Leading in Fire Detection Control Systems
Established over 24 years ago, Kentec Electronics Ltd. has evolved into one of the world’s leading independent fire control panel manufacturers. Over the years the Kentec name has become synonymous with World class product, great service and excellent support. Based in the UK, Kentec is a truly global supplier, exporting control equipment to over 70 countries Worldwide, and in many different languages.

In keeping with our philosophy of in-house production we have invested heavily in state of the art manufacturing equipment for all areas of the business, this has allowed us to react quickly to customer requirements and market trends whilst maintaining our position at the forefront of Control panel design & manufacture.

Kentec offers the most comprehensive range of conventional, analogue addressable fire detection and extinguishant control panels available. Our custom build service is also highly regarded in the industry and utilises our expertise in control panel technology to design and build high quality product to exacting customer specifications. More recently we have further increased our range and launched our Marine approved range of Analogue Addressable control panels.

Kentec believes that the quality of our products should be paramount; rigorous testing procedures are employed at every stage of the manufacturing process to ensure that all equipment is supplied to the highest standards. For this reason we are confident in offering an industry leading 3 years warranty on all product that we supply. Many of Kentec’s products are tested and approved to international standards such as EN54, EN12094, UL and FM.

Kentec offers first rate technical support facilities and a dedicated team of highly trained personnel provide direct telephone assistance; this is backed up by regular technical e-mail bulletins, on-site and off-site customer specific training.

Our management systems are ISO 9001:2008 approved and our policy for environmental awareness was officially recognized in 2007 when we gained our ISO 14001 certification from BSI. In 2004 Kentec achieved ‘Investors in people’ accreditation. In 2008 Kentec was proud to be awarded the Royal Warrant of Appointment by Her Majesty the Queen.
Analogue Fire Detection Control Equipment

Pages 6-41
Single or Two Loop Analogue Addressable Control Panel

**Features**

- 16 zonal LED indicators
- 2 programmable sounder circuits
- 5 programmable inputs
- 3 programmable relays
- 3A power supply
- Large graphic display
- Real time clock
- Up to 512 additional programmable I/O via Syncro I/O modules *
- Powerful, network wide cause and effects *
- Sensitivity adjustment and Drift Compensation
- Can be networked with Syncro control panels *
- Compatible with Focus and View repeaters *
- Supports Apollo, Argus Vega and Hochiki protocols
- Same look and feel as Syncro range
- Stores 500 last events in event log
- Dial up modem connection available
- Compact, stylish enclosure
- Installer friendly, removable equipment chassis
- Different language and character set variants available
- Fully EN54-2 and EN54-4 compliant
- Printer option * **

* These items not available on Syncro AS Lite panel
** Can be fitted to M3 size enclosure only

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**Product Overview**

- Syncro AS is a versatile range of open protocol fire alarm control panels compatible with existing Syncro fire alarm panel technology.

- Available with one or two detection loops capable of hosting up to 126 devices (Apollo), 240 devices (Argus Vega) or 127 devices (Hochiki). Syncro AS uses leading edge microprocessor based electronics to provide a flexible control system with high reliability and integrity.

- Suitable for all small to medium sized fire detection systems, Syncro AS control panels can be expanded and networked to become part of much larger systems if the need arises, therefore providing a future proof solution for any installation.

- With its large graphical display and ergonomic button and indicator layout, the Syncro AS control panel is simple and straightforward to understand for installers, commissioning engineers and end users alike.

**Config. Features**

- Comprehensive day/night mode facility
- Programmable one touch test mode
- Powerful and versatile cause & effect programming
- Cause & effect wizard including:
  - Cause & effect action
  - Disablement configuration
  - Test mode configuration

---

Model No. #80161M2
Specifications

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Protocol</th>
<th>Zones</th>
<th>Loops</th>
<th>Printer</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A80161M2</td>
<td>Apollo</td>
<td>16</td>
<td>1</td>
<td>No</td>
<td>385 x 310 x 90 *</td>
</tr>
<tr>
<td>A80162M2</td>
<td>Apollo</td>
<td>16</td>
<td>2</td>
<td>No</td>
<td>385 x 310 x 90 *</td>
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<tr>
<td>A80161M3</td>
<td>Apollo</td>
<td>16</td>
<td>1</td>
<td>No</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>A80162M3</td>
<td>Apollo</td>
<td>16</td>
<td>2</td>
<td>No</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>A80161M3P</td>
<td>Apollo</td>
<td>16</td>
<td>1</td>
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<tr>
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<tr>
<td>V80161M2</td>
<td>Argus Vega</td>
<td>16</td>
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<td>V80162M2</td>
<td>Argus Vega</td>
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<td>Argus Vega</td>
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<tr>
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</tr>
<tr>
<td>V80162M3P</td>
<td>Argus Vega</td>
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<tr>
<td>H80161M2</td>
<td>Hochiki</td>
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<td>385 x 310 x 90 *</td>
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<tr>
<td>H80162M2</td>
<td>Hochiki</td>
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<td>2</td>
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<tr>
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<td>Hochiki</td>
<td>16</td>
<td>2</td>
<td>Yes</td>
<td>385 x 520 x 110</td>
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* Flush versions are available to order (See price guide).

Lite Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Protocol</th>
<th>Zones</th>
<th>Loops</th>
<th>Printer</th>
<th>Size (mm)</th>
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<tbody>
<tr>
<td>LA80161M2</td>
<td>Apollo</td>
<td>16</td>
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<td>Argus Vega</td>
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<tr>
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<td>Hochiki</td>
<td>16</td>
<td>1</td>
<td>No</td>
<td>385 x 310 x 90</td>
</tr>
</tbody>
</table>

Technical

Construction
- 1.2mm sheet steel
- Epoxy powder coated
- BS 00 A 05 grey - fine texture
- RAL 7047 light grey - satin
- 110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V)
- 1.6A 250V

Finish
- Power supply DC rating
- Aux 24V supply
- Battery (24 hour standby)
- Fault contact rating
- Fire contact rating
- Alarm contact rating
- Sounder output rating
- Detection loop

Detector protocols
- 9Ah 12V (2 per panel) (non-networked)
- 30V DC 1 Amp
- 30V DC 1 Amp
- 30V DC 1 Amp
- Fused at 1 Amp each
- Fused at 1 Amp each
- 400 milliamp output
- Apollo (S90, XP95, Discovery), Argus Vega or Hochiki ESP
- Apollo (S90, XP95, Discovery), Argus Vega or Hochiki ESP

Printer port
- Serial RS232
- Serial RS485

Serial expansion port
- Serial RS232
- Serial RS485

PC port
- Serial RS232
- RS485 - Up to 64 panels via fully fault tolerant optional network card

Network connection
- RS485 - Up to 64 panels via fully fault tolerant optional network card
- Via Loop Explorer PC utility
- Via Guide or Guide Net systems

Remote Silence input (SIL)
- Switched -ve

Remote fault input (FLT)
- Switched -ve

Remote reset input (RES)
- Switched -ve

Remote alert input (INT)
- Switched -ve

Remote evacuate input (CNT)
- Switched -ve

Download lead
- Standard S187, X187LS economy

Configuration
- Via Loop Explorer PC utility
- Via Guide or Guide Net systems

Modem
- Optional dial up modem for remote diagnostics
  (Can be fitted to M3 size enclosure only)

Options

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>K555</td>
<td>Fault tolerant Network interface card</td>
</tr>
<tr>
<td>K560</td>
<td>16 channel input/output board</td>
</tr>
<tr>
<td>K547</td>
<td>8 way relay extender board</td>
</tr>
<tr>
<td>K546</td>
<td>6 way sounder extender board</td>
</tr>
<tr>
<td>K545</td>
<td>4 way conventional detection zone board</td>
</tr>
<tr>
<td>K556P</td>
<td>Modem module (PSTN) (M3 size enclosure only)</td>
</tr>
<tr>
<td>K232AS</td>
<td>Printer Module (M3 size enclosure only)</td>
</tr>
<tr>
<td>K18002</td>
<td>Retrofit Vision Window Door (M2 size enclosure only)</td>
</tr>
</tbody>
</table>

The manufacturer reserves the right to amend specifications without prior notice.
Analogue Addressable
Fire Control Panels

Features
- 2 or 4 loop versions as standard
  (for 6 - 8 loop versions see DS57 page 10-11)
- Larger versions available (fits 24A/H SLAs)
- Loopless panel option (repeater)
- 0, 16, 48, or 96 zone indicators
- Option for Enable Control keyswitch
- Fully supports Apollo, Argus Vega & Hochiki protocols
- Network up to 64 panels/repeaters
- 4 programmable sounder circuits as standard
- 4 amp power supply to EN54 part 4
- Large graphic display
- In built help and alarm information screens
- Complies with EN54-2/4
- Real time clock
- Supports Apollo, Argus Vega and Hochiki loop powered sounders and beacons
- Supports Apollo Ancillary Base Sounder
- Supports Apollo Intelligent Beam
- Stylish enclosure design
- Soft-touch tactile buttons
- 2 programmable function buttons
- 3 programmable front panel mounted LED’s
- Thermal printer (optional)
- Up to 512 programmable inputs/outputs per panel via 2 wire RS485 serial link (optional)
- Simple Windows® graphical configuration utility

Product Overview
- Available with 2 or 4 detection circuits, each capable of hosting up to 126 devices (Apollo), 240 devices (Argus Vega) or 127 devices (Hochiki). Syncro uses the most advanced microprocessor technology to provide a control system of extremely high integrity.
- Syncro can be configured to suit all types of system, from the most simple, to the highly complex. Its fully integrated and secure network provides an intelligent interface for building control.
- A large area graphic display ensures that information is presented in plain language with detailed extra help available by pressing a ‘help’ button.
- Syncro supports three of the most widely used communication protocols produced by leading fire detector manufacturers and employs daily calibration routines to ensure that the system is always at optimum performance.

Config. Features
- Comprehensive day/night mode facility
- Programmable one touch test mode
- Powerful and versatile cause & effect programming
- Cause & effect wizard including:
  - Cause & effect action
  - Disablement configuration
  - Test mode configuration
**Specifications**

**Finish**
- Colour - lid & box: Epoxy powder coated - BS 00 A 05 grey - fine texture
- Colour - controls plate & labels: RAL 7047 light grey - satin

**Technical**
- 2 or 4 (400mA each) Loops
- 0, 16, 48, or 96 (up to 500 software zones) Zones
- 500 x 355 x 117 Size (mm)

**Options**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K552#</td>
<td>Loop extension card (loops 3 &amp; 4)</td>
</tr>
<tr>
<td>K555</td>
<td>Fault tolerant Network interface card</td>
</tr>
<tr>
<td>K232SYN</td>
<td>Thermal printer kit (for retrofitting to non-printer models)</td>
</tr>
<tr>
<td>K560</td>
<td>16 channel input/output board</td>
</tr>
<tr>
<td>K547</td>
<td>8 way relay extender board</td>
</tr>
<tr>
<td>K546</td>
<td>6 way sounder extender board</td>
</tr>
<tr>
<td>K545</td>
<td>4 way conventional detection zone board</td>
</tr>
<tr>
<td>K556P</td>
<td>Modem module (PSTN)</td>
</tr>
</tbody>
</table>

Flush Syncro Control Panel

- 506mm × 361mm × 130mm
- Bezel extends 15mm in each direction

Note: There is one size for all standard flush Syncro control panels. For the hole size we recommend that you allow 5mm clearance all round.

Flush mount cross section
Syncro

Analogue Addressable Fire Control Panels 6 or 8 Loops

Features
- 6 or 8 loop versions as standard
- 96 zone indicators
- Fully supports Apollo, Argus Vega & Hochiki protocols
- Network up to 32 6 or 8 loop panels
- 8 programmable sounder circuits as standard
- 2 x 4 amp PSU’s to EN54 part 4
- Large graphic display
- In built help and alarm information screens
- Complies with EN54-2/4
- Real time clock
- Supports Apollo, Argus Vega and Hochiki loop powered sounders and beacons
- Stylish enclosure design
- Soft-touch tactile buttons
- 2 programmable function buttons
- 3 programmable front panel mounted LED’s
- Thermal printer (optional)
- Up to 1024 programmable inputs/outputs per panel via 2 wire RS485 serial link (optional)
- Simple Windows® graphical configuration utility
- Wide choice of languages available

Product Overview
- Available with 6 or 8 detection circuits, each capable of hosting up to 126 devices (Apollo), 240 devices (Argus Vega) or 127 devices (Hochiki). Syncro uses the most advanced microprocessor technology to provide a control system of extremely high integrity.
- Syncro can be configured to suit all types of system, from the most simple, to the highly complex. Its fully integrated and secure network provides comprehensive scalability.
- A large area graphic display ensures that information is presented in plain language with detailed extra help available by pressing a ‘help’ button.
- Syncro supports three of the most widely used communication protocols produced by leading fire detector manufacturers and employs daily calibration routines to ensure that the system is always at optimum performance.

Config. Features
- Comprehensive day/night mode facility
- Programmable one touch test mode
- Powerful and versatile cause & effect programming
- Cause & effect wizard including:
  - Cause & effect action
  - Disablement configuration
  - Test mode configuration
### Specifications

**Specifications**

The manufacturer reserves the right to amend specifications without prior notice.

### Technical

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Loops</th>
<th>Enable Control</th>
<th>Zones</th>
<th>Size (mm)</th>
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<tbody>
<tr>
<td>EN#63966S4</td>
<td>6</td>
<td>No</td>
<td>96</td>
<td>500W x 650H x 137D</td>
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<td>ENS#63966S4</td>
<td>6</td>
<td>Yes</td>
<td>96</td>
<td>500W x 650H x 137D</td>
</tr>
<tr>
<td>EN#63968S4</td>
<td>8</td>
<td>No</td>
<td>96</td>
<td>500W x 650H x 137D</td>
</tr>
<tr>
<td>ENS#63968S4</td>
<td>8</td>
<td>Yes</td>
<td>96</td>
<td>500W x 650H x 137D</td>
</tr>
</tbody>
</table>

'#: replace with 'A' for Apollo protocol, '
'V' for Argus Vega protocol or 'H' for Hochiki protocol.

For fitted printer add 'P' after stock code.

### Options

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K552#</td>
<td>Loop extension card (loops 7 &amp; 8)</td>
</tr>
<tr>
<td>K232SYN</td>
<td>Thermal printer kit (for retrofitting to non-printer models)</td>
</tr>
<tr>
<td>K560</td>
<td>16 channel input/output board</td>
</tr>
<tr>
<td>K547</td>
<td>8 way relay extender board</td>
</tr>
<tr>
<td>K546</td>
<td>6 way sounder extender board</td>
</tr>
<tr>
<td>K545</td>
<td>4 way conventional detection zone board</td>
</tr>
<tr>
<td>K556P</td>
<td>Modem module (PSTN)</td>
</tr>
</tbody>
</table>

'#: replace with 'A' for Apollo protocol, '
'V' for Argus Vega protocol or 'H' for Hochiki protocol.
Analogue Addressable
Fire Control Panel Repeaters

Features
- 0, 16, 48, or 96 zone indicators
- Network up to 64 panels/repeaters
- 4 amp power supply to EN54 part 4
- Large graphic display
- In-built help and alarm information screens
- Complies with EN54-2
- Real time clock
- Stylish enclosure design
- Soft-touch tactile buttons
- 2 programmable function buttons
- 3 programmable front panel mounted LED’s
- Thermal printer (optional)
- Up to 512 programmable inputs/outputs per panel via 2 wire RS485 serial link (optional)
- Simple Windows graphical configuration utility

Product Overview
- Syncro Response is a full function repeater panel used to compliment the Syncro control panel range. Syncro Response uses the most advanced microprocessor technology to provide a control system of extremely high integrity.
- Syncro Response can be configured to suit all types of system, to provide selectable event reporting and controls from each panel on the network.
- A large area graphic display ensures that information is presented in plain language with detailed extra help available by pressing a “help” button.
- Syncro networks support three of the most widely used communication protocols used by leading fire detection manufacturers.

Config. Features
- Programmable one touch test mode
- Powerful and versatile cause & effect programming
- Cause & effect wizard including:
  - Cause & effect action
  - Disablement configuration
  - Test mode configuration

Model No. #6196003
Specifications

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Loops</th>
<th>Zones</th>
<th>Size (mm)</th>
<th>Construction</th>
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</thead>
<tbody>
<tr>
<td>K6100003</td>
<td>0</td>
<td>0</td>
<td>500 x 355 x 117</td>
<td>All steel enclosure</td>
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<tr>
<td>K6116003</td>
<td>0</td>
<td>16</td>
<td>500 x 355 x 117</td>
<td>All steel enclosure</td>
</tr>
<tr>
<td>K6148003</td>
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<td>0</td>
<td>96</td>
<td>500 x 355 x 117</td>
<td>All steel enclosure</td>
</tr>
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</table>

Flush versions are available to order.
For fitted printer add 'P' after stock code

Options

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K232SYN</td>
<td>Thermal printer kit</td>
</tr>
<tr>
<td></td>
<td>(for retrofitting to non printer models)</td>
</tr>
<tr>
<td>K560</td>
<td>16 channel input/output board</td>
</tr>
<tr>
<td>K547</td>
<td>8 way relay extender board</td>
</tr>
<tr>
<td>K546</td>
<td>6 way sounder extender board</td>
</tr>
<tr>
<td>K545</td>
<td>4 way conventional detection zone board</td>
</tr>
<tr>
<td>K556P</td>
<td>Modem module (PSTN)</td>
</tr>
</tbody>
</table>

Technical

- Epoxy powder coated
- BS 00 A 05 grey - fine texture
- RAL 7047 light grey - satin
- 0, 16, 48, or 96
- 240 x 64 pixels graphic LCD
- Volt free 1 Amp 30V DC
- Volt free 1 Amp 30V DC
- Volt free 1 Amp 30V DC
- Volt free 1 Amp 30V DC
- Fused at 500mA
- 5 Amp self-resetting polyfuse
- 20mm 3 Amp
- -5 to +50 deg. C
- To 95% (non-condensing)
- 110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V)
- 12V 12Ah (2 per panel)
- Individual for each input selectable up to 2 minutes
- Individual 2-stage to 10 minutes per stage
- Programmable to carry out any cause & effect, disablement or test action
- Red/yellow/green to indicate any action
- 40 column thermal
- $187 (standard) or X187LS (economy)

Note: Syncro Response is supplied complete with S555 network interface card fitted.

