

Leading in Fire Detection Control Systems

2009 - 2010



Kentec Electronics Ltd.



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.



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Analogue Fire Detection Control Equipment

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Syncro

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Syncro Guide Repeater

Providing Repeater Facility for any
GUIDE System

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MIOU/LIOU

Multi Input/ Output Unit
(Standard and Light versions)

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Syncro I/O

A range of I/O boards and
enclosures

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BS-EN54-2
BS-EN54-4
KM 73505



Single or Two Loop Analogue Addressable Control Panel

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.

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

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

xplorer

XP95
DISCOVERY

(Also backward-compatible with Series 90 detectors)

series90

HOCHIKI
EST
COMPATIBLE

ARGUS SECURITY



Model No. #80161M2

Panels

Product Code	Protocol	Zones	Loops	Printer	Size (mm)
A80161M2	Apollo	16	1	No	385 x 310 x 90 *
A80162M2	Apollo	16	2	No	385 x 310 x 90 *
A80161M3	Apollo	16	1	No	385 x 520 x 110
A80162M3	Apollo	16	2	No	385 x 520 x 110
A80161M3P	Apollo	16	1	Yes	385 x 520 x 110
A80162M3P	Apollo	16	2	Yes	385 x 520 x 110
V80161M2	Argus Vega	16	1	No	385 x 310 x 90 *
V80162M2	Argus Vega	16	2	No	385 x 310 x 90 *
V80161M3	Argus Vega	16	1	No	385 x 520 x 110
V80162M3	Argus Vega	16	2	No	385 x 520 x 110
V80161M3P	Argus Vega	16	1	Yes	385 x 520 x 110
V80162M3P	Argus Vega	16	2	Yes	385 x 520 x 110
H80161M2	Hochiki	16	1	No	385 x 310 x 90 *
H80162M2	Hochiki	16	2	No	385 x 310 x 90 *
H80161M3	Hochiki	16	1	No	385 x 520 x 110
H80162M3	Hochiki	16	2	No	385 x 520 x 110
H80161M3P	Hochiki	16	1	Yes	385 x 520 x 110
H80162M3P	Hochiki	16	2	Yes	385 x 520 x 110

* Flush versions are available to order (See price guide).

Specifications

Lite Panels

Product Code	Protocol	Zones	Loops	Printer	Size (mm)
LA80161M2	Apollo	16	1	No	385 x 310 x 90
LV80161M2	Argus Vega	16	1	No	385 x 310 x 90
LH80161M2	Hochiki	16	1	No	385 x 310 x 90

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
Display	- 8 lines of 40 characters graphic LCD
Mains voltage supply	- 110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V)
Mains supply fuse	- 1.6A 250V
Power supply DC rating	- 24V 3 Amps
Aux 24V supply	- Fused at 500 milliamps
Battery (24 hour standby)	- 9Ah 12V (2 per panel) (non-networked)
Fault contact rating	- 30V DC 1 Amp
Fire contact rating	- 30V DC 1 Amp
Alarm contact rating	- 30V DC 1 Amp
Sounder output rating	- Fused at 1 Amp each
Detection loop	- 400 milliamp output
Detector protocols	- Apollo (S90, XP95, Discovery), Argus Vega or Hochiki ESP
Printer port	- Serial RS232
Serial expansion port	- Serial RS485 (Compatible with all Syncro I/O modules)
PC port	- Serial RS232
Network connection	- RS485 - Up to 64 panels via fully fault tolerant optional network card
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
PC graphics	- Via Guide or Guide Net systems
Modem	- Optional dial up modem for remote diagnostics (Can be fitted to M3 size enclosure only)

Options

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



BS-EN54-2
BS-EN54-4
KM 73505



Analogue Addressable Fire Control Panels

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.

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

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



Panels

Product Code Loops Zones Size (mm)

2 Loop Panels	EN#6300203	2	0	500 x 355 x 117
	EN#6316203	2	16	500 x 355 x 117
	EN#6348203	2	48	500 x 355 x 117
	EN#6396203	2	96	500 x 355 x 117
4 Loop Panels	EN#6300403	4	0	500 x 355 x 117
	EN#6316403	4	16	500 x 355 x 117
	EN#6348403	4	48	500 x 355 x 117
	EN#6396403	4	96	500 x 355 x 117
4 Loop Panels Larger Enclosure	EN#6300415	4	0	500 x 460 x 190
	EN#6316415	4	16	500 x 460 x 190
	EN#6348415	4	48	500 x 460 x 190
	EN#6396415	4	96	500 x 460 x 190

'#' - replace with 'A' for Apollo protocol,
 'V' for Argus Vega protocol or 'H' for Hochiki protocol.
 Flush versions are available to order (See price guide).
 For fitted printer add 'P' after stock code.

Specifications

Options

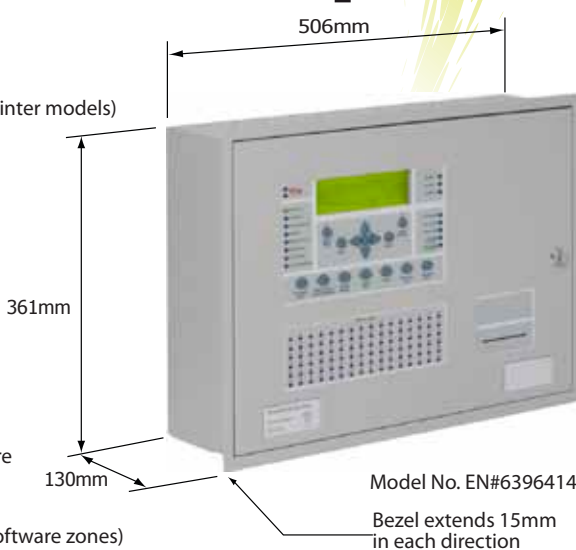
Product Code Description

K552#	Loop extension card (loops 3 & 4)
K555	Fault tolerant Network interface card
K232SYN	Thermal printer kit (for retrofitting to non-printer models)
K560	16 channel input/output board
K547	8 way relay extender board
K546	6 way sounder extender board
K545	4 way conventional detection zone board
K556P	Modem module (PSTN)

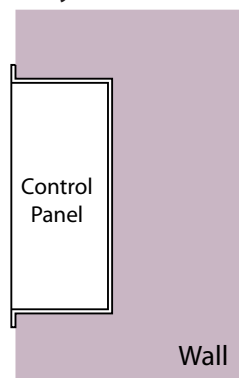
'#' - replace with 'A' for Apollo protocol,
 'V' for Argus Vega protocol or 'H' for Hochiki protocol.

Technical

- Finish** - Epoxy powder coated
- Colour - lid & box** - BS 00 A 05 grey - fine texture
- Colour - controls plate & labels** - RAL 7047 light grey - satin
- Detection circuits (Loops)** - 2 or 4 (400mA each)
- Zone LED's** - 0, 16, 48, or 96 (up to 500 software zones)
- Display** - 8 lines of 40 characters graphic LCD
- 4 sounder circuits** - Each fused at 1 Amp (total load 2 Amp)
- Fire contact** - Volt free 1 Amp 30V DC
- Alarm contact** - Volt free 1 Amp 30V DC
- Fault contact** - Volt free 1 Amp 30V DC
- Programmable relay 1** - Volt free 1 Amp 30V DC
- Programmable relay 2** - Volt free 1 Amp 30V DC
- Fire routing output** - Monitored-voltage reversing, fused at 500mA
- Fault routing output** - Monitored-voltage reversing, fused at 500mA
- Extinguisher output** - Monitored-voltage reversing, fused at 1A
- Fault input** - Volt free contact input signals fault
- Reset input** - Volt free contact input resets panel
- Intermittent input** - Volt free contact input pulses sounder outputs
- Continuous input** - Volt free contact input for continuous sounders
- Silence input** - Volt free contact input silences sounders
- Programmable input 1** - Volt free contact for any action required
- Programmable input 2** - Volt free contact for any action required
- Programmable input 3** - Volt free contact for any action required
- Auxiliary 24V DC output** - Fused at 500mA
- System fuse** - 5 Amp self-resetting polyfuse
- Mains fuse** - 20mm 3 Amp
- Operating Temperature** - -5 to +50 deg. C
- Operating humidity** - To 95% (non-condensing)
- Mains voltage supply** - 110 or 230V AC 50 or 60 Hz.
(specify when ordering, default is 230V)
- Battery (24 hour standby)** - 12Ah 12V (2 per panel) (non-networked)
- Day/night modes** - 2 with variable device sensitivity
- Input delays** - Individual for each device selectable up to 2 minutes
- Output delays** - Individual 2-stage to 10 minutes per stage
- 2 programmable function buttons** - Programmable to carry out any cause & effect, disablement or test action
- 3 programmable indicators** - Red/yellow/green to indicate any action
- Network (option)** - Up to 64 panels on 2 wires (S555 Network Card required)
- Printer (option)** - 40 column thermal
- Download lead** - S187 (standard) or X187LS (economy)



Flush Syncro Control Panel



Flush mount cross section

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.

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



Model No. EN#63966S4P



Panels

Product Code	Loops	Enable Control	Zones	Size (mm)
EN#63966S4	6	No	96	500W x 650H x 137D
ENS#63966S4	6	Yes	96	500W x 650H x 137D
EN#63968S4	8	No	96	500W x 650H x 137D
ENS#63968S4	8	Yes	96	500W x 650H x 137D

'#' - replace with 'A' for Apollo protocol,
'V' for Argus Vega protocol or 'H' for Hochiki protocol.
For fitted printer add 'P' after stock code.



Specifications

Technical

Finish	- Epoxy powder coated
Colour - lid & box	- BS 00 A 05 grey - fine texture
Colour - controls plate & labels	- RAL 7047 light grey - satin
Detection circuits (Loops)	- 6 or 8 (400mA each)
Zone LED's	- 96 (up to 500 software zones)
Display	- 8 lines of 40 characters graphic LCD
8 sounder circuits	- Each fused at 1 Amp (total load 2 Amp per bank of 4 circuits)
2 x Fire contact	- Volt free 1 Amp 30V DC
2 x Alarm contact	- Volt free 1 Amp 30V DC
2 x Fault contact	- Volt free 1 Amp 30V DC
2 x Programmable relay 1	- Volt free 1 Amp 30V DC
2 x Programmable relay 2	- Volt free 1 Amp 30V DC
2 x Fire routing output	- Monitored-voltage reversing, fused at 500mA
2 x Fault routing output	- Monitored-voltage reversing, fused at 500mA
2 x Extinguisher output	- Monitored-voltage reversing, fused at 1A
2 x Fault input	- Volt free contact input signals fault
2 x Reset input	- Volt free contact input resets panel
2 x Intermittent input	- Volt free contact input pulses sounder outputs
2 x Continuous input	- Volt free contact input for continuous sounders
2 x Silence input	- Volt free contact input silences sounders
2 x Programmable input 1	- Volt free contact for any action required
2 x Programmable input 2	- Volt free contact for any action required
2 x Programmable input 3	- Volt free contact for any action required
2 x Auxiliary 24V DC output	- Fused at 500mA
2 x System fuse	- 5 Amp self-resetting polyfuse
2 x Mains fuse	- 20mm 3 Amp
Operating Temperature	- -5 to +50 deg. C
Operating humidity	- To 95% (non-condensing)
Mains voltage supply	- 110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V)
Battery (24 hour standby)	- 12Ah 12V (4 per panel) (non-networked)
Day/night modes	- 2 with variable device sensitivity
Input delays	- Individual for each device selectable up to 2 minutes
Output delays	- Individual 2-stage to 10 minutes per stage
2 programmable function buttons	- Programmable to carry out any cause & effect, disablement or test action
3 programmable indicators	- Red/yellow/green to indicate any action
Network	- Up to 32 6 or 8 loop panels on 2 wires
Printer (option)	- 40 column thermal
Download lead	- S187 (standard) or X187LS (economy)

Options

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

'#' - 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

Panels

Product Code	Loops	Zones	Size (mm)	Construction
K6100003	0	0	500 x 355 x 117	All steel enclosure
K6116003	0	16	500 x 355 x 117	All steel enclosure
K6148003	0	48	500 x 355 x 117	All steel enclosure
K6196003	0	96	500 x 355 x 117	All steel enclosure

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

Specifications

Options

Product Code Description

K232SYN	Thermal printer kit (for retrofitting to non printer models)
K560	16 channel input/output board
K547	8 way relay extender board
K546	6 way sounder extender board
K545	4 way conventional detection zone board
K556P	Modem module (PSTN)

Technical

Finish	- Epoxy powder coated
Colour - lid & box	- BS 00 A 05 grey - fine texture
Colour - controls plate & labels	- RAL 7047 light grey - satin
Zones	- 0, 16, 48, or 96
Display	- 8 lines of 40 characters graphic LCD
Alarm contact	- Volt free 1 Amp 30V DC
Fault contact	- Volt free 1 Amp 30V DC
Programmable relay 1	- Volt free 1 Amp 30V DC
Programmable relay 2	- Volt free 1 Amp 30V DC
Auxiliary 24V DC output	- Fused at 500mA
System fuse	- 5 Amp self-resetting polyfuse
Mains fuse	- 20mm 3 Amp
Operating Temperature	- -5 to +50 deg. C
Operating humidity	- To 95% (non-condensing)
Mains voltage supply	- 110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V)
Battery (24 hour standby)	- 12V 12Ah (2 per panel)
Day/night modes	- 2 with variable device sensitivity
Input delays	- Individual for each input selectable up to 2 minutes
Output delays	- Individual 2-stage to 10 minutes per stage
2 programmable function buttons	- Programmable to carry out any cause & effect, disablement or test action
3 programmable indicators	- Red/yellow/green to indicate any action
Printer (option)	- 40 column thermal
Download lead	- S187 (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.

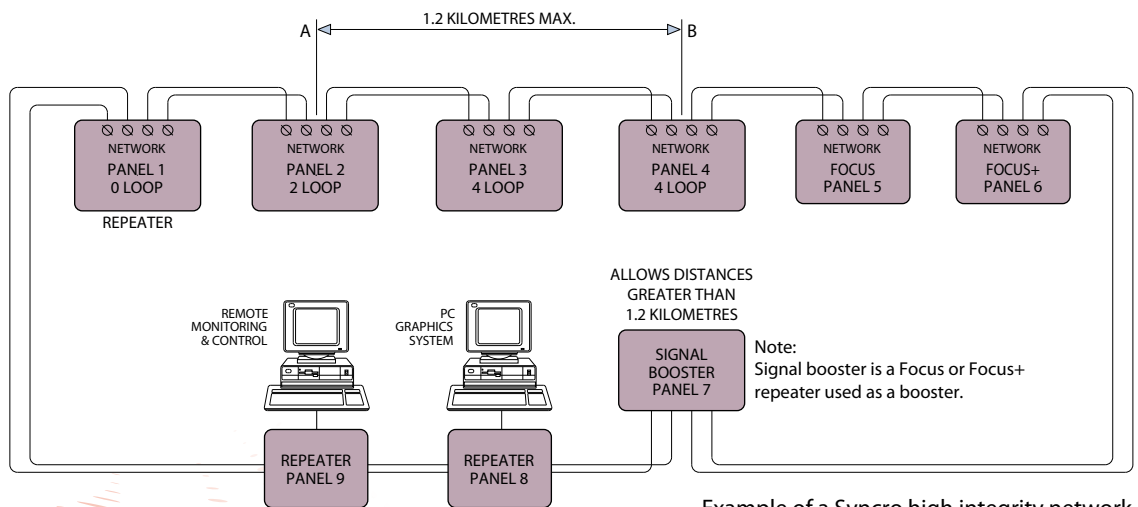
Network LCD Repeaters

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.



