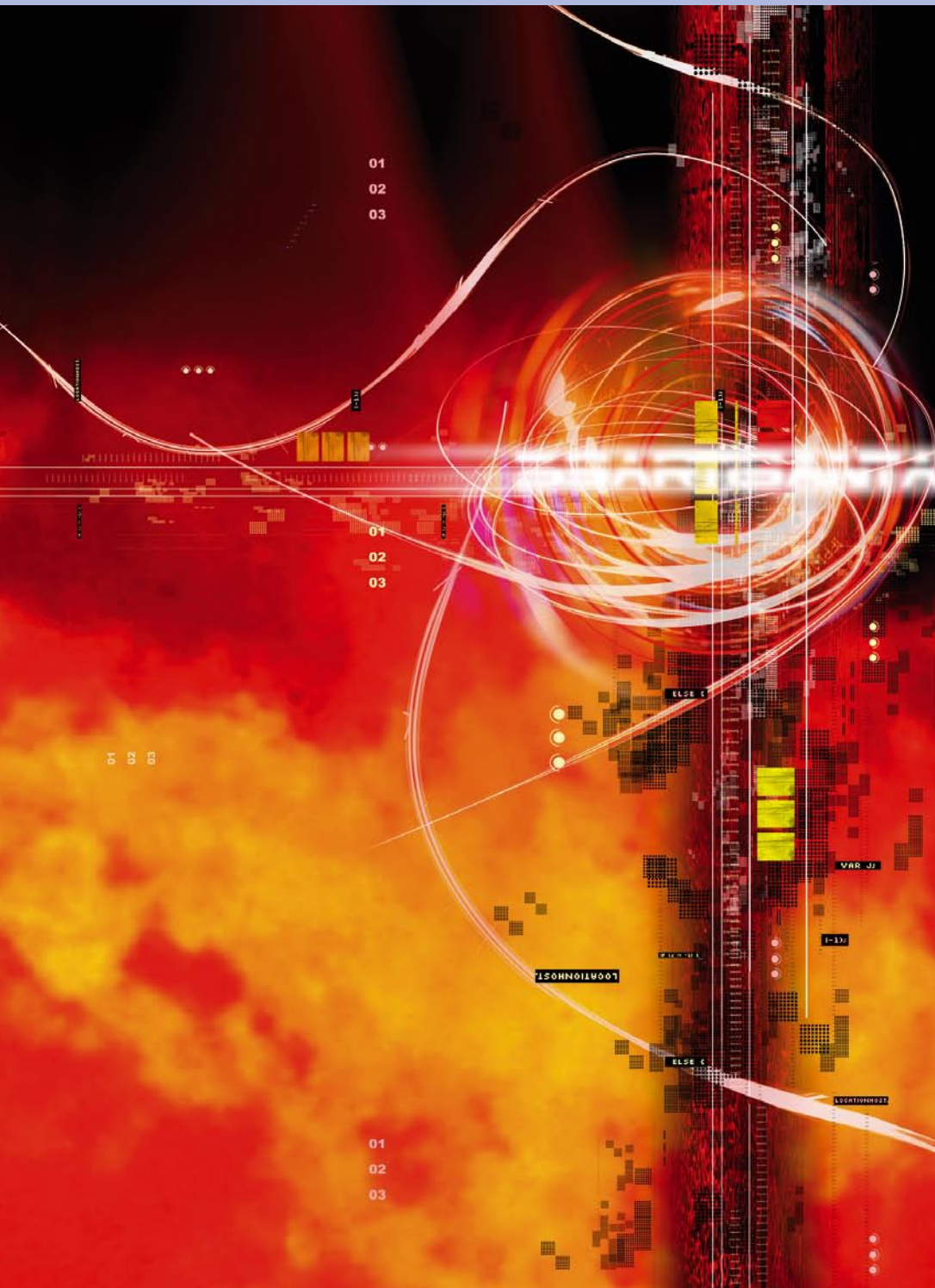


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Section 4:

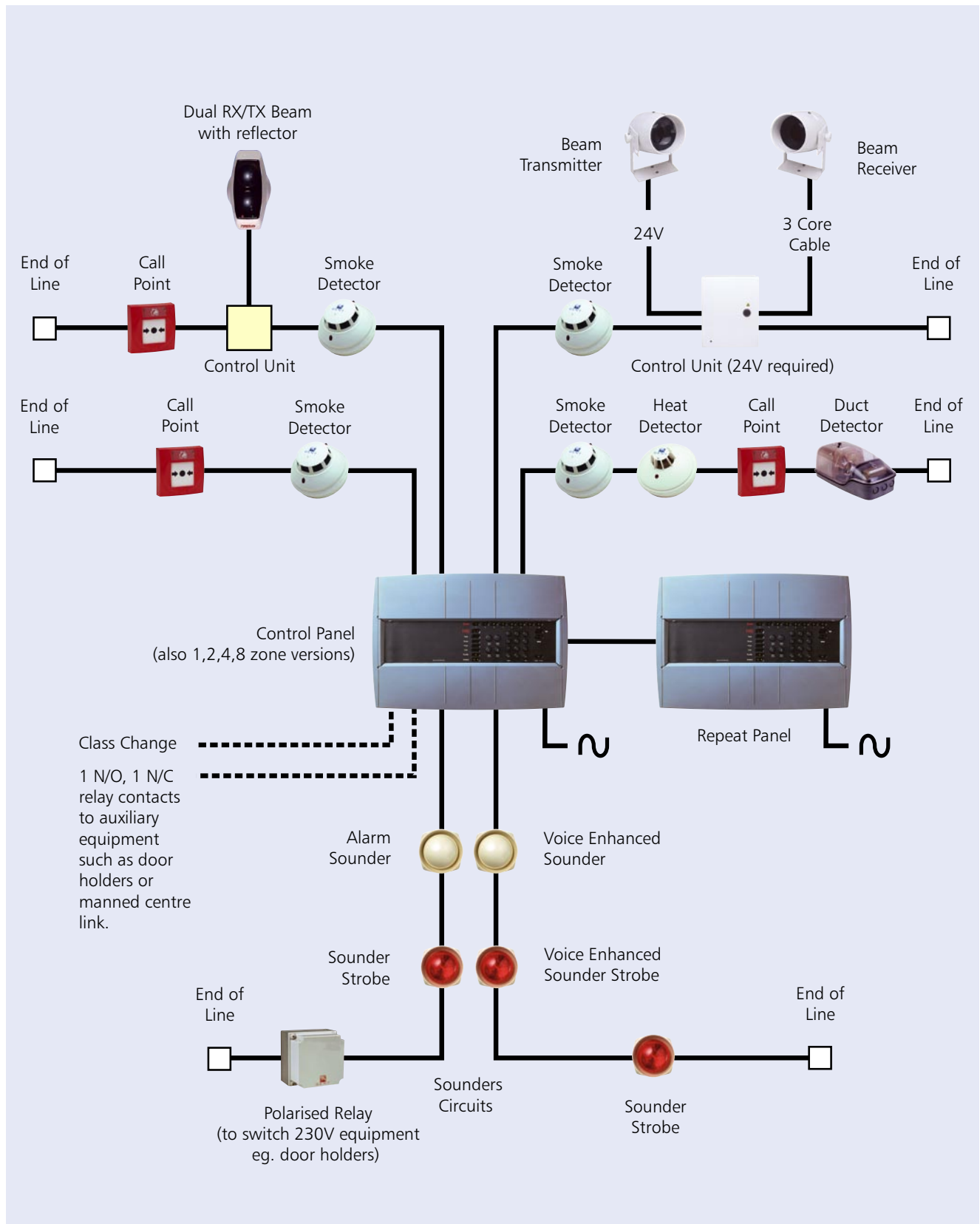
Conventional Fire Detection



4: CONVENTIONAL FIRE DETECTION

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Xenex system architecture



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4: CONVENTIONAL FIRE DETECTION

Xenex control panel

The Xenex panel complies fully with the European standard EN 54 Parts 2 & 4 and can be used on installations meeting BS 5839-1.