Note: If this panel is to be fitted to an existing system the main panel must be also be fitted with and S555 network interface card to enable communications. 6 & 8 loop panels have a network card fitted as standard.
Network LCD Repeaters

Features
- Large graphic display
- Simple connection to Syncro network
- 24V DC powered (230V AC available)
- Small attractive enclosure
- Configurable to display all or any events
- Simple to install
- Volt free Alarm, Fire and Fault contacts
- Up to 63 repeaters can be connected to a panel
- Focus+ with full controls has the following extra buttons:
  - Silence Alarm
  - Resound Alarm
  - Reset

Product Overview
- This simple and attractive repeater panel can be connected to any point on a Syncro network to provide additional display points as needed.
- Using the same large format graphics display as the main control panel ensures that a clear and concise indication is given at all times.
- Ideal for additional building entrances, security desks or nurses stations this unit provides an economical alternative to a full function repeater panel. (Syncro Response) The repeater also acts as a network booster and can be used to extend cable runs beyond the specified lengths as required.

Focus+ Model No. K691000M1
Focus Model No. K69000M1

Example of a Syncro high integrity network
Focus Units

<table>
<thead>
<tr>
<th>Product Code</th>
<th>PSU</th>
<th>Weight</th>
<th>Build</th>
<th>Size (mm)</th>
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</thead>
<tbody>
<tr>
<td>K68000M1</td>
<td>-</td>
<td>2.5kg</td>
<td>Surface</td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K69000M1</td>
<td>750mA</td>
<td>4.0kg</td>
<td>Surface</td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K68000F1</td>
<td>-</td>
<td>2.5kg</td>
<td>Semi Flush</td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K69000F1</td>
<td>750mA</td>
<td>4.0kg</td>
<td>Semi Flush</td>
<td>330 x 255 x 90</td>
</tr>
</tbody>
</table>

Focus+ Units

<table>
<thead>
<tr>
<th>Product Code</th>
<th>PSU</th>
<th>Weight</th>
<th>Build</th>
<th>Size (mm)</th>
</tr>
</thead>
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<td>Surface</td>
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<tr>
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<td>750mA</td>
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<td>Surface</td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K681000F1</td>
<td>-</td>
<td>3.5kg</td>
<td>Semi Flush</td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K691000F1</td>
<td>750mA</td>
<td>4.0kg</td>
<td>Semi Flush</td>
<td>330 x 255 x 90</td>
</tr>
</tbody>
</table>

Technical

- **Construction**: 1.2mm sheet steel
- **Finish**: Epoxy powder coated
- **Colour - lid & box**: BS 00 A 05 grey - fine texture
- **Colour - controls plate & labels**: Ral 7047 light grey - satin
- **Input voltage (24V DC model)**: 21V DC - 30V DC
- **Input voltage (230V AC model)**: 230V AC +10%/-15%
- **Current consumption**: 80mA at 24V DC (in fault condition)
- **Alarm current**: 100mA at 24V DC
- **Alarm contact rating**: 30V DC 1 Amp max.
- **Fire contact rating**: 30V DC 1 Amp max.
- **Fault contact rating**: 30V DC 1 Amp max.
- **Display**: 240 x 64 pixel graphic LCD
- **Indicators**: 5mm high brightness LED
- **Battery Size**: 2.3Ah 12V (2 per panel)
- **Communications**: Syncro system network protocol only
- **Cable length**: 1200 metres to adjacent nodes
- **Network cable type**: Belden 9271, Belden 9860, FP200 Gold
- **Operating temperature**: -5°C to +40°C

**NOTE**: An K555 network card is required in the Syncro/Syncro AS panel in order to communicate with these products. 6 - 8 loop panels have a network card fitted as standard.
Local LCD Control
Panel Repeater

Features
- Up to 15 annunciators can be connected to each Syncro, Syncro Response or Syncro AS fire control panel.
- Large liquid crystal display (240 x 64 pixels)
- High brightness LED indications
- Internal sounder
- Replicates all Syncro panel controls
- Simple, two-wire serial connection
- Small, Syncro style enclosure
- Removable electronics for easy installation
- 24V DC or 230V AC power options
- Low power consumption
- Multi language options
- Connection monitored by Syncro fire control panel

Product Overview
- Designed and manufactured to the highest standards in a quality controlled environment the Syncro VIEW fire alarm annunciator provides a simple and convenient method of extending the controls and indications of the Syncro fire alarm control panel to other locations.
- The large, graphic liquid crystal display and high brightness LED indicators duplicate the indications on the Syncro fire alarm control panel at up to 15 additional locations via a simple, two-wire serial data connection.
- The Syncro VIEW is available in either a 24V DC powered option (which can be powered via an additional 2 cores from the Syncro control panel/local 24V DC supply) or a 230V powered option with local battery back up.
- Syncro VIEW is housed in a small enclosure which is styled similarly to the Syncro control panel and is ideal for installations where a large control panel would be detrimental to décor such as entrance halls.
- Up to 15 Syncro VIEW annunciators can be connected to each control panel on the Syncro network making VIEW ideal where multiple points of indication and/or control are required such as nurses stations or shop units.

Model No. K67750M1
### Equipment

#### Specifications

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>PSU</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K67000M1</td>
<td>Syncro View repeater panel</td>
<td></td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K67750M1</td>
<td>Syncro View repeater panel</td>
<td>750mA</td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K67001M1</td>
<td>Syncro View repeater panel c/w enable keyswitch</td>
<td></td>
<td>330 x 255 x 90</td>
</tr>
<tr>
<td>K67751M1</td>
<td>Syncro View repeater panel c/w enable keyswitch</td>
<td>750mA</td>
<td>330 x 255 x 90</td>
</tr>
</tbody>
</table>

Semi-flush versions are available to order.

### Technical

**Construction**
- 1.2mm Mild steel

**Cable entry**
- 5 x 20mm knockouts in top of box and 5 in rear

**Finish**
- Epoxy powder coated
- BS 00 A 05 grey - fine texture
- Ral 7047 light grey - satin

**Colour - controls plate & labels**
- 230V AC +10% - 15% (20 Watts maximum)

**Mains supply (Mains models only)**
- 21 to 30V DC
- 2 Amp, 20mm

**24V supply (24V DC models only)**
- 28V 750mA total (including battery charging)
- 200 millivolts
- Two 12 Volt 1.9Ah sealed lead acid in series
- 27.6VDC nominal

**Battery charge voltage**
- 200mA maximum
- 200mA, 20mm, glass

**Battery fuse**
- 95mA

**Maximum current draw from batteries**
- 0.03 Amps

**Quiescent current of panel in mains fail**
- 2 core RS485 (Up to 1200 metres total cable length)

**Maximum terminal capacity**
- 2.5mm²
Programmable, LED Indication Panels

Product Overview

- Syncro Ident panels provide a compact and attractive display for up to 24 indications from a Syncro or Syncro AS fire control panel. As with all inputs and outputs on the Syncro system, each indicator is fully programmable to indicate a variety of events as well as being fully programmable via cause and effects to operate in response to logically connected inputs. Each indication defaults to a zonal fire indicator but may be configured via the Loop Explorer configuration utility to operate upon any event type or combination of inputs.

- Requiring only a low current 24V power supply and a 2 core data connection to the fire panel, Syncro Ident panels can be installed quickly and easily to provide supplementary information on the status of the fire alarm system with the minimum of cost and effort.

- The compact, slimline enclosure is unobtrusive and is ideal for mounting in locations where a larger control and indication unit would be unsuitable.

- Each indication has a dedicated field for customized text to provide a concise description of the indication.

- Multiple Syncro Ident panels can be connected to the Syncro serial bus to provide a diverse range of indications at multiple locations.

Features

- 8 and 24 LED versions available as standard
- Large versions available to special order
- Up to 16 x 24 way Syncro Ident can be connected to each fire panel
- Programmable flashing or steady states
- Red, yellow or green indications/ options
- Common Fire, Fault and Disabled indication
- Customisable label identification tags
- Buzzer with silence control and re-sound
- Lamp test control
- Low power 24V DC supply
- Connects to 2 wire Syncro RS485 data bus
- Multiple language options

Model No. K6524L2
Specifications

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>No. of LEDs</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K6508L2</td>
<td>8</td>
<td>385 x 310 x 60</td>
</tr>
<tr>
<td>K6524L2</td>
<td>24</td>
<td>385 x 310 x 60</td>
</tr>
</tbody>
</table>

Technical

- Construction: 1.2mm mild steel
- Finish: Epoxy powder coated
- Colour - lid & box: BS 00 A 05 grey - fine texture
- Colour - controls plate & labels: RAL 7047 light grey - satin
- LED colours: Red, yellow or green
- Supply Voltage: 18 to 30V DC
- Data Connection: RS485 Syncro comms bus (Max 1200 metres)

Examples of Syncro Ident panel used to provide supplementary indications from the fire control panel:

Syncro AS Fire Control Panel

Syncro Matrix
Syncro I/O
Syncro View
Disabled Refuge Alarms
Other RS485 compatible devices

The manufacturer reserves the right to amend specifications without prior notice.
Intelligent Fire Alarm Mimic Display System

Features

- Up to 504 LED’s can be controlled from any Syncro or Syncro AS panel
- Select up to 12 printed colours (not including background and building outline)
- Available in a range of standard enclosures to suit any application
- Bespoke sized units can be made upon request
- Choice of Red, Green or Yellow LED’s
- Available with or without controls
- Same look and feel as Syncro range
- Syncro Matrix can easily be upgraded on site with minimal cost and effort
- EN54-4 approved PSU (optional)
- Configured via standard Loop Explorer Software

Product Overview

- The Syncro Matrix system uses flexible, fibre optic light guides to illuminate areas on a floor plan, laid over a high resolution grid. This unique system dispenses completely with wiring and enables indicators to be moved, removed or added on site without the need for any wiring.
- All indicators can be configured to operate upon any event type and at point, zone or group level via Kentec’s powerful and intuitive Loop Explorer configuration programme. Syncro Matrix can be supplied with or without LEDs and controls. Optional LEDs indicate Power on, Fire, Fault and Disablement and optional controls are for Alarm silence, Buzzer silence, Lamp test and Reset.
- Housed in attractive, slimline enclosures to match Syncro and Syncro AS fire alarm panels and with high quality, full colour or monochrome floor plans, Syncro Matrix provides a clear, geographical indication of fire alarm activation enabling speedy identification of the source of an alarm.

View showing mimic mounted on inner door

View showing LED grid

View showing internal layout

M3 size Syncro Matrix
Specifications

Panels

<table>
<thead>
<tr>
<th>No. LED’s</th>
<th>Standby Current</th>
<th>Full Alarm Current</th>
<th>Batteries for 24 hours</th>
<th>Batteries for 48 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>0.026</td>
<td>0.09</td>
<td>0.88Ah</td>
<td>1.76Ah</td>
</tr>
<tr>
<td>56</td>
<td>0.052</td>
<td>0.18</td>
<td>1.75Ah</td>
<td>3.5Ah</td>
</tr>
<tr>
<td>88</td>
<td>0.78</td>
<td>0.36</td>
<td>11Ah</td>
<td>22Ah</td>
</tr>
</tbody>
</table>

Enclosure Size Options

<table>
<thead>
<tr>
<th>Max. number of LED’s</th>
<th>Will house 1 x 8 Red LED driver PCB and 3 x 16 LED extension PCB’s (Red, Green or Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>M2: 385mm x 310mm 90mm Deep, 500mm x 355mm 117mm Deep, 385mm x 520mm 110mm Deep, 500mm x 650mm 137mm Deep</td>
</tr>
<tr>
<td>56</td>
<td>S3: 385mm x 310mm 90mm Deep, 500mm x 355mm 117mm Deep, 385mm x 520mm 110mm Deep, 500mm x 650mm 137mm Deep</td>
</tr>
<tr>
<td>88</td>
<td>M3: 385mm x 310mm 90mm Deep, 500mm x 355mm 117mm Deep, 385mm x 520mm 110mm Deep, 500mm x 650mm 137mm Deep</td>
</tr>
</tbody>
</table>

Technical

- 230V AC +10% - 15% (100 Watts max.)
- T2A L250V Replace only with similar type
- 4 Amps total including battery charge 28V +/- 2V
- 200 millivolts
- Two 12 Volt sealed lead acid (7Ah maximum)
- 27.6VDC nominal (temperature compensated)
- 1.5A maximum
- 3 Amps. With mains power source disconnected
- See above
- 21 to 30V DC
- See above
- 0.5mm² to 2.5mm² solid or stranded wire
- See ‘Enclosure Size Options’
- 1.2mm mild steel
- Epoxy powder coated
- BS 00 A 05 grey - fine texture
- RAL 7047 light grey - satin
- 3mm Clear Anti-Glare Acrylic
- Standard 901 key
- M2/M3 - standard 801 key, S3/S4 - standard KT3001 key
- RS485 – Syncro/Syncro AS serial I/O bus protocol
- 1.2Km using RS485 data cable
- IP30
- -5°C to +50°C
- M2 size - up to 24, M3 and S3 size - up to 56, S4 size - up to 88

The manufacturer reserves the right to amend specifications without prior notice.
Features

- Up to 64 nodes
- High integrity protocol
- Fully secure against short or open circuit faults
- Simple 2-wire loop connection
- Supports open ended networks for retrofit applications
- Repeaters share network connection
- Network wide test and disablement functions
- Network wide cause and effect logic
- Flexible configuration options
- Panels configurable to act on network events or not as required
- Apollo & Hochiki panels supported on single network

Product Overview

- The flexibility of the Syncro system can be further enhanced by connecting control panels and repeaters together using a high integrity network.
- A simple 2-wire connection between each panel allows events to be transmitted to other parts of the system to provide indication or control on a system wide basis.
- Using the Loop Explorer configuration programme, up to 64 nodes can be programmed to respond in a variety of ways to any system events as required.
- This flexibility extends the comprehensive cause and effect programming capability of Syncro control panels to the entire network allowing actions, test modes or disablements to be started from any point.
- The fault tolerance of the network is such that any single open or short circuit fault will not result in any loss of information. Multiple faults are isolated and the network breaks into smaller networks which continue to work autonomously.
**Specifications**

Flexible network configuration options using simple to follow PC configuration programme

Two core loop wiring ensures network integrity by providing full isolation of faulty wiring segments.

---

### Technical

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product code</strong></td>
<td>K555</td>
</tr>
<tr>
<td><strong>Protocol</strong></td>
<td>RS485</td>
</tr>
<tr>
<td><strong>Connection</strong></td>
<td>Two wire loop</td>
</tr>
<tr>
<td><strong>Current Consumption</strong></td>
<td>40mA</td>
</tr>
<tr>
<td><strong>Integrity</strong></td>
<td>Full isolation of faulty nodes or wiring segments</td>
</tr>
<tr>
<td><strong>Indicators</strong></td>
<td>Data In and Data Out communications status</td>
</tr>
<tr>
<td><strong>Cable length</strong></td>
<td>1200 metres to adjacent nodes (subject to cable type) (see technical manual)</td>
</tr>
<tr>
<td><strong>Cable type</strong></td>
<td>Belden 9271, Belden 9860, FP200 Gold</td>
</tr>
<tr>
<td><strong>Compatible panels</strong></td>
<td>Syncro/Syncro AS (required for networking), Syncro Response/Syncro 6 &amp; 8 loop, Syncro Focus (supplied with panel)</td>
</tr>
</tbody>
</table>

---

The manufacturer reserves the right to amend specifications without prior notice.
Communications
Module (modem)

Features

- View devices near calibration limits
- Plan maintenance visits
- Retrieve event log
- Dial in and observe reported faults
- Assist commissioning from remote location
- Offer value added service to customers
- Check software version to see if updates are available
- Retrieve configuration
- Avoid unnecessary call outs
- Simple to install
- Dongle protected access, for customers security

Product Overview

- The K556 communications module enables service companies to interrogate control panels remotely via a telephone link.
- The communications module is simple to install and requires a PSTN telephone line.
- The module mounts on existing pillars in the control panel and is supplied with all wiring and connections to enable speedy installation and commissioning.
- Once connected to the control panel via the Loop Explorer software, users can upload configuration data and event logs or take control of the system via the virtual panel interface. This allows the panel controls to be operated as if the user was standing at the panel.
- The Loop Explorer configuration programme (version 3.0 or higher) is used to dial into control panels but the dial up facility will not be available unless the PC calling the control panel is fitted with a registered dongle (part number B2158 for parallel port or B2158USB for USB version).
Specifications

### Module Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part number</td>
<td>K556P (PSTN)</td>
</tr>
<tr>
<td>Size</td>
<td>190mm x 62mm x 40mm</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>21V to 30V DC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>50 milliamps</td>
</tr>
<tr>
<td>Connection</td>
<td>PSTN</td>
</tr>
<tr>
<td>Dongle part number</td>
<td>B2158 (parallel port) B2158USB (USB serial port)</td>
</tr>
</tbody>
</table>

#### Technical Notes

- **Note:** One dongle required per user, to enable the 'dial in' facility within the Loop Explorer program.

---

**Technical**

- **Module part number** - K556P (PSTN)
- **Size** - 190mm x 62mm x 40mm
- **Supply voltage** - 21V to 30V DC
- **Current consumption** - 50 milliamps
- **Connection** - PSTN
- **Dongle part number** - B2158 (parallel port) B2158USB (USB serial port)

**Note:** The Communications Module is compatible with Loop Explorer Software version 3 or above and Syncro Control Panel Firmware version 3 or above.
Graphical User Interface for Fire Detection Equipment

Product Overview

- Syncro fire control panels can send data to, and be controlled by, the Guide system providing a single point of co-ordination for all alarms.
- The powerful 32 bit programme features a standard Windows look and feel and runs under Windows® 2000 or XP.
- The system is highly configurable in terms of the style of presentation so that the end user can be presented with maps, text, photographs, audio or a combination of all as required.
- User profiles allow the system manager to control the facilities available to each individual system user.
- A comprehensive history logging and reporting system allows analysis of events and trends to be identified to reduce unwanted alarms.
- Easy to programme and simple to use, Guide provides a cost effective solution for fire alarm management at many levels.