Example of a Syncro high integrity network

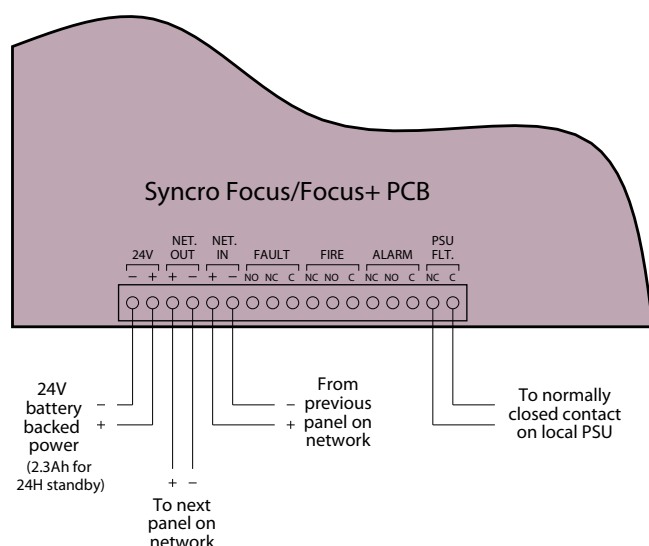


Focus Units

Product Code	PSU	Weight	Build	Size (mm)
K68000M1	-	2.5kg	Surface	330 x 255 x 90
K69000M1	750mA	4.0kg	Surface	330 x 255 x 90
K68000F1	-	2.5kg	Semi Flush	330 x 255 x 90
K69000F1	750mA	4.0kg	Semi Flush	330 x 255 x 90

Focus+ Units

Product Code	PSU	Weight	Build	Size (mm)
K681000M1	-	3.5kg	Surface	330 x 255 x 90
K691000M1	750mA	4.0kg	Surface	330 x 255 x 90
K681000F1	-	3.5kg	Semi Flush	330 x 255 x 90
K691000F1	750mA	4.0kg	Semi Flush	330 x 255 x 90



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
Display	- 8 lines of 40 characters graphic LCD
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
Cable entry	- 20mm knockouts
Indicators	- 5mm high brightness LED
Battery Size	- 2.3Ah 12V (2 per panel)
(24 hr. standby on 230V AC model)	
Communications	- Syncro system network protocol only
Cable length	- 1200 metres to adjacent nodes (subject to cable type) (see technical manual)
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.

Specifications

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

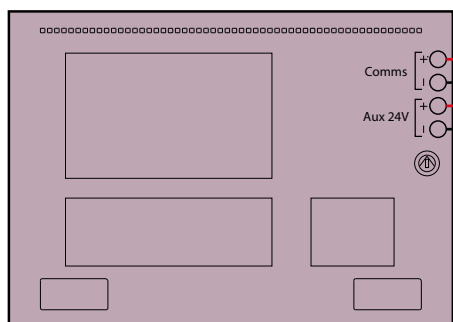
Equipment

Product Code	Description	PSU	Size (mm)
K6700M1	Syncro View repeater panel	-	330 x 255 x 90
K67750M1	Syncro View repeater panel	750mA	330 x 255 x 90
K67001M1	Syncro View repeater panel c/w enable keyswitch	-	330 x 255 x 90
K67751M1	Syncro View repeater panel c/w enable keyswitch	750mA	330 x 255 x 90

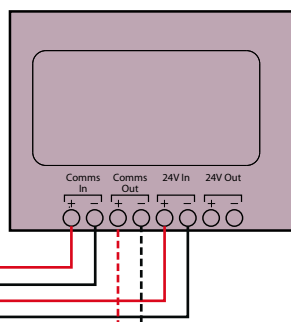
Semi-flush versions are available to order

Specifications

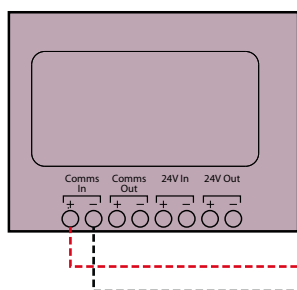
Syncro Control Panel



Syncro View #1



Syncro View #15



Technical

Construction	- 1.2mm Mild steel
Cable entry	- 5 x 20mm knockouts in top of box and 5 in rear
Finish	- Epoxy powder coated
Colour - lid & box	- BS 00 A 05 grey - fine texture
Colour - controls plate & labels	- Ral 7047 light grey - satin
Display	- 8 lines of 40 characters graphic LCD
Mains supply (Mains models only)	- 230V AC +10% - 15% (20 Watts maximum)
24V supply (24V DC models only)	- 21 to 30V DC
Mains supply fuse	- 2 Amp, 20mm
Power supply rating	- 28V 750mA total (including battery charging)
Maximum ripple current	- 200 millivolts
Battery type (Yuasa NP)	- Two 12 Volt 1.9Ah sealed lead acid in series
Battery charge voltage	- 27.6VDC nominal
Battery charge current	- 200mA maximum
Battery fuse	- 200mA, 20mm, glass
Maximum current draw from batteries	- 95mA
Quiescent current of panel in mains fail	- 0.03 Amps
Serial data connection	- 2 core RS485 (Up to 1200 metres total cable length)
Maximum terminal capacity	- 2.5mm ²

Programmable, LED Indication Panels

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

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.



Model No. K6524L2

Panels

Product Code	No. of LEDs	Size (mm)
K6508L2	8	385 x 310 x 60
K6524L2	24	385 x 310 x 60

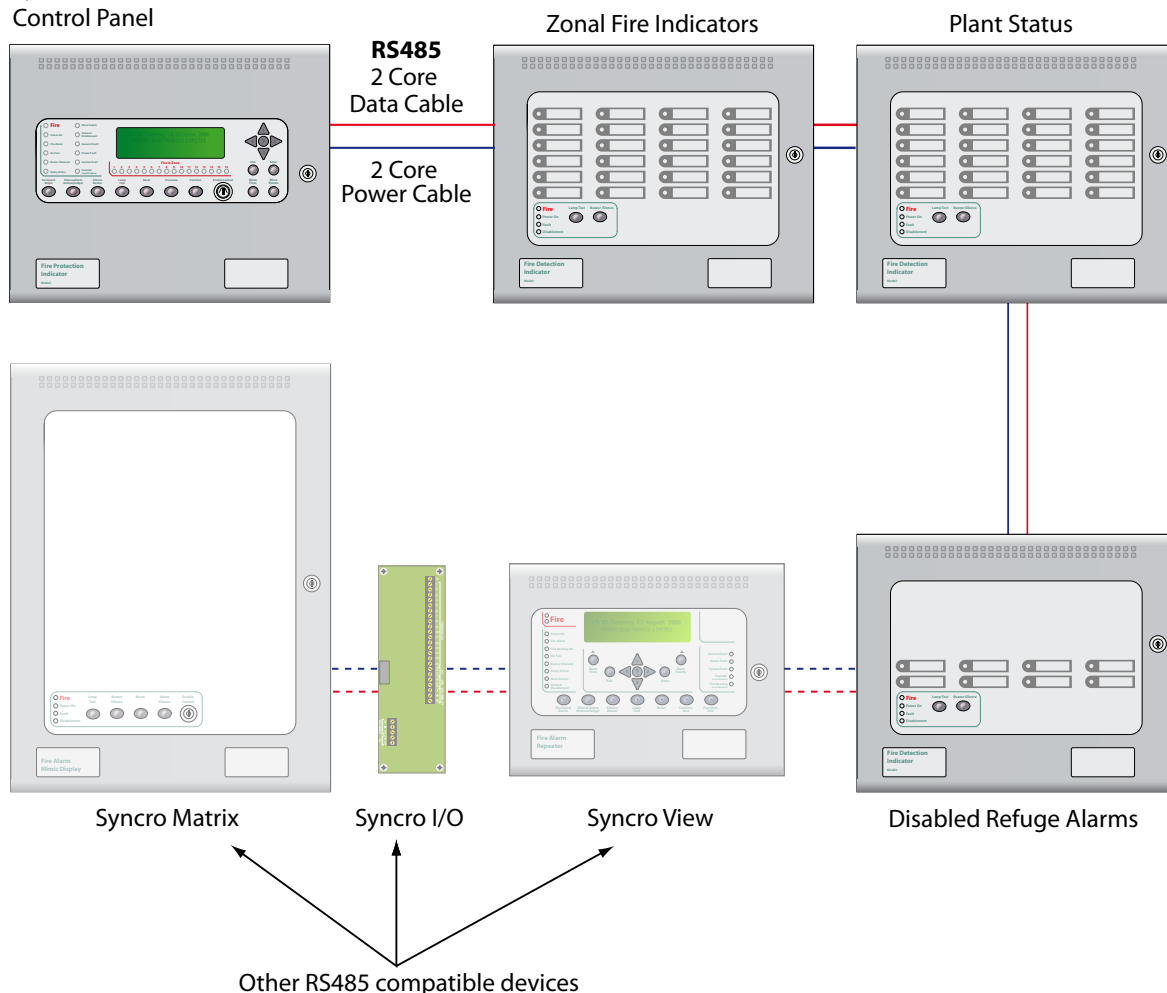
Specifications

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



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 applications
- 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

View showing mimic mounted on inner door



View showing LED grid



View showing internal layout



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.



M3 size Syncro Matrix

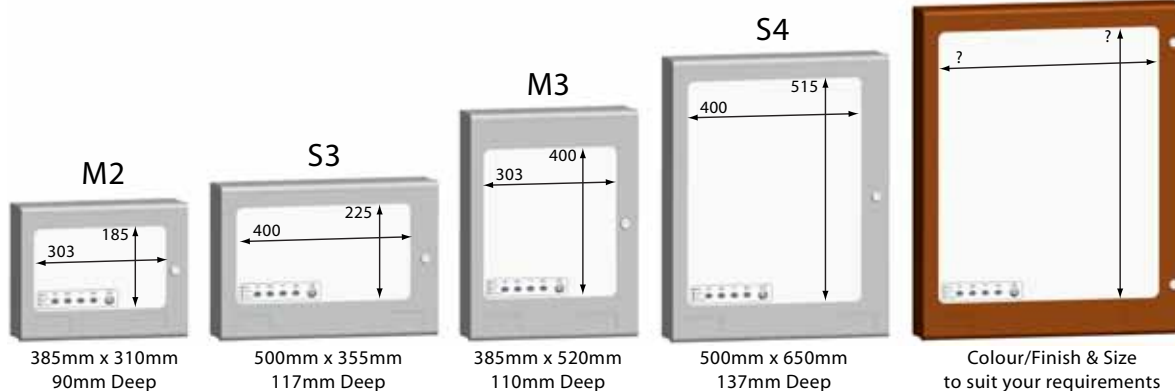
Panels

No. LED's	Standby Current	Full Alarm Current	Batteries for 24 hours	Batteries for 48 hours
24	0.026	0.09	0.88Ah	1.76Ah
56	0.052	0.18	1.75Ah	3.5Ah
88	0.78	0.36	11Ah	22Ah

Enclosure Size Options

Max. number of LED's = 24	Max. number of LED's = 56	Max. number of LED's = 56	Max. number of LED's = 88	Max. number of LED's = 504
Will house 1 x 8 Red LED driver PCB and 1 x 16 LED extension PCB's (Red, Green or Yellow)	Will house 1 x 8 Red LED driver PCB and 3 x 16 LED extension PCB's (Red, Green or Yellow)	Will house 1 x 8 Red LED driver PCB and 3 x 16 LED extension PCB's (Red, Green or Yellow)	Will house 1 x 8 Red LED driver PCB and 5 x 16 LED extension PCB's (Red, Green or Yellow)	Will house 1 x 8 Red LED driver PCB (Red) and up to 31 x 16 LED extension PCB's (Red, Green or Yellow)

Bespoke Size



Technical

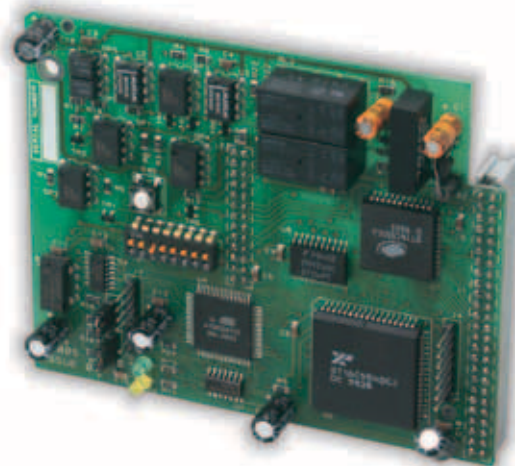
Mains supply (230V Versions only)	- 230V AC +10% - 15% (100 Watts max.)
Mains supply fuse (230 V Versions only)	- T2A L250V Replace only with similar type
Power supply rating (230 V Versions only)	- 4 Amps total including battery charge 28V +/- 2V
Max. ripple current (230 V Versions only)	- 200 millivolts
Battery type (Yuasa NP) (230 V Versions only)	- Two 12 Volt sealed lead acid (7Ah maximum)
Battery charge voltage (230 V Versions only)	- 27.6VDC nominal (temperature compensated)
Battery charge current (230 V Versions only)	- 1.5A maximum
Max. current draw from batteries (230 V Versions only)	- 3 Amps. With mains power source disconnected
Quiescent current	- See above
Supply voltage (24V versions)	- 21 to 30V DC
Supply current	- See above
Terminal capacity	- 0.5mm ² to 2.5mm ² solid or stranded wire
Enclosure Size & mimic area	- See 'Enclosure Size Options'
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
Mimic	- 3mm Clear Anti-Glare Acrylic
Enable keyswitch (if fitted)	- Standard 901 key
Cabinet locks	- M2/M3 - standard 801 key, S3/S4 - standard KT3001 key
Communications interface	- RS485 – Syncro/Syncro AS serial I/O bus protocol
Maximum distance from control panel	- 1.2Km using RS485 data cable
IP rating	- IP30
Operating temperature	- -5°C to +50°C
Number of indicators (standard models)	- M2 size - up to 24, M3 and S3 size - up to 56, S4 size - up to 88

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

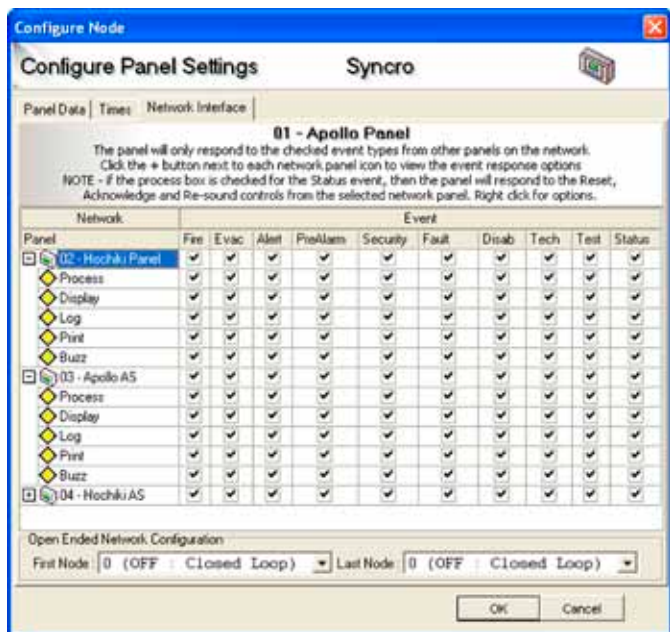
Product Overview

- 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.



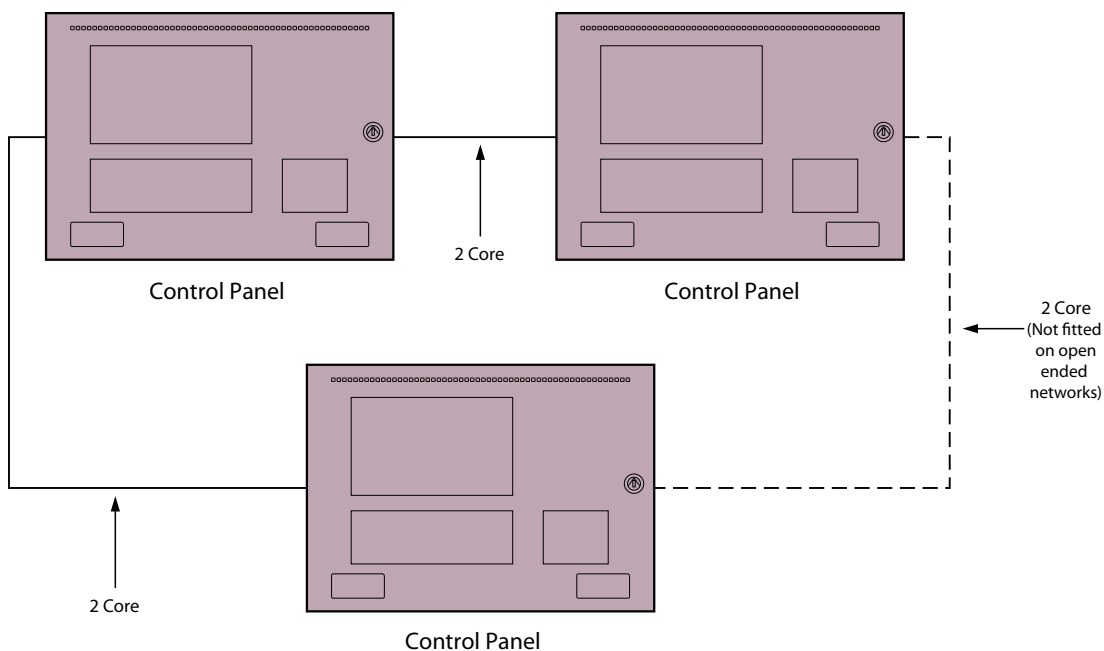
Part No. K555

Flexible network configuration options using simple to follow PC configuration programme



Specifications

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



Technical

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

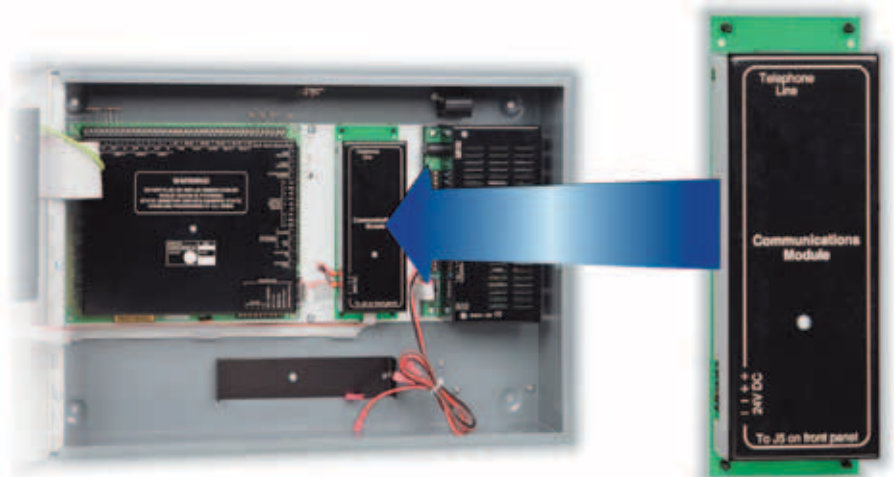
Communications Module (modem)

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).