Each panel contains its own integral power supply and battery support for up to eight alarm sounder circuits, two auxiliary relay contacts, a zone disablement facility and a one man test and commission facility, all simplifying system design, installation and commissioning.



Xenex Control Panel

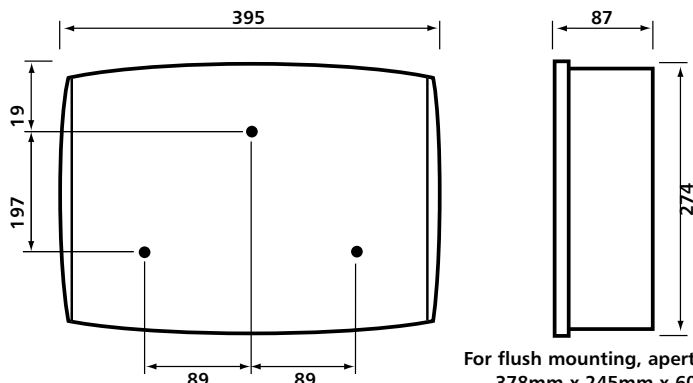
4

TECHNICAL SPECIFICATION					
No. of Zones	1	2	4	8	*8 Zone Repeat
Maximum Load per Zone	3mA	3mA	3mA	3mA	N/A
No. of Sounder Circuits	2	2	4	8	N/A
Max. Sounder Circuit Load	0.5A per circuit Total load not to exceed 1A				N/A
Batteries (seperate)	2 x 12V, 2.1 Ah		2 x 12V, 2.8 Ah		2 x 12V, 2.1 Ah
Battery Standby	72 hours plus 0.5 hours alarm load				72 hours
Aux. Relay Contacts	1 N/O and 1 N/C pair, 1A at 24V				N/A
Approx Weight (with batteries)	5.8 Kg	5.8 Kg	5.8 Kg	6.2 Kg	5.8 Kg
Relevant Standard	EN 54 Parts 2 & 4				
Approvals	LPCB approved to EN54: Parts 2 & 4				
Cable Entry	13 Top and 13 Rear				
Cable Type	BS 6387, 2 core, min 1.5mm ² CSA				
Class Change Facility	Via normally open push button switch located no more than 100m from panel				N/A
Operating Temperature	Indoor, 0 - 40°C				

Note: Maximum of 1, 8 zone repeat panel per system.

Note: For maximum system loading table see page 20.

Dimensions of all panels (inc Repeat panel) (mm)



For flush mounting, aperture size
378mm x 245mm x 60mm

ORDER CODES

1 Zone	13270-01LB
2 Zone	13270-02LB
4 Zone	13270-04LB
8 Zone	13270-08LB
8 Zone Repeat	
Panel	13271-08LB
Flush Surround	13270-29LB

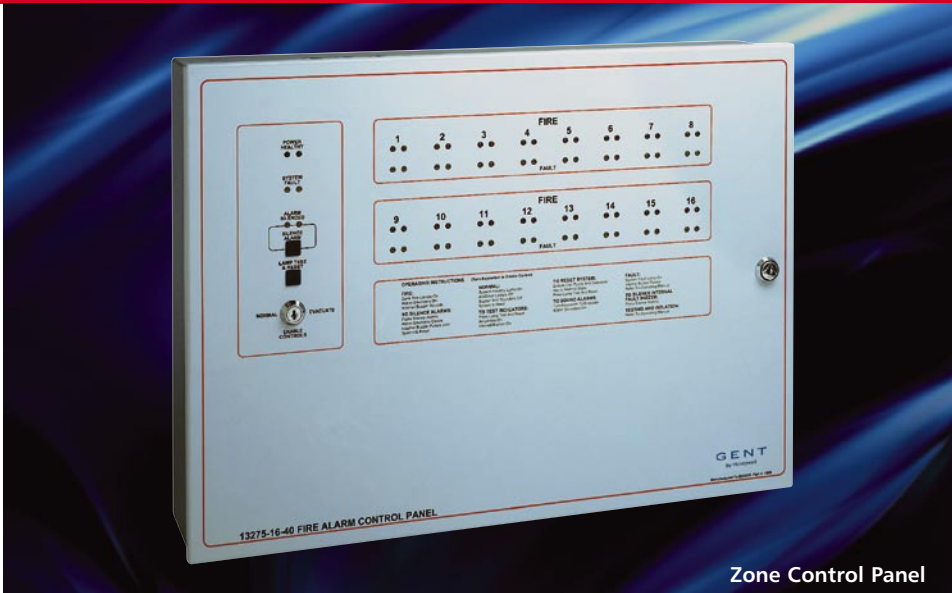
(Batteries to be ordered seperatly)

4: CONVENTIONAL FIRE DETECTION

12 Zone Control Panels

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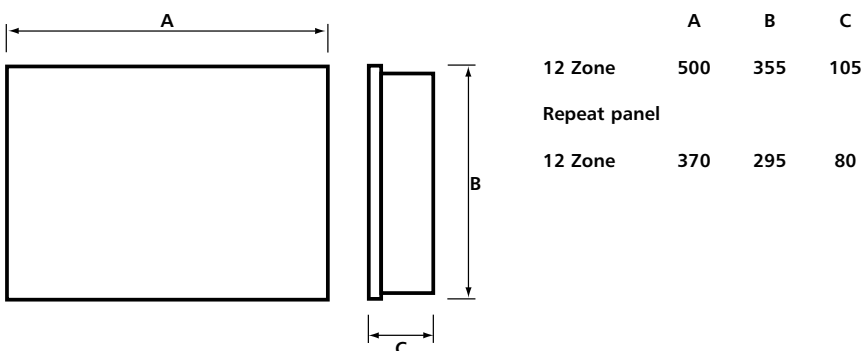


Zone Control Panel

For larger applications a 12 zone conventional panel is available. The panel complies with BS 5839 and includes facilities such as one man zone test, bomb alert and zoned or two stage alarm outputs as required. For larger panel sizes or flush mounting versions please contact Gent.