Features

- Choice of text, graphic, event list display when an event occurs
- Versatile event analysis
- Total history archive
- Easy to programme
- Secure system
- Cost effective compared to other systems
- Simple to use
- Unlimited map linking & zoom facility
- Support for 100’s of graphics
- Display and control for multiple panels
- Event history explore and export facility to text or HTML documents
Specifications

**Technical**

<table>
<thead>
<tr>
<th>Serial</th>
<th>Description</th>
<th>Processor</th>
<th>Operating system</th>
<th>Memory</th>
<th>Hard disk</th>
<th>Graphics</th>
<th>Sound card</th>
<th>Loudspeaker</th>
<th>Monitor</th>
<th>Pointing device</th>
<th>Printer</th>
<th>Parallel port</th>
<th>Serial ports</th>
<th>CDROM drive</th>
<th>Backup drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1001</td>
<td>GUIDE software - Single panel package</td>
<td>Intel Pentium 1Ghz</td>
<td>Windows® XP/Vista</td>
<td>256MB minimum</td>
<td>&gt;20GB would be better.</td>
<td>1024 x 768 16M colours</td>
<td>Any PC sound card</td>
<td>Any PC speakers</td>
<td>Any that supports above graphics driver</td>
<td>Mouse essential</td>
<td>Optional</td>
<td>Optional</td>
<td>Any</td>
<td>CD Writer</td>
<td>CD Writer</td>
</tr>
<tr>
<td>G1004</td>
<td>GUIDE software - 4 panel package</td>
<td>Intel Pentium 1Ghz</td>
<td>Windows® XP/Vista</td>
<td>256MB minimum</td>
<td>&gt;20GB would be better.</td>
<td>1024 x 768 16M colours</td>
<td>Any PC sound card</td>
<td>Any PC speakers</td>
<td>Any that supports above graphics driver</td>
<td>Mouse essential</td>
<td>Optional</td>
<td>Optional</td>
<td>Any</td>
<td>CD Writer</td>
<td>CD Writer</td>
</tr>
<tr>
<td>G1008</td>
<td>GUIDE software - 8 panel package</td>
<td>Intel Pentium 1Ghz</td>
<td>Windows® XP/Vista</td>
<td>256MB minimum</td>
<td>&gt;20GB would be better.</td>
<td>1024 x 768 16M colours</td>
<td>Any PC sound card</td>
<td>Any PC speakers</td>
<td>Any that supports above graphics driver</td>
<td>Mouse essential</td>
<td>Optional</td>
<td>Optional</td>
<td>Any</td>
<td>CD Writer</td>
<td>CD Writer</td>
</tr>
<tr>
<td>G1016</td>
<td>GUIDE software - 16 panel package</td>
<td>Intel Pentium 1Ghz</td>
<td>Windows® XP/Vista</td>
<td>256MB minimum</td>
<td>&gt;20GB would be better.</td>
<td>1024 x 768 16M colours</td>
<td>Any PC sound card</td>
<td>Any PC speakers</td>
<td>Any that supports above graphics driver</td>
<td>Mouse essential</td>
<td>Optional</td>
<td>Optional</td>
<td>Any</td>
<td>CD Writer</td>
<td>CD Writer</td>
</tr>
<tr>
<td>G1032</td>
<td>GUIDE software - 32 panel package</td>
<td>Intel Pentium 1Ghz</td>
<td>Windows® XP/Vista</td>
<td>256MB minimum</td>
<td>&gt;20GB would be better.</td>
<td>1024 x 768 16M colours</td>
<td>Any PC sound card</td>
<td>Any PC speakers</td>
<td>Any that supports above graphics driver</td>
<td>Mouse essential</td>
<td>Optional</td>
<td>Optional</td>
<td>Any</td>
<td>CD Writer</td>
<td>CD Writer</td>
</tr>
<tr>
<td>G1064</td>
<td>GUIDE software - 64 panel package</td>
<td>Intel Pentium 1Ghz</td>
<td>Windows® XP/Vista</td>
<td>256MB minimum</td>
<td>&gt;20GB would be better.</td>
<td>1024 x 768 16M colours</td>
<td>Any PC sound card</td>
<td>Any PC speakers</td>
<td>Any that supports above graphics driver</td>
<td>Mouse essential</td>
<td>Optional</td>
<td>Optional</td>
<td>Any</td>
<td>CD Writer</td>
<td>CD Writer</td>
</tr>
</tbody>
</table>

**Note:** Guide will be operating 24 hours a day for many years. It may be desirable to include on site PC maintenance as part of the package.

**Technical**

- **Processor:** Intel Pentium 1Ghz
  - The faster the better, 2Ghz will provide future proofing.
- **Operating system:** Windows® XP/Vista
  - Will operate under Windows® 2000
- **Memory:** 256MB minimum
  - The larger the better.
- **Hard disk:** 10GB minimum
  - >20GB would be better.
- **Graphics:** 1024 x 768 16M colours
  - The driver must allow this mode with large fonts. Separate Graphics card with 256MB graphics memory recommended
- **Sound card:** Any PC sound card
- **Loudspeaker:** Any PC speakers
  - More convenient if built into PC.
- **Monitor:** Any that supports above graphics driver
  - 17 inch minimum recommended, the larger the better. (1024 x 768)
- **Pointing device:** Mouse essential
  - Third button and wheels are supported. Touch screen option supported
- **Printer:** Optional
  - Required if parallel printer to be used.
- **Parallel port:** Optional
  - Required if parallel printer to be used.
- **Serial ports:** One RS232 per network
  - Isolated converter supplied for connection to fire alarm system.
- **CDROM drive:** Any
  - Required for installation of software and updates.
- **Backup drive:** CD Writer
  - To back up history.

**Note:** Guide will be operating 24 hours a day for many years. It may be desirable to include on site PC maintenance as part of the package.

**Note:** The Syncro panel to which the Guide system is connected must not have a printer fitted.

---

**Range**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1001</td>
<td>GUIDE software - Single panel package</td>
</tr>
<tr>
<td>G1004</td>
<td>GUIDE software - 4 panel package</td>
</tr>
<tr>
<td>G1008</td>
<td>GUIDE software - 8 panel package</td>
</tr>
<tr>
<td>G1016</td>
<td>GUIDE software - 16 panel package</td>
</tr>
<tr>
<td>G1032</td>
<td>GUIDE software - 32 panel package</td>
</tr>
<tr>
<td>G1064</td>
<td>GUIDE software - 64 panel package</td>
</tr>
</tbody>
</table>

**Note:** Guide For use with Syncro Panels. Syncro 6 & 8 loop panels are considered 2 panels in the packages above.
Providing Repeater Facility for any GUIDE System

Product Overview

- Syncro GUIDE Repeater is an additional facility for the Syncro GUIDE fire alarm management system.
- GUIDE Repeater allows control and monitoring of the Syncro fire control system to be repeated on dedicated computers connected to the building Local Area Network.
- GUIDE Repeater is highly configurable allowing replication of the main GUIDE system or alternative information to be given at the repeater.

Features

- Up to 16 GUIDE Repeaters may be connected to a single GUIDE system.
- All control and monitoring options on GUIDE are supported on the GUIDE repeater.
- Choice of text, graphics, combined display when an event occurs.
- Easy to use.
- Allows graphical information of fire events to be shown at alternative locations.
- Unlimited map linking and zoom facility.
- Display and control for up to 64-networked Syncro panels.
## Specifications

### Range

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR2001</td>
<td>GUIDE Repeater - single repeater package</td>
</tr>
<tr>
<td>GR2004</td>
<td>GUIDE Repeater - 4 repeater package</td>
</tr>
<tr>
<td>GR2016</td>
<td>GUIDE Repeater - 16 repeater package</td>
</tr>
</tbody>
</table>

### Technical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Recommended Minimum</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel Pentium 1Ghz</td>
<td>The faster the better, 2Ghz will provide future proofing.</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows® XP/Vista</td>
<td>Will operate under Windows® 2000</td>
</tr>
<tr>
<td>Memory</td>
<td>256MB minimum</td>
<td>The larger the better.</td>
</tr>
<tr>
<td>Hard disk</td>
<td>10GB minimum</td>
<td>&gt;20GB would be better.</td>
</tr>
<tr>
<td>Graphics</td>
<td>1024 x 768 16M colours</td>
<td>The driver must allow this mode with large fonts. Separate Graphics card with 256MB graphics memory recommended</td>
</tr>
<tr>
<td>Sound card</td>
<td>Any PC sound card</td>
<td>More convenient if built into PC.</td>
</tr>
<tr>
<td>Loudspeaker</td>
<td>Any PC speakers</td>
<td>17 inch minimum recommended, the larger the better. (1024 x 768)</td>
</tr>
<tr>
<td>Monitor</td>
<td>Any that supports above graphics driver</td>
<td>Third button and wheels are supported. Touch screen option supported</td>
</tr>
<tr>
<td>Pointing device</td>
<td>Mouse essential</td>
<td>Any type.</td>
</tr>
<tr>
<td>Printer</td>
<td>Optional</td>
<td>Required if parallel printer to be used.</td>
</tr>
<tr>
<td>Parallel port</td>
<td>Optional</td>
<td>Required for installation of software and updates.</td>
</tr>
<tr>
<td>Network</td>
<td>One network port</td>
<td>To back up history.</td>
</tr>
<tr>
<td>CDROM drive</td>
<td>Any</td>
<td></td>
</tr>
<tr>
<td>Backup drive</td>
<td>CD Writer</td>
<td></td>
</tr>
</tbody>
</table>
Multi Input/Output Unit

Product Overview - MIOU
- Occupying less than 20% of the space required by conventional I/O units, the MIOU replaces the large and expensive enclosures normally required for this application.
- With 8 opto-isolated inputs and 8 volt-free relay contacts (relay outputs individually selectable as normally open, normally closed or switched voltage outputs), the MIOU will find a multitude of uses in concentrated I/O applications.

Features - MIOU
- Multiple inputs and outputs at one address
- Opto isolated inputs
- Volt free contact or switched voltage outputs
- Considerable space and cost saving over discreet I/O units
- Easy clip-on din rail mounting method
- Compatible with Solo, Syncro AS and Syncro control equipment
- Low standby supply current
- Hochiki ESP protocol

Product Overview - LIOU
- LIOU Lite provides 4 inputs and 4 outputs to a Hochiki analogue addressable detection loop in a compact and cost effective package.
- The LIOU Lite can replace up to four addressable modules in approximately the same space taken by one standard module and is ideal for applications where a concentration of I/O is needed in a limited space.
- The modules can be addressed with the Hochiki, hand held programmer in the range 1 to 127.
- All inputs and outputs are fully configurable for any action and for cause and effect via the Syncro Loop Explorer configuration utility.
- The LIOU connects to the ESP loop as per all other ESP devices. Consider the maximum number of sub-addresses when using LIOU.
- Each unit has an integral short circuit isolator which provides further cost and space saving.

Features - LIOU
- Four optically isolated inputs
- Four volt free changeover relay contact outputs
- 24V DC powered
- Small footprint
- Cost effective for concentrated I/O applications
- Built in short circuit isolator
- Compatible with Syncro and Syncro AS addressable fire control panels
- Hochiki ESP protocol

Note:
MIOU & LIOU are currently compatible with Solo, Syncro and Syncro AS addressable fire control panels only.

Note:
MIOU & LIOU support Hochiki ESP protocol only.

Note:
Inputs on MIOU & LIOU are not monitored.
## Specifications

### Technical - MIOU

| Boxed unit battery capacity | 2.6Ah 12V (2 per unit) |
| Finish - lid & box | Epoxy powder coated, BS 00-A-05 grey - fine texture |
| Colour - lid & box | BS 00-A-05 grey - fine texture |
| Boxed unit IP rating | IP30 |
| Module mounting | Symmetrical or asymmetrical din rail |
| Communication protocol | Hochiki ESP |
| Supply voltage (H66000M2) | 24V DC |
| Supply voltage (H66750M2) | 110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V) |
| Quiescent supply current | 10 milliamps |
| Input operated current | 3 milliamps |
| Output operated current | 18 milliamps |
| Input trigger resistance | 1k maximum |
| Output contact rating | 30V DC 1 Amp maximum |
| Switched -ve output | 65 milliamps maximum per output |
| Minimum recommended PSU | 750 milliamps at 24V DC |
| Operating temperature | -5 to +40 deg. C |
| Device sub-address count | 17 (of 800 permitted in Syncro / Syncro AS panel) |
| Address setting | Hochiki hand held programmer (see TB1010) |

### Technical - LIOU

| Boxed unit battery capacity | 2.6Ah 12V (2 per unit) |
| Finish - lid & box | Epoxy powder coated, BS 00-A-05 grey - fine texture |
| Module mounting | 4 x 4mm holes in PCB |
| Communication protocol | Hochiki ESP |
| Supply voltage (K507 & HL6600M2) | 21 to 30V DC |
| Supply voltage (HL66750M2) | 20mm ceramic 2A/250V fast acting |
| Quiescent supply current | 10 milliamps |
| Input operated current | 3 milliamps |
| Output operated current | 18 milliamps |
| Input trigger resistance | 1K maximum |
| Output contact rating | 30V DC/2A - 230V AC/0.5A |
| minimum recommended PSU | 750 milliamps at 24V DC |
| Operating temperature | -5 to +40 deg. C |
| Device sub-address count | 17 (of 800 permitted in Syncro / Syncro AS panel) |

---

**Range**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Module</th>
<th>PSU</th>
<th>Weight</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K559 (Module Only)</td>
<td>MIOU</td>
<td>-</td>
<td>0.3kg</td>
<td>203(L) x 77(W) x 45(D)</td>
</tr>
<tr>
<td>H66000M2</td>
<td>MIOU</td>
<td>-</td>
<td>3.6kg</td>
<td>385(L) x 310(H) x 90(D)</td>
</tr>
<tr>
<td>H66750M2</td>
<td>MIOU</td>
<td>750mA</td>
<td>6.8kg</td>
<td>385(L) x 310(H) x 90(D)</td>
</tr>
<tr>
<td>K507 (Module Only)</td>
<td>LIOU</td>
<td>-</td>
<td>0.2kg</td>
<td>119(L) x 99(W)</td>
</tr>
<tr>
<td>HL66000M2</td>
<td>LIOU</td>
<td>-</td>
<td>3.6kg</td>
<td>385(L) x 310(H) x 90(D)</td>
</tr>
<tr>
<td>HL66750M2</td>
<td>LIOU</td>
<td>750mA</td>
<td>6.8kg</td>
<td>385(L) x 310(H) x 90(D)</td>
</tr>
</tbody>
</table>
16 Channel
Input/Output Board

Product Overview

- To add more I/O capability to the extensive options already offered by the Syncro control panel, up to thirty two, sixteen channel I/O boards may be connected.
- The 16 channel boards may be mixed on the RS485 bus with 8 way sounder boards, 6 way sounder boards or 4 way conventional detection zone boards to provide a very flexible system of I/O to satisfy any requirement.
- When using a simple two wire RS485 communications protocol, these boards may be mounted locally to the control panel or distributed on a bus up to 1200 metres long by using a suitable cable.
- The flexibility of these boards is further enhanced by the fact that each of the channels is configurable as either an input or output.
- Each channel may also be configured to produce a variety of input actions or respond to a variety of output types.
- All channels can contribute to, or respond to, system wide cause and effects logic.
- Typical uses for I/O boards include geographical LED mimic displays and plant alarm inputs.
- Standard Syncro control panels contain fixings for one sounder, relay, conventional detection or I/O board, which can easily be connected using four small signal wires to the power and comms bus within the panel.
- Consideration must be taken as to the loading on the main panel.

Features

- 16 channels
- Each channel configurable as input or output
- Inputs opto-isolated
- Outputs open collector transistor
- Simple 2 wire connection to control panel
- Up to 32 boards supported per panel (512 Input/Output Channels)
- Inputs and outputs configurable as per field devices
- Full cause and effects on all inputs and outputs
- Multi drop RS485 communications
- Can be used with other Syncro I/O modules on the same panel
- Compatible with Syncro AS panels

Part No. K560
Technical

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>K560</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>21 - 30V DC</td>
</tr>
<tr>
<td>Quiescent current</td>
<td>20mA</td>
</tr>
<tr>
<td>Current per input</td>
<td>3mA (maximum)</td>
</tr>
<tr>
<td>Current per output</td>
<td>100mA (maximum)</td>
</tr>
<tr>
<td>Communications</td>
<td>RS485 two wire</td>
</tr>
<tr>
<td>Maximum distance from</td>
<td>1.2Km (using correct type of</td>
</tr>
<tr>
<td>panel</td>
<td>cable)</td>
</tr>
<tr>
<td>PCB size</td>
<td>190mm x 61mm</td>
</tr>
<tr>
<td>Cable capacity</td>
<td>2.5mm per terminal</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-10°C to +50°C</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>To 95% (non condensing)</td>
</tr>
</tbody>
</table>

For full technical and application details see the Syncro I/O Board manual.

Syncro 16 Channel I/O Board

- 24V Out to next board only if powered from Power Supply & not Aux.24V at panel
- 24V Out to next board only if powered from Power Supply & not Aux.24V at panel
- To Next I/O Board
8 Way Relay Extender Board

Features

- 8 volt free changeover relay contacts (1Amp 30V DC)
- Relay operated indications
- Remote connection to panel via RS485 serial bus
- Common footprint to other Syncro I/O board types
- All outputs programmable for cause and effects
- Can be used with other Syncro I/O modules on the same panel
- Compatible with Syncro AS panels

Product Overview

- To further enhance the versatility of the Syncro fire alarm system, additional relay output capability can be added using Syncro relay boards.
- These boards have 8 voltage free changeover relay contacts, each of which can be individually programmed.
- Up to 32 of these boards can be connected to the dedicated RS485 communications bus in the control panel giving the capability of up to 256 additional relay outputs.
- The relay boards may be mixed on the RS485 bus with 16 channel I/O boards, 6 way sounder boards or 4 way conventional detection zone boards to provide a very flexible system of I/O to satisfy any requirement.
- All outputs are configurable in the same way as devices connected to the loops and all may be acted upon by cause and effect logic.
- These boards are typically used in applications which require more than the four standard relay outputs such as signalling to other systems or plant control.
- Standard Syncro control panels contain fixings for one sounder, relay, conventional detection or I/O board, which can easily be connected using four small signal wires to the power and comms bus within the panel.
- Consideration must be taken as to the loading on the main panel.

Part No. K547
Specifications

Technical

Product code: K547
Supply voltage range: 21 to 30 volts DC
Quiescent current consumption: 10mA
Operating current (all outputs on): 250mA
Output contact rating: 30V DC 1 Amp
Communications: RS485 two wire
Max. distance from panel: 1.2Km (using RS485 data cable)
PCB size: 190mm x 61mm
Fixing centres: 51.5mm x 180mm
Cable capacity: 2.5mm per terminal
Operating temperature: -5°C to +50°C
Operating humidity: To 95% (non condensing)

Syncro 8 Way Relay Board

Signal to other Systems 30V DC Max. 1 Amp Max.

Data Out to other Boards

24V Out to next board only if powered from Power Supply & not Aux.24V at panel

Remote PSU

Syncro Main PCB

The manufacturer reserves the right to amend specifications without prior notice
To further enhance the versatility of the Syncro fire alarm system, additional sounder output capability can be added using Syncro sounder boards.

These boards have 6 monitored sounder outputs, each of which can be individually programmed.

In addition to the sounder outputs each board has two general purpose, opto-isolated inputs and two volt-free changeover contact outputs.

Up to 32 of these boards can be connected to the dedicated RS485 communications bus in the control panel giving the capability of 192 additional sounder outputs with 64 general purpose inputs and 64 general purpose outputs.