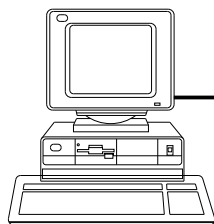
Features

- 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

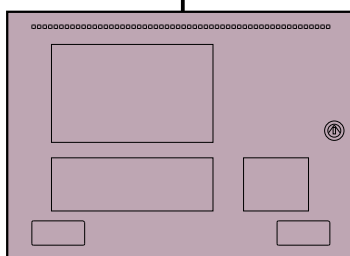
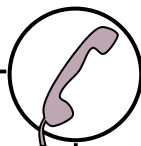


Specifications

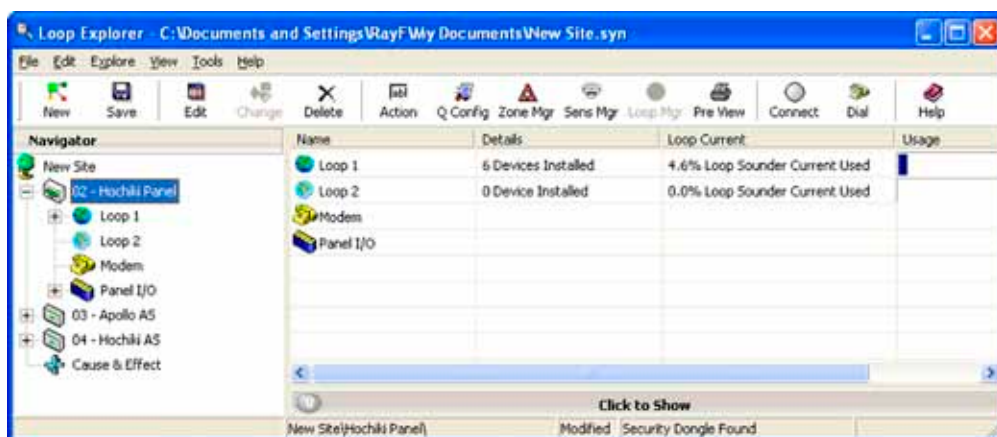
PC running Loop Explorer Programme & fitted with Dongle



Public Telephone Network



Syncro Control Panel fitted with Communications Module



Note: The Communications Module is compatible with Loop Explorer Software version 3 or above and Syncro Control Panel Firmware version 3 or above.

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

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.



Virtual Panel - allows direct control



Powerful Event log filtering

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



Range

Product Code Description

G1001	GUIDE software - Single panel package
G1004	GUIDE software - 4 panel package
G1008	GUIDE software - 8 panel package
G1016	GUIDE software - 16 panel package
G1032	GUIDE software - 32 panel package
G1064	GUIDE software - 64 panel package

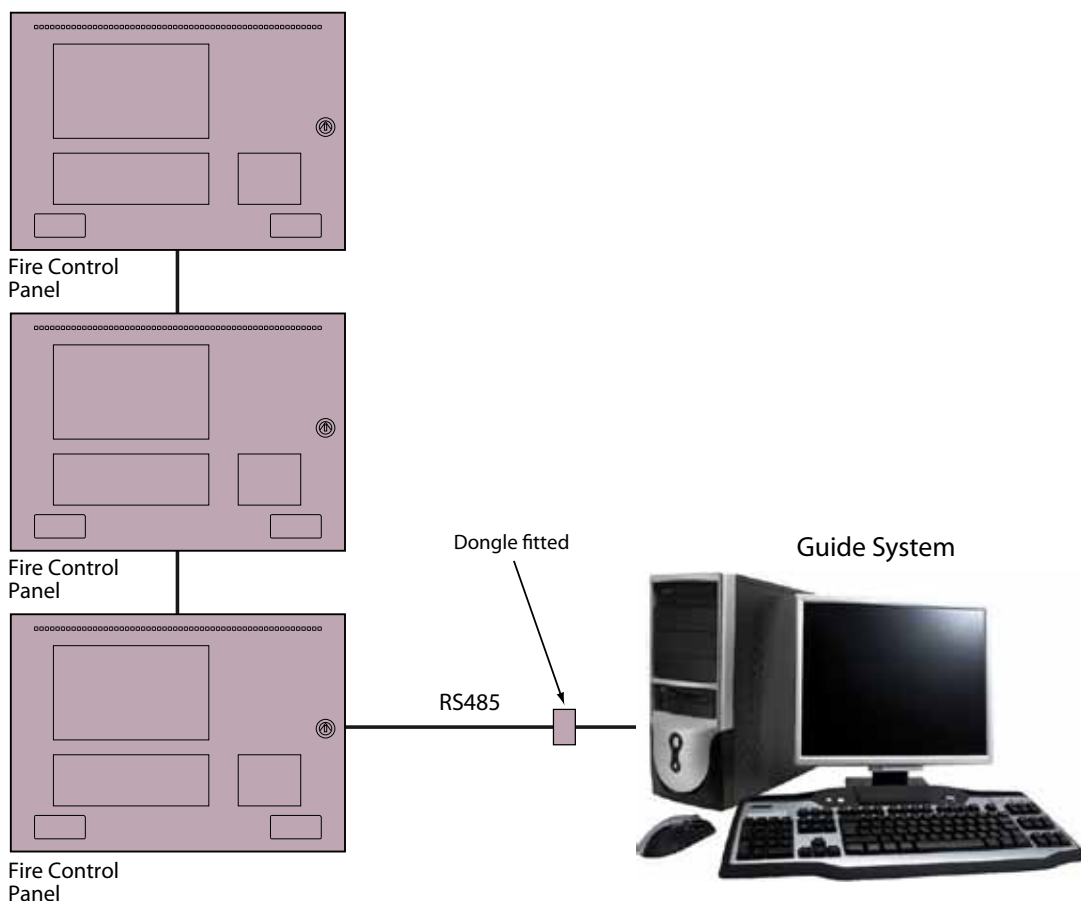
Note: Guide For use with Syncro Panels. Syncro 6 & 8 loop panels are considered 2 panels in the packages above.

Specifications

Technical

	Recommended Minimum	Notes
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	Any type.
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.



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 monitoring and limited control 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 monitoring options on GUIDE are supported on the GUIDE repeater. Device and zone disablements may also be performed from 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



Guide Repeater user interface

Range

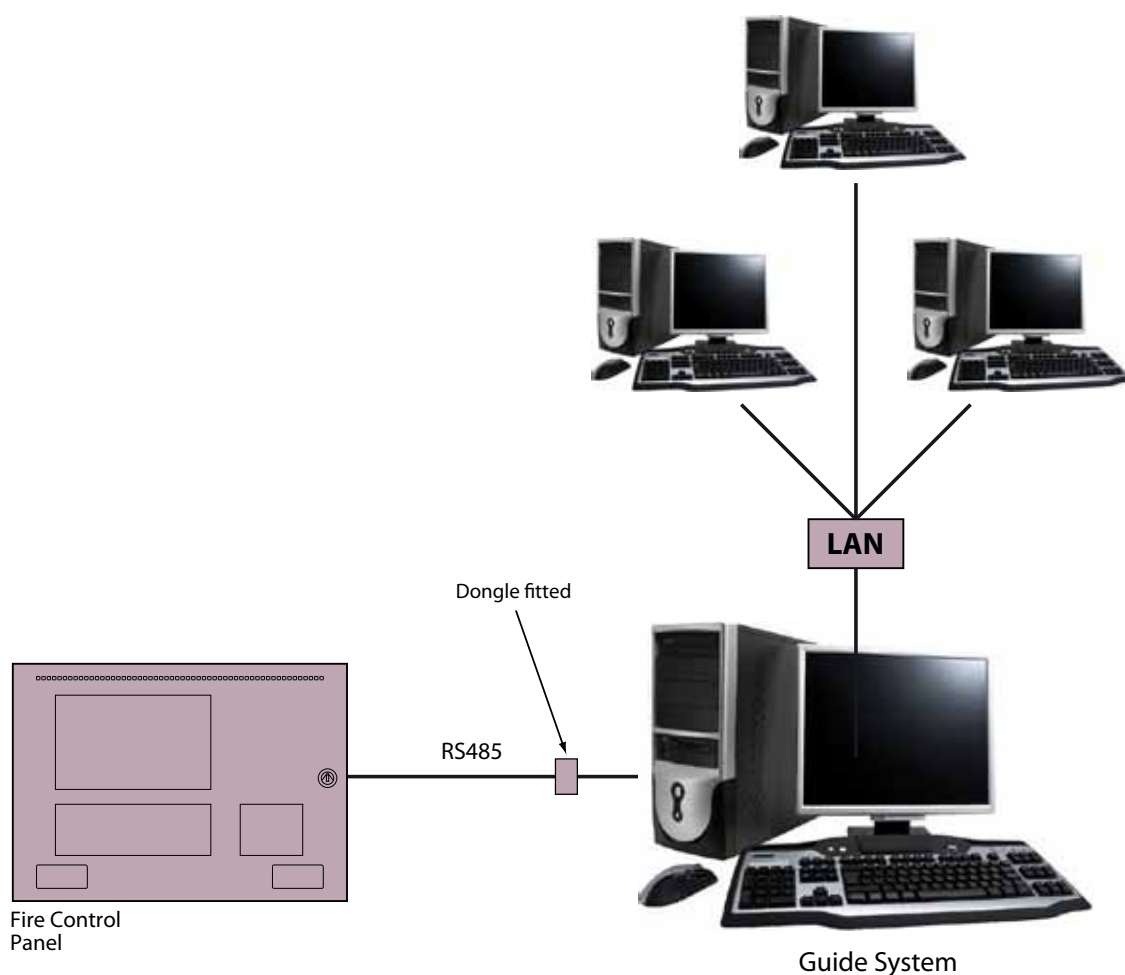
Product Code Description

GR2001	GUIDE Repeater - single repeater package
GR2004	GUIDE Repeater - 4 repeater package
GR2016	GUIDE Repeater - 16 repeater package

Technical

	Recommended Minimum	Notes
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	Any type.
Parallel port	Optional	Required if parallel printer to be used.
Network	One network port	
CDROM drive	Any	Required for installation of software and updates.
Backup drive	CD Writer	To back up history.

Specifications




MIOU


LIOU (Lite Version)

Multi Input/Output Unit

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 

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 



LIOU - Model No. K507

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.

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.

Note:

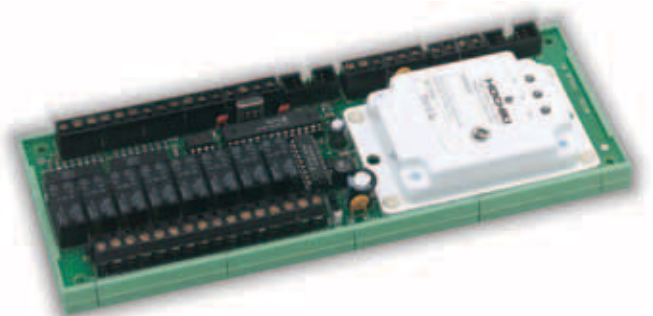
MIOU & LIOU are currently compatible with Solo, Syncro and Syncro AS control panels only.

Note:

MIOU & LIOU support Hochiki ESP protocol only.

Note:

Inputs on MIOU & LIOU are not monitored.



MIOU - Din rail mounting version (K559)

Range

Product Code	Module	PSU	Weight	Size (mm)
K559 (Module Only)	MIOU	-	0.3kg	203(L) x 77(W) x 45(D)
H66000M2	MIOU	-	3.6kg	385(L) x 310(H) x 90(D)
H66750M2	MIOU	750mA	6.8kg	385(L) x 310(H) x 90(D)
K507 (Module Only)	LIOU	-	0.2kg	119(L) x 99(W)
HL66000M2	LIOU	-	3.6kg	385(L) x 310(H) x 90(D)
HL66750M2	LIOU	750mA	6.8kg	385(L) x 310(H) x 90(D)

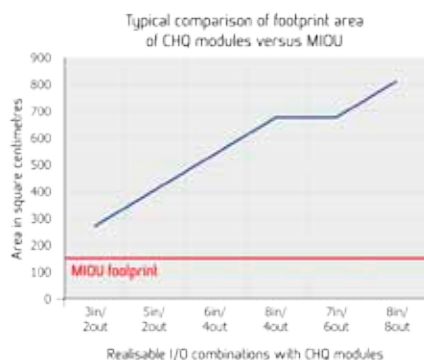
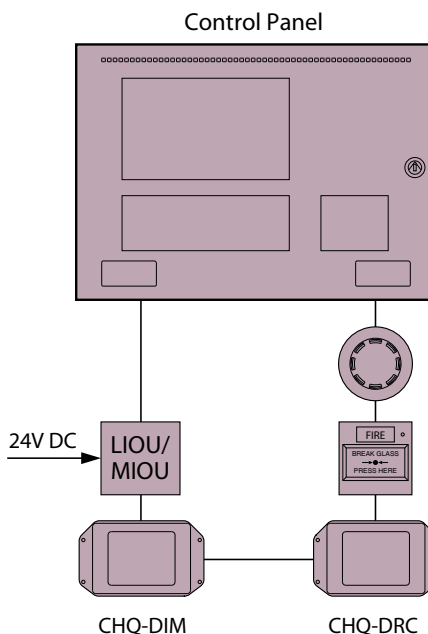
Specifications

Technical - MIOU

- Boxed unit battery capacity** - 2.6Ah 12V (2 per unit)
- Finish - lid & box** - Epoxy powder coated
- 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 H6600001** - 24V DC
- Supply voltage H6675001** - 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,
- Colour - lid & box** - 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)** - 230V AC
- Mains fuse for HL67750M2** - 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)



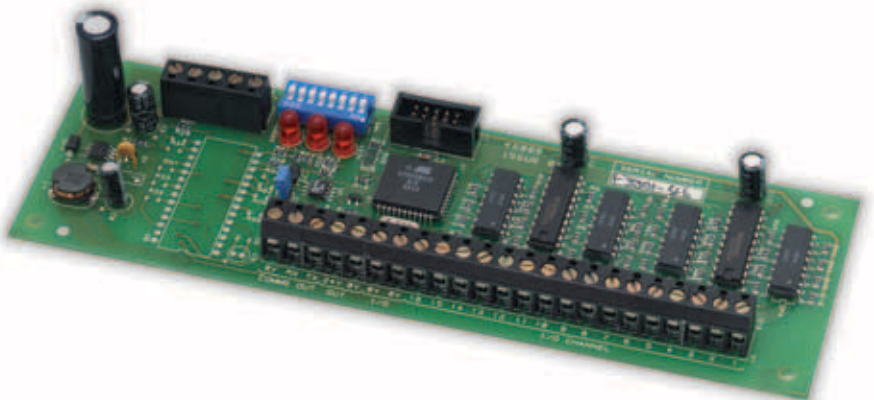
16 Channel Input/Output Board

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

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 and 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.