TECHNICAL SPECIFICATION	
No. of Zones	12
Maximum Load per Zone	1.6mA
No. of Sounder Circuits	2 (extra sounder circuits may be added using 4 way sounder cards)
Max. Sounder Circuit Load	1A per circuit
Batteries	2 x 7Ah, 12V
Battery Standby	24 hours - For 48 hour or 72 hour requirements consult Gent
Aux. Relay Contacts All contacts rated at 30 Vdc 1A maximum	Common fire contacts - Operates on fire condition
	Zonal fire contacts - Per zone, operates on fire condition
	Alarm contacts - Operates with alarm sounders
	Fault contacts - Operates on any fault condition
Approx Weight	15kg
Cable Entry	Top and bottom
Class Change Facility	Yes

Note: If additional sounder circuits are required an extra power supply unit may be needed.



ORDER CODES

12 Zone	13275-12
Repeat Panel	
12 Zone	03276-12
4 Way Extension	
Sounder Card	03277-04

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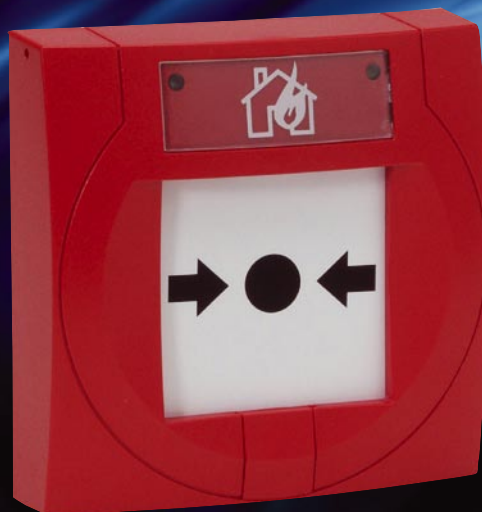
4: CONVENTIONAL FIRE DETECTION

Manual Call Points

Manual call points are manufactured from ABS with plastic covered push break glasses for safe and simple operation. No hammer is required.

For accessories see page 19.

A polycarbonate cover version is available for applications susceptible to inadvertent operation, such as sports halls.



Manual Call Point

TECHNICAL SPECIFICATION	
Nominal Voltage	24Vdc
Ingress Protection	IP43 (IP55 with cover)
Approx Weight	0.11 Kg
Operating Temperature	-20°C to +70°C
Relevant Standard	EN 54-11
Approvals	LPCB applied for
Alarm Current	30mA (max)
Colour	Red (Similar to RAL 3020)

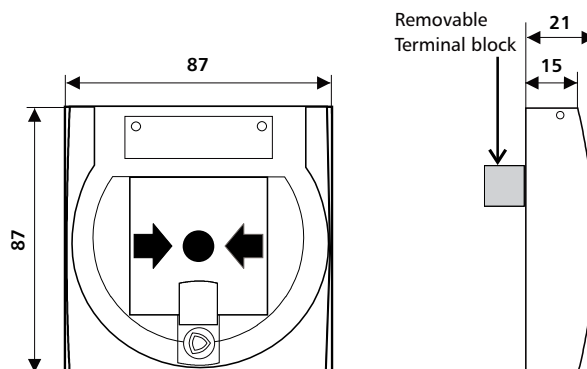
4

ORDER CODES

MCP Flush 470 ohm	14222-08
NO/NC* Flush Call Point	71160-62NM
MCP Key operated (470 ohm)	14225-08
Pack of 10 MCP S/Mount Boxes	71167-94NM
Pack of 10 Spares Glasses	71167-90NM
Pack of 10 Test Keys	S4-34899
MCP Weather Resistant kit	S4-34898
Pack of 10 Resetable Elements	71167-96NM
Pack of 5 Protective Covers	71167-95NM

* Normally Open / Normally Close

Dimensions (mm)



4: CONVENTIONAL FIRE DETECTION

Smoke Detectors

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by Honeywell



Optical Detector

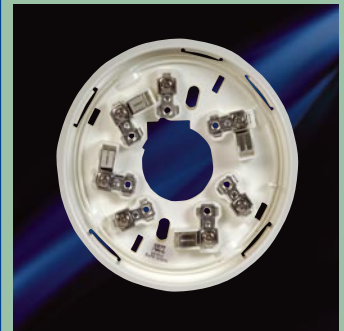
Optical smoke detectors are ideal at detecting visually smoky fires which are likely to be slow, smouldering fires.

ABS casing with red LED fire indicator.

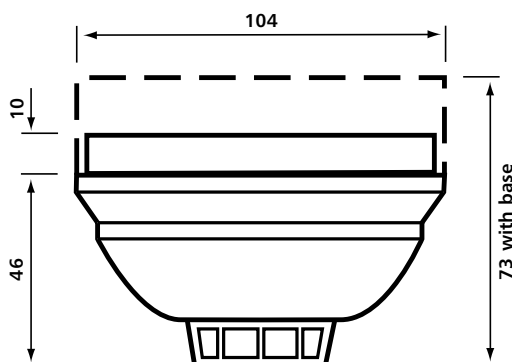
TECHNICAL SPECIFICATION	
Type	Optical
Nominal Voltage	9 - 28V dc
Quiescent Current	60 μ A
Ingress Protection	IP30
Approx Weight	0.11 Kg
Operating Temperature	-10°C to +50°C
Relevant Standards	EN 54-7
Approvals	LPCB approved

Special feature The use of the diode base allows monitoring of a removed detector to comply with BS 5839.

N.B. Maximum of 20 per zone.



Dimensions (mm)



ORDER CODES

Optical	17840-01
Common Base	17800-02
Common Base with Diode	17801-02
Base less Diode (surface cabling)	17800-01
Base with Diode (surface cabling)	17801-01
Remote LED module	17899-01
Remote Relay module	17899-44

GENT

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4: CONVENTIONAL FIRE DETECTION

Heat Detectors

Heat detectors respond to changes in temperature and are better suited to smoky, dusty or steamy environments than smoke detectors.

A comprehensive range of fixed, high temperature and rate of rise devices are available, making the range suitable for areas where the temperature fluctuates for natural reasons or due to certain industrial processes.

ABS casing with red LED fire indicator.