The sounder boards may be mixed on the RS485 bus with 16 channel I/O boards, 8 way relay boards or 4 way conventional detection zone boards to provide a very flexible system of I/O to satisfy any requirement.

All inputs and outputs are configurable in the same way as devices connected to the loops and all may contribute to, or be acted upon by cause and effect logic.

These boards are typically used in applications that require more than the four standard sounder outputs such as replacement of existing conventional systems.

Standard Syncro control panels contain fixings for one sounder, relay, conventional detection or I/O board, which can easily be connected using four small signal wires to the power and comms bus within the panel.

Consideration must be taken as to the loading on the main panel.
Specifications

Technical

Product code - K546
Supply voltage range - 21 to 30 volts DC
Quiescent current consumption - 30mA
Full alarm current consumption - 260mA
Sounder current monitoring resistor - 10k
Current per input - 3mA maximum
Current per sounder output - 1 Amp maximum
Output contact rating - 30V DC 1 Amp
Communications - RS485 two wire
Max. distance from panel - 1.2Km (using RS485 data cable)
PCB size - 190mm x 74mm
Fixing centres - 51.5mm x 180mm
Cable capacity - 2.5mm per terminal
Operating temperature - -5°C to +50°C
Operating humidity - To 95% (non condensing)
4 Way Conventional Detection Zone Module

Product Overview

- To further enhance the versatility of the Syncro fire alarm system, four conventional detection circuits can be connected with up to 30 detectors per circuit.

- Conventional control panels can be replaced with this simple module and existing conventional systems can be interfaced directly to modern analogue addressable control systems and networks.

- A fail safe mode ensures that the detection inputs will still operate the sounder outputs and fire contact if communication to the Syncro panel is lost.

- Up to 32 of these boards can be connected to the dedicated RS485 communications bus in the control panel giving the capability of up to 128 conventional zones with 64 sounder outputs.

- The detection zone boards may be mixed on the RS485 bus with 16 channel I/O Boards, 6 way sounder boards or 8 way relay boards to provide a very flexible system of I/O to satisfy any requirement.

- All inputs and outputs are configurable in the same way as devices connected to the loops and all may be acted upon by cause and effect logic.

- Standard Syncro control panels contain fixings for one (four way) Detection Zone board, Sounder board, Relay board or I/O board, all of which can easily be connected using four signal wires to the power and comms bus within the panel.

- Consideration must be taken as to the loading on the main panel.

Features

- 4 monitored detection zone inputs
- 2 monitored sounder outputs
- Volt free fire contact
- Volt free fault contact
- Local power supply fault input
- RS485 comms connection to Syncro Fire Alarm Panel
- Individual fault and operated indications for inputs and outputs
- Directly replaces a conventional control panel when integrating into an analogue addressable system
- Can be used with other Syncro I/O modules on the same panel
- Compatible with Syncro AS panels
Technical

**Product code**
- K545

**Supply voltage range**
- 21 to 30 volts DC

**Quiescent current consumption**
- 70mA

**Operating current**
- 250mA

**(all outputs on)**

**Output contact rating**
- 30V DC 1 Amp

**Detection zone monitoring resistor**
- 6k8

**Sounder circuit monitoring resistor**
- 10k

**Communications**
- RS485 two wire

**Max. distance from panel**
- 1.2Km (using RS485 data cable)

**PCB size**
- 190mm x 74mm

**Fixing centres**
- 51.5mm x 180mm

**Cable capacity**
- 2.5mm per terminal

**Operating temperature**
- -5°C to +50°C

**Operating humidity**
- To 95% (non condensing)
I/O Board Enclosure

Product Overview

- A range of new enclosures designed to house Syncro I/O modules with or without a power supply. The Syncro I/O enclosure offers the installer the flexibility to create their own customised I/O panel. The standard Syncro I/O enclosure can hold up to 3 Syncro I/O modules or 2, if a power supply is incorporated.

Features

- Matching design & colour scheme for Kentec new style control panel range
- Easy to install
- Incorporates Kentec’s “Quick Fit” lid & equipment chassis
- Front panel mounted status led indication
- Space for batteries
- Choice of power supplies

Equipment

Product Code Description

- **K16001M2**  - Syncro I/O enclosure without Charger
- **K16750M2**  - Syncro I/O enclosure c/w 750mA Charger
- **K16250M2**  - Syncro I/O enclosure c/w 2.5A Charger
- **K16400M2**  - Syncro I/O enclosure c/w 4.0A Charger

Plug-Ins

- **K560**  - 16 Channel Input/Output Board
- **K547**  - 8 Way Relay Extender Board
- **K546**  - 6 Way Sounder Extender Board
- **K545**  - 4 Way Conventional Detection Zone Module

Choose any combination of I/O boards
# Product Overview

- Syncro addressable sounder controller units enable additional, distributed power and control for sounder circuits in situations where there are insufficient circuits at the fire alarm control panel or where additional power is required to power heavily loaded sounder circuits.

- Sounder control modules for any of the protocols supported by Syncro are available in a steel enclosure designed to match the appearance of the Syncro fire alarm control panel.

- All units contain mains powered battery charger/power supply, they have space for up to 7 Ah batteries.

- Indicators are provided for power healthy and power fault conditions and power fault conditions are signalled to the Syncro fire alarm control panel as a sounder fault.

## Features

- Two, four or six way units available
- Apollo, Argus Vega or Hochiki protocols available
- Integral power supply
- Robust steel enclosure matches Syncro control panel styling
- Space for 7Ah batteries
- Power Healthy and Power Fault indicators

## Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>500mm (W) x 355mm (H) x 108mm (D)</td>
</tr>
<tr>
<td>Finish</td>
<td>Epoxy powder coated</td>
</tr>
<tr>
<td>Colour - lid &amp; box</td>
<td>BS 00 A 05 grey - fine texture</td>
</tr>
<tr>
<td>Colour - labels</td>
<td>RAL 7047 light grey - satin</td>
</tr>
<tr>
<td>Mains voltage supply</td>
<td>110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V)</td>
</tr>
<tr>
<td>Mains fuse</td>
<td>3A, 1¼ inch</td>
</tr>
<tr>
<td>Battery charge fuse</td>
<td>20mm x 5mm, 500 milliamp</td>
</tr>
<tr>
<td>Battery</td>
<td>7Ah 12V (2 per panel)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-5°C to +50°C</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>To 95% (non condensing)</td>
</tr>
<tr>
<td>Protocol</td>
<td>Apollo XP95, Argus Vega or Hochiki ESP</td>
</tr>
</tbody>
</table>

## Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Protocol</th>
<th>Sounder Outputs</th>
<th>PSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1725203</td>
<td>Apollo XP95</td>
<td>2</td>
<td>2.5A</td>
</tr>
<tr>
<td>V1725203</td>
<td>Argus Vega</td>
<td>2</td>
<td>2.5A</td>
</tr>
<tr>
<td>H1725203</td>
<td>Hochiki ESP</td>
<td>2</td>
<td>2.5A</td>
</tr>
<tr>
<td>A1725403</td>
<td>Apollo XP95</td>
<td>4</td>
<td>4.0A</td>
</tr>
<tr>
<td>V1725403</td>
<td>Argus Vega</td>
<td>4</td>
<td>4.0A</td>
</tr>
<tr>
<td>H1725403</td>
<td>Hochiki ESP</td>
<td>4</td>
<td>4.0A</td>
</tr>
<tr>
<td>A1725603</td>
<td>Apollo XP95</td>
<td>6</td>
<td>4.0A</td>
</tr>
<tr>
<td>V1725603</td>
<td>Argus Vega</td>
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<td>4.0A</td>
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<tr>
<td>H1725603</td>
<td>Hochiki ESP</td>
<td>6</td>
<td>4.0A</td>
</tr>
</tbody>
</table>

Model No. #1725203

The manufacturer reserves the right to amend specifications without prior notice.
Conventional Fire Detection Control Equipment

Pages 44-57
Conventional Fire Alarm
Control Panels

Features

- Fully compliant with & tested to BS EN54-2 and BS EN54-4
- 2-wire and standard versions in 2, 4 or 8 zones
- Compatible for use on BS5839: Part 1: 2002 installations
- 2-wire repeaters and ancillary boards
- Fully programmable using simple menu options
  - Adjustable sounder delay time
  - Sounder configuration options
  - Zonal sounder delay detectors only
  - Zonal sounder delay call points only
  - Coincidence input selection
  - I.S Barrier selection by zone
  - Short circuit fire by zone
  - Non latching zones
  - Silent zones
  - Zone input delay
  - General panel configuration
- Simple, single board construction
- Installer friendly
- Compatible with wide range of detection devices
- Two monitored sounder outputs
- 3 Amp power supply
- Auxiliary power output

Product Overview

- The Sigma CP range consists of a series of conventional fire alarm control panels designed in accordance with European standards BS EN54-2 and BS EN54-4 Fire Detection and Fire Alarm systems - Control and Indicating Equipment.

- The range consists of 2, 4 and 8 zone control panels. All control panels are available in two versions:
  - **Sigma K11** range in which detectors and call points are wired on separate circuits to sounders (two sounder circuits are provided).
  - **Sigma T11** range in which detectors, call points and sounders are wired to the same pair of cables. Commonly referred to as a two-wire system.

- Wiring sounders to the detection circuits eliminates the need to install sounder circuit cables and also offers the ability to provide zoned or two stage sounder operation. (T series only)

- All control panels have an integral, mains powered battery charger and power supply designed in accordance with the requirements of BS EN54-4.

**Note:** For 2-wire T series panels, compatible detectors and call points must be used. All sounders must be polarised.

**Note:** Also available is the Sigma Ancillary Board (K580) which is compatible with all Sigma CP and CP-R panels which have operating software version V2.0 or above. See DS39 (pages 46-47) for more details.

**Note:** Also available is the Sigma Sounder Board (K461) which is compatible with all Sigma CP and CP-R panels which have operating software version V3.0 or above. See DS48 (page 77) for more details.

Part No. K580
Part No. K461
Model No. K11080M2
**Specifications**

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Standby Current</th>
<th>Alarm Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>K11020M2</td>
<td>2 zone control panel</td>
<td>0.065 Amps</td>
<td>0.1 Amps</td>
</tr>
<tr>
<td>K11040M2</td>
<td>4 zone control panel</td>
<td>0.075 Amps</td>
<td>0.21 Amps</td>
</tr>
<tr>
<td>K11080M2</td>
<td>8 zone control panel</td>
<td>0.093 Amps</td>
<td>0.35 Amps</td>
</tr>
<tr>
<td>T11020M2</td>
<td>2 zone, 2 wire panel</td>
<td>0.065 Amps</td>
<td>0.15 Amps</td>
</tr>
<tr>
<td>T11040M2</td>
<td>4 zone, 2 wire panel</td>
<td>0.075 Amps</td>
<td>0.3 Amps</td>
</tr>
<tr>
<td>T11080M2</td>
<td>8 zone, 2 wire panel</td>
<td>0.093 Amps</td>
<td>0.63 Amps</td>
</tr>
<tr>
<td>K18002</td>
<td>Tamper resistant Vision Window *</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Vision Window can be easily retrofitted to any Sigma CP panel

Technical

- Size: 385mm(W) x 310mm(H) x 90mm(D)
- Construction: 1.2mm mild steel
- Finish: Epoxy powder coated
- Colour - lid & box: BS 00 A 05 grey - fine texture
- Colour - controls plate & labels: RAL 7047 light grey - satin
- Supply voltage: 230V AC (+10%/-15%)
- Mains supply fuse: 1.6 Amp 250V
- Power supply DC rating: 24V 3 Amps
- Maximum battery size: 7Ah 12V (2 per panel)
- Fault contact rating: 30V DC 1 Amp
- Local fire contact rating: 30V DC 1 Amp
- Fire contact rating: 30V DC 1 Amp
- Sounder output rating: 0.5A per output (max 1.6A over all outputs)
- Detection zone current: 1.6 milliamperes
- Detection zone EOL resistor: 6k8 5%
- Active EOL: K14606K (optional)
- Sounder output EOL resistor: 10k 5%
- Cable capacity: 2.5mm² per terminal
- Operating temperature: -5°C to +50°C
- Operating humidity: <95% (non condensing)
Conventional Fire Alarm Control Panel Repeaters

Ancillary PCB Product Overview
- The Sigma Ancillary Board is compatible with all Sigma CP and CP-R panels which have operating software version V2.0 or above.
- The board provides common fire, common fault, coincidence and zonal fire, volt free contacts allowing control of sub-systems, graphical mimics and plant, remotely from the main panel over a two wire data bus.
- Mains powered Ancillary boards require only a two core data cable from the main control panel. 24V DC versions require an additional two cores for power either from the main panel or from another 24V DC source.
- A mixture of Ancillary boards, Sounder boards or Repeaters up to a maximum of 7 of each type can be connected to a control panel and each is allocated an address from 1 to 7 using a binary coded DIL switch. The total length of the data cable from the main panel to the last repeater must not exceed 1200 metres.

Sigma CP-R Product Overview
- The Sigma CP-R Repeater is compatible with all Sigma CP control panels which have operating software version V2.0 or above.
- Repeaters are available with 2, 4 or 8 zones and in mains powered (K versions) or 24V powered (E versions).
- Mains powered repeaters require only a two core data cable from the main control panel. 24V DC versions require an additional two cores for power either from the main panel or from another 24V DC source.
- A mixture of Repeaters, Ancillary boards or Sounder Boards up to a maximum of 7 of each type can be connected to a control panel and each is allocated an address from 1 to 7 using a binary coded DIL switch. The total length of the data cable from the main panel to the last repeater must not exceed 1200 metres.

Ancillary PCB Features
- Two wire serial connection
- Up to 7 boards per system
- 230V AC or 24V DC powered versions
- Open collector zonal fault outputs
- Volt free fire, coincidence and common fault contact outputs

Sigma CP-R Features
- Two wire serial connection
- Up to 7 panels per system
- 230V AC or 24V DC powered versions
- Full control over main panel
- Volt free fire and fault contact outputs

Note: Also available is the Sigma Sounder Board (K461) which is compatible with all Sigma CP and CP-R panels which have operating software version V3.0 or above. See DS48 (page 77) for more details.
Specifications

Equipment

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Supply Voltage</th>
<th>Standby Current</th>
<th>Alarm Current</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E01020L2</td>
<td>2 zone Sigma CP-R repeater panel</td>
<td>24V DC</td>
<td>0.075 Amps</td>
<td>0.094 Amps</td>
<td>385 x 310 x 60</td>
</tr>
<tr>
<td>E01040L2</td>
<td>4 zone Sigma CP-R repeater panel</td>
<td>24V DC</td>
<td>0.075 Amps</td>
<td>0.098 Amps</td>
<td>385 x 310 x 60</td>
</tr>
<tr>
<td>E01080L2</td>
<td>8 zone Sigma CP-R repeater panel</td>
<td>24V DC</td>
<td>0.11 Amps</td>
<td></td>
<td>385 x 310 x 60</td>
</tr>
<tr>
<td>K01020M2</td>
<td>2 zone Sigma CP-R repeater panel with PSU</td>
<td>230V AC</td>
<td>0.075 Amps</td>
<td>0.094 Amps</td>
<td>385 x 310 x 90</td>
</tr>
<tr>
<td>K01040M2</td>
<td>4 zone Sigma CP-R repeater panel with PSU</td>
<td>230V AC</td>
<td>0.075 Amps</td>
<td>0.098 Amps</td>
<td>385 x 310 x 90</td>
</tr>
<tr>
<td>K01080M2</td>
<td>8 zone Sigma CP-R repeater panel with PSU</td>
<td>230V AC</td>
<td>0.075 Amps</td>
<td>0.11 Amps</td>
<td>385 x 310 x 90</td>
</tr>
<tr>
<td>K580</td>
<td>Stand alone ancillary board</td>
<td>24V DC</td>
<td>0.020 Amps</td>
<td>0.2 Amps</td>
<td>385 x 310 x 90</td>
</tr>
<tr>
<td>K02000M2</td>
<td>Boxed ancillary board</td>
<td>24V DC</td>
<td>0.020 Amps</td>
<td>0.2 Amps</td>
<td>385 x 310 x 90</td>
</tr>
<tr>
<td>K02750M2</td>
<td>Boxed ancillary board with 0.75A PSU</td>
<td>230V AC</td>
<td>0.020 Amps</td>
<td>0.2 Amps</td>
<td>385 x 310 x 90</td>
</tr>
<tr>
<td>K18002</td>
<td>Tamper resistant Vision Window *</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

* Vision Window can be easily retrofitted to any Sigma CP-R panel

Sigma CP-R Technical

- 1.2mm mild steel
- Epoxy powder coated
- BS 00 A 05 grey - fine texture
- RAL 7047 light grey - satin
- 230V AC (+10%/-15%)
- 20-30V DC
- 1.6A 250V
- 24V 1 Amps
- 30VDC 1 Amp
- 30VDC 1 Amp
- 2.5mm² per terminal
- -5°C to +50°C
- <95% (non condensing)

Ancillary PCB Technical

- 155mm(W) x 136mm(H)
- 1.2mm mild steel
- Epoxy powder coated
- BS 00 A 05 grey - fine texture
- RAL 7047 light grey - satin
- 230V AC (+10%/-15%)
- 20-30V DC
- 1.6A 250V
- 24V 750mA
- 2.6Ah 12V (2 per panel)
- 20mA
- 190mA
- 30VDC 1 Amp
- 30VDC 1 Amp
- 30VDC 1 Amp
- 30VDC 1 Amp
- 2.5mm² per terminal
- -5°C to +50°C
- <95% (non condensing)
Conventional Fire Alarm Control Panels

**Product Overview**

- The K3000 Series exceeds the requirements of BS5839: Part 4: 1988 in several areas. Inclusion of zone isolate, zonal one man test, zonal contacts, shop unit interface and zoned or two stage alarm outputs are all standard features.

- A wide range of detectors are supported by the equipment, ensuring that the K3000 Series control panels can be used with existing installations without the need to change the field devices. Front panel controls and indicators are kept to a minimum to simplify user operation and to maintain clarity of indication. High intensity, twin bar LED indicators are used on all front panels. All panels are supplied with suitable power supply and generous battery space to give extended battery standby if required.

- Ample cable entries and removable chassis assist in ease of installation. All panels are available as true flush or surface mounting and in two tone grey or cream and brown.

- Other colours are available to special order. Arrangements can be made for special badging or special finishes such as brass or stainless steel.

- K3000 Series control panels allow continued operation of call points and detectors upon removal of a device from the detection line. This can be achieved either by fitting an active end of line device or by using special line clamping bases.