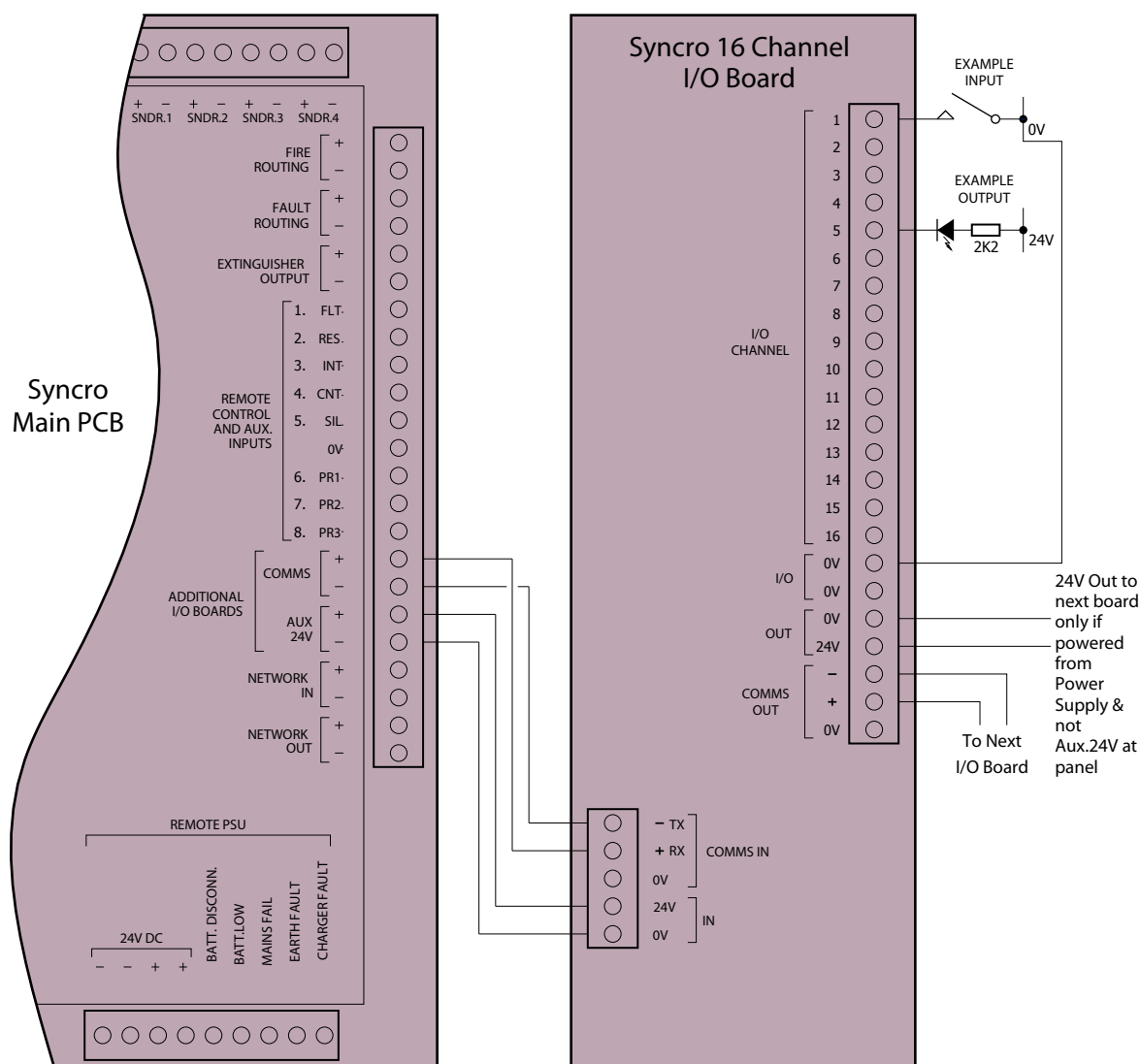
Part No. K560

Technical

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

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

Specifications



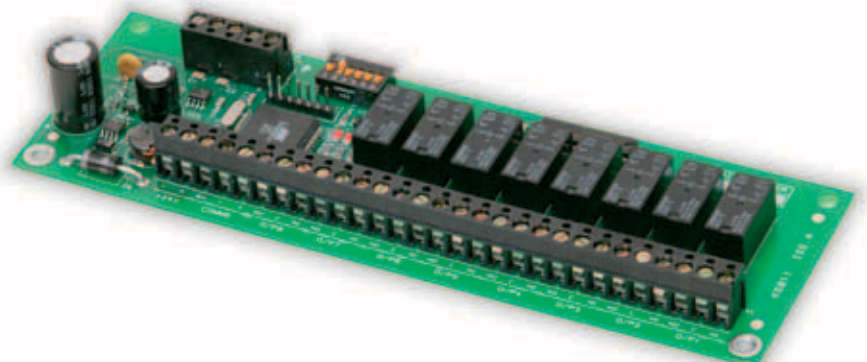
8 Way Relay Extender Board

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.

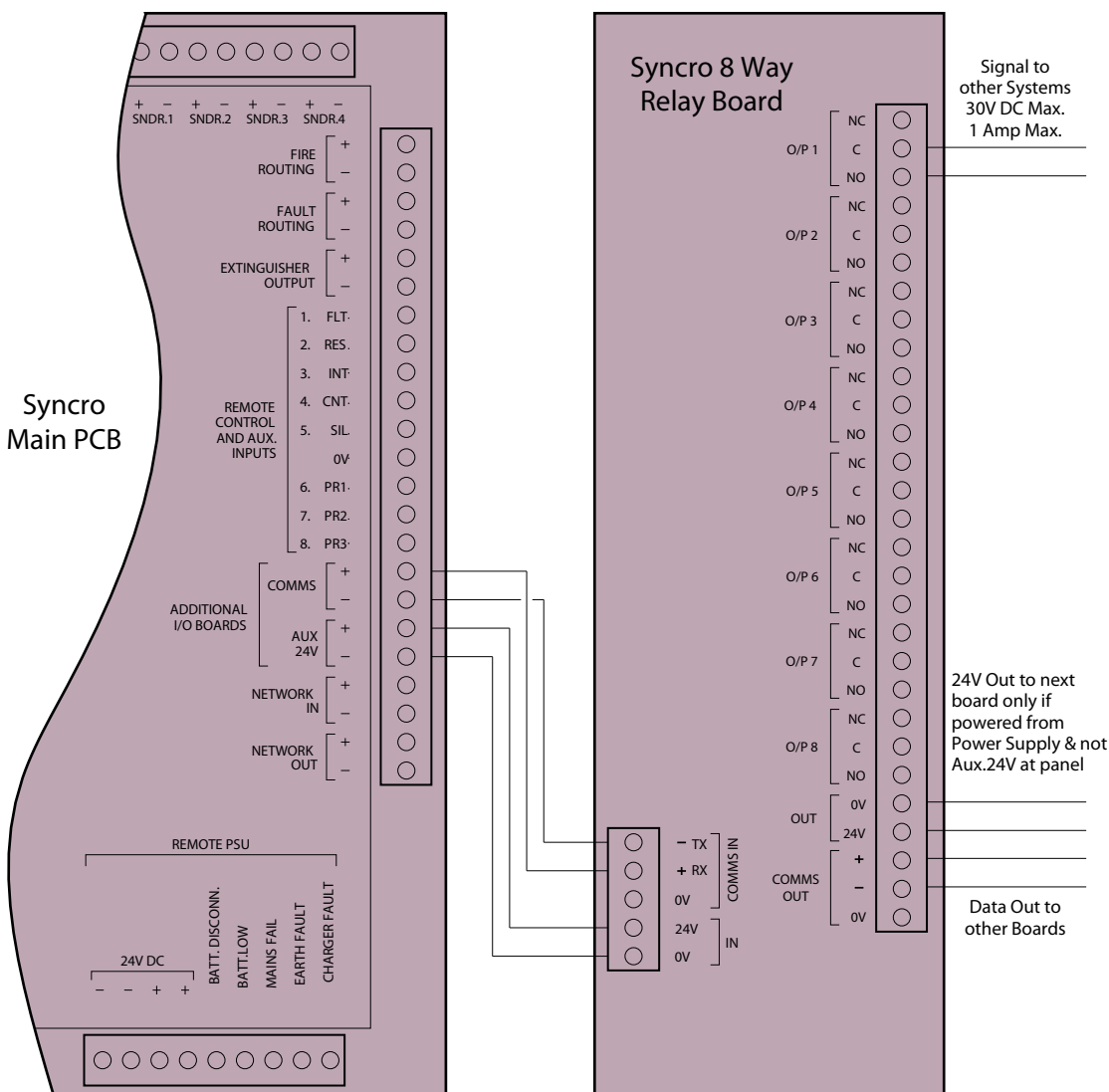


Part No. K547

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)

Specifications



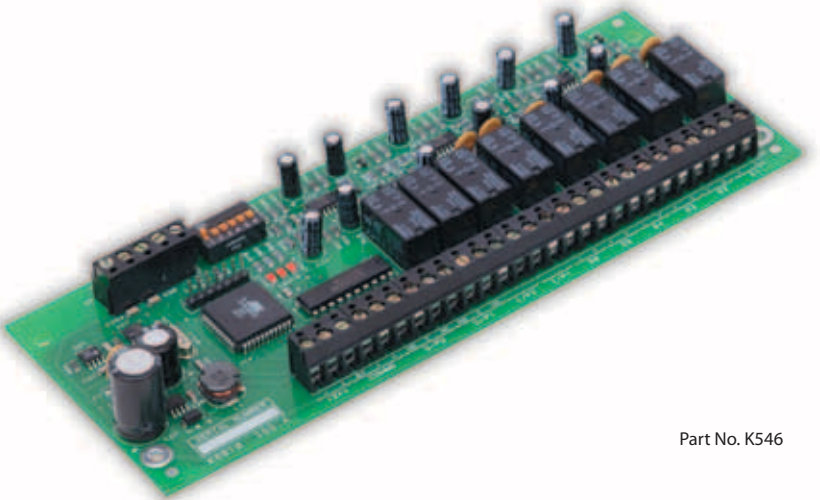
6 way Sounder Extender Board

Features

- 6 individually fused and monitored sounder outputs
- Fault and operated indications
- 2 opto-isolated general purpose inputs
- 2 volt free contact general purpose outputs
- Remote connection to panel via RS485 serial bus
- Common footprint to other Syncro I/O board types
- All outputs and inputs 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 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.

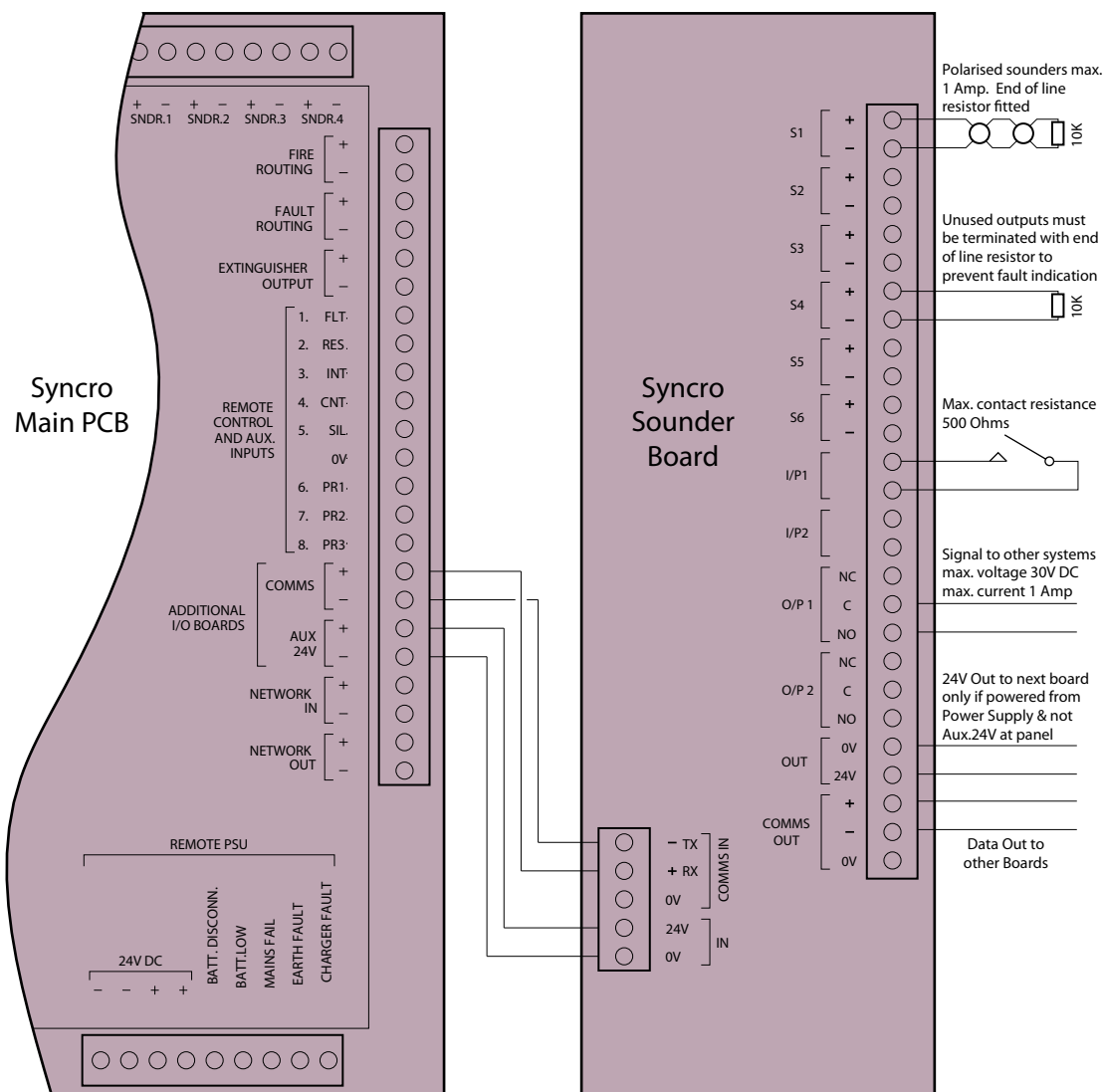


Part No. K546

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)

Specifications



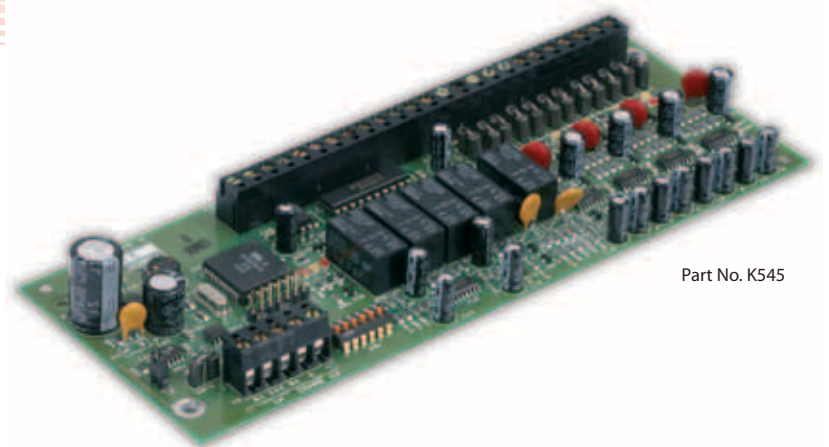
4 Way Conventional Detection Zone Module

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

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.