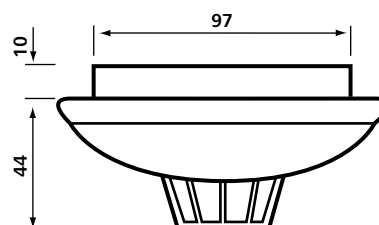
Heat Detector

TECHNICAL SPECIFICATION			
Type	Fixed Temp.	Rate of Rise	High Fixed Temp.
Nominal Voltage	28V dc	28V dc	24V dc
Quiescent Current	30 μ A	30 μ A	30 μ A
Ingress Protection	IP30	IP30	IP30
Approx Weight	0.07 Kg	0.07 Kg	0.07 Kg
Operating Temperature	-10°C to +50°C		
Relevant Standards	EN 54 Part 5	EN 54 Part 5	EN 54 Part 8
Approvals	LPCB	LPCB	-
Trigger Temperature	58°C	NA (Factory preset 58°C)	85°C
Sensitivity	Grade 1	Grade 1	Grade 2

ORDER CODES

Fixed Temperature	17850-01
Rate of Rise	17860-01
High Fixed Temperature	17870-01
Common Base	17800-02
Common Base with Diode	17801-02
Base less Diode (surface cabling)	17800-01
Base with Diode (surface cabling)	17801-01
Remote LED module	17899-01
Remote Relay module	17899-44

Dimensions (mm)



4: CONVENTIONAL FIRE DETECTION

Beam Smoke Detectors

GENT
by Honeywell



Dual Beam

Combined Reflective Detector

Optical beam smoke detectors are suitable for large open areas where installation of single point detectors may be difficult or uneconomical.

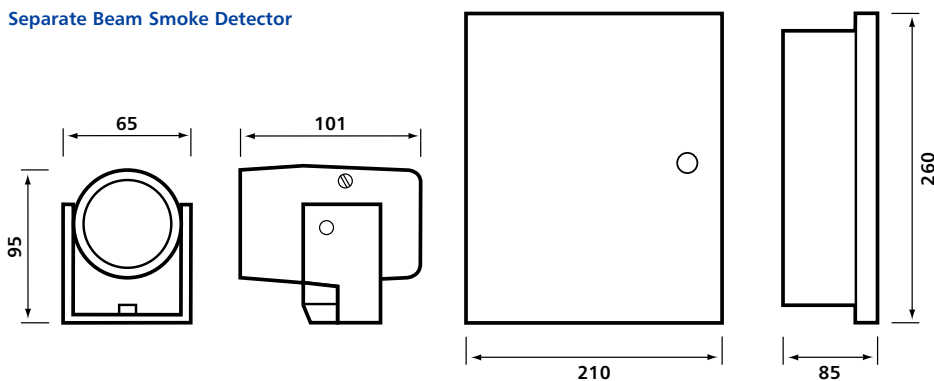
Beam detectors can be installed with separate transmitter and receiver or combined transceiver unit and reflector.

Note: An additional 24V dc power supply is required.

TECHNICAL SPECIFICATION		
Type	Dual Beam	Combined Reflective Detector
Nominal Voltage	24V dc	24V dc
Quiescent Current	Receiver: - 8mA	Receiver: <4mA
	Transmitter: - 5mA	
Approx Packaged Weight	3.2 Kg	0.67 Kg
Ambient Temperature	-10°C to 50°C	-30°C to 55°C
Relevant Standards	BS 5839-5	
Beam Length	10m - 100m	50m - 100m

Dimensions (mm)

Separate Beam Smoke Detector



Combined RXTX

Width: 130mm

Height: 210mm

Depth: 120mm

ORDER CODES

Beam Detector	07011-41
Reflective Beam	07011-40

GENT
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4: CONVENTIONAL FIRE DETECTION

Duct Smoke Detector

The duct detector kit is comprised of a conventional detector and duct detector housing.

The duct detector is mounted on the outside of the air duct. A venturi tube protrudes into the duct and draws a sample of the air which passes over the sensor and returns back into the duct.

When the smoke density in the sampled air reaches the trigger level of the smoke detector an alarm will be signalled on the fire alarm control panel.



Duct Detector

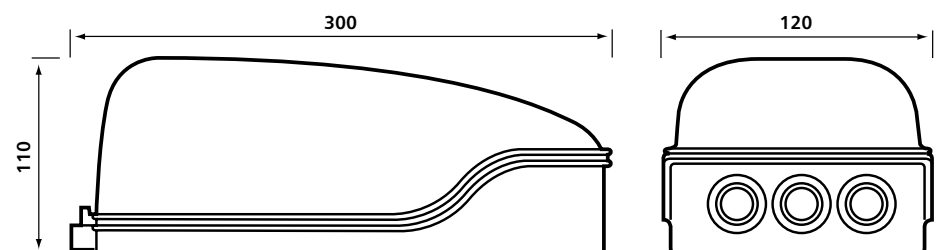
TECHNICAL SPECIFICATION	
Ingress Protection	IP54
Operating Temperature	-10°C to +60°C
Approx Weight	0.7Kg
Finish	ABS plastic (Grey)
Air Velocity	1M/S to 20M/S
Quiescent Current	90µA

4

ORDER CODES

Duct Detector	17815-01
Duct Detector including 0.6m Venturi tube	781456
Mounting Kit	
For round and installed air ducts	781459
Remote Relay Module	17899-44
Optical Smoke Detector	17840-01

Dimensions (mm)



4: CONVENTIONAL FIRE DETECTION

S³ Electronic Sounders / Strobes

GENT

by Honeywell



The S-cubed range of alarm sounders incorporate sound, speech and strobe effects all in one range of alarm devices. The range offers all variants in the choice of 2 colours, red or white, with either a shallow base version sealed to IP31 or a deep base version sealed to IP55. All the low profile sounders have the option of an integral strobe. As an aid to commissioning there is the option to use the HandiLink IR remote control to select sander tones and adjust the volume remotely. This means physical access is not required to make this adjustment. This facility is only active when the sounders are turned on from the fire alarm panel.

4

TECHNICAL SPECIFICATION – 1.0. SOUNDERS AND STROBES			
Type	Sounder	Sounder/Strobe	Strobe Only
Sound Output at 1m	See Tone Table	See Tone Table	N/A
Strobe Flash Rate	See Tone Table	See Tone Table	Variable
Strobe Output	N/A	Equivalent to a 3w Xenon Strobe	Equivalent to a 3w Xenon Strobe
Average Current	See Tone Table	See Tone Table	6 mA @ 24V
Synchronisation	Sound & Strobe synchronisation better than $\pm 30\text{mS}$ over 20 minutes with all units powered from the same circuit		
Operating Voltage Range	10.8V – 28.8V	10.8V – 28.8V	10.8V – 28.8V
Ingress Protection	IP55C with the Deep Base IP31C with the Shallow Base		
Approx Weight	0.3Kg	0.3Kg	0.3Kg
Operating Temperature	-10°C to 50°C	-10°C to 50°C	-10°C to 50°C
Relevant Standards (Sounder only)	EN54-3	EN54-3	N/A
IR Control Operating Distance	3m	3m	N/A
Standards	Complies with EN54 Pt3		

- Very low power consumption means more sounders and strobes per circuit
- The strobe option is equivalent to a standard 3w xenon strobe and uses 1/20th of the power
- 32 sander tones are available
- Voice enhanced sounders are available in the range
- 4 voice phrases and a bell sound are available as standard
- All sound and strobe signals are synchronised to better than $\pm 30\text{mS}$ over 20 minutes
- Sounders and Strobes are compatible with 12V and 24V systems
- A third wire option allows the selection of 2 alternative sounds. Ideal for class change applications
- Products incorporate innovative design features for which multiple patents have been granted