**Features**

- Complies with BS5839: Part 4: 1988
- Can be used on pre BS5839 type systems
- 12 - 48 zones as standard more available on request
- Class change input
- Common fire and fault contacts
- Line continuity upon detector removal
- Remote signal contact and isolate
- Shop interface input
- Zonal one man test
- Zonal selection for operation with intrinsically safe barriers
- Zonal volt free contacts
- Zone isolate facility
- Compatible with most popular detectors
- Option for plug-in two stage sounder cards

Model No. K3024005
Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Zones</th>
<th>Standby Current</th>
<th>Alarm Current</th>
<th>Sounder Load per Circuit</th>
<th>Sounder Load total</th>
<th>Minimum Battery (24h standby)</th>
<th>PSU</th>
<th>Weight</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3012003</td>
<td>12</td>
<td>0.2A</td>
<td>0.34A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>7.0Ah</td>
<td>2.5A</td>
<td>8.6kg</td>
<td>500 x 355 x 108</td>
</tr>
<tr>
<td>K3016005</td>
<td>16</td>
<td>0.22A</td>
<td>0.38A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>7.0Ah</td>
<td>4.0A</td>
<td>11.0kg</td>
<td>570 x 420 x 110</td>
</tr>
<tr>
<td>E3016005</td>
<td>16</td>
<td>0.22A</td>
<td>0.38A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>7.0Ah</td>
<td>4.0A</td>
<td>11.0kg</td>
<td>570 x 420 x 110</td>
</tr>
<tr>
<td>K3024005</td>
<td>24</td>
<td>0.31A</td>
<td>0.45A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>12.0Ah</td>
<td>4.0A</td>
<td>11.5kg</td>
<td>570 x 420 x 110</td>
</tr>
<tr>
<td>E3024005</td>
<td>24</td>
<td>0.31A</td>
<td>0.45A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>12.0Ah</td>
<td>4.0A</td>
<td>11.5kg</td>
<td>570 x 420 x 110</td>
</tr>
<tr>
<td>K3032007</td>
<td>32</td>
<td>0.38A</td>
<td>0.52A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>12.0Ah</td>
<td>4.0A</td>
<td>20.0kg</td>
<td>600 x 700 x 140</td>
</tr>
<tr>
<td>E3032007</td>
<td>32</td>
<td>0.38A</td>
<td>0.52A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>12.0Ah</td>
<td>4.0A</td>
<td>20.0kg</td>
<td>600 x 700 x 140</td>
</tr>
<tr>
<td>K3040007</td>
<td>40</td>
<td>0.45A</td>
<td>0.59A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>15.0Ah</td>
<td>4.0A</td>
<td>20.5kg</td>
<td>600 x 700 x 140</td>
</tr>
<tr>
<td>K3048009</td>
<td>48</td>
<td>0.52A</td>
<td>0.66A</td>
<td>1.0A</td>
<td>1.5A</td>
<td>17.0Ah</td>
<td>4.0A</td>
<td>24.0kg</td>
<td>700 x 1000 x 145</td>
</tr>
</tbody>
</table>

Flush mounting versions are available to order. All weights quoted are less standby batteries.

Technical

Construction - 1.2mm fully welded sheet steel
Finish - Epoxy powder coated
Standard colour - BS 00 A 05 grey - fine texture
Sounder outputs - 2 outputs each fused at 1 amp each (0.5A E3002001)
Isolatable fire contact - Volt free changeover 1A at 30V DC
Auxiliary alarm contact - Volt free changeover 1A at 30V DC
Fault contact - Volt free changeover 1A at 30V DC
Zonal contacts - Volt free normally open 1A at 30V DC
Auxiliary DC output - Fused at 500mA
Detection zone monitoring resistor - 6k8
Sounder circuit monitoring resistor - 10k
Remote control inputs - Alarm input, Silence input, Reset input (option for pulsed alarm input [Security Alert])
Mains supply - 230V AC (+10%/-15%)
(other voltages upon request)
Call points - Require 470 OHM series resistor
Alarm threshold - 100 to 900 Ohms
Short circuit threshold - 0 to 100 Ohms
Maximum zone quiescent current - 1.6mA
Active end of line - K1406K (optional)
Operating temperature - -5°C to +40°C
Operating humidity - To 95% (non condensing)
Conventional Fire Alarm Control Panel Repeaters & Remote Indicators

K3200 Repeaters

Product Overview

- The K3200 series repeater panel uses a similar layout to the main control panel and is fitted with the same high quality indicators. In their discrete enclosure, they are well suited to areas where space is limited and aesthetics are an important consideration.

- As well as zonal fire indicators, system fault, system healthy and buzzer muted indicators are provided. Controls are kept to the practical minimum of lamp test and buzzer mute. Subsequent alarm or fault conditions whilst the buzzer is muted will resound the buzzer to alert personnel to changing conditions.

- Repeat panels are available as true flush or surface mounting and in two tone grey or cream and brown as standard. Other colours are available to special order. Arrangements can be made for special badging or special finishes such as brass or stainless steel. Special repeater panels can be made to order.

K3200 Repeaters

Features

- Zonal fire indicators
- Common fault and power on indicators
- Lamp test push button
- Internal buzzer with mute facility
- Buzzer resound facility

Twin Lamp Units

Product Overview

- To provide visual and audible indication of an alarm condition in areas where a high powered sounder is inappropriate, twin lamp and buzzer units are available with or without a buzzer mute keyswitch.

- These units are equipped with two large area, high brightness LED’s which flash alternately accompanied by an internal high frequency buzzer. A volume control is provided on all units which is set upon commissioning to suit the environment.

- All units may be mounted on a double gang flush back box or to a purpose made surface enclosure.

Twin Lamp Units

Features

- Zonal fire indicators
- Common fault and power on indicators
- Lamp test push button
- Internal buzzer with mute facility

Model No. K3212001
Specifications

Technical

Construction - 1.2mm fully welded sheet steel
Finish - Epoxy powder coated
Colour - BS 00 A 05 grey - fine texture
Voltage - 20V - 30V DC
Power consumption (repeater) - 20mA per zone
Power consumption (twin lamp) - 40mA (max. buzzer volume)
Operating temperature - -5 to +50 deg. C
Operating humidity - To 95% (non condensing)

Equipment

Repeater Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Zones</th>
<th>Weight</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K3212001</td>
<td>12</td>
<td>3.5kg</td>
<td>365 x 290 x 88</td>
</tr>
<tr>
<td>K3216001</td>
<td>16</td>
<td>6.0kg</td>
<td>365 x 290 x 88</td>
</tr>
<tr>
<td>K3224001</td>
<td>24</td>
<td>6.0kg</td>
<td>365 x 290 x 88</td>
</tr>
<tr>
<td>K3232003</td>
<td>32</td>
<td>8.0kg</td>
<td>500 x 355 x 108</td>
</tr>
<tr>
<td>K3240005</td>
<td>40</td>
<td>10.5kg</td>
<td>570 x 420 x 110</td>
</tr>
<tr>
<td>K3248005</td>
<td>48</td>
<td>10.5kg</td>
<td>570 x 420 x 110</td>
</tr>
</tbody>
</table>

Flush mounting versions are available to order, see price guide

Equipment

Remote Indicator Units

A range of remote lamp indicators are available for locating concealed positions in floor or ceiling voids. All units mount onto standard electrical boxes (single gang square types, BESA round types) and are compatible with most common detectors. Indication is from 5mm LED, operating voltage 10 - 30 V DC and maximum current 25mA.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description (all flush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K14000</td>
<td>Square detector (Fire Detector Operated)</td>
</tr>
<tr>
<td>K14010</td>
<td>Round detector (Fire Detector Operated)</td>
</tr>
<tr>
<td>K14020</td>
<td>Square addressable (Fire Detector Operated)</td>
</tr>
<tr>
<td>K14030</td>
<td>Round addressable (Fire Detector Operated)</td>
</tr>
<tr>
<td>K14050</td>
<td>Square detector (stainless steel finish)</td>
</tr>
</tbody>
</table>

Equipment

Lamp & Buzzer Units

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Mute Facility</th>
<th>Construction</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1441024</td>
<td>No</td>
<td>Flush</td>
<td>140 x 80</td>
</tr>
<tr>
<td>K1442023</td>
<td>No</td>
<td>Surface</td>
<td>152 x 92 x 38</td>
</tr>
<tr>
<td>K1443024</td>
<td>Yes</td>
<td>Flush</td>
<td>140 x 80</td>
</tr>
<tr>
<td>K1444023</td>
<td>Yes</td>
<td>Surface</td>
<td>152 x 92 x 38</td>
</tr>
</tbody>
</table>

For flush mounting use 47mm deep double gang electrical box
Economy Conventional Fire Alarm Control Panels

Product Overview

- The Sigma range of Control Panels has been designed with economy in mind and are based on well proven, established electronic circuitry.

- Many features and facilities have been incorporated as standard to aid operation, maintenance and testing, including one man test and zone isolation functions.

- Modern state-of-the-art production techniques such as surface mount technology components, automatic component placement and automatic testing are used to improve reliability and reduce overall size.

- The panel enclosure is a flame retardent ABS injection moulded cover; this permits a design of smooth flowing lines to be used which is both modern and functional.

- The integral battery charger/power supply and generous battery space combine to make the panels compact but with the flexibility to provide long standby operation should it be required.

Features

- 1 man zone test mode
- 1, 2, 4 and 6 zones
- 2 monitored sounder outputs
- Fault volt free changeover contacts
- Fire volt free changeover contacts
- Fire contact disable function
- Head removal monitoring
- Option for fire contact on evacuation
- Zone disable function
- Remote evacuate input intermittent or continuous
- Sounder disable function
- User-friendly and simple in operation
- Auxiliary power output
- Compact, lightweight design
- Easy to install
- Easy to service and maintain
- Integral charger with reverse battery polarity protection
- Space for up to 7Ah batteries
Specifications

Technical

Size
- 315mm(W) x 235mm(H) x 84mm(D)

Packed size
- 330mm(W) x 250mm(H) x 100mm(D)

Packed weight
- 1-2 zone panels = 3kg
- 4-6 zone panels = 3.2kg

Construction
- Flame retardent ABS injection moulded

Finish
- Light texture

Standard colour
- Stone grey

Chassis
- 1mm mild steel, powder coated, off white

Mains supply
- 230V AC (+10%/-15%)

Standby Battery
- 7Ah 12V (2 per panel)

Detection line voltage
- 21-28V DC (optional 21.5V line)

Detection line
- 2mA max per zone

quiescent current

Short circuit threshold
- 0 - 40 Ohms

Alarm threshold
- 40 - 740 Ohms

Open circuit threshold
- >10K Ohms

Operating temperature
- -5°C to +50°C

Operating humidity
- To 95% (non condensing)

Call points
- 470 Ohm or 680 Ohm series resistor

Sounder circuit end of line
- 20K Ohms

Zone circuit end of line
- 6k8 Ohms

Active end of line
- LCMU (K1406K) (optional)

Available only as surface mounting unit

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>E1001000</th>
<th>K1001000</th>
<th>K1002000</th>
<th>K1004000</th>
<th>K1006000</th>
</tr>
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<tbody>
<tr>
<td>Number of zones</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Sounder outputs</td>
<td>250mA total</td>
<td>500mA total</td>
<td>500mA total</td>
<td>500mA total</td>
<td>500mA total</td>
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<tr>
<td>Zone disable function</td>
<td>N/A</td>
<td>★</td>
<td>★</td>
<td>★</td>
<td>★</td>
</tr>
<tr>
<td>One man test</td>
<td>N/A</td>
<td>★</td>
<td>★</td>
<td>★</td>
<td>★</td>
</tr>
<tr>
<td>Fire volt free changeover contact</td>
<td>N/A</td>
<td>1A @ 30V DC switched -VE</td>
<td>1A @ 30V DC switched -VE</td>
<td>1A @ 30V DC switched -VE</td>
<td>1A @ 30V DC switched -VE</td>
</tr>
<tr>
<td>Remote evacuate input</td>
<td>N/A</td>
<td>100mA</td>
<td>100mA</td>
<td>100mA</td>
<td>100mA</td>
</tr>
<tr>
<td>Sounder disable</td>
<td>N/A</td>
<td>★</td>
<td>★</td>
<td>★</td>
<td>★</td>
</tr>
<tr>
<td>Fire contact disable switch</td>
<td>N/A</td>
<td>1A @ 30V DC switched -VE</td>
<td>1A @ 30V DC switched -VE</td>
<td>1A @ 30V DC switched -VE</td>
<td>1A @ 30V DC switched -VE</td>
</tr>
<tr>
<td>Integral charger/PSU</td>
<td>750mA</td>
<td>1.25A</td>
<td>1.25A</td>
<td>1.25A</td>
<td>1.25A</td>
</tr>
<tr>
<td>Auxiliary fused output 24V</td>
<td>N/A</td>
<td>100mA</td>
<td>100mA</td>
<td>100mA</td>
<td>100mA</td>
</tr>
<tr>
<td>Head removal monitoring</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Standby current</td>
<td>50mA</td>
<td>56mA</td>
<td>66mA</td>
<td>76mA</td>
<td>86mA</td>
</tr>
<tr>
<td>Alarm current</td>
<td>82mA</td>
<td>136mA</td>
<td>166mA</td>
<td>176mA</td>
<td>186mA</td>
</tr>
<tr>
<td>Fault volt free changeover contact</td>
<td>N/A</td>
<td>1A @ 30V DC</td>
<td>1A @ 30V DC</td>
<td>1A @ 30V DC</td>
<td>1A @ 30V DC</td>
</tr>
<tr>
<td>Fire contact on evacuation switch</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

★ = Standard equipment  ○ = Optional equipment (using LCMU)  N/A = Not Available

The manufacturer reserves the right to amend specifications without prior notice.
Conventional Fire Alarm Mimic System

Features

- Up to 320 LED's can be controlled
- Select up to 12 printed colours (not including background and building outline)
- Available in a range of standard enclosures to suit any application
- Bespoke sized units can be made upon request
- Choice of Red, Green or Yellow LED's
- Available with or without controls
- Same look and feel as Sigma range
- Sigma Matrix can easily be upgraded on site with minimal cost and effort
- EN54-4 approved PSU (optional)

Product Overview

- The Sigma Matrix system uses flexible, fibre optic light guides to illuminate areas on a floor plan, laid over a high resolution grid. This unique system dispenses completely with wiring and enables indicators to be moved, removed or added on site without the need for any wiring.
- All indicators can be configured to operate via switched positive or negative inputs providing compatibility with a wide range of input/output boards. Sigma Matrix can be supplied with or without common LEDs and controls. Optional LEDs indicate Power on, Fire and Fault and optional controls are for Buzzer silence and Lamp test.
- Housed in attractive, slimline enclosures to match Sigma fire alarm panels and with high quality, full colour or monochrome floor plans, Sigma Matrix provides a clear, geographical indication of fire alarm activation enabling speedy identification of the source of an alarm.
Specifications

**Technical**

- **Mains supply***
- **Mains supply fuse***
- **Power supply rating***
- **Maximum ripple current***
- **Battery type** (Yuasa NP)
- **Battery charge voltage***
- **Battery charge current***
- **Max. current draw from batteries***
- **Supply voltage (24V versions)**
- **Terminal capacity**
- **Enclosure Size & mimic area**
- **Construction**
- **Finish**
- **Colour - lid & box**
- **Colour - controls plate & labels**
- **Mimic**
- **Cabinet locks**
- **Maximum distance from control panel**
- **IP rating**
- **Operating temperature**
- **Number of indicators (standard models)**

- 230V AC +10% - 15% (100 Watts max.)
- T2A L250V Replace only with similar type
- 4 Amps total including battery charge 28V +/- 2V
- 200 millivolts
- Two 12 Volt sealed lead acid (7Ah maximum)
- 27.6VDC nominal (temperature compensated)
- 1.5A maximum
- 3 Amps. With mains power source disconnected
- 18 to 30V DC
- 0.5mm² to 2.5mm² solid or stranded wire
- See ‘Enclosure Size Options’
- 1.2mm mild steel
- BS 00 A 05 grey - fine texture
- RAL 7047 light grey - satin
- 3mm Clear Anti-Glare Acrylic
- M2/M3 - standard 801 key, S3/S4 - standard KT3001 key
- 1km with 1.5mm² cable

**Enclosure Size Options**

<table>
<thead>
<tr>
<th>Max. number of LED’s</th>
<th>Max. number of LED’s</th>
<th>Max. number of LED’s</th>
<th>Max. number of LED’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>64</td>
<td>64</td>
<td>96</td>
</tr>
</tbody>
</table>

Will house 1 x 32 LED driver PCB
Will house 1 x LED driver PCB and 1 x 32 LED extension PCB’s
Will house 1 x 32 LED driver PCB and 1 x 32 LED extension PCB’s
Will house 1 x 32 LED driver PCB and up to 9 x 32 LED extension PCB’s

(Red, Green or Yellow) (Red, Green or Yellow) (Red, Green or Yellow) (Red, Green or Yellow)

**Bespoke Size**

- Colour/Finish & Size to suit your requirements
To use this method of monitoring, the breaking connection of the detector base must be fitted with a diode. To ensure correct operation over a wide supply voltage range and with up to 20 detectors removed, a Schottky type BYV-1060 is recommended. These devices are, however, very sensitive to electrostatic discharge and extra care should be taken when handling or cable testing.

It is also necessary to fit a 47uF capacitor to the detection line terminals on some of the control panels (not K3000 series or Sigma CP). Extreme care should be taken when fitting the capacitor in the panel as they are polarity conscious. The LCMU itself is also polarity conscious and the polarity is indicated in the normal manner i.e. black wire is always negative. A wrongly connected LCMU will produce a short circuit fault condition.

Due to the use of surface mount technology components, the LCMU is probably the smallest device of its kind on the market. This enables the device to be fitted either within the last device on a zone or in the back box, eliminating the need for an additional wiring point.

