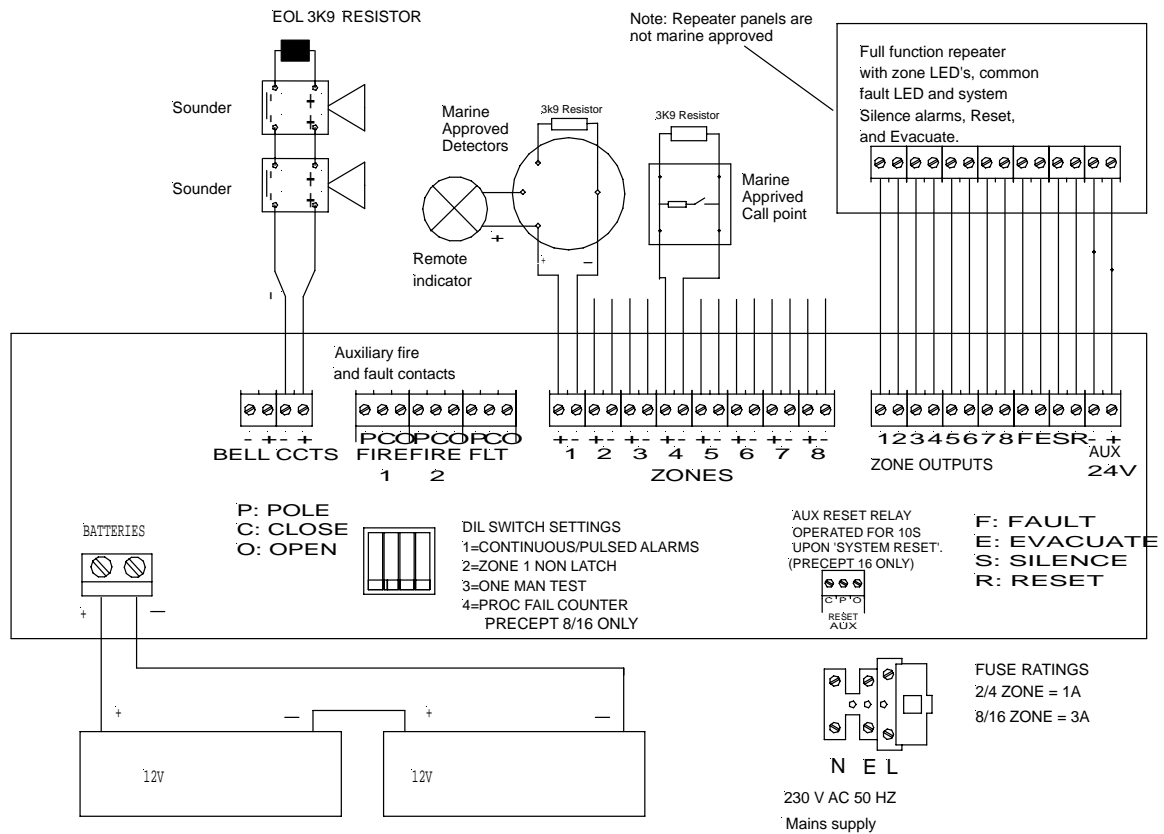
4.4 Precept Marine 16 zone control panel

Max. power supply output	5A
Mains failed current - alarm	355mA (plus alarm load)
Mains failed current - standby	230mA
Integral charger output	1A
Auxiliary 24V supply	800mA
Alarm circuit output	2 at 1A each
Battery size	2 x 12V 6.2AH sealed lead acid
Weight (excluding batteries)	11kg

4.5 Precept Marine 32 zone control panel

Max. power supply output	10.0A (2 transformers)
Mains failed current - alarm	710mA (plus alarm load)
Mains failed current - standby	460mA
Integral charger output	2 at 1A each
Auxiliary 24V supply	2 at 800mA each
Alarm circuit output	4 at 1A each
Battery size	4 x 12V 6.2AH sealed lead acid
Weight (excluding batteries)	22kg

4.6 Typical Terminal Wiring Schematic



Note:- This is a schematic representation only and not a PCB layout drawing.

5.0 Battery Sizes

Battery Rating	Battery Size
3.2AH battery 12V	134 length x 67 wide x 64 high
6.2AH battery 12V	151 length x 65 wide x 97.5 high
12AH battery 12V	151 length x 98 wide x 97.5 high
15AH battery 12V	181 length x 98 wide x 167 high
38AH battery 12V	166 length x 175 wide x 125 high
65AH battery 12V	350 length x 166 wide x 174 high

6.0 Precept Panel Compatible Zone Devices

Notes: *For marine and offshore use, these control panels shall only be used with compatible LR Type Approved zone devices.*

The Precept Marine panel is designed to operate with the following devices.

Manufacturer	Part no.	Description	Maximum [Combined] Quantity Per Zone
Apollo	55000-200MAR	Series 60 ionisation detector	20
Apollo	55000-210MAR	Series 60 integrating ion detector	20
Apollo	55000-100MAR	Series 60 Grade 1 heat detector	20
Apollo	55000-101MAR	Series 60 Grade 2 heat detector	20
Apollo	55000-102MAR	Series 60 Grade 3 heat detector	20
Apollo	55000-103MAR	Series 60 Range 1 heat detector	20
Apollo	55000-104MAR	Series 60 Range 2 heat detector	20
Apollo	55000-300MAR	Series 60 optical detector	20
Apollo	45681-200MAR	Series 60 mounting base	20
Hochiki	SLR-EM	CDX marine optical smoke detector	20
Hochiki	SIJ-EM	CDX marine ionisation smoke detector	20
Hochiki	DCD-1EM	CDX marine combined heat detector Grade 1	20
Hochiki	YBN-R/4M	CDX marine mounting base	20
Hochiki	YBO-R/5M	CDX marine mounting base with Rem Ind	20
Hochiki	MBB-1	CDX marine back box	20
KAC	WR2061-120-470	Indoor Class Call Point with 470 Ohm series monitoring resistor and LED	Unlimited
KAC	WR2072-470	Indoor Class Call Point with 470 Ohm series Monitoring resistors and LED	Unlimited
KAC	WR4061-120-470	Waterproof Class Call Point with 470 Ohm series monitoring resistor and LED	Unlimited
KAC	WR4072-470	Waterproof Class Call Point with 470 Ohm series monitoring resistor	Unlimited
KAC	WRZ2/4072	Class 4000 for use in hazardous areas with normally open, closing on alarm contacts with 6 Watt series monitoring resistor [470 Ohm preferred value]	Unlimited
KAC	WRZ2/4010	Class 4000 for use in hazardous areas with normally open, closing on alarm contacts with 6 Watt series monitoring resistor and 0.75 Watt end of line resistor. [3K9 Ohm preferred value]	Unlimited

All call points must have a 470-680 ohm resistor fitted to them.

Appendix

i Other Relevant Documentation

Sales Literature
Installation & Commissioning Manual
Wiring Recommendations
Fault Finding Guide
User Instructions
After-Sales Technical Support Booklet