ORDER CODES

IP31 Low Profile Sounders

Sounder/Strobe Red C3-SN-ST-RR

Sounder/Strobe White C3-SN-ST-WR

Sounder Red C3-SN-R

Sounder White C3-SN-W

IP55 Low Profile Sounders

Sounder/Strobe Red C3IP-SN-ST-RR

Sounder/Strobe White C3IP-SN-ST-WR

Sounder Red C3IP-SN-R

Sounder White C3IP-SN-W

Sounder Red Body/White Lens C3IP-SN-ST-RW

IP55 Strobe only

Strobe Red Body/Red Lens C2IP-ST-RR

Remote Control

HandiLink IR Remote Control S3-CONTROL

Please note – all strobes are red except where listed

4 TONE TABLE FOR SOUNDER ONLY AND SOUNDER / STROBE VARIANTS

Signal 1	Strobe	Description	SW1 Switch	Graphical representation	12V			24V			Signal 2	Strobe	Signal 3	Strobe
					dB(A) @1m	Operating Current With Strobe mA	Without Strobe mA	dB(A) @1m	Operating Current With Strobe mA	Without Strobe mA				
Tone 1	1Hz	Alternating tone 800/ 970Hz @ 2Hz - FP 1063.1 Telecoms BS 5839: Part 1			101.8	16.5	7.4	101.8	9.5	3.4	Tone 3	0.5Hz	Tone 6	1Hz
Tone 2	1Hz	Alternating tone 800/ 970Hz @ 1Hz - BS 5839: Part 1			101.7	16.5	7.3	101.7	9.5	3.4	Tone 3	0.5Hz	Tone 6	1Hz
Tone 3	1Hz	Intermittent tone 970Hz @ 1Hz LF back up alarm - BS 5839: Part 1			101.6	15.5	4.5	101.6	8.2	2.0	Tone 5	0.8Hz	Tone 6	1Hz
Tone 4	1Hz	Intermittent tone 2850Hz @ 1Hz HF back up alarm - 2nd tone BS 5839: Part 1			103.7	15.8	5.5	103.7	8.5	2.5	Tone 3	0.5Hz	Tone 6	1Hz
Tone 5	0.8Hz	Intermittent tone 970Hz 0.25s - on, 1s off - BS 5839: Part 1			101.2	12.0	2.0	101.4	6.0	1.0	Tone 2	0.5Hz	Tone 6	1Hz
Tone 6	1Hz	Continuous @ 970Hz - BS 5839: Part 1			102.0	16.5	8.0	102.1	9.8	3.7	Tone 3	0.5Hz	Tone 1	1Hz
Tone 7	0.5Hz	Slow sweep 300Hz - 1200Hz over 2s - Vds2300 Signal			99.3	13.0	7.9	99.3	7.0	3.7	Tone 3	0.5Hz	Tone 6	1Hz
Tone 8	1Hz	Fast sweep 800Hz - 970Hz @ 7Hz - BS 5839: Part 1			93.5	16.3	8.2	93.7	9.4	3.7	Tone 3	0.5Hz	Tone 6	1Hz
Tone 9	1Hz	Medium sweep 800Hz - 970Hz @ 1Hz - BS 5839: Part 1			94.1	16.5	8.7	94.3	9.5	4.0	Tone 3	0.5Hz	Tone 6	1Hz
Tone 10	1Hz	Continuous @ 2850Hz			104.4	16.5	9.7	104.7	10.2	4.4	Tone 3	0.5Hz	Tone 6	1Hz
Tone 11	1Hz	Sweep 2400 - 2850Hz @ 7Hz			100.2	16.5	11.2	100.8	10.6	5.4	Tone 12	0.5Hz	Tone 10	1Hz
Tone 12	1Hz	Sweep 2400 - 2850Hz @ 1Hz			101.9	16.5	12.0	102.7	11.5	5.8	Tone 3	0.5Hz	Tone 10	1Hz
Tone 13	0.86Hz	Slow whoop 500Hz - 1200Hz over 3s with 0.5s off			98.8	15.5	7.5	99.2	8.7	3.5	Tone 3	0.5Hz	Tone 6	1Hz
Tone 14	1Hz	Sweep 1200Hz @ 1200Hz - 500Hz @ 1Hz with 10ms silence - German DIN tone evacuate			96.6	16.2	7.3	98.1	9.5	3.5	Tone 3	0.5Hz	Tone 6	1Hz
Tone 15	1Hz	Alternating tone 2400/ 2850Hz @ 2Hz			101.7	16.5	12.0	102.5	11.8	6.2	Tone 12	0.5Hz	Tone 10	1Hz
Tone 16	1Hz	Alternating tone 554Hz for 100ms then 440Hz for 400ms - French AFNOR tone			89.3	15.8	5.2	89.6	8.7	2.5	Tone 3	0.5Hz	Tone 6	1Hz
Tone 17	1Hz	Alternating tone 440Hz / 554Hz @ 2Hz - Turn out Sweden			90.1	15.8	5.7	90.3	8.9	2.8	Tone 19	0.5Hz	Tone 18	1Hz
Tone 18	1Hz	Continuous 700Hz - All clear Sweden			95.9	16.2	7.0	96.3	9.8	3.3	Tone 1	0.5Hz	Tone 3	1Hz
Tone 19	1Hz 6s - On 12s - Off	Intermittent tone 700Hz 6s On 12s Off - Pre- vital message Sweden			95.9	6.1	4.0	96.3	5.0	2.3	Tone 17	0.5Hz	Tone 18	1Hz
Tone 20	1Hz	Intermittent tone 1000Hz @ 1Hz - Local warning Sweden			100.6	15.5	5.8	101.0	8.5	2.7	Tone 17	0.5Hz	Tone 25	1Hz
Tone 21	1Hz	Rising 1s, constant 4s, fall 1s @ 1000Hz - Industrial alarm Germany			100.9	16.0	10.0	101.2	10.0	4.0	Tone 3	0.5Hz	Tone 6	1Hz
Tone 22	1Hz 4s - On 4s - Off	Intermittent tone 700Hz 4s On , 4s Off - Industrial alarm Germany			101.4	8.7	5.7	101.9	6.4	3.0	Tone 19	0.5Hz 6s - On 12s - Off	Tone 6	1Hz
Tone 23	Sync. pulses	Emergency evacuation to ISO 8201 - ISO 8201 Tone			104.0	12.0	4.0	104.5	6.0	1.5	Tone 3	0.5Hz	Tone 6	1Hz
Tone 24	1Hz	Slow whoop 500Hz - 1000Hz over 4.5s - Evacuate Netherlands			99.6	16.0	7.2	100.2	9.5	3.4	Tone 3	0.5Hz	Tone 6	1Hz
Tone 25	1Hz	Siren (ramp up from 500Hz - 1200Hz in 3s then ramp down 1200Hz - 500Hz in 3s)			98.2	16.0	7.5	98.5	9.5	3.5	Tone 3	0.5Hz	Tone 6	1Hz
Tone 26	1Hz	Fast whoop 500Hz - 1000Hz @ 7Hz			95.8	15.8	7.0	96.0	8.7	3.3	Tone 24	0.5Hz	Tone 25	1Hz
Tone 27	Sync. pulses	US temporal tone LF			100.6	12.0	3.0	100.6	5.5	1.0	Tone 3	0.5Hz	Tone 6	1Hz
Tone 28	Sync. pulses	US temporal tone HF			99.0	11.8	2.5	99.0	5.3	0.8	Tone 4	0.5Hz	Tone 6	1Hz
Tone 29	1Hz	LF buzz 800Hz - 970Hz @ 50Hz			98.8	16.3	9.4	99.2	10.0	4.3	Tone 3	0.5Hz	Tone 6	1Hz
Tone 30	1Hz	Alternate 2500/ 3100 @ 2Hz - Security alarm			101.6	16.5	13.0	102.2	10.8	6.4	Tone 3	0.5Hz	Tone 31	1Hz
Tone 31	1Hz	Alternate 2500 / 3100 @ 4Hz			101.2	16.5	13.0	102.0	10.8	6.4	Tone 3	0.5Hz	Tone 8	1Hz
Tone 32	1Hz	Define during manufacture - default is a fast siren			98.8	16.0	7.5	99.2	9.5	3.5	Tone 3	0.5Hz	Tone 6	1Hz