Easy to install
No additional wiring point
Low cost
Sub-miniature design
Environmentally sealed

**Product Overview**

**Features**

- Easy to install
- No additional wiring point
- Low cost
- Sub-miniature design
- Environmentally sealed

**Technical**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Size</td>
<td>25mm x 20mm x 8mm</td>
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<tr>
<td>Finish</td>
<td>Conformal powder coating</td>
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<tr>
<td>Colour</td>
<td>Blue</td>
</tr>
<tr>
<td>Normal current</td>
<td>5mA at 28V</td>
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<tr>
<td>Fault condition current</td>
<td>750uA 50V</td>
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<tr>
<td>Max. zone cable resistance</td>
<td>20 ohms</td>
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<tr>
<td>Panel capacitor</td>
<td>47uF 30V</td>
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<tr>
<td>Operating voltage</td>
<td>15V to 30V</td>
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<tr>
<td>Terminal connections</td>
<td>Bootlace ferrules</td>
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<tr>
<td>Max. detectors supported</td>
<td>20 per zone</td>
</tr>
<tr>
<td>Lead colours</td>
<td>K1406K - pink/black</td>
</tr>
<tr>
<td></td>
<td>K1406C - orange/black</td>
</tr>
<tr>
<td></td>
<td>K1406N - red/black</td>
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</table>

**Panels**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1406K</td>
<td>Line Continuity Monitoring Unit 6k8</td>
</tr>
<tr>
<td>K1406C</td>
<td>Line Continuity Monitoring Unit 8k2</td>
</tr>
<tr>
<td>K1406N</td>
<td>Line Continuity Monitoring Unit 5k6</td>
</tr>
</tbody>
</table>
RL1 (S375) Single Way Relay PCB

**Product Overview**

- This simple board contains a single 24V DC relay, which can be used for any extra low voltage switching applications.
- It has two changeover contacts, an LED indicator to show when the coil is energised and a polarising diode to prevent damage to the power source by reverse polarity connection.
- The contacts are suitable for switching a maximum of 30V DC and 2 Amps. Voltages or currents that exceed these values should not be connected under any circumstances.
- The current consumption of the unit when operated from a 24V supply is approximately 25mA.
- The PCB has four 4mm mounting holes, which will accept the self adhesive standoffs supplied. The use of self adhesive standoffs should be carefully considered however due to their tendency to become detached over a period of time and a more permanent fixing method is recommended.

**Features**

- 24V DC operated
- LED indicator shows relay operated
- Two changeover contacts per relay
- Built in suppression diodes
- Spring leaf 2.5mm capacity terminals
- Small footprint
- 2 Amp 30V DC contact rating
- Low current consumption

---

RL4 (S376) Four Way Relay PCB

**Product Overview**

- This simple board contains four 24V DC relays, which can be used for any extra low voltage switching applications.
- Each relay has two changeover contacts, and an LED indicator to show when the coil is energised. The coils of the relays are commoned to the positive supply and the relays can be operated individually by switching a negative to the numbered coil inputs.
- The contacts are suitable for switching a maximum of 30V DC and 2 Amps. Voltages or currents that exceed these values should not be connected under any circumstances.
- The current consumption of the unit when operated from a 24V supply is approximately 25mA per relay.
- The PCB has four 4mm mounting holes, which will accept the self adhesive standoffs supplied. The use of self adhesive standoffs should be carefully considered however due to their tendency to become detached over a period of time and a more permanent fixing method is recommended.

---

Example sounder interface of two K3000S fire panels
Extinguishant System Control Equipment

Pages 60-69
Sigma XT
EN12094 Extinguishant Control Panels
Page 60-61

Sigma XT+
Multi Area Extinguishant Control Panels
Page 62-63

Sigma XT+
Extinguishant Coincidence Unit
Page 64-65

Sigma Si
Status Units for use with Sigma XT/XT+
Page 66-67

Syncro XT+
Multi Area Addressable Extinguishant Control Panels
Page 68-69
Extinguishant Control Panel

Features

- Complies with EN12094-1
- Three detection zones as standard
- Any single zone or any combinations of zones can be configured to release
- Configurable first stage sounder delays
- Configurable detection delays
- Zero time delay upon manual release option
- Compatible with I.S. barriers
- Non-latching zone input option to receive signals from other systems such as aspirating equipment
- Configurable extinguishant delays up to 60 seconds in 5 second steps
- Configurable extinguishant duration up to 5 minutes in 5 second steps
- Countdown timer shows time remaining until release
- Supports up to seven, four wire status indicators
- Built in Extract Fan control

Product Overview

- Designed and manufactured to the highest standards in a quality controlled environment and with European EN12094-1 approvals, the Sigma XT extinguishant releasing panel offers outstanding value and performance for all small to medium fixed firefighting installations.

- With three detection zones as standard, extinguishant release can be configured to activate from any combination of detection zone inputs to allow (among other combinations) any two from three type activations such as would be required for detection in ceiling void, room and floor void applications.

- The extensive configuration options of the Sigma XT allow the functionality of the system to be extensively modified while still complying with the requirements of the controlling standard for the equipment (EN12094-1).

- The panel contains a large LED display to enable easy configuration and control which also displays the time remaining until extinguishant release for added user safety.

- The countdown timer is duplicated on up to seven remote status units to provide local indication of the extinguishant system status.

- With all of the electronics mounted on a single, easily removable, steel plate Sigma XT panels are both robust and easy to install.

- Sigma XT is supplied in an enclosure that matches the design and colour of the Sigma CP range.

Programmable Functions

Access Level 2

- Test Zones 1 to 3
- Disable Zones 1 to 3
- Disable 1st Stage Alarms
- Disable Pre-activated 1st Stage Relay
- Disable Pre-activated 2nd Stage Relay
- Disable Extract Fan Output
- Disable Manual Release Input
- Disable Extinguishant Sub System
- Activate Extract Fan Output
- Activate Alarm Delays

Access Level 3

- Sounder Delay
- Coincidence Detection
- Disable Panel Features
- Zone Alarm Delays (Detectors)
- Zone Alarm Delay (Call Points)
- Configure Zone for I.S Barrier Use
- Zone Short Circuit Alarm
- Zone Non Latching
- Zone Inputs Delay
- Extinguishant Release Time Delay
- Extinguishant Release Duration Timer
- Extinguishant Reset Delay Timer
Specifications

Mains supply
- 230V AC +10%/-15% (100 Watts maximum)
Mains supply fuse
- 1.6 Amp (F1.6A L250V)
Finish
- Epoxy powder coated
- BS 00 A 05 grey - fine texture
Colour - controls plate & labels
- RAL 7047 light grey - satin
Power supply rating
- 3 Amps total including battery charge 28V +/- 2V
Maximum ripple current
- Two 12 Volt 7Ah sealed lead acid in series
Battery charge voltage
- 27.6VDC nominal (temperature compensated)
Battery charge current
- 0.7A maximum
Battery fuse
- Fused at 500mA with electronic fuse
Maximum current draw from batteries
- 3 Amps
Fault relay contact rating
- 30VDC 1A Amp maximum
Fire relay contact rating
- 30VDC 1A Amp maximum
First stage contact rating
- 30VDC 1A Amp maximum
Second stage contact rating
- 30VDC 1A Amp maximum
Extract contact rating
- 30VDC 1A Amp maximum
Zone quiescent current
- 2mA maximum
Terminal capacity
- 0.5mm² to 2.5mm² solid or stranded wire
- Dependent on type (maximum 32)
Number of detectors per zone
- Dependent on type (max. 0.5A per sounder circuit)
Number of sounders per circuit
- 8K 8 ½ Watt resistor
- 6K8 5% ½ Watt resistor
- 10K 5% ¼ Watt resistor
Extinguishant output EOL
- 1N4004 Diode
No. of detection circuits
- 3
No. of sounder circuits
- 2 x 1st Stage, 1 x 2nd Stage
Extinguishant release output
- Fused at 1 Amp
Extinguishant release delay
- Adjustable 0 to 60 seconds (in 5 second steps)
Extinguishant release duration
- Adjustable 60 to 300 seconds (in 5 second steps)
SIL, AL, FLT, RST inputs
- Switched -ve, max resistance 100 Ohms
Zone normal threshold
- 8K ohms to 1K ohm
Detector alarm threshold
- 999 ohms to 400 ohms
Call point alarm threshold
- 399 ohms to 100 ohms
Short circuit threshold
- 99 ohms to 0 ohms
Head removal condition
- 15.5 to 17.5 volts
Cabling
- FP200 or equivalent
- 8K ohms to 1K ohm
- 8K ohms to 1K ohm
- 8K ohms to 1K ohm
- 999 ohms to 100 ohms
- 99 ohms to 0 ohms
Monitored inputs normal threshold
- Two wire RS485 connection
Monitored inputs alarm threshold
- Two wire RS485 connection
Local fire relay contact rating
- Fused at 1 Amp
Fault relay contact rating
- Adjustable 0 to 60 seconds (in 5 second steps)
Fire relay contact rating
- Adjustable 60 to 300 seconds (in 5 second steps)
Fault relay contact rating
- Switched -ve, max resistance 100 Ohms
Fused at 1 Amp
- Remote Auto/Manual Select Switch
- Remote Manual Release Switch
- Remote Hold Switch
- Extinguishant Released Pressure Switch
- Releasing Solenoid
- Releasing Detectors
- Stop Air Conditioning
- Peripheral Detectors
- Extract Fan Power
- Shutdown Power
- Sigma XT PCB

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K11031M2</td>
<td>Surface mounting panel</td>
<td>385 x 310 x 90</td>
</tr>
<tr>
<td>K11031F2</td>
<td>Flush mounting panel</td>
<td>415 x 315 x 86</td>
</tr>
</tbody>
</table>
Multi-Area Extinguishant Control Panels

Features

- Complies with EN12094-1
- 2, 4 or 8 detection zones
- 1 to 4 extinguishant areas
- Dual extinguishant outputs for each area (configurable as Main/Reserve)
- First and second stage sounder outputs for each area
- First and second stage volt free changeover contacts for each area
- Released volt free contact per area
- Fault volt free contact per area
- Programmable extinguishant delays
- Programmable output duration
- Extract fan control
- Countdown indicator shows time until release in seconds
- Mode select and manual release controls per area
- Monitored remote manual release input
- Monitored remote Hold input
- Monitored remote Mode select (door interlock) input
- Monitored remote Released pressure switch input
- Monitored remote Low Pressure switch input
- Monitored Abort input
- Serial connection for Sigma Si status units and ancillary boards. (K588)

Product Overview

- Sigma XT+ control panels are multi-area extinguishant control panels complying with EN12094-1. Up to 8 zones of conventional detection with up to 4 extinguishant areas are available. Stand alone extinguishant control units are also available with 2 monitored inputs to receive initiating signals from remote fire detection control panels or addressable modules.

- Each extinguishant area has a comprehensive set of inputs and outputs and is configurable via a simple programming interface. All extinguishant areas may have up to 7, serially connected Sigma Si status indication and control units or ancillary relay boards connected via a simple 4 core cable.

- The versatility of the control panel can be enhanced further by the fitting of up to 7 Sigma CP Ancillary boards (K580) or Sigma CP Sounder boards (K461) to the RS485 serial bus. See data sheet DS39 (page 46-47) and DS48 (page 76-77).

- For compatible status units see Sigma Si data sheet DS41 (page 66-67).

Model No. K21082M3
** Specifications **

**Product Code** | **Zones** | **Areas** | **Size (mm)**
--- | --- | --- | ---
K21021M3 | 2 | 1 | 385 x 520 x 110
K21041M3 | 4 | 1 | 385 x 520 x 110
K21042M3 | 4 | 2 | 385 x 520 x 110
K21081M3 | 8 | 1 | 385 x 520 x 110
K21082M3 | 8 | 2 | 385 x 520 x 110
K21083M4 | 8 | 3 | 385 x 700 x 145
K21084M4 | 8 | 4 | 385 x 700 x 145

**Technical**

**Mains supply**
- 230V AC, 50Hz +10% - 15% (100 Watts maximum)

**Mains supply fuse**
- 1.6 Amp ( F1.6A L250V)

**Finish**
- Epoxy powder coated

**Colour - lid & box**
- BS 00 A 05 grey - fine texture

**Colour - controls plate & labels**
- RAL 7047 light grey - satin

**Power supply rating (1 & 2 area units)**
- 3 Amps total including battery charge 28V +/- 2V

**Power supply rating (3 & 4 area units)**
- 4 Amps including battery charge 28V +/- 2V

**Maximum ripple current**
- 200 millivolts

**Battery charge voltage**
- 27.6VDC nominal (temperature compensated)

**Battery charge current**
- 0.7A maximum

**Battery fuse**
- 20mm, 3.15A glass

**Current draw in mains fail condition**
- 54 millamps per module

**Max. current draw from batteries**
- 3A (K21021, K21041, K21042, K21081, K21082)
- 4A (K21083, K21084)

**Sigma XT+ module Aux 24V output**
- Fused at 500mA with electronic fuse - 1 per extinguishing area

**Sigma CP Aux 24V output**
- Fused at 2.5A - not available to user

**1st and 2nd stage Sounder outputs**
- 21 to 28V DC Fused at 1A with electronic fuse

**Fault relay contact rating**
- 5 to 30VDC 1A Amp maximum for each

**Fire relay contact rating**
- 5 to 30VDC 1A Amp maximum for each

**Local fire relay contact rating**
- 5 to 30VDC 1A Amp maximum for each

**First stage contact rating**
- 5 to 30VDC 1A Amp maximum for each

**Second stage contact rating**
- 5 to 30VDC 1A Amp maximum for each

**Extract contact rating**
- 5 to 30VDC 1A Amp maximum for each

**Zone quiescent current**
- 0mA minimum, 2mA maximum

**Terminal capacity**
- 0.5mm² to 2.5mm² solid or stranded wire

**Number of detectors per zone**
- Dependent on type - typically 20

**Number of sounders per circuit**
- Dependent on type and current consumption - typically 20+

**Detection circuit end of line**
- 6K8 +/- 5% ½ Watt resistor

**Monitored input end of line**
- 6K8 +/- 5% ½ Watt resistor

**Sounder circuit end of line**
- 10K +/- 5% ¼ Watt resistor

**Extinguishant output end of line**
- 21 to 28V DC. Fused at 1 Amp

**No. of detection circuits**
- Two to eight. 21 to 28V DC

**Extinguishant release output**
- 21 to 28V DC. Fused at 1 Amp

**Extinguishant release delay**
- Adjustable 0 to 60 seconds (+/- 10%)

**Extinguishant release duration**
- Adjustable 60 to 300 seconds

**SIL, AL, FLT, RST inputs**
- Switched -ve, min resistance 0 ohms, max resistance 100 Ohms

**Zone normal threshold (Allowable EOL)**
- 10K ohm to 2K ohm

**Detector alarm threshold**
- 1K ohms to 390 ohms

**Call point alarm threshold**
- 370 ohms to 150 ohms

**Short circuit threshold**
- 130 ohms to 0 ohms

**Head removal condition**
- 15.5 to 17.5 volts

**Cabling**
- FP200 or equivalent (max capacitance 1uF max inductance 1 mH)
- 10K ohm to 2K ohm

**Monitored inputs normal threshold (Allowable EOL)**
- 2K ohms to 150 ohms +/- 5%

**Monitored inputs alarm threshold**
- 140 ohms to 0 ohms +/- 5%

**Status unit/Ancillary board connection**
- Two wire RS485 connection (EIA-485 specification)

**Status unit power output**
- 21 to 28V DC. Fused at 500mA with electronic fuse

The manufacturer reserves the right to amend specifications without prior notice.
The Sigma XT+ ECD coincidence unit has two fully monitored inputs for connection to fire detection control equipment or addressable control modules to provide an EN12094-1 compliant extinguishant control system.

Its many programmable features and extensive range of inputs and outputs make the Sigma XT+ ECD coincidence unit suitable for all extinguishing applications where a fully featured control device is required.

Among the many features of the Sigma XT+ ECD are serially connected status units for reduced wiring and reduced installation cost, dual extinguishant outputs that may be configured for main/reserve applications and a countdown timer which displays the time until discharge of the extinguishant in seconds.

All units are independently configurable via a simple, code based programming interface to suit the desired application.

Features
- Complies with EN12094-1
- Dual extinguishant outputs
- First and second stage sounder outputs
- First and second stage relay contacts
- Main reserve facility
- Serial connection to status units
- Discharge countdown time indicator
### Specifications

#### Example Schematic 1
- **Sigma CP-R**
- Repeater Panel
- **(Up to 7)**

#### Example Schematic 2
- **Syncro**
- Control Panel
- **Board (S580)**

#### Technical

- **Product Code**
  - K21001M2
- **Finish**
  - Epoxy powder coated
- **Colour - lid & box**
  - BS 00 A 05 grey - fine texture
- **Colour - controls plate & labels**
  - RAL 7047 light grey - satin
- **Size**
  - 385mm(W) x 310mm(H) x 90mm(D)
- **Areas**
  - 1
- **Mains supply**
  - 230V AC, 50Hz +10% - 15%
- **Mains supply fuse**
  - 1.6 Amp (F1.6A L250V)
- **Power supply rating**
  - 4 Amps including battery charge 28V +/- 2V
- **Battery charge voltage**
  - 27.6VDC nominal (temperature compensated)
- **Battery charge current**
  - 600mA with electronic fuse
- **Battery fuse**
  - 1N4004 Diode
- **Current draw in mains fail condition**
  - 4 Amps
- **Maximum current draw from batteries**
  - 2mA maximum
- **Aux 24V output**
  - 20mm, 3.15A glass
- **1st and 2nd stage**
  - 54 milliamps
- **Sounder outputs**
  - 200 millivolts
- **Fault relay contact rating**
  - 6K8 +/- 5% ½ Watt resistor
- **Fire relay contact rating**
  - 10K +/- 5% ¼ Watt resistor
- **Local fire relay contact rating**
  - 5mA minimum, 0.5mA maximum for each
- **First stage contact rating**
  - 0.7A maximum
- **Second stage contact rating**
  - Adjustable 0 to 60 seconds
- **Extract contact rating**
  - Adjustable 60 to 300 seconds
- **Zone quiescent current**
  - 0mA minimum
- **Terminal capacity**
  - Dependent on type and current consumption
- **Number of sounds per circuit**
  - 6K8 +/- 5% ½ Watt resistor
- **Monitored input end of line**
  - 10K +/- 5% ¼ Watt resistor
- **Sounder circuit end of line**
  - 1N4004 Diode
- **Extinguishant output end of line**
  - Adjustable 0 to 60 seconds (+/- 10%)
- **Extinguishant release output**
  - Adjustable 60 to 300 seconds
- **Extinguishant release duration**
  - (Allowable EOL)
  - 10K ohm to 2K ohm
  - 2K ohms to 150 ohms +/- 5%
  - 140 ohms to 0 ohms +/- 5%
- **Monitored inputs normal threshold**
  - Two wire RS485 connection (EIA-485 specification)
- **Monitored inputs alarm threshold**
  - 21 to 28V DC, Fused at 1 Amp
- **Short circuit threshold**
  - 2mA maximum
- **Status unit/Ancillary circuit threshold**
  - 0.5mA maximum for each
- **Status unit power output**
  - 5 to 30VDC 1A Amp maximum for each
- **Status unit power output**
  - 250V HRC
- **MONITORED INPUTS**
  - 21 to 28V DC. Fused at 1 Amp
  - 5 to 30VDC 1A Amp maximum for each
  - 0.7A maximum
  - 2mA maximum
  - 0.5mA maximum for each
  - 5mA minimum, 0.5mA maximum for each
  - 0mA minimum, 2mA maximum
  - 0.5mA2 to 2.5mm2 solid or stranded wire
  - 12 Volt sealed lead acid in series
  - 2.5 mm2 solid or stranded wire

The manufacturer reserves the right to amend specifications without prior notice.
Sigma Si Status Indicators

The Sigma Si range of status indicators provide detailed status information for Sigma XT/XT+ extinguishant release control equipment.