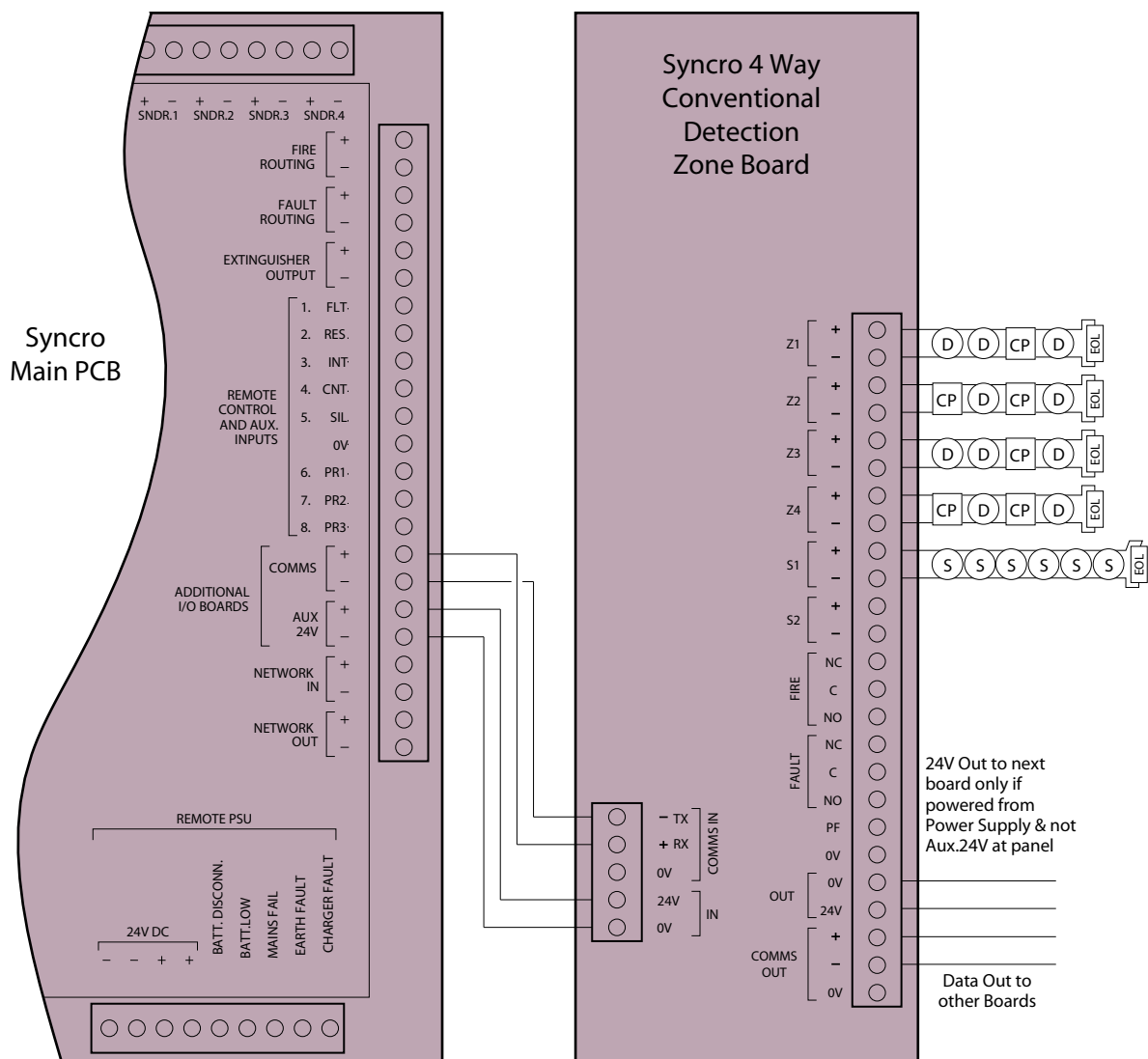


Part No. K545

Technical

- Product code** - K545
- Supply voltage range** - 21 to 30 volts DC
- Quiescent current consumption** - 70mA
- Operating current (all outputs on)** - 250mA
- 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)

Specifications





I/O Board Enclosure

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



2x I/O boards with PSU



3x I/O boards without PSU

Product Overview

- A range of new enclosures designed to house Syncro I/O modules with or with 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.

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



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



Choose any combination of I/O boards



Model No. K16001M2



Addressable Sounder Controller Unit

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.

Technical

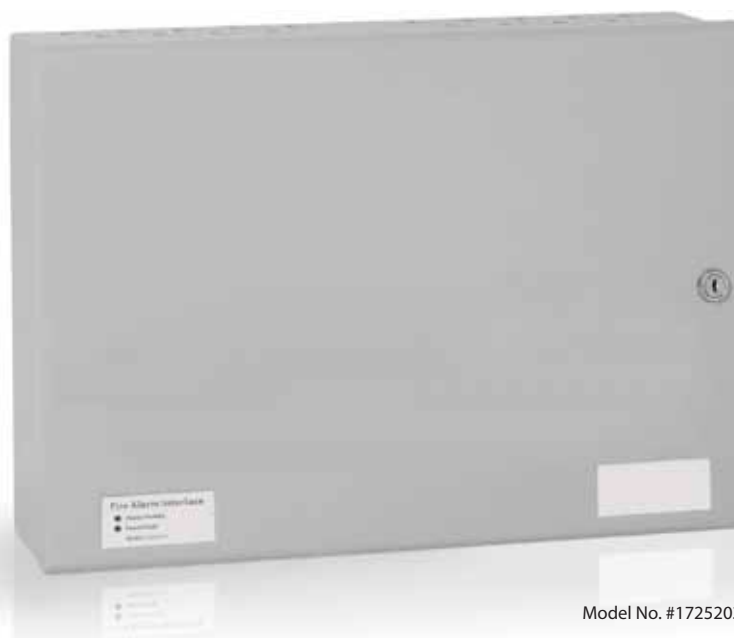
Size	- 500mm (W) x 355mm (H) x 108mm (D)
Finish	- Epoxy powder coated
Colour - lid & box	- BS 00 A 05 grey - fine texture
Colour - labels	- RAL 7047 light grey - satin
Mains voltage supply	- 110 or 230V AC 50 or 60 Hz. (specify when ordering, default is 230V)
Mains fuse	- 3A, 1¼ inch
Battery charge fuse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

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

Panels

Product Code	Protocol	Sounder Outputs	PSU
A1725203	Apollo XP95	2	2.5A
V1725203	Argus Vega	2	2.5A
H1725203	Hochiki ESP	2	2.5A
A1725403	Apollo XP95	4	4.0A
V1725403	Argus Vega	4	4.0A
H1725403	Hochiki ESP	4	4.0A
A1725603	Apollo XP95	6	4.0A
V1725603	Argus Vega	6	4.0A
H1725603	Hochiki ESP	6	4.0A



Model No. #1725203



Conventional Fire Detection Control Equipment

Pages 44-57



Sigma CP

EN54 Range Conventional
Fire Alarm C/P's

Page 44-45



Sigma CP-R

Conventional Fire Alarm
C/P Repeaters

Page 46-47



K3000 Series

Conventional Fire Alarm C/P's

Page 48-49



K3200 Series

Conventional Fire Alarm
C/P Repeaters

Page 50-51



Sigma

Economy Conventional
Fire Alarm C/P's

Page 52-53



Sigma Matrix

Conventional Fire Alarm
Mimic System

Page 54-55



LCMU

Line Continuity Monitoring Unit

Page 56



Relay Boards

Single (RL1) and Four (RL4) Way
Relay PCB

Page 57



BS-EN54-2
BS-EN54-4
KM 73505



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



Part No. K580



Part No. K461

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.



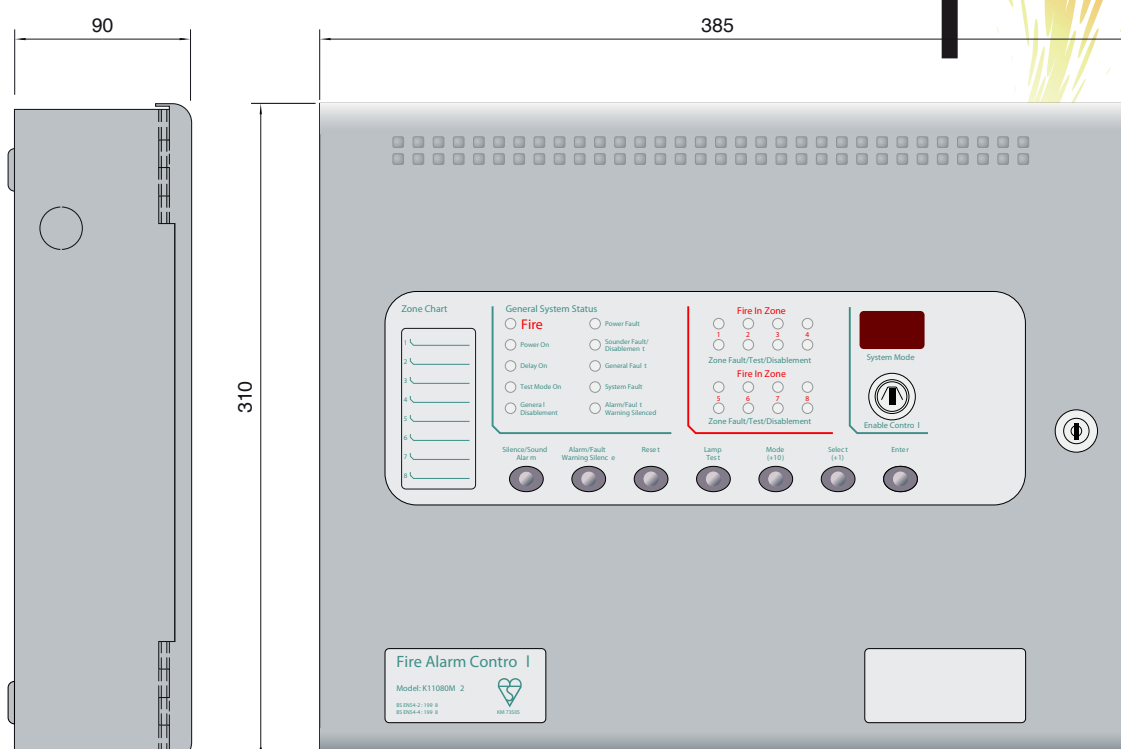
Model No. K11080M2

Panels

Product Code	Description	Standby Current	Alarm Current
K11020M2	2 zone control panel	0.065 Amps	0.1 Amps
K11040M2	4 zone control panel	0.075 Amps	0.21 Amps
K11080M2	8 zone control panel	0.093 Amps	0.55 Amps
T11020M2	2 zone, 2 wire panel	0.065 Amps	0.15 Amps
T11040M2	4 zone, 2 wire panel	0.075 Amps	0.3 Amps
T11080M2	8 zone, 2 wire panel	0.093 Amps	0.63 Amps
K18002	Tamper resistant Vision Window *	N/A	N/A

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

Specifications



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 milliamps
Detection zone EOL resistor	- 6k8 5%
Active EOL	- K14606K (optional)
Sounder output EOL resistor	- 10k 5%
Cable capacity	- 2.5mm ² 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.

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



Part No. K580

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.

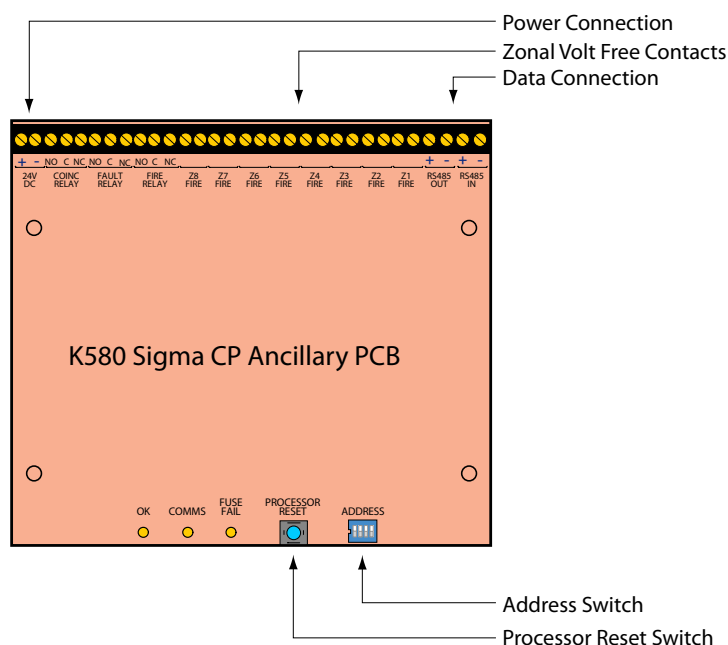
Sigma CP-R Features

- 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.



Model No. E01080M2



Specifications

Equipment

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

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

Sigma CP-R 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
Supply voltage (K models)	- 230V AC (+10%/-15%)
Supply voltage (E models)	- 20-30V DC
Mains supply fuse	- 1.6A 250V
Power supply DC rating	- 24V 1 Amps
Maximum battery size	- 7Ah 12V (2 per panel)
Fault contact rating	- 30V DC 1 Amp
Fire contact rating	- 30V DC 1 Amp
Cable capacity	- 2.5mm ² per terminal
Operating temperature	- -5°C to +50°C
Operating humidity	- <95% (non condensing)

Ancillary PCB Technical

Size (PCB only)	- 155mm(W) x 136mm(H)
Construction (boxed)	- 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 (K02750M2)	- 230V AC (+10%/-15%)
Supply voltage (K02000M2)	- 20-30V DC
Mains supply fuse	- 1.6A 250V
Power supply DC rating	- 24V 750mA
Maximum battery size	- 2.6Ah 12V (2 per panel)
Standby current	- 20mA
Full alarm current	- 190mA
Fault contact rating	- 30V DC 1 Amp
Fire contact rating	- 30V DC 1 Amp
Coincidence contact rating	- 30V DC 1 Amp
Zonal contact rating	- 30V DC 1 Amp
Cable capacity	- 2.5mm ² per terminal
Operating temperature	- -5°C to +50°C
Operating humidity	- <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.

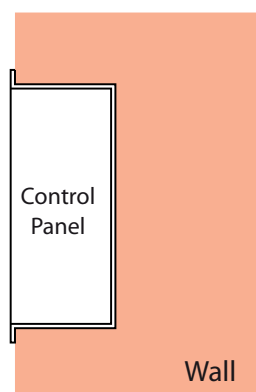
Features

- 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
- 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.



Model No. K3024005

Specifications



Flush mount cross section



Flush Mounted Version (K3012004)

Panels

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

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

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

Product Code	Zones	Weight	Size (mm)
K3212001	12	3.5kg	365 x 290 x 88
K3216001	16	6.0kg	365 x 290 x 88
K3224001	24	6.0kg	365 x 290 x 88
K3232003	32	8.0kg	500 x 355 x 108
K3240005	40	10.5kg	570 x 420 x 110
K3248005	48	10.5kg	570 x 420 x 110

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.

Product Code Description (all flush)

K14000	Square detector (Fire Detector Operated)
K14010	Round detector (Fire Detector Operated)
K14020	Square addressable (Fire Detector Operated)
K14030	Round addressable (Fire Detector Operated)
K14050	Square detector (stainless steel finish)



Remote Indicator Units

Equipment

Lamp & Buzzer Units

Product Code	Mute Facility	Construction	Size (mm)
K1441024	No	Flush	140 x 80
K1442023	No	Surface	152 x 92 x 38
K1443024	Yes	Flush	140 x 80
K1444023	Yes	Surface	152 x 92 x 38

For flush mounting use 47mm deep double gang electrical box



Twin lamp & buzzer Units

Specifications

Economy Conventional Fire Alarm Control Panels

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

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 retardant 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.