Note: The current data in the table is for Red strobe only.

The nominal sound frequencies stated in the table are based on the resonance frequency of the transducer.

Tone 1 is the factory default setting

4: CONVENTIONAL FIRE DETECTION

S³ Voice Enhanced Sounders

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TECHNICAL SPECIFICATION – 1.1 VOICE ENHANCED SOUNDERS & STROBES		
Type	Voice Enhanced Sounder	Voice Enhanced Sounder/Strobe
Sound Output at 1m	See Table 3	See Table 3
Strobe Flash Rate	See Table 3	See Table 3
Strobe Output	Equivalent to a 3w Xenon Strobe	
Average Current	See Table 3	See Table 3
Synchronisation	Sound & Strobe synchronisation better than $\pm 30\text{mS}$ over 20 minutes with all units powered from the same circuit	
Message and Attention Tone Period	10-30 Seconds	10-30 Seconds
Operating Voltage Range	10.8V – 28.8V	10.8V – 28.8V
Maximum Reverse Monitoring Voltage	30V/20 μA	30V/20 μA
Ingress Protection	IP55C with the Deep Base	IP31C with the Shallow Base
Approx Weight	0.3 Kg	0.3 Kg
Operating Temperature	-10°C to 50°C	-10°C to 50°C
IR Control Operating Distance	3m	3m

CONVENTIONAL SPEECH SOUNDER AND STROBE		
Table 1		
Message No.	Speech Message	
M1	Attention please this is an emergency please leave the building by the nearest available exit. (Female voice)	
M2	An incident has been reported in this building please await further instructions. (Female voice)	
M3	This is a test message no action is required. (Female voice)	
M4	This is a fire alarm! Please leave the building immediately by the nearest available exit. (Male voice)	
Complex Tone No.	Description of Tone	
CT0	Alarm Bell (equivalent to 8" Solenoid Bell) 12V 105dB(A) @ 1m with strobe 14.2mA (without strobe 4.5mA) 24V 105.5dB(A) @ 1m with strobe 12mA (without strobe 4.5mA)	
Standard messages and complex tones (Audio File - PA020001)		
Table 2		
Tone	Description	Graphical representation
Tone 1	Alternating tone 800/ 970Hz @ 2Hz – FP 1063.1 Telecoms	
Tone 2	Intermittent tone 970Hz @ 1Hz LF back up alarm – BS 5839: Part 1	
Tone 3	Intermittent tone 970Hz 0.25s on, 1s off – BS 5839: Part 1	
Tone 4	Continuous @ 970Hz - BS 5839: Part 1	
Tone 5	Fast sweep 800Hz – 970Hz @ 7Hz – BS 5839: Part 1	
Tone 6	Medium sweep 800Hz – 970Hz @ 1Hz – BS 5839: Part 1	
Tone 7	Sweep 1200Hz @ 1200Hz -- 500Hz @ 1Hz with 10ms silence – German DIN tone evacuate	
Tone 8	Alternating tone 440Hz / 554Hz @ 2Hz – Turn out Sweden	
Tone 9	Intermittent tone 1000Hz @ 1Hz – Local warning Sweden	
Tone 10	Intermittent Tone 700Hz 4s On, 4s Off – Industrial alarm Germany	
Tone 11	Fast whoop 500Hz – 1000Hz @ 7Hz	
Tone 12	US temporal tone LF	
Tone 13	US temporal tone HF	
Tone 14	Define during manufacture – default is a fast siren	

Note: Only the messages and complex tones specified in table 1 are applicable to this S-cubed product.

Note: The nominal sound frequencies stated in the table are based on the resonance frequency of the transducer.

How to select a speech message and attention tone

1. Select the required speech message and tone from the signal 1 column of table 3 referring to table 1 and 2 for message and tone descriptions.
2. If the third wire option is used the two alternative messages and ones for your first selection are shown on the right hand side of table 3.
3. After making a selection set the switch SW1 as shown in the SW1 column of table 3.

ORDER CODES

IP31 Low Profile Sounders

Voice Sounder Red	C3-VP-R
Voice Sounder White	C3-VP-W
Voice Sounder/Strobe Red	C3-VP-ST-RR
Voice Sounder/Strobe White	C3-VP-ST-WR

IP55 Low Profile Sounders

Voice Sounder Red	C3IP-VP-R
Voice Sounder White	C3IP-VP-W
Voice Sounder/Strobe Red	C3IP-VP-ST-RR
Voice Sounder/Strobe White	C3IP-VP-ST-WR

Remote Control

HandiLink IR Remote Control	S3-CONTROL
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4: CONVENTIONAL FIRE DETECTION