- All models provide high brightness, LED indication of Manual Only, Automatic and Manual, Hold operated, Disabled, Imminent and Released conditions. Models are also available with zonal fire indicators and a common fault indicator.
- For systems where local control of the Automatic/Manual mode and or a Manual extinguishant release control are required, units are available with these controls fitted.
- All models have monitored inputs for the remote connection of Automatic/Manual mode and Hold switches.
- All units contain a large, LED display which shows a countdown of the time remaining until the extinguishant is released in seconds.

Ancillary PCB

The Sigma XT Ancillary Board is compatible with all Sigma XT control panels which have operating software version SIGXT_11A.HEX or above.

- The board provides volt free normally open contacts allowing control of sub-systems and plant remotely from the main panel over a two wire data bus.
- Mains powered, boxed Ancillary boards require only a two core data cable from the main control panel. 24V DC versions require an additional two cores for power either from the main panel or from another 24V DC source.
- Up to 7 Ancillary boards can be connected to a control panel and each is allocated an address from 1 to 7 using a binary coded DIL switch. The total length of the data cable from the main panel to the last repeater must not exceed 1200 metres.
- A mixture of status units and Ancillary boards, up to a maximum of 7 of each type, can be connected to the serial data bus.

Sigma Si Features

- Certified compliant with BS EN12094-1 when used with Sigma XT control equipment
- High brightness LEDs
- Detailed indication of the status of the control panel
- Monitored data connection
- Countdown timer shows time remaining until release
- Manual only and Automatic & Manual mode select keyswitch option
- Four wire connection (data and power)
- Protected dual action manual release switch option
- Option for zonal fire and common fault indication with buzzer
- Robust, high quality enclosure
- Easy access to terminals
- Remote Auto/Manual door interlock input (monitored)
- Remote Hold input (monitored)
- Internal fault diagnosis indicators
- Weatherproof IP65 versions available
- Internal buzzer

Ancillary PCB Features

- Two wire serial connection
- Up to 7 per system
- 230V AC or 24V DC powered versions
- Volt free relay outputs for fire and extinguishing system status
- Relay operated LED indicators

Model No. K911113M8
Model No. K911111M8
Model No. K911100M8
Model No. K911100M8
Model No. K911100M8
Model No. S588
Specifications

The manufacturer reserves the right to amend specifications without prior notice.

Equipment

Product Code  Description

K911000M8  6 lamp status unit surface
K911000F8  6 lamp status unit flush
K911100M8  6 lamp status unit with mode select keyswitch surface
K911100F8  6 lamp status unit with mode select keyswitch flush
K911010M8  6 lamp status unit with manual release surface
K911010F8  6 lamp status unit with manual release flush
K911110M8  6 lamp status unit with mode select keyswitch and manual release surface
K911110F8  6 lamp status unit with mode select keyswitch and manual release flush
K911113M8*  10 lamp status unit with mode select keyswitch and manual release surface
K911113F8*  10 lamp status unit with mode select keyswitch and manual release flush

W911000W8  IP65 - 6 lamp status unit surface
W911110W8  IP65 - 6 lamp status unit with mode select keyswitch surface
W911110W8* IP65 - 6 lamp status unit with mode select keyswitch and manual release surface
W911113W8* IP65 - 10 lamp status unit with mode select keyswitch and manual release surface

K588  Stand alone ancillary PCB
K03000M2  Boxed ancillary PCB
K03750M2  Boxed ancillary PCB with 0.75A PSU

* Not suitable for Sigma XT+ / Syncro XT+ or Sigma XT+ ECU products

Ancillary PCB

Technical

Size (PCB only)  - 155mm (W) x 136mm (H)
Size (Boxed PCB)  - 385mm (W) x 310mm (H) x 90mm (D)
Construction (Boxed)  - 1.2mm mild steel
Colour - lid & box  - BS 00A 05 grey - fine texture
Supply voltage (K03750M2)  - 230V AC (+10%/-15%)
Supply voltage (K03000M2)  - 20-30V DC
Mains supply fuse  - 1.6A 250V
Power supply DC rating  - 24V 0.75 Amp
Maximum battery size  - 2Ah 24V (2 per panel)
Contact ratings  - 30V DC 1 Amp
Cable capacity  - 2.5mm² per terminal
Operating temperature  - -5°C to +50°C
Operating humidity  - <95% (non condensing)

Sigma Si

Technical

Power supply  - 21 to 30V DC
Maximum current draw  - 0.07A
Max. number of status units  - 7
Quiescent current  - 0.033A
Cable capacity  - 2.5mm² per terminal
Monitored inputs end of line resistor  - 6K8 0.5W Resistor
Monitored inputs normal threshold  - 8K ohm to 1K ohm
Monitored inputs trigger threshold  - 700 ohms to 100 ohms
Monitored inputs Short circuit threshold  - 99 ohms to 0 ohms
Data connection  - Two wire RS485 connection (max 1200 metres)

Weatherproof Version
Model No. W911113W8*

* Not suitable for Sigma XT+ / Syncro XT+ or Sigma XT+ ECU products
Multi-Area, Addressable Extinguishant Control Panels

Features

- Complies with EN12094-1
- 16 detection zones
- Up to 4 extinguishant areas
- Dual extinguishant outputs for each area (configurable as Main/Reserve)
- First and second stage sounder outputs for each area
- First and second stage volt free changeover contacts for each area
- Released volt free contact per area
- Fault volt free contact per area
- Programmable extinguishant delays
- Programmable output duration
- Countdown indicator shows time until release in seconds
- Mode select and manual release controls per area
- Monitored remote manual release input
- Monitored remote hold input
- Monitored remote mode select (door interlock) input
- Monitored remote released pressure switch input
- Monitored Abort input
- Serial connections for Sigma Si status units and ancillary boards. (K588)

Product Overview

- Syncro XT+ control panels are multi-area extinguishant control panels complying with EN12094-1.
- Up to 16 zones of addressable detection over 1 or 2 loops ensure every detector is able to contribute to extinguishant release. Up to 4 extinguishant areas are available. Stand alone extinguishant control units are also available with 2 monitored inputs to receive initiating signals from remote fire detection control panels or addressable modules.
- Each extinguishant area has a comprehensive set of inputs and outputs and is configurable via a simple programming interface. All extinguishant areas may have up to 7, serially connected Sigma Si status indication and control units or ancillary relay boards connected via a simple 4 core cable.
- For compatible status units see Sigma Si data sheet DS41 (page 66-67).
Specifications

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Loop Areas</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#31161M3</td>
<td>1</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>#32161M3</td>
<td>2</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>#31162M3</td>
<td>1</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>#32162M3</td>
<td>2</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>#31163M4</td>
<td>1</td>
<td>385 x 700 x 145</td>
</tr>
<tr>
<td>#32163M4</td>
<td>2</td>
<td>385 x 700 x 145</td>
</tr>
<tr>
<td>#31164M4</td>
<td>1</td>
<td>385 x 700 x 145</td>
</tr>
<tr>
<td>#32164M4</td>
<td>2</td>
<td>385 x 700 x 145</td>
</tr>
</tbody>
</table>

*# - replace with:
'A' for Apollo protocol,
'H' for Hochiki protocol
'V' for Argus Vega protocol

Technical

- Mains supply: 230V AC, 50Hz +10% - 15% (100 Watts maximum)
- Mains supply fuse: 1.6 Amp (F1.6A L250V)
- Finish: Epoxy powder coated
- Colour - lid & box: BS 00 A 05 grey - fine texture
- Colour - controls plate & labels: RAL 7047 light grey - satin
- Power supply rating (1 & 2 area units): 3 Amps total including battery charge 28V +/- 2V
- Power supply rating (3 & 4 area units): 4 Amps including battery charge 28V +/- 2V
- Maximum ripple current: 200 millivolts
- Battery charge voltage: 27.6VDC nominal (temperature compensated)
- Battery charge current: 0.7A maximum
- Battery fuse: 20mm, 3.15A glass
- Current draw in mains fail condition: 54 milliamps per extinguishing module
- Max. current draw from auxiliary: 3A (#31161M3, #32161M3, #31162M3, #32162M3)
- Sigma XT+ module Aux 24V output: Fused at 500mA with electronic fuse - 1 per extinguishant area
- Syncro AS Aux 24V output: Fused at 2.5A - not available to user
- 1st and 2nd stage Sounder outputs: 21 to 28V DC Fused at 1A with electronic fuse
- Fault relay contact rating: 5 to 30VDC 1A Amp maximum for each
- Fire relay contact rating: 5 to 30VDC 1A Amp maximum for each
- Local fire relay contact rating: 5 to 30VDC 1A Amp maximum for each
- First stage contact rating: 5 to 30VDC 1A Amp maximum for each
- Second stage contact rating: 5 to 30VDC 1A Amp maximum for each
- Extract contact rating: 5 to 30VDC 1A Amp maximum for each
- Terminal capacity: 0.5mm2 to 2.5mm2 solid or stranded wire
- Number of sounders per circuit: Dependent on type and current consumption - typically 20+
- Monitored input end of line: 6K8 +/- 5% ½ Watt resistor
- Sounder circuit end of line: 10K +/- 5% ¼ Watt resistor
- Extinguishant output end of line: 1N4004 Diode
- Number of detection loops: 1 or 2
- Number of zones: 16
- No. of sounder circuits: Dependent on model 21 to 28V DC
- Extinguishant release output: 21 to 28V DC. Fused at 1 Amp
- Extinguishant release delay: Adjustable 0 to 60 seconds (+/- 10%)
- Extinguishant release duration: Adjustable 60 to 300 seconds
- SIL, AL, FLT, RST inputs: Switched -ve, min resistance 0 ohms, max resistance 100 Ohms
- Cabling: FP200 or equivalent (max capacitance 1uF max inductance 1 mH)
- Monitored inputs normal threshold: 10K ohm to 2K ohm
- Monitored inputs alarm threshold: 2K ohms to 150 ohms +/- 5%
- Monitored inputs Short circuit threshold: 140 ohms to 0 ohms +/- 5%
- Status unit/Ancillary board connection: Two wire RS485 connection (EIA-485 specification)
- Status unit power output: 21 to 28V DC. Fused at 500mA with electronic fuse

Panels

Product Code | Loop Areas | Size (mm) |
---|---|---|
#31161M3 | 1 | 385 x 520 x 110 |
#32161M3 | 2 | 385 x 520 x 110 |
#31162M3 | 1 | 385 x 520 x 110 |
#32162M3 | 2 | 385 x 520 x 110 |
#31163M4 | 1 | 385 x 700 x 145 |
#32163M4 | 2 | 385 x 700 x 145 |
#31164M4 | 1 | 385 x 700 x 145 |
#32164M4 | 2 | 385 x 700 x 145 |

The manufacturer reserves the right to amend specifications without prior notice.
Miscellaneous Items

Pages 72-81
EN54-4 Approved
Fire Alarm Power Supplies

Features
- 2.5A and 5.25A versions
- Chassis only or enclosure mounted with battery space
- 110V or 230V input
- Regulated, true 24V output
- Intelligent battery charging and temperature compensation
- House up to 26Ah batteries
- Status indicators for monitored faults
- Dual output option for powering fire alarm control panels remotely
- Chassis versions have same mounting points
- Fully enclosed and robust construction

Product Overview
- Syncro Power EN54-4 compliant power supplies provide a stable and fully regulated, true 24V output for fire alarm system applications under all power conditions. The unique regulation techniques ensure that even when running on standby batteries, a stable 24V supply is available to all parts of the system ensuring that all 24V powered devices connected are supplied with optimum power.

- The powerful onboard microcontroller ensures that all battery types are conditioned with optimum, temperature compensated charging algorithms to maximise battery life and maintain batteries in top condition.

- Syncro Power EN54-4 compliant power supplies can be fitted with an optional dual fused output monitoring module to ensure compliance with European standards when supplying fire control panels with an external power supply.

- Enclosed units are available to match both Sigma and Syncro equipment ranges and all are finished with matching livery and provide power on and power fault indications.
Specifications

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>PSU</th>
<th>Batteries</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K25250M3</td>
<td>2.5 Amp</td>
<td>up to 12Ah</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>K2525003</td>
<td>2.5 Amp</td>
<td>up to 12Ah</td>
<td>500 x 355 x 117</td>
</tr>
<tr>
<td>K25400M3</td>
<td>5.25 Amp</td>
<td>up to 17.2Ah</td>
<td>385 x 520 x 110</td>
</tr>
<tr>
<td>K2540003</td>
<td>5.25 Amp</td>
<td>up to 12Ah</td>
<td>500 x 355 x 117</td>
</tr>
<tr>
<td>K2540015</td>
<td>5.25 Amp</td>
<td>up to 26Ah</td>
<td>500 x 460 x 190</td>
</tr>
</tbody>
</table>

Technical

- **Mains input supply voltage**: 230V AC 50/60Hz or 110V AC 50/60Hz (link selectable)
- **Mains supply fuse**: 250V, 3A, SB, 5mm x 20mm
- **Finish**: Epoxy powder coated
- **colour - lid & box**: BS 00 A 05 grey - fine texture
- **Load output voltage**: 19-30V DC +/- 1%
- **Maximum load current – K25400 models**: 5.25 Amps continuous with maximum battery charge output of 1.25A
- **Maximum load current – K25250 models**: 2.5 Amps continuous with maximum battery charge output of 1.0A
- **Maximum ripple**: 200 milliamps
- **Load fuse**: 5 Amp, self resetting Polyfuse
- **Maximum current draw from batteries**: 5 Amps
- **Battery charge output voltage**: 27.4V DC nominal at 20 degrees C (temperature compensated from -5 to 45 degrees C)
- **Battery charge current**: Two stage, constant voltage. 1.25 Amps maximum
- **Deep discharge prevention**: Battery disconnects at 19V
- **Compatible batteries**: Yuasa – NP7-12, NP12-12, NP17-12, NP24-12
  Powersonic – PS-1270, PS-12120, PS-12170, PS12260
- **Operating temperature**: -5 to 45 degrees C
- **Common fault output**: Normally energised volt free changeover relay – 30V DC 1 Amp
- **Battery disconnected output**: Open collector 50 milliamps
- **Battery low output**: Open collector 50 milliamps
- **Charger fault output**: Open collector 50 milliamps
- **Earth fault output**: Open collector 50 milliamps
- **Front panel Power On indicator**: Green LED
- **Front panel Fault indicator**: Yellow LED
- **Power output**: Dual 24V supply terminals with EN54-4 clause 6.4 interface

The manufacturer reserves the right to amend specifications without prior notice.
Product Overview

- The S407/S406 power supply/battery charger has been developed using switched mode technology to produce an efficient and lightweight power unit for a host of fire alarm applications.

- Suited to almost any application, the S407/S406 is designed to be a universal power source which will reduce spares stock holding and increase serviceability of systems.

- The comprehensive monitoring features of the S407/S406 include true battery present detection, low battery voltage warning, battery overcharge warning and low battery shut off.

- These features combined with the temperature compensated charger output will increase the service life of sealed lead acid batteries.

- The S407 and S406 power supplies are available as chassis only versions for mounting into existing enclosures of various sizes to suit different battery capacities.

S407 Features

- Complies with EN54-4
- Fully enclosed construction
- Small & lightweight
- True 2.5 Amp continuous output
- Comprehensive fault monitoring
- Temperature compensated charger
- Wide input supply voltage
- Enclosed or chassis only versions available
- Low battery shut off to prevent deep discharge of battery

S406 Features

- Complies with EN54-4
- Fully enclosed construction
- Small & lightweight
- True 5.25 Amp continuous output
- Comprehensive fault monitoring
- Microprocessor controlled
- Temperature compensated charger
- Wide input supply voltage
- Enclosed or chassis only versions available
- Low battery shut off to prevent deep discharge of battery
Specifications

**Construction**

- Aluminium base - sheet steel cover

**Finish**

- Epoxy powder coated

**Colour**

- Black

**Size**

- 226mm x 120mm x 55mm

**Weight**

- 0.9Kg

**Supply voltage**

- 230V AC (+10%/-15%)

**Input voltage**

- 110 or 230V AC

**Output voltage**

- 27.5V DC (temperature compensated)

**Total output current**

- 3.5 Amps (continuous)

**Battery charge current**

- 1.25 Amps max.

**Load current**

- 2.5 Amps (with flat battery)

**Fault outputs rating**

- 50mA max.

**Mains fuse**

- 3 Amp 20mm HRC

**Load fuses**

- 3 Amp (self resetting)

**Mains failed warning**

- Switched -ve output

**Battery disconnected warning**

- Switched -ve output

**Battery low warning**

- Switched -ve output

**Battery overcharge warning**

- Switched -ve output

**Earth fault warning**

- Switched -ve output

**Common fault output**

- Switched -ve output

**Operating temperature**

- -5 to +50 deg. C

---

**Formula**

**Battery Calculation**

BS 5839-1:2002

\[ C_{\text{min}} = 1.25 \left( T_2 I_1 + D I_2 /2 \right) \]

Where:

- \( C_{\text{min}} \) = Minimum capacity of the battery when new at the 20 hour discharge rate and at 20 °C in ampere-hours;
- \( T_2 \) = Total battery stand by period in hours;
- \( I_1 \) = Total battery stand by load in amperes;
- \( I_2 \) = Total battery alarm load in amperes;
- \( D \) = a de-rating factor. (1.75)
Conventional Sounder Controller Units

Features
- Two four or six way units available
- Integral power supply
- Robust steel enclosure
- Space for 7Ah batteries
- Power Healthy, Power Fault and Sounder Fault indicators
- Full fault monitoring and integrity maintained

Product Overview
- Conventional Sounder controllers enable additional, distributed power and control for sounder circuits in situations where there are insufficient circuits at the fire alarm control panel or where additional power is required to power heavily loaded sounder circuits.
- The Sounder Controller Unit connects to conventional sounder circuits and any faults on its outputs are transmitted to the fire control panel via the incoming, triggering sounder circuit thus maintaining full fault monitoring.
- All units contain a mains powered battery charger/power supply. There is space for up to 7 Ah batteries.
- Indicators are provided for power healthy, power fault and sounder fault conditions and power fault conditions are signalled to the fire alarm control panel as a sounder fault.