Model No. K1004000

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 retardant 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 quiescent current	- 2mA max per zone
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

Specifications

Panels

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

● = Standard equipment

○ = Optional equipment (using LCMU)

N/A = Not Available

Conventional Fire Alarm Mimic System

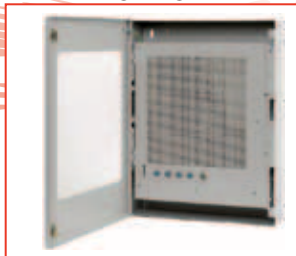
Features

- 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)

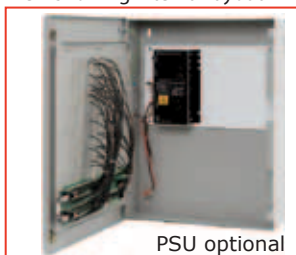
View showing mimic mounted on inner door



View showing LED grid



View showing internal layout



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

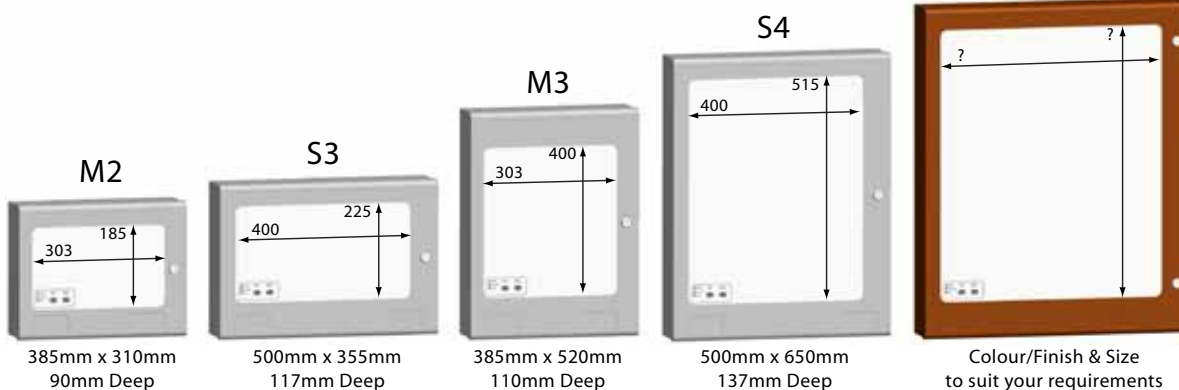
Mains supply*	- 230V AC +10% - 15% (100 Watts max.)
Mains supply fuse*	- T2A L250V Replace only with similar type
Power supply rating*	- 4 Amps total including battery charge 28V +/- 2V
Maximum ripple current*	- 200 millivolts
Battery type* (Yuasa NP)	- Two 12 Volt sealed lead acid (7Ah maximum)
Battery charge voltage*	- 27.6VDC nominal (temperature compensated)
Battery charge current*	- 1.5A maximum
Max. current draw from batteries*	- 3 Amps. With mains power source disconnected
Supply voltage (24V versions)	- 18 to 30V DC
Terminal capacity	- 0.5mm ² to 2.5mm ² solid or stranded wire
Enclosure Size & mimic area	- See 'Enclosure Size Options'
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
Mimic	- 3mm Clear Anti-Glare Acrylic
Cabinet locks	- M2/M3 - standard 801 key, S3/S4 - standard KT3001 key
Maximum distance from control panel	- 1km with 1.5mm ² cable
IP rating	- IP30
Operating temperature	- -5°C to +50°C
Number of indicators (standard models)	- M2 size - up to 32, M3 and S3 size - up to 64, S4 size - up to 96

* 230 V Versions onlys

Enclosure Size Options

Max. number of LED's = 32	Max. number of LED's = 64	Max. number of LED's = 64	Max. number of LED's = 96	Max. number of LED's = 320
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 2 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)	(Red, Green or Yellow)

Bespoke Size





Line Continuity Monitoring Unit

Product Overview

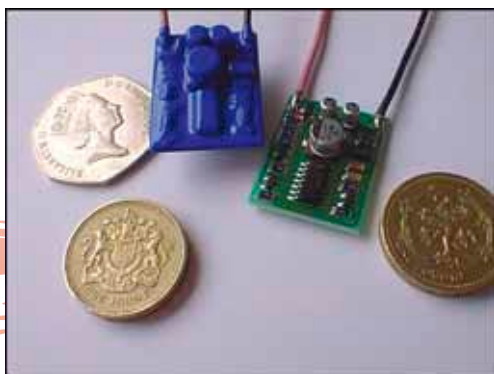
- To use this method of monitoring, the breaking connection of the detector base must be fitted with a diode. To ensure correct operation over a wide supply voltage range and with up to 20 detectors removed, a Schottky type BYV-1060 is recommended. These devices are, however, very sensitive to electrostatic 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.

Features

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

Technical

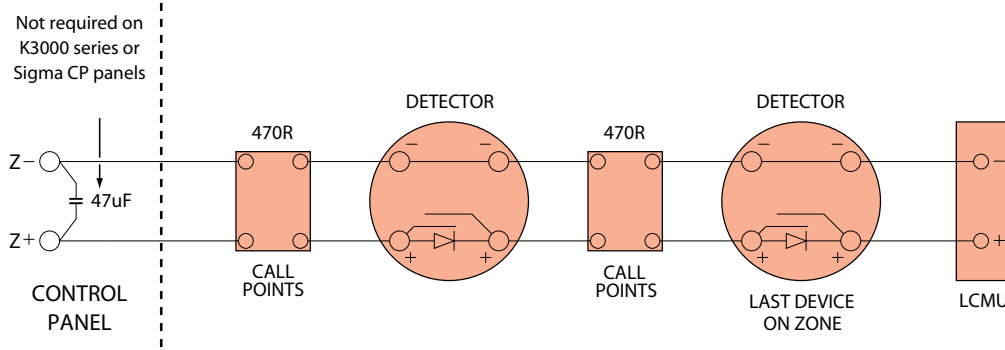
Size	- 25mm x 20mm x 8mm
Finish	- Conformal powder coating
Colour	- Blue
Normal current	- 5mA at 28V
Fault condition current	- 750uA 50V
Max. zone cable resistance	- 20 ohms
Panel capacitor	- 47uF 50V
Operating voltage	- 15V to 30V
Terminal connections	- Bootlace ferrules
Max. detectors supported	- 20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



Panels

Product Code Description

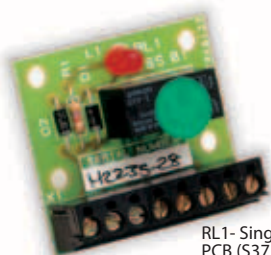
K14060	Line Continuity Monitoring Unit 6k8
NF14060	Line Continuity Monitoring Unit 5k6
KID14060	Line Continuity Monitoring Unit 3k9



Relay Boards

RL1 (S375) Single Way Relay PCB Product Overview

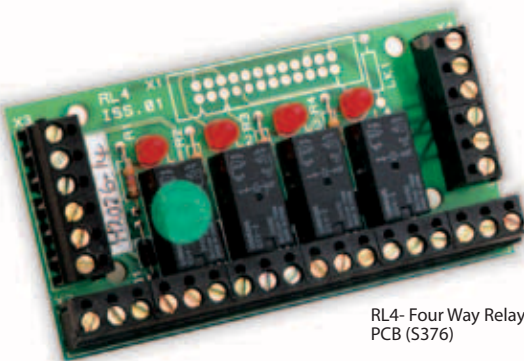
- This simple board contains a single 24V DC relay, which can be used for any extra low voltage switching applications.
- It has two changeover contacts, an LED indicator to show when the coil is energised and a polarising diode to prevent damage to the power source by reverse polarity connection.
- 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.



RL1- Single Way Relay PCB (S375)

RL4 (S376) Four Way Relay PCB Product Overview

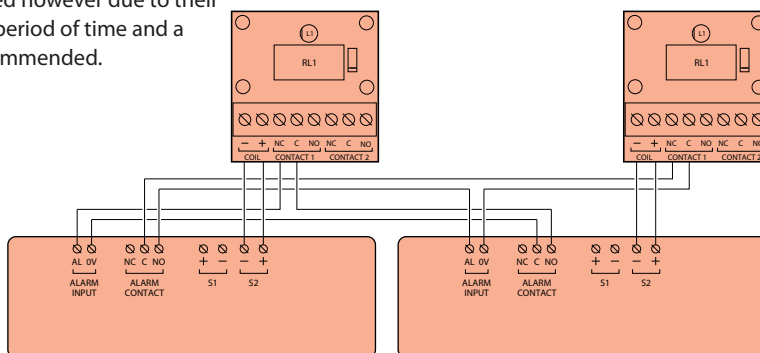
- This simple board contains four 24V DC relays, which can be used for any extra low voltage switching applications.
- Each relay has two changeover contacts, and an LED indicator to show when the coil is energised. The coils of the relays are commoned to the positive supply and the relays can be operated 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.



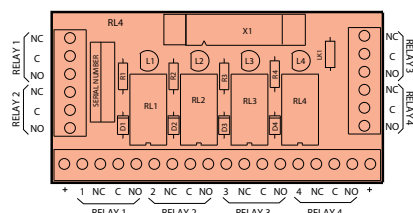
RL4- Four Way Relay PCB (S376)

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



Example sounder interface of two K3000S fire panels





Extinguishant System Control Equipment

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Sigma XT

EN12094 Extinguishant
Control Panels

Page 60-61



Sigma XT+

Multi Area Extinguishant
Control Panels

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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



BS-EN12094-1
KM 96761



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

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

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.



Model No. K11031M2

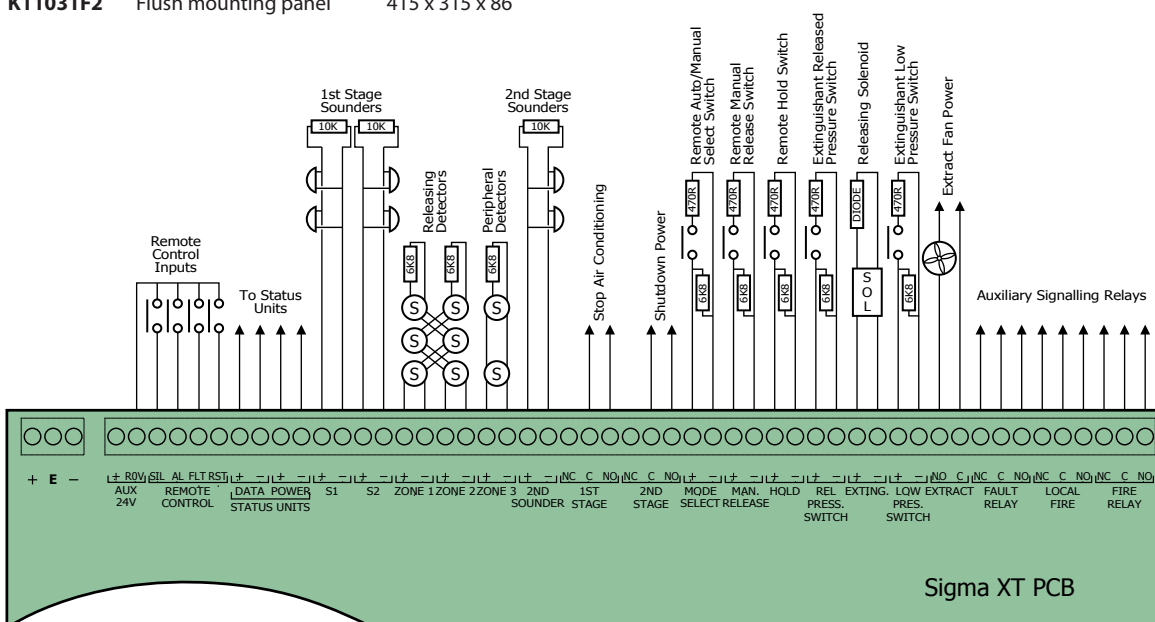
Technical

- Mains supply** - 230V AC +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** - 3 Amps total including battery charge 28V +/- 2V
- Maximum ripple current** - 200 millivolts
- Battery type (Yuasa NP)** - 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** - 20mm, 3.15A glass
- Maximum current draw from batteries** - 3 Amps
- Quiescent current of panel in mains fail** - 0.095A
- ROV output** - Fused at 500mA with electronic fuse
- Sounder outputs** - 24V Fused at 500mA with electronic fuse
- Fault relay contact rating** - 30VDC 1A Amp maximum
- Fire relay contact rating** - 30VDC 1A Amp maximum
- Local 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
- Number of detectors per zone** - Dependent on type (maximum 32)
- Number of sounders per circuit** - Dependent on type (max. 0.5A per sounder circuit)
- 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 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
- Monitored inputs normal threshold** - 8K ohms to 1K ohm
- Monitored inputs alarm threshold** - 999 ohms to 100 ohms
- Monitored inputs Short circuit threshold** - 99 ohms to 0 ohms
- Status unit/Ancillary board connection** - Two wire RS485 connection
- Status unit power output** - Fused at 500mA with electronic fuse

Specifications

Panels

Product Code	Description	Size (mm)
K11031M2	Surface mounting panel	385 x 310 x 90
K11031F2	Flush mounting panel	415 x 315 x 86



Sigma XT PCB

Multi- Area Extinguishant Control Panels

Product Overview

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)
- 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).



Sigma XT Ancillary Board - K588



Sigma CP Ancillary Board - K580



Sigma CP Sounder Board - K461

Panels

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 milliamps 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 extinguishant 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	- 0.5mm ² to 2.5mm ² 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	- 1N4004 Diode
No. of detection circuits	- Two to eight. 21 to 28V DC
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
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)
Monitored inputs normal threshold (Allowable EOL)	- 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



Extinguishant Coincidence Unit

Product Overview

- 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.

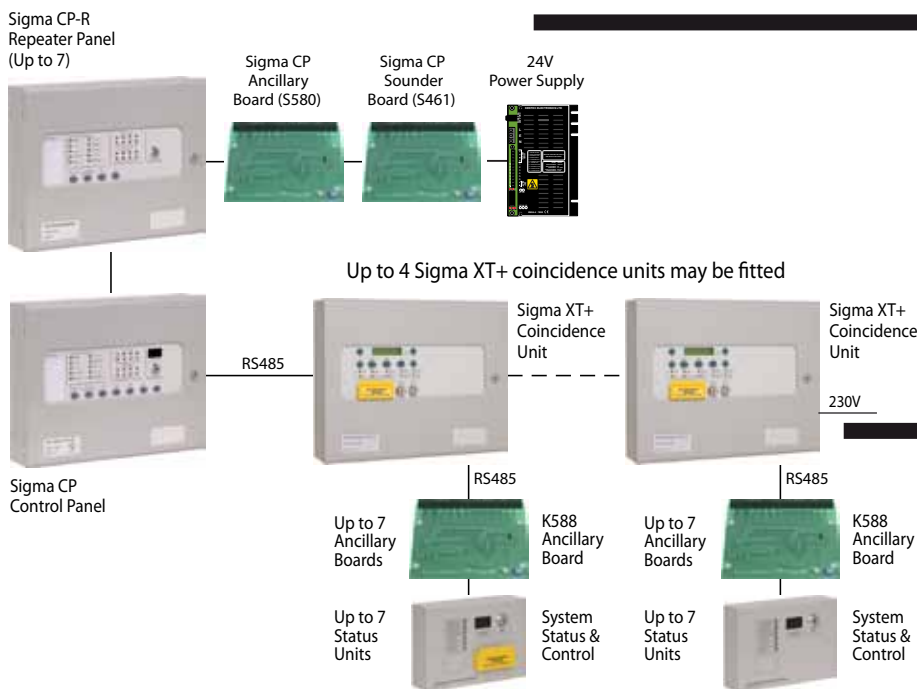
Features

- 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

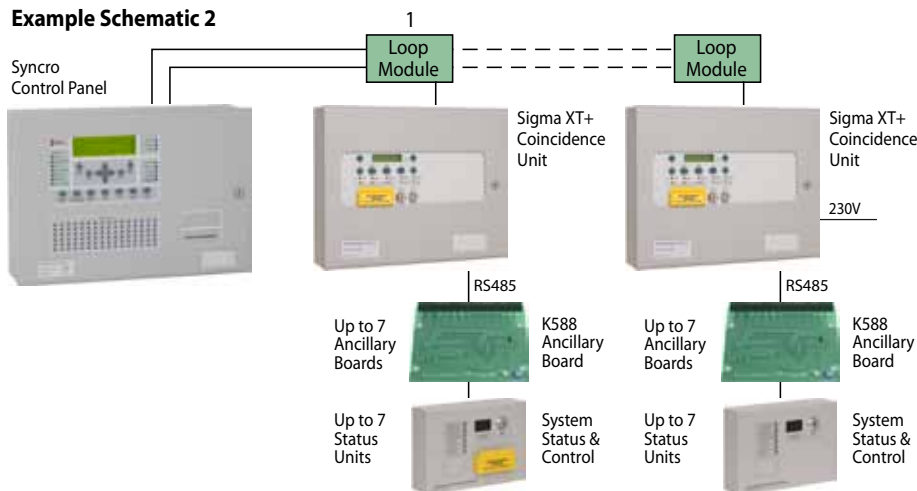


Model No. K21001M2

Example Schematic 1



Example Schematic 2



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 total including battery charge 28V +/- 2V

Power supply rating (K21083, K21084)

- 4 Amps including battery charge 28V +/- 2V

Maximum ripple current

- 200 millivolts

Battery type (Yuasa NP)

- 12 Volt sealed lead acid in series

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

Maximum current draw from batteries

- 4 Amps

Aux 24V output

- Fused at 500mA with electronic fuse

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 sounders per circuit

- Dependent on type and current consumption

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

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

Monitored inputs normal threshold

- (Allowable EOL) 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

Extinguishant Status Indicators

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. S588



Model No. K911000M8



Model No. K911111M8



Model No. K911100M8



Model No. K911110M8

Sigma Si Product Overview

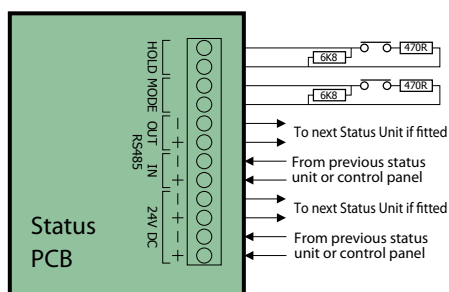
- The Sigma Si range of status indicators provide detailed status information for Sigma XT/XT+ extinguishant release control equipment.
- All models provide high brightness, LED indication of Manual Only, Automatic and Manual, Hold operated, Disabled, Imminent and Released conditions. Models are also 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 Product Overview

- 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.