S³ Voice Enhanced Sounders

TABLE 3 – TONE / VOICE TABLE FOR VOICE AND VOICE / STROBE VARIANTS

				Decibel (dBA) and current (mA) values						Intermittent 1S On and 1S Off					
Signal 1 Message	Strobe	Attention Tone	SW1 Switch	12V dB(A) @1m	With Strobe mA	Without Strobe mA	24V dB(A) @1m	With Strobe mA	Without Strobe mA	Signal 2 Message	Strobe	Attention Tone	Signal 3 Message	Strobe	Attention Tone
M1	1Hz	Tone 1		101.8	16.5	7.4	101.8	9.5	3.4	M2	0.5Hz	Tone 2	M3	1Hz	Tone 4
M1	1Hz	Tone 6		94.1	16.5	8.7	94.3	9.5	4.0	M2	0.5Hz	Tone 3	M3	1Hz	Tone 4
M1	1Hz	Tone 11		95.8	15.8	7.0	96.0	8.7	3.3	Tone 5	0.8Hz	Tone 6	M3	1Hz	Tone 4
M1	1Hz	Tone 5		93.5	16.3	8.2	93.7	9.4	3.7	Tone 3	0.5Hz	Tone 6	M3	1Hz	Tone 4
M1	1Hz	Tone 8		90.1	15.8	5.7	90.3	8.9	2.8	Tone 2	0.5Hz	Tone 6	M3	1Hz	Tone 4
M1	1Hz	Tone 7		96.6	16.2	7.3	98.1	5.5	1.0	Tone 3	0.5Hz	Tone 1	M3	1Hz	Tone 4
M1	1Hz	Tone 12		98.8	16.0	7.5	99.2	9.5	3.5	Tone 3	0.5Hz	Tone 6	M3	1Hz	Tone 4
M1	1Hz	Tone 14		101.8	16.5	7.4	101.8	9.5	3.4	Tone 3	0.5Hz	Tone 6	M3	1Hz	Tone 14
M4	1Hz	Tone 1		94.1	16.5	8.7	96.0	8.7	3.3	Tone 3	0.5Hz	Tone 6	M6	1Hz	Tone 4
M4	1Hz	Tone 6		93.5	16.3	8.2	93.7	9.4	3.7	Tone 3	0.5Hz	Tone 6	M6	1Hz	Tone 4
M4	1Hz	Tone 11		90.1	15.8	5.7	90.3	8.9	2.8	Tone 12	0.5Hz	Tone 10	M6	1Hz	Tone 4
M4	1Hz	Tone 5		96.6	16.2	7.3	98.1	9.5	3.5	Tone 3	0.5Hz	Tone 10	M6	1Hz	Tone 4
M4	1Hz	Tone 8		100.6	12.0	3.0	100.6	5.5	1.0	Tone 3	0.5Hz	Tone 6	M6	1Hz	Tone 4
M4	1Hz	Tone 7		98.8	16.0	7.5	99.2	9.5	3.5	Tone 3	0.5Hz	Tone 6	M6	1Hz	Tone 4
M4	1Hz	Tone 12		Refer to decibel (dBA) and current (mA) values stated in Table 1.						Tone 12	0.5Hz	Tone 10	M6	1Hz	Tone 4
M4	1Hz	Tone 14								Tone 3	0.5Hz	Tone 6	M3	1Hz	Tone 14
M1	1Hz	CT0								Tone 19	0.5Hz	Tone 18	M3	1Hz	CT0
M1	1Hz	CT1								Tone 1	0.5Hz	Tone 3	M3	1Hz	CT1
M1	1Hz	CT2								Tone 17	0.5Hz	Tone 18	M3	1Hz	CT2
M1	1Hz	CT3								Tone 17	0.5Hz	Tone 25	M3	1Hz	CT3
M1	1Hz	CT4								Tone 3	0.5Hz	Tone 6	M3	1Hz	CT4
M1	1Hz	CT5								Tone 19	0.5Hz 6s - On 12s - Off	Tone 6	M3	1Hz	CT5
M1	1Hz	CT6								Tone 3	0.5Hz	Tone 6	M3	1Hz	CT6
M1	1Hz	CT7								Tone 3	0.5Hz	Tone 6	M3	1Hz	CT7
-	1Hz	CT0								Tone 3	0.5Hz	Tone 6	-	1Hz	CT0
-	1Hz	CT1								Tone 24	0.5Hz	Tone 25	-	1Hz	CT1
-	1Hz	CT2								Tone 3	0.5Hz	Tone 6	-	1Hz	CT2
-	1Hz	CT3								Tone 4	0.5Hz	Tone 6	-	1Hz	CT3
-	1Hz	CT4		Tone 3	0.5Hz	Tone 6	-	1Hz	CT4						
-	1Hz	CT5		Tone 3	0.5Hz	Tone 31	-	1Hz	CT5						
-	1Hz	CT6		Tone 3	0.5Hz	Tone 8	-	1Hz	CT6						
-	1Hz	CT7		Tone 3	0.5Hz	Tone 6	-	1Hz	CT7						

Note: Only the complex tones (CTn) and speech messages (Mn) specified in Table 1 are valid.

The highlighted row in this table shows the factory default setting of the S-cubed unit.

ATTENTION TONE FOLLOWED BY SPEECH MESSAGES

TONE ONLY

4: CONVENTIONAL FIRE DETECTION

Bells

GENT

by Honeywell



Bell

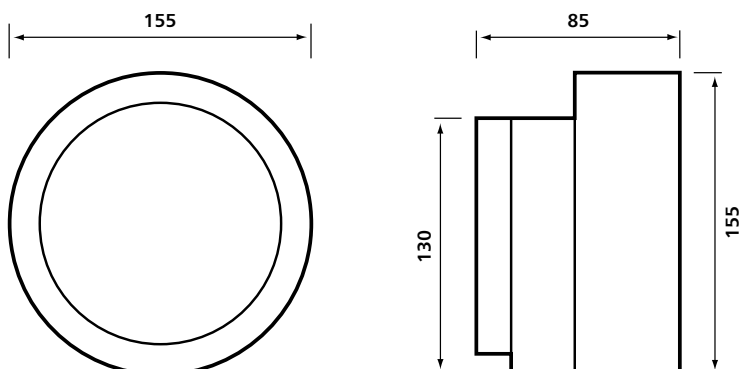
An electronic bell for a wide range of uses.

Metal casing available in red or grey finish.

Suitable for semi flush or surface mounting.

TECHNICAL SPECIFICATION		
Type	24V dc	230V ac
Ingress Protection	Standard IP40	Standard IP41
	Special IP55	Special IP55
Approx Weight	1.1 Kg	1.25 Kg
Operating Temperature	Indoor, -10°C to +50°C	
Sound Output at 1m	93dB(A)	96dB(A)
Current at Nominal Voltage	30mA	30mA
Relevant Standard	EN 54-3	

Dimensions (mm)



ORDER CODES

24V dc Bell, Red	12141-04
24V dc Bell, Red, IP55	12143-04
230V ac Bell, Grey	12142-59
230V ac Bell, Grey IP55	12144-59

GENT
by Honeywell

4: CONVENTIONAL FIRE DETECTION

Door Release

To ensure fire doors close in an emergency and prevent the spread of fire and smoke.

Moulded ABS and steel enclosure capable of floor or wall mounting.

Complies with BS 5839-3.