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>PSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1725203</td>
<td>2 Way Sounder Controller Unit</td>
<td>4.0A</td>
</tr>
<tr>
<td>K1725403</td>
<td>4 Way Sounder Controller Unit</td>
<td>4.0A</td>
</tr>
<tr>
<td>K1725603</td>
<td>6 Way Sounder Controller Unit</td>
<td>4.0A</td>
</tr>
</tbody>
</table>

Technical

- Size (mm) - 500(W) x 355(H) x 108(D)
- Finish - Epoxy powder coated
- Colour - lid & box - BS 00 A 05 grey - fine texture
- Supply voltage - 230V AC (+10%/-15%)
- Mains fuse - 3A, 1¼ inch
- Battery charge fuse - 20mm x 5mm, 500 milliamp
- Power output - 24V at 2.5A
- Battery - 7Ah
- Operating temperature - -5°C to +50°C
- Operating humidity - To 95% (non condensing)
Product Overview

- The Sigma CP Sounder Board is compatible with all Sigma CP control panels which have operating software version V3.0 or above.

- The board provides 8 additional sounder outputs which can be configured as zoned, 2-stage or common alarm.

- All sounder outputs are open and short circuit monitored and any faults on the sounder outputs will be announced at the main fire alarm panel as a sounder fault.

- A class change input is provided which, when activated by a volt free contact closing, will switch all sounder outputs on.

- Mains powered units require only a two core data cable from the main control panel. 24V DC versions require an additional two cores from another 24V DC source which is suitably rated to supply the total sounder current. 230V versions have their own power supply which is rated to supply the full sounder load of 4 Amps.

- Up to 7 Sounder boards can be connected to a control panel and each is allocated an address from 1 to 7 using a binary coded DIL switch. Sounder boards may be connected to the Sigma CP serial bus in addition to Sigma CP ancillary boards and Sigma CP-R repeater panels.

- The total length of the data cable from the main panel to the last repeater must not exceed 1200 metres. Once Sounder boards have been recognised by the main panel, a fault will be announced at the main panel if any become disconnected.

Technical

- Size (PCB only) - 155mm (W) x 136mm (H)
- Size (Boxed PCB) - 385mm (W) x 310mm (H) x 90mm (D)
- Construction (Boxed) - 1.2mm mild steel
- Finish - Epoxy powder coated
- Colour - lid & box - BS 00 A 05 grey - fine texture
- Supply Voltage (K04400M2) - 230V AC (+10%/-15%)
- Supply Voltage (K04000M2) - 20-30V DC
- Mains supply fuse - 1.6A 250V
- Power supply DC rating - 24V 4 Amp
- Sounder output rating - 0.5A per output
- Class change input - Volt free NOC
- Cable capacity - 2.5mm² per terminal
- Operating temperature - -5°C to +50°C
- Operating humidity - <95% (non condensing)

Panels

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>PSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>K461</td>
<td>Stand alone sounder PCB</td>
<td>24V DC</td>
</tr>
<tr>
<td>K04000M2</td>
<td>Boxed sounder PCB</td>
<td>24V DC</td>
</tr>
<tr>
<td>K04400M2</td>
<td>Boxed sounder PCB</td>
<td>230V DC</td>
</tr>
<tr>
<td></td>
<td>with 4 Amp PSU</td>
<td></td>
</tr>
</tbody>
</table>

The manufacturer reserves the right to amend specifications without prior notice.
Product Overview

- Another addition to the Kentec range, the document box is designed to complement the design & colour of the Sigma CP range of control panels. The standard version Document Box will hold up to 50 A4 sheets of information on the Fire Detection or other security systems within a premises. The deep version will hold up to 100 sheets. The "Doc Box" also doubles up as a Key Box providing 7 easily accessible formed key hooks inside the enclosure.

Features

- Matches design & colour scheme for standard Sigma CP/XT & Syncro AS control panel ranges
- Easy to install
- Key Lockable
- Designed for versatility
- Choice of small or large capacity enclosure

Technical

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Size</th>
<th>Construction</th>
<th>Finish</th>
<th>Colour - lid &amp; box</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>K16000L2</td>
<td>385mm(W) x 310mm(H) x 60mm(D)</td>
<td>1.2mm mild steel</td>
<td>Epoxy powder coated</td>
<td>BS 00 A 05 grey - fine texture</td>
<td>3.0Kg</td>
</tr>
<tr>
<td>K16000M2</td>
<td>385mm(W) x 310mm(H) x 90mm(D)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Model No. K16000L2

Internal View
Product Overview

- The Tamper Resistant Vision Window is perfect for public areas where restricted access is necessary to prevent damage and unauthorised operation of the control panel. The cover features a fully welded steel construction and key lockable inner door making it robust and secure.

- The Vision Window is available from stock, fully assembled, and can be fitted on site in minutes by simply taking out the hinge pins on the existing enclosure, removing the lid before fitting the new Vision Window cover and hinge pins.

- Control panels can also be supplied pre-fitted with the Vision Window. This applies to any M2 size Sigma CP, Sigma CP-R, Sigma XT or Syncro AS control panels. Please contact our sales department for prices.

Features

- 2 minutes to fit on site
- Kit available from stock
- Colour to match standard Control Panel ranges
- Special colours available on request
- Fits any M2 sized Sigma CP, Sigma CP-R, Sigma XT or Syncro AS panel
- Attractive design
- Key lockable

Technical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>K18002</td>
</tr>
<tr>
<td>Size</td>
<td>385mm x 310mm x 35mm</td>
</tr>
<tr>
<td>Construction</td>
<td>1.2mm mild steel</td>
</tr>
<tr>
<td>Finish</td>
<td>Epoxy powder coated</td>
</tr>
<tr>
<td>Colour - lid &amp; box</td>
<td>BS 00 A 05 grey - fine texture</td>
</tr>
<tr>
<td>Colour - controls plate &amp; labels</td>
<td>RAL 7047 light grey - satin</td>
</tr>
<tr>
<td>Weight</td>
<td>2.0 Kg</td>
</tr>
</tbody>
</table>

Take out both hinge pins & remove lid

Fit the Vision Window, then re-fit both hinge pins

Product code: K18002
Hydrosense Water Detection System

Features

- Auxiliary alarm contacts
- Monitored alarm outputs
- Open and short circuit line monitoring
- Simple controls
- Zonal repeat contacts
- Easy to install
- Easy to service and maintain
- Bright dual LEDs
- Clean low profile appearance
- Diagnostic fault LEDs
- Lockable enclosure
- Special colours and finishes available

Product Overview

- A hydrosense Water Detection System installed in vulnerable areas will continuously monitor the potential hazards, around the clock, year in year out. The system has the facility for 24 hour battery standby in the event of power failures.

- The Hydrosense system has an attractive and unobtrusive control panel containing the alarm circuitry and power supply. The point detection Hydrosense probes or Hydrowire continuous cables are connected to the control panel via a simple two core leader cable making installation quick and inexpensive. Upon detection of a leak, the green alarm lamp on the control panel will flash accompanied by a warning buzzer. The alarm may be extended to a remote location by extension sounder/indicator units. Disconnection of Hydrosense probes or a break in the Hydrowire is immediately indicated on the control panel by the yellow line fault indicator. This ensures that the integrity of the system cannot be compromised without a warning.

- **Hydrosense Floor Mounting Probe K2101**
  This adjustable height probe is simply screwed into the floor and adjusted to give the required detection level. An LED indicator on the top of the probe gives a clear indication of which probe has been activated and this may be extended to a remote lamp location (e.g. above false floor level) using a remote indicator. The probe is connected to the control panel wiring via a flexible cable which plugs into the probe. This plug connection is monitored by the line fault circuit of the control panel.

- **Hydrosense Drip Tray Mounting Probe K2102**
  This probe has exactly the same facilities as the floor mounting probe but has a bracket for mounting onto the side of an air conditioning unit drip tray. The probe is then adjusted to give the required detection level and plugged into the detection circuit.

- **Hydrowire**
  Available as standard 5 and 10 metre lengths, Hydrowire is a flexible cable which will continuously monitor large areas. When even a small amount of water comes into contact with Hydrowire it is absorbed by capillary action thereby triggering an alarm. After the source of the leak has been removed, Hydrowire will dry out in around 20 minutes for use again.

- Unplugging or cutting the Hydrowire will be immediately indicated on the control panel by the line fault indicator. Longer runs can be made by simply plugging lengths of Hydrowire together. Special lengths can be made to order. Each zone requires a connection box and an end of line DIN plug.
### Specifications

#### Equipment

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2001000</td>
<td>Single zone control panel (ABS)</td>
<td>3.5 kg</td>
</tr>
<tr>
<td>K2002001</td>
<td>2 zone control panel (metal)</td>
<td>5.0 kg</td>
</tr>
<tr>
<td>E2002000</td>
<td>2 zone control panel (ABS)</td>
<td>3.5 kg</td>
</tr>
<tr>
<td>K2004001</td>
<td>4 zone control panel (metal)</td>
<td>5.1 kg</td>
</tr>
<tr>
<td>E2004000</td>
<td>4 zone control panel (ABS)</td>
<td>3.5 kg</td>
</tr>
<tr>
<td>E2006000</td>
<td>6 zone control panel (ABS)</td>
<td>3.5 kg</td>
</tr>
<tr>
<td>K20080003</td>
<td>8 zone control panel (metal)</td>
<td>8.4 kg</td>
</tr>
<tr>
<td>K20120003</td>
<td>12 zone control panel (metal)</td>
<td>8.6 kg</td>
</tr>
<tr>
<td>K2101</td>
<td>Floor mounted probe</td>
<td>-</td>
</tr>
<tr>
<td>K2102</td>
<td>Drip tray probe</td>
<td>-</td>
</tr>
<tr>
<td>K2103</td>
<td>Remote indicator</td>
<td>-</td>
</tr>
<tr>
<td>K2104</td>
<td>5 metre Hydrowire</td>
<td>-</td>
</tr>
<tr>
<td>K2105</td>
<td>10 metre Hydrowire</td>
<td>-</td>
</tr>
<tr>
<td>K2106</td>
<td>Hydrowire connection box</td>
<td>-</td>
</tr>
<tr>
<td>K2110</td>
<td>End of line plug</td>
<td>-</td>
</tr>
<tr>
<td>K2111</td>
<td>Leader cable 50M</td>
<td>-</td>
</tr>
<tr>
<td>K2112</td>
<td>Fixing clips (100)</td>
<td>-</td>
</tr>
<tr>
<td>S9615/A</td>
<td>Protection Cage for Floor Mounted Probe</td>
<td>-</td>
</tr>
<tr>
<td>F/A/1W</td>
<td>Fire-Cryer® with water leakage alarm</td>
<td>-</td>
</tr>
</tbody>
</table>

Larger control panels are available on request

### Technical

#### Specifications common to ABS & Metal Control Panels

- **Sounder outputs**: 2 outputs each rated at 500mA
- **Isolatable remote contact**: Volt free changeover 1 Amp at 30V DC fused at 500mA
- **Auxiliary alarm contact**: Volt free changeover 1 Amp at 30V DC
- **Sounder fuses**: 500mA each
- **System fuse**: 2 Amp
- **Mains input**: 230V AC

#### ABS Enclosure, 1, 2, 4 & 6 Zones

- **Size**: 315W x 235H x 84D
- **Construction**: Flame retardant ABS injection
- **Power supply**: 1.25 Amp
- **Battery capacity**: 7.0A/h
- **24 hour standby**: 2.8A/h
- **Max. battery capacity**: 7.0A/h
- **Finish**: Light texture
- **Standard colour**: Stone grey

#### Metal Enclosure - 2, 4, 8, 12, 16 & 24 Zones

- **Construction**: Zone 1.2mm fully welded sheet steel
- **Finish**: Epoxy powder coated
- **Standard colour**: 2 tone grey
- **2 & 4 zone size**: 365W x 290H x 88mmD
- **8 & 12 zone size**: 500W x 355H x 107mmD
- **16 & 24 zone size**: 570W x 420H x 110mmD
- **Construction**: 1.2mm fully welded sheet steel
- **Power supply**: 1.25 Amp (2 & 4 zone)
  - 2.5 Amp (8, 12, 16 & 24 zone)
- **Zonal repeat contacts**: Volt free normally open 1 Amp at 30V DC
- **Max. battery capacity**: 4.0A/h (2 & 4 zone)
  - 6.0A/h (8 zone)
  - 7.0A/h (12 zone)
  - 12.0A/h (16 & 24 zone)

#### Hydrosense Probes

##### Technical

- **Size**: 95mm (max.) 80mm (min.) H x 45mmD x 100mmW
- **Indicator**: Green LED
- **Connection**: 4 pin din flying lead (1 metre)
- **Material**: Black nylon

### Guidelines

- **Hydrosense Probe**:
  - Maximum recommended coverage
  - Maximum recommended detectors per zone
  - Maximum distance between probes for perimeter detection
  - Sensor height above finished floor
- **Hydrowire Cable**:
  - Maximum recommended length per zone
  - Recommended pitch between cable for area protection
  - Minimum bend radius

- 20sq metres per detector
- 20
- 3 metres
- 1mm - 3mm
- 0.5mm round 3A
- 50 metres
- 2 metres
- 150mm

### VIMPEx

Star Lane, Great Wakering
Essex, SS3 0PJ, England

Tel: +44 (0)1702 216999
Fax: +44 (0)1702 216699

Email: sales@vimpex.co.uk
Web: www.vimpex.co.uk

The manufacturer reserves the right to amend specifications without prior notice.
At the heart of our sheet metal fabrication department is a state-of-the-art Amada break press, which was re-installed to the new unit in March 2009.

All custom built equipment is project managed by our engineering department, using the latest software to produce electrical, mechanical and construction drawings to the customers’ specifications.

We also have a full range of bending, cropping, studding and welding plant equipment allowing us the capability to produce single items or volume product.

One of the key areas of our business is the design and manufacture of bespoke equipment. Kentec has considerable expertise in this field with over 20 years experience, so you can be certain that all custom engineered product will be designed and built in accordance with your exact requirements and our strict ISO 9001 approved quality procedures. Many in-house facilities are at our disposal from the initial design process to sheet metal fabrication to painting and silk screening to panel construction. We have full control at every stage allowing us to offer industry leading delivery times and with quality you can have confidence in. In March 2009 we opened a new facility in Dartford which now houses the metal fabrication, paint and print shops, and has more than tripled our overall size.

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The powder coating department features a semi automatic powder coating plant. This was installed into the new factory in March 2009 and has increased our output some five fold, whilst producing a better and more consistent finish.

Our screen printing department also doubled in size following the opening of our new factory. Environmentally friendly printing products are used to screen a wide range of substrates.

Sub assemblies are produced from our fully automated state of the art surface mount production line. We employ automatic test equipment to ensure each and every board is built to the same high standard and is fault free.

All panels supplied by Kentec are manufactured and assembled in house in the U.K. Before despatch all panels undergo a rigorous testing procedure, they are then given a final visual inspection.

We have a dedicated area for the construction of bespoke equipment. Our skilled production engineers build each unit using detailed information from the engineering department.
Custom

Custom Engineered Solutions

Facilities

- Expert design advice
- Mechanical engineering design
- Artwork and printing design
- Documentation
- Electrical engineering
- Electronic engineering
- Sheet metal fabrication
- Powder coat finishing
- Metal finishing
- Silk screen printing
- Wire looming
- Electrical safety testing
- Technical support

Geographical floor plan with LED indications.

Analogue Addressable fire control panel with plant controls.

Floor standing fire detection control panel with geographical floor plan & plant controls.
From Concept . . .

Conceptual drawing produced and sent to client for approval

On approval, parts are engineered & sent to sheet metal shop for fabrication before going to paint shop (choice of finishes)

Detailed electrical schematic diagrams are produced for production and record purposes

Silk screen artworks are generated in house for use in our printing shop

Unit is then assembled, fully tested and dispatched to address of your choosing!

Special Firemans Control Panel

. . . To Product

The manufacturer reserves the right to amend specifications without prior notice
Custom Engineered Solutions

Applications
- Smoke Damper Control Panels
- Composite Relay Units (c/w Resettable Latching Relay & Firemans Switch)
- Sprinkler System Indicator Panels
- Pump Status Indicator Panels
- Firemans Control Switch Panels
- Analogue/Addressable Interface Units (with or without integral PSU)
- Mimic Repeat Indicator Panels (perspex/metal, metal only, black & white or multi-coloured)

...choose your finish
...choose your colour
...choose your specification
Specifications

- Bespoke Fire Alarm Control Panel housed in a special compact enclosure to suit customers building layout.

Floor standing triple width enclosure with glazed doors. Unit features geographical floor plan layouts and 3rd party voice alert system.
Enhanced Training from Kentec

Due to the continuing success of the Regional Training Seminars that have been running for the past two years, we have now committed and published dates for 2010. Each course is split over two days, the first comprises of the Syncro Foundation Course and the second day will build upon the foundation course and provide additional training and hands-on experience of networking, expansion cards and complex systems.

For more information please visit our web site www.kentec.co.uk and click on the ‘Training’ tab. Alternatively please contact Roger, our training technician on 01322 222121.

Places are limited, sign up online today!

Are you ‘In the loop’?

Kentec’s popular ‘In the loop’ e-mail bulletin has now been a regular feature for over four years, providing articles on a variety of subjects including news about new products, enhancements to existing products and many other subjects relating to our products and services along with general industry information.

If you would like to be ‘In the loop’ you or a colleague can register for free on our web site by visiting www.kentec.co.uk

For the more technical user we also produce the technically biased ‘In the technical loop’ e-mail bulletin, which can also be subscribed to by visiting www.kentec.co.uk

For back issues of either publication please visit our web site.

Marine approvals for Syncro ASM

Syncro ASM analogue addressable, fire detection systems are available from Kentec Electronics Limited, for a wide range of marine fire alarm system applications.

Syncro ASM fire control panels can be networked to provide scalable fire alarm systems, suitable for many classes of vessel.

For more information please visit our web site www.kentec.co.uk and click on the ‘Marine’ tab. Alternatively please contact our sales department on 01322 222121.
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Marine approvals for Syncro ASM

How to find us?

Train
The nearest station is Dartford which is served by trains from Charing Cross, London Victoria. Journey time approximately 40 minutes from Central London.

From M25 Clockwise
Leave M25 at Junction1b (signed Dartford & A225). At the roundabout, take the third exit onto the A225. Continue straight across the next roundabout and continue to a set of traffic lights. Turn left at lights onto Darenth Road. Turn right onto Powder Mill Lane. Turn left into Fawkes Avenue. We are located on the right.

From M25 Anti-Clockwise
Leave M25 at Junction 2 (signed London, Canterbury, A2 (M2) & Dartford (A225). At the roundabout, take second exit and follow slip road towards Junction 1b. At roundabout take first exit onto the A225. Continue straight across the next roundabout and continue to a set of traffic lights. Turn left at lights onto Darenth Road. Turn right onto Powder Mill Lane. Turn left into Fawkes Avenue. We are located on the right.