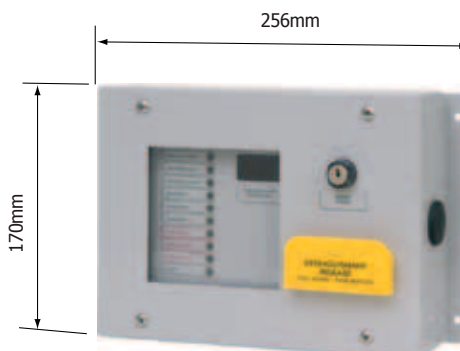


Model No. K911113M8



- Manual Only
- Auto/Manual
- Hold Activated
- Disabled
- Imminent
- Released
- Fire Zone 1
- Fire Zone 2
- Fire Zone 3
- Fault

available on 10 lamp units only



Weatherproof Version
Model No. W911113W8*

Specifications

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
W911100W8	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 00 A 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	- 2.5mm ² 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	- 2.5mm ² 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)

Multi-Area, Addressable Extinguishant Control Panels

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).

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)



Model No. #32162M3

Specifications

Panels

Product Code Loop Areas Size (mm)

#31161M3	1	1	385 x 520 x 110
#32161M3	2	1	385 x 520 x 110
#31162M3	1	2	385 x 520 x 110
#32162M3	2	2	385 x 520 x 110
#31163M4	1	3	385 x 700 x 145
#32163M4	2	3	385 x 700 x 145
#31164M4	1	4	385 x 700 x 145
#32164M4	2	4	385 x 700 x 145

'#' - replace with:

'A' for Apollo protocol,

'H' for Hochiki protocol

'V' for Argus Vega protocol

Technical

Mains supply

Mains supply fuse

Finish

Colour - lid & box

Colour - controls plate & labels

Power supply rating (1 & 2 area units)

Power supply rating (3 & 4 area units)

Maximum ripple current

Battery charge voltage

Battery charge current

Battery fuse

Current draw in mains fail condition

Max. current draw from batteries

Sigma XT+ module Aux 24V output

Syncro AS Aux 24V output

1st and 2nd stage Sounder outputs

Fault relay contact rating

Fire relay contact rating

Local fire relay contact rating

First stage contact rating

Second stage contact rating

Extract contact rating

Terminal capacity

Number of sounders per circuit

Monitored input end of line

Sounder circuit end of line

Extinguishant output end of line

Number of detection loops

Number of zones

No. of sounder circuits

Extinguishant release output

Extinguishant release delay

Extinguishant release duration

SIL, AL, FLT, RST inputs

Cabling

Monitored inputs normal threshold

Monitored inputs alarm threshold

Monitored inputs Short circuit threshold

Status unit/Ancillary board connection

Status unit power output

- 230V AC, 50Hz +10% - 15% (100 Watts maximum)
- 1.6 Amp (F1.6A L250V)
- Epoxy powder coated
- BS 00 A 05 grey - fine texture
- RAL 7047 light grey - satin
- 3 Amps total including battery charge 28V +/- 2V
- 4 Amps including battery charge 28V +/- 2V
- 200 millivolts
- 27.6VDC nominal (temperature compensated)
- 0.7A maximum
- 20mm, 3.15A glass
- 54 milliamps per extinguishing module
- 3A (#31161M3, #32161M3, #31162M3, #32162M3)
- 4A (#31163M4, #32163M4, #31164M4, #32164M4)
- Fused at 500mA with electronic fuse - 1 per extinguishant area
- Fused at 2.5A - not available to user
- 21 to 28V DC Fused at 1A with electronic fuse
- 5 to 30VDC 1A Amp maximum for each
- 5 to 30VDC 1A Amp maximum for each
- 5 to 30VDC 1A Amp maximum for each
- 5 to 30VDC 1A Amp maximum for each
- 5 to 30VDC 1A Amp maximum for each
- 5 to 30VDC 1A Amp maximum for each
- 5 to 30VDC 1A Amp maximum for each
- 0.5mm² to 2.5mm² solid or stranded wire
- Dependent on type and current consumption - typically 20+
- 6K8 +/- 5% ½ Watt resistor
- 10K +/- 5% ¼ Watt resistor
- 1N4004 Diode
- 1 or 2
- 16
- Dependent on model 21 to 28V DC
- 21 to 28V DC. Fused at 1 Amp
- Adjustable 0 to 60 seconds (+/- 10%)
- Adjustable 60 to 300 seconds
- Switched -ve, min resistance 0 ohms, max resistance 100 Ohms
- FP200 or equivalent (max capacitance 1uF max inductance 1 mH)
- 10K ohm to 2K ohm
- 2K ohms to 150 ohms +/- 5%
- 140 ohms to 0 ohms +/- 5%
- Two wire RS485 connection (EIA-485 specification)
- 21 to 28V DC. Fused at 500mA with electronic fuse



Miscellaneous Items

Pages 72-83



PSU

EN54-4 Approved Fire Alarm
Power Supplies

Page 72-73



PSU

EN54-4 Approved Switched Mode
Power Supply / Charger

Page 74-75



EN54-4

Conventional Sounder
Controller Units

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Sigma Sounder

Sigma CP Conventional
Sounder Controller Units

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Sigma DocBox

Document Enclosure

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Vision Window

Tamper Resistant Vision Window

Page 79



Hydrosense

Water Detection System

Page 80-83



BS-EN54-4
KM 73505



EN54-4 Approved Fire Alarm Power Supplies

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.

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



Boxed Power Supply
to match Sigma CP
and Syncro AS Style



Boxed Power Supply
to match Syncro Style

Specifications

Panels

Product Code	PSU	Batteries	Size (mm)	
K25250M3	2.5 Amp	up to 12Ah	385 x 520 x 110	
K2525003	2.5 Amp	up to 12Ah	500 x 355 x 117	
K25400M3	5.25 Amp	up to 17.2Ah	385 x 520 x 110	
K2540003	5.25 Amp	up to 12Ah	500 x 355 x 117	
K2540015	5.25 Amp	up to 26Ah	500 x 460 x 190	
KD25250M3	2.5 Amp	up to 12Ah	385 x 520 x 110	With Dual Output Board
KD2525003	2.5 Amp	up to 12Ah	500 x 355 x 117	With Dual Output Board
KD25400M3	5.25 Amp	up to 17.2Ah	385 x 520 x 110	With Dual Output Board
KD2540003	5.25 Amp	up to 12Ah	500 x 355 x 117	With Dual Output Board
KD2540015	5.25 Amp	up to 26Ah	500 x 460 x 117	With Dual Output Board

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	- 5.25 Amps continuous with maximum battery charge output of 1.25A
- K25400 models	
Maximum load current	- 2.5 Amps continuous with maximum battery charge output of 1.0A
- K25250 models	
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
Mains failed output	- Open collector 50 milliamps
Fault output connector	- 14 way DIL header 0.1" spacing
Mains connector	- 3 way terminal, 7.62mm spacing, 2.5mm maximum cable size
Load connector	- 2 way terminal, 7.62mm spacing, 2.5mm maximum cable size
Battery connector	- 2 way terminal, 7.62mm spacing, 2.5mm maximum cable size
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 (when fitted with optional dual fused output monitoring module)



BS-EN54-4
KM 73505



EN54-4 Approved Switched Mode Power Supply/Charger

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

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 - 2.5 Amp PSU



S406 - 5.25 Amp PSU

Formula

Battery Calculation BS 5839-1:2002

$$C_{min} = 1.25 (T_1 I_1 + D I_2 / 2)$$

Where:

- C min** = Minimum capacity of the battery when new at the 20 hour discharge rate and at 20 °C in ampere-hours;
- T₁** = Total battery stand by period in hours;
- I₁** = Total battery stand by load in amperes;
- I₂** = Total battery alarm load in amperes;
- D** = a de-rating factor. (1.75)

S407 Technical

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

S406 Technical

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	- 5.25 Amps (continuous)
Battery charge current	- 1.25 Amps max.
Load current	- 4.0 Amps (with flat battery)
Fault outputs rating	- 50mA max.
Mains fuse	- 3 Amp 20mm HRC
Load fuses	- 5 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

Specifications

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

Product Code	Description	PSU
K1740203	2 Way Sounder Controller Unit	4.0A
K1740403	4 Way Sounder Controller Unit	4.0A
K1740603	6 Way Sounder Controller Unit	4.0A

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)



Model No. K1725203



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	- 2.5mm ² per terminal
Operating temperature	- -5°C to +50°C
Operating humidity	- <95% (non condensing)

Panels

Product Code	Description	PSU
K461	Stand alone sounder PCB	24V DC
K04000M2	Boxed sounder PCB	24V DC
K04400M2	Boxed sounder PCB with 4 Amp PSU	230V DC

Sigma CP Conventional Sounder Controller Units

Features

- Two wire serial connection
- Up to 7 sounder boards per system
- 230V AC or 24V DC powered versions
- Zoned, 2-stage or common alarm
- All outputs monitored for open and short circuit faults
- Individual open and short circuit fault indicators
- Fully monitored by main control panel
- Class change input facility
- Up to 8 outputs with 0.5A available from each
- Can be connected to serial bus with Ancillary boards and repeaters
- Boxed units in enclosure to match Sigma CP control panels
- Power fault input for monitoring remote power supplies



Model No. K04400M2



Sigma Doc Box

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

Part Number	- K16000L2 (Standard version)
Size	- 385mm(W) x 310mm(H) x 60mm(D)
Part Number	- K16000M2 (Deep version)
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
Weight	- 3.0Kg



Model No. K16000L2



Internal View

Tamper Resistant Vision Window

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

Product code	- K18002
Size	- 385mm x 310mm x 35mm
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
Weight	- 2.0 Kg



Take out both hinge pins & remove lid



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



Product code: K18002

Hydrosense Water Detection System

System Features

- Linear detection with Hydrowire
- Point detection with probes
- Zonal repeat contacts
- Easy to install
- Easy to service and maintain
- Auxillary alarm contacts
- Monitored alarm outputs
- Battery backup
- Remote monitoring

Control Panels

- Two types of control panel are available. The Hydrosense HSCP is available in 2, 4 and 8 Zone configurations and the Hydrosense K200000 range for 12 Zones or greater. Flush versions and special finishes are also available.
- Repeater panels and ancillary PCBs are available to provide common alarm, common fault, coincidence and zonal alarm, VFCs allowing control of sub-systems, graphical mimics and plant, remotely from the main panel over a two wire data bus.

System Overview

- A Hydrosense Water Detection System installed in vulnerable areas will continuously monitor the potential hazards around the clock, year in year out.
- The Hydrosense system has a range of attractive and unobtrusive control panels containing the alarm circuitry, power supply and has the facility for 24 hour battery standby.
- A Hydrosense System has two methods of leak or moisture detection, Linear or Point detection.
- Linear detection is provided by Hydrowire moisture sensitive cables which are connected to the control panel via a special Connection Box, by simple two core leader cable making installation quick and inexpensive.
- Point detection is provided by Floor or Drip Tray Probes also connected to the control panel by simple two core leader cable.
- The Hydrowire and Probes are continuously monitored. Any disconnection or fault is immediately indicated on the control panel. All monitoring indicators can be repeated to remote repeater panels or via volt free contacts to a BMS.
- **Hydrosense Floor and Drip Tray Mounting Probes**
The Floor Probe is simply fixed to the floor and adjusted to give the required detection level and connected to the control panel via a simple junction box.
The Drip Tray Probe has exactly the same facilities as the floor mounting probe but has a bracket for mounting onto the side of an ACU drip tray.
- **Hydrowire**
Available as standard 5 and 10 metre lengths pre-terminated with DIN plugs, Hydrowire is a flexible cable which will continuously monitor large areas. When even a small amount of water or moisture comes into contact with Hydrowire it will trigger an alarm. Hydrowire will dry out in around 20 minutes for use again. Each zone requires a junction box and an end of line plug.



Hydrosense HSCP Control Panel Features

- Fully compliant with & tested to BS EN54-2 and BS EN54-4
- Available 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 by zone
 - Non latching zones
 - Silent zones
 - Zone input delay
 - General panel configuration
- Simple, single board construction
- Installer friendly
- Two monitored sounder outputs
- 3 Amp power supply
- Auxiliary power output



Model No. HSCP-S-8



Model No. K2101

Specifications

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
Alarm contact rating	- 30V DC 1 Amp
Sounder output rating	- 0.5A per output (max 1.6A over all outputs)
Detection zone current	- 1.6 milliamps
Detection zone EOL resistor	- 6k8 5%
Sounder output EOL resistor	- 10k 5%
Cable capacity	- 2.5mm ² per terminal
Operating temperature	- -5°C to +50°C
Operating humidity	- <95% (non condensing)

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

Equipment

Product Code Description

HSCP-S-2	2 zone Control Panel
HSCP-S-4	4 zone Control Panel
HSCP-S-8	8 zone Control Panel
HSCP-S-2	2 zone Repeater Panel
HSCP-S-4	4 zone Repeater Panel
HSCP-S-8	8 zone Repeater Panel
K2101	Floor mounted probe
K2102	Drip tray probe
K2103	Remote indicator
K2104	5 metre Hydrowire
K2105	10 metre Hydrowire
K2106	Hydrowire connection box
K2110	End of line plug
K2111	Leader cable 50M
K2112	Fixing clips (100)
S 9615/A	Protection Cage for Floor Mounted Probe
F/A/1W	Fire-Cryer® with water leakage alarm

Larger control panels are available on request

Hydrosense Water Detection System

Hydrosense K200000 Control Panel

Features

- 12 - 48 zones as standard more available on request
- Common fire and fault contacts
- Remote signal contact and isolate
- Zonal one man test
- Zonal volt free contacts
- Zone isolate facility

Technical

Metal Enclosure - 12, 16 & 24 Zones

- | | |
|------------------------------|--|
| Construction | - Zone 1.2mm fully welded sheet steel |
| Finish | - Epoxy powder coated |
| Standard colour | - 2 tone grey |
| 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 | - 2.5 Amp |
| Zonal repeat contacts | - Volt free normally open 1 Amp at 30V DC |
| Max. battery capacity | - 7.0A/h (12 zone)
12.0A/h (16 & 24 zone) } 230V AC |



Model No. K2024005



Model No. K2101

Equipment

Product Code	Description	Weight
K2012003	12 zone control panel	8.6 kg
K2016005	16 zone control panel	11.0 kg
K2024005	24 zone control panel	11.5 kg
K2101	Floor mounted probe	-
K2102	Drip tray probe	-
K2103	Remote indicator	-
K2104	5 metre Hydrowire	-
K2105	10 metre Hydrowire	-
K2106	Hydrowire connection box	-
K2110	End of line plug	-
K2111	Leader cable 50M	-
K2112	Fixing clips (100)	-
S 9615/A	Protection Cage for Floor Mounted Probe	-
F/A/1W	Fire-Cryer® with water leakage alarm	-

Larger control panels are available on request

Hydrosense Matrix Overview

- The Matrix Mimic Panel can be connected to any number of Hydrosense control panels and provides a clear, geographical indication of alarm activation enabling speedy identification of the source of an alarm.
- The 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. Matrix is housed in attractive, slimline enclosures and with high quality, full colour or monochrome floor plans.
- All indicators can be configured to operate via switched positive or negative inputs providing compatibility with a wide range of input/output boards. 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.