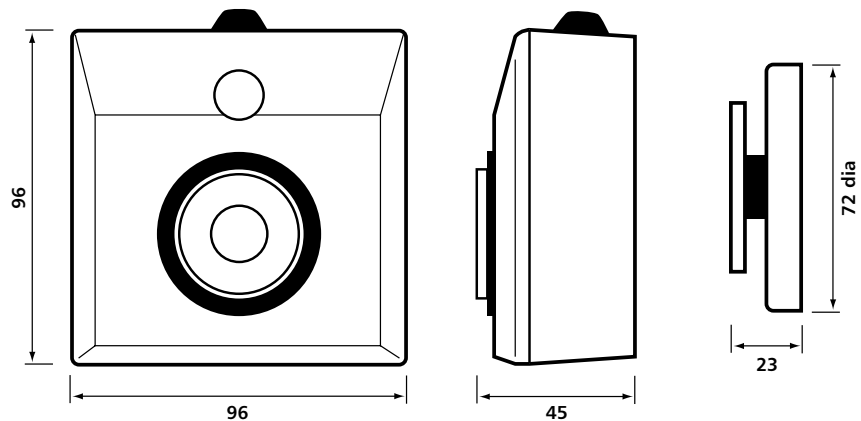


Door Holder

TECHNICAL SPECIFICATION			
	Wall Mounted	Wall Mounted	Floor Mounted
Type	24V dc	230V ac	24V dc
Approx Weight	Door plate, 0.07 Kg Door holder, 0.53 Kg		
Current Consumption	21mA	12mA	45mA
Operating Temperature	Indoor/Outdoor, -10°C to + 50°C		
Nominal Magnetic Pull	112 Newton		200 Newton
Relevant Standard	BS 5839- 3		
Finish	Moulded ABS		

4

Dimensions (mm)



ORDER CODES

24V dc Door Holder	
c/w door plate	04390-31
230V ac Door Holder	
c/w door plate	04390-55
Door Holder Floor Plate	04390-92
24V dc Relay	19107-52
Door Holder Floor Mounted	04390-41

4: CONVENTIONAL FIRE DETECTION

Relays

GENT

by Honeywell



Low Profile Enclosure

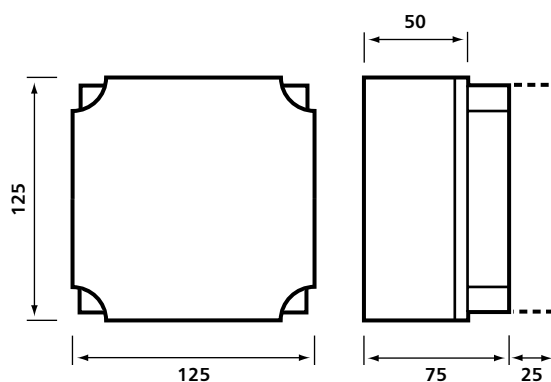
Relay enclosure to house applications involving switching and timers.

All purpose polycarbonate construction.

Suitable for activating class change or 'start work' signals.

TECHNICAL SPECIFICATION	
Coil Voltage	24V dc
Coil Current	50mA
Contact Rating 240V ac	6A
Contact Rating 24V dc	5A
Profile	High
Max. Capacity	4 mini relays
Ingress Protection	IP67
Operating Temperature	Indoor/Outdoor, 0 - 40°C

Dimensions (mm)



ORDER CODES

24V dc Relay c/w enclosure	19107-52
High Profile Enclosure	19100-02
24V dc Relay	19104-52
24V dc Timer	19106-02

GENT
by Honeywell

4: CONVENTIONAL FIRE DETECTION

Power Supplies

To supply additional standby power for control panels or relays.

Protected against over-voltage and reverse polarity connections.

Fault monitoring to comply with BS 5839.

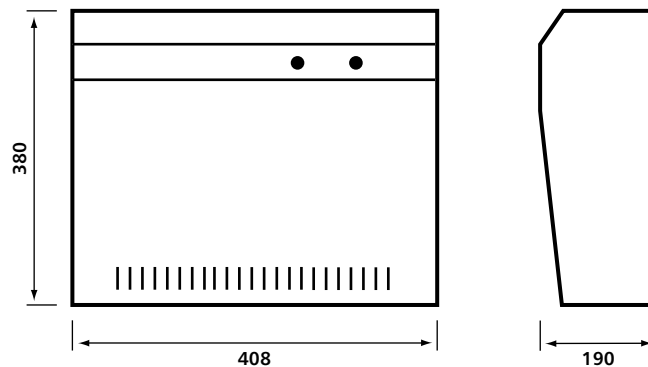


Power Supply Unit (O5216-24)

4

TECHNICAL SPECIFICATION		
Mains Input	230V ac	230V ac
Output Current	6A	1A
Output Voltage	27.5V dc	
Operating Temperature	-10° to +40°C	-10° to +50°C
Max. Battery Capacity	2 x 12V/24Ah	2 x 12V/7Ah
Approx Weight	8.5 Kg	7.5Kg

Dimensions (mm)



ORDER CODES

Power Supply Units (less cells)

24V, 6.0A charger	05216-24
24V, 1A Charger	621028

4: CONVENTIONAL FIRE DETECTION

Accessories

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by Honeywell

Key Box

A neat circular enclosure in which a key can be kept for use in emergencies.

Particularly suitable for buildings where there is a need for unsupervised emergency exits to be kept locked.

Accommodates keys up to 75mm long.

ORDER CODES

Key Box	08205-00
10 Spare Glasses (Plain)	4144-007
10 Spare Glasses (Printed)	4144-088

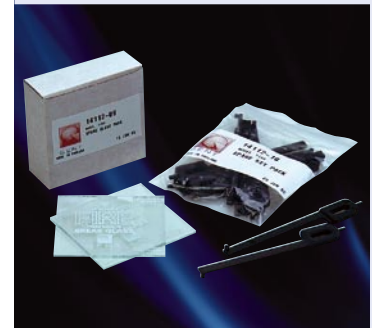
Spares

Test Keys For testing call points without breaking the glass.

Resettable Element Allowing a break glass call point to be modified into a resettable call point.

ORDER CODES

Pack of 10 MCP S/Mount Boxes	71167-94NM
Pack of 10 Spares Glasses	71167-90NM
Pack of 10 Test Keys	S4-34899
Pack of 10 Resettable Elements	71167-96NM
Pack of 5 Protective Covers	71167-95NM



Zone Loading

To calculate the zone loading of any system complete the table below and ensure that the grand total does not exceed system limits (Xenex is 3mA per zone).

	NO. (a)	QUIESCENT LOAD (μ A) (b)	TOTAL LOAD (μ A) (a x b)
Ionisation Smoke Detector		15	
Optical Smoke Detector		60	
Fixed Temperature Heat Detector		30	
Rate of Rise Heat Detector		30	
High Temperature Heat Detector		30	
24V dc Duct Detector		90	
			Grand Total

Notes:

1. If detector removal monitoring is required to comply with BS 5839, a detector base with diode should be used and the maximum number of detectors should not exceed 20 per zone.
2. Any number of manual call points may be included in zone calculations.
3. Beam detectors will require a separate power supply.

Sounder Circuit Loading

To calculate the maximum sounder loading complete the table below and ensure that the grand total does not exceed system limits. (For Xenex; maximum load per circuit is 0.5A. Total load maximum 1A).

	NO. (a)	OPERATING CURRENT (mA) (b)	TOTAL LOAD (mA) (a x b)
S3 Sounders and Strobes		*	
Sounder Base		18	
24V dc Bell		30	
24V dc Xenon (Low current)		45	
			Grand Total

*See tone table for specific operating currents (page 4 section 12).

Note:

1. Sirens will require a separate power supply.
2. Xenon flashers may require a separate power supply.