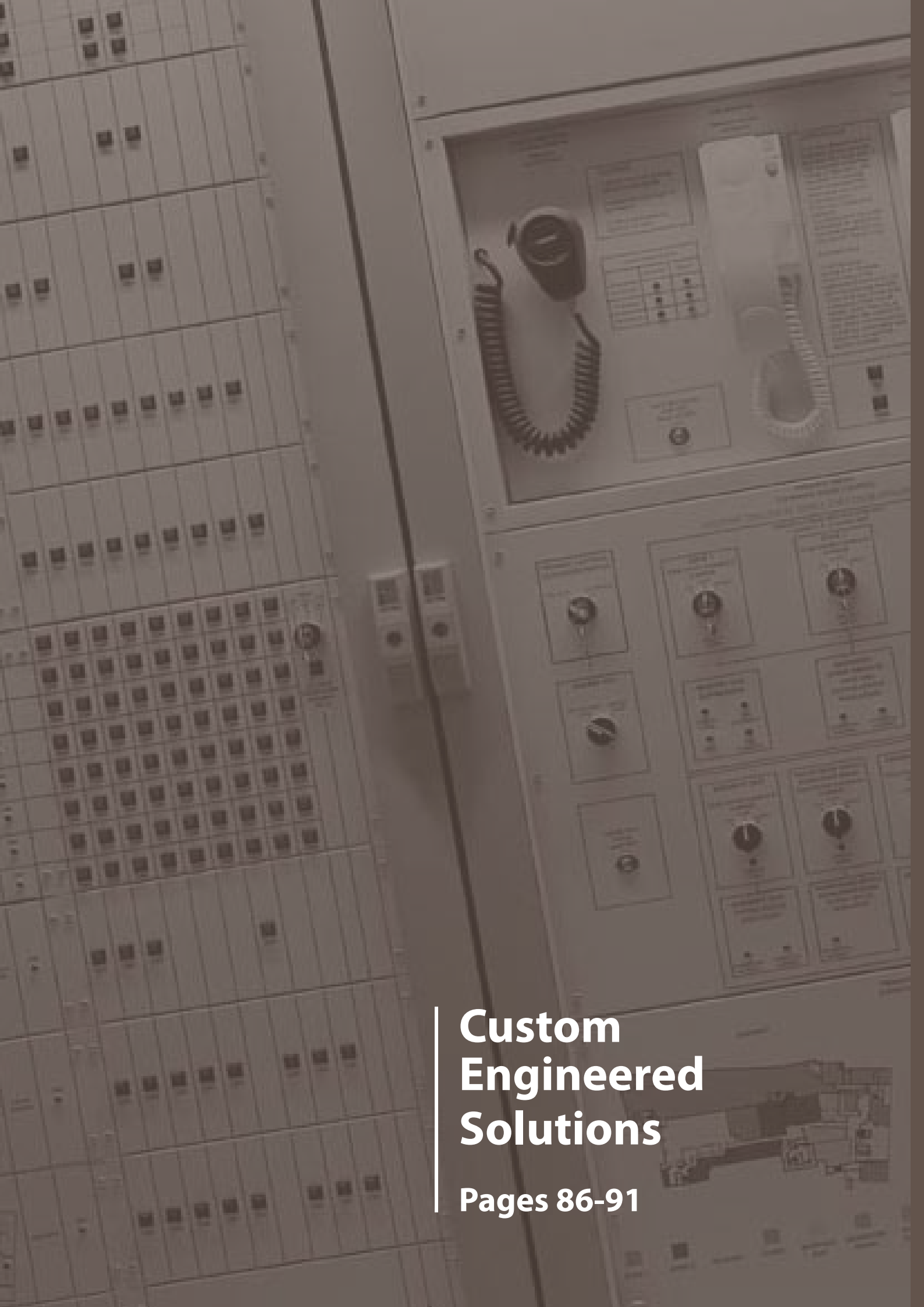
Hydrosense Matrix Control Panel Features

- 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
- Matrix can easily be upgraded on site with minimal cost and effort
- EN54-4 approved PSU (optional)

Technical

Mains supply*	- 230V AC +10% - 15% (100 Watts max.)
Mains supply fuse*	- T2A L250V Replace only with similar type
Power supply rating*	- 4 Amps total including battery charge 28V +/- 2V
Maximum ripple current*	- 200 millivolts
Battery type* (Yuasa NP)	- Two 12 Volt sealed lead acid (7Ah maximum)
Battery charge voltage*	- 27.6VDC nominal (temperature compensated)
Battery charge current*	- 1.5A maximum
Max. current draw from batteries*	- 3 Amps. With mains power source disconnected
Supply voltage (24V versions)	- 18 to 30V DC
Terminal capacity	- 0.5mm ² to 2.5mm ² solid or stranded wire
Enclosure Size & mimic area	- See 'Enclosure Size Options'
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
Mimic	- 3mm Clear Anti-Glare Acrylic
Cabinet locks	- M2/M3 - standard 801 key, S3/S4 - standard KT3001 key
Maximum distance from control panel	- 1km with 1.5mm ² cable
IP rating	- IP30
Operating temperature	- -5°C to +50°C
Number of indicators (standard models)	- M2 size - up to 32, M3 and S3 size - up to 64, S4 size - up to 96

* 230 V Versions only



Custom Engineered Solutions

Pages 86-91



The Custom Specialists

Our In-house Facilities

Page 86-87



Custom Engineered Solutions

Page 88-91

The Custom Specialists

Our In-house facilities...

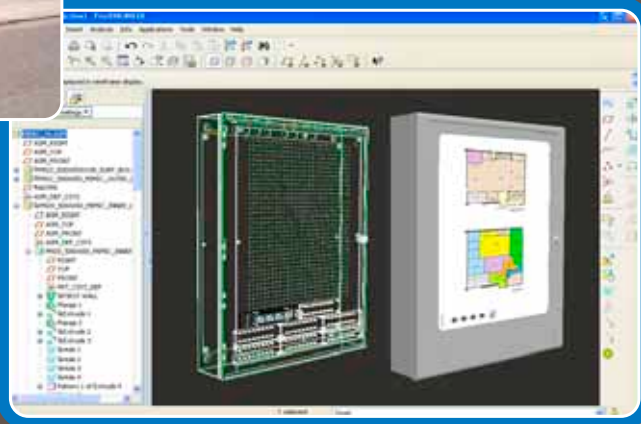
Overview

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.



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.



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.

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.



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.



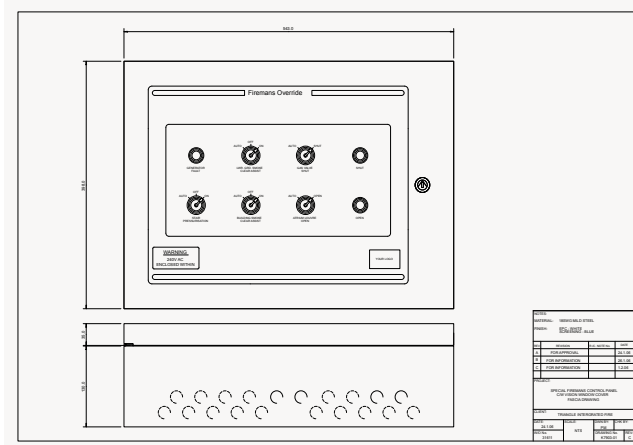
Analogue Addressable fire control panel with plant controls.



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

From Concept

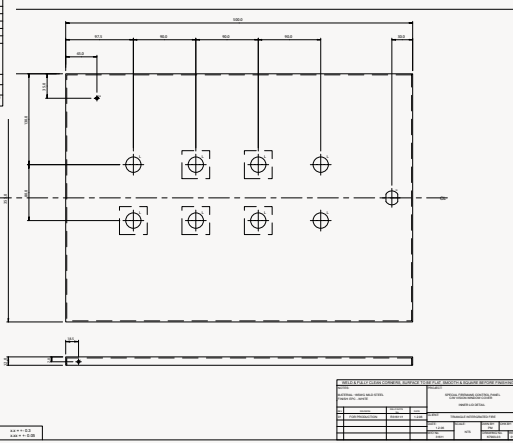
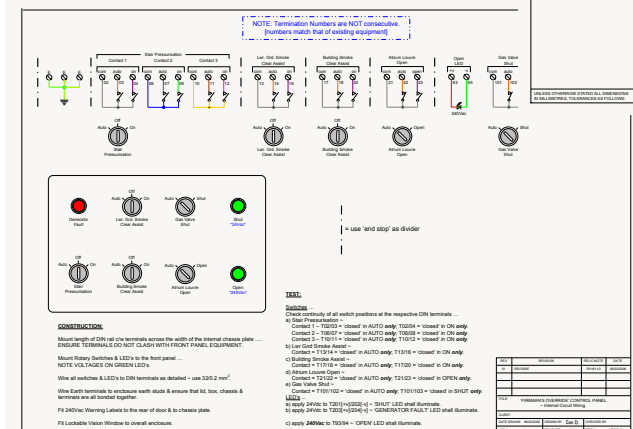
Conceptual drawing produced and sent to client for approval



Specifications

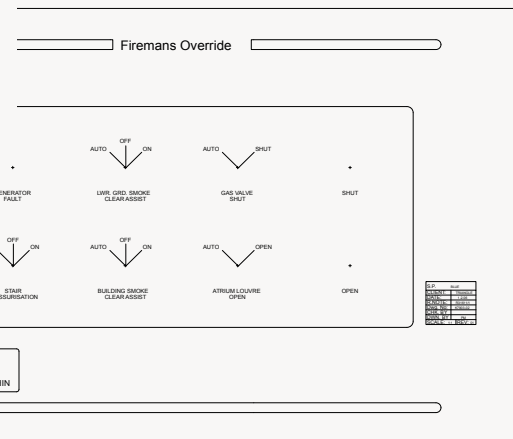
On approval, parts are engineered & sent to sheet metal shop for fabrication before going to paint shop (choice of finishes)

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!



. . . . To Product

Special Firemans Control Panel

Custom

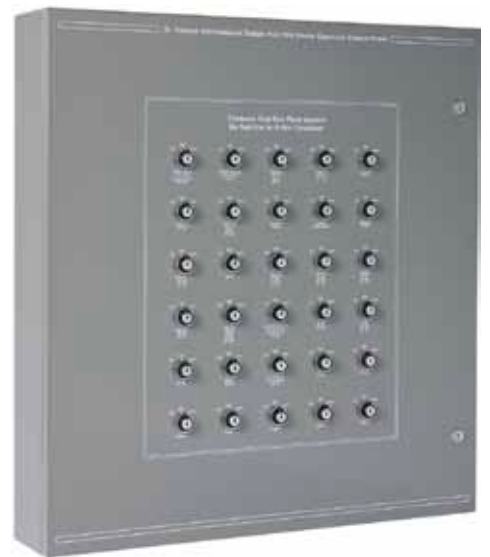
Custom Engineered Solutions



.... choose your finish



.... choose your colour



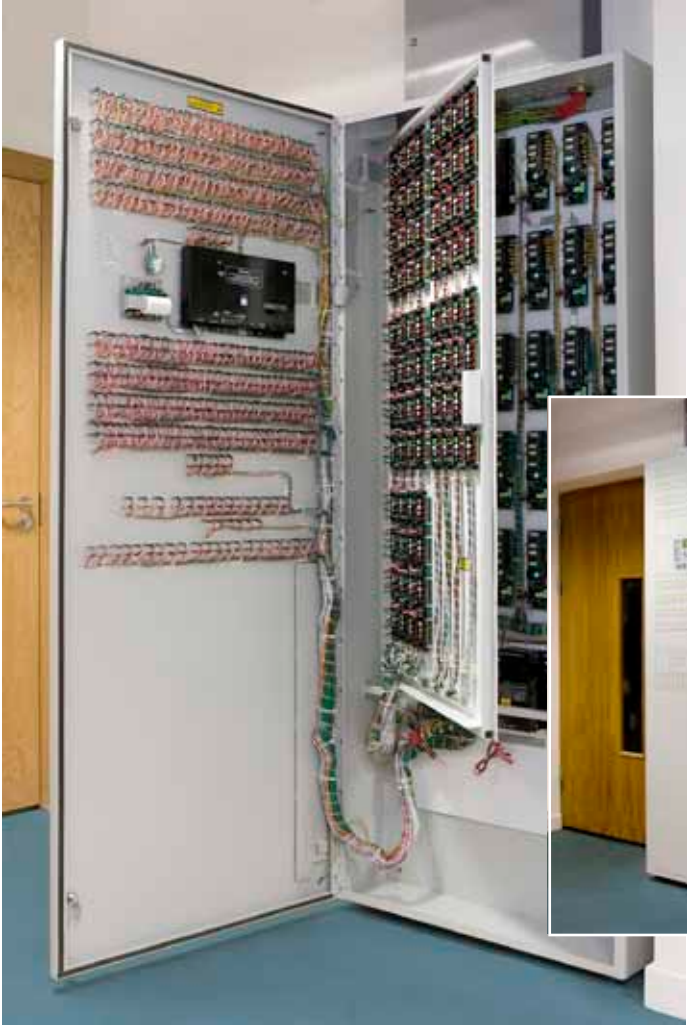
.... choose your specification

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)

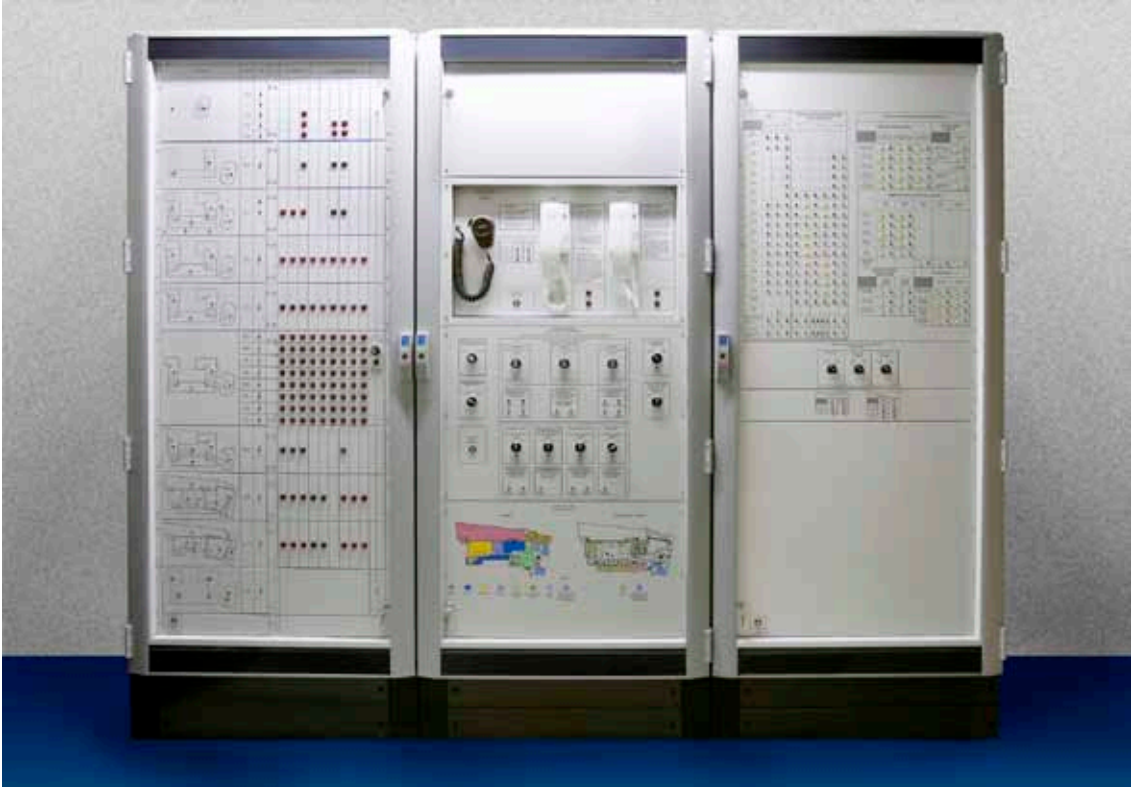


Specifications



◀ 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



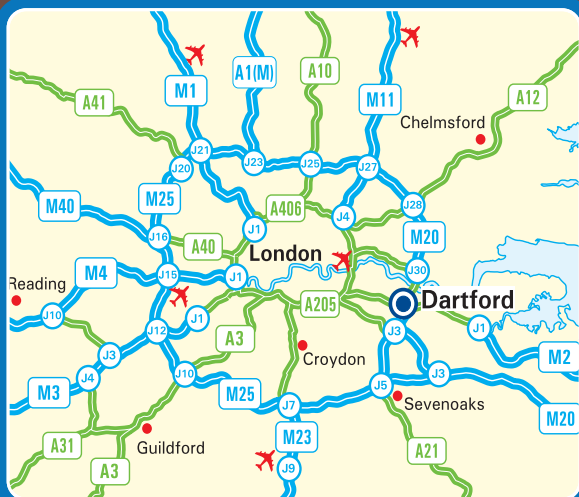
Syncro ASM analogue addressable, fire detection systems are available from Kentec Electronics Limited, for a wide range of marine fire alarm system applications.

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.



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.

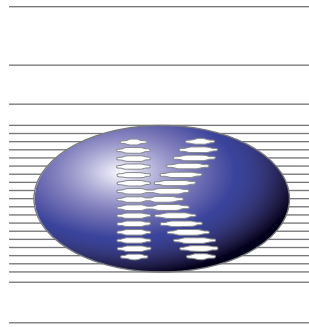
From M25 Clockwise

Leave M25 at Junction 1b (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.





Kentec Electronics Ltd.

Kentec Electronics Ltd

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