CB200 1 – 8 Zone Conventional Control Panel

product profile

> features

- Built-in detector removal indication facility
- From 1 to 8 zones
- 4 Alarm circuits on 4-8 zone panels
- Conforms to the requirements of EN54-2
- User-friendly access code
- One-man test facility
- Non-latching zone feature
- Class change input
- Earth fault monitoring
- Fully functional repeater available
  (4 & 8 zone panels only)
- Surface or semi-flush mounting as standard

> description

The CB200 conventional panel may be supplied in 1, 2, 4 or 8 zone formats. It fully complies with the requirements of BS5839 part 4. All zones and alarm circuits are monitored for open and short circuit fault conditions with detector removal facility also provided as standard. The cabinet will house 2 x 12V 2.1AH S.L.A. batteries wired in series, which will sustain an 8 zone panel for up to 24 hours.

All panels have a zone 1 non-latch facility to enable panel interlinking without “lock-up” occurring. The class change input enables the alarm circuits to operate without panel indication and panel latching. A slide-in insert is included for clear zone identification.

The 4 & 8 zone panels will accommodate up to 3 repeater panels, which are connected by a shielded 2-core data cable where the repeater panels are powered locally, or an additional 2-core may be run from the panel for power (Max. 1 repeater may be powered from the panel).
## CB200 1 – 8 Zone Conventional Control Panel

### specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>1-2 Zone</th>
<th>4 Zone</th>
<th>8 Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordering Code</td>
<td>EL 13 - 0005 CB200 1 zone control panel</td>
<td>EL 13 - 0010 CB200 2 zone control panel</td>
<td>EL 13 - 0015 CB200 4 zone control panel</td>
</tr>
<tr>
<td>Max. field equipment load</td>
<td>500mA</td>
<td>850mA</td>
<td>850mA</td>
</tr>
<tr>
<td>Mains failed current consumption</td>
<td>35mA</td>
<td>40mA</td>
<td>40mA</td>
</tr>
<tr>
<td>Integral charger output</td>
<td>500mA</td>
<td>500mA</td>
<td>500mA</td>
</tr>
<tr>
<td>Common fire output</td>
<td>Volt-free contacts - 1A, 30V DC maximum</td>
<td>Volt-free contacts - 1A, 30V DC maximum</td>
<td>Volt-free contacts - 1A, 30V DC maximum</td>
</tr>
<tr>
<td>Common fault output</td>
<td>2 @ 250mA each</td>
<td>4 @ 500mA each</td>
<td>4 @ 500mA each</td>
</tr>
<tr>
<td>Alarm circuit output *</td>
<td>250mA</td>
<td>250mA</td>
<td>250mA</td>
</tr>
<tr>
<td>Aux supply *</td>
<td>2 @ 250mA each</td>
<td>4 @ 500mA each</td>
<td>250mA</td>
</tr>
<tr>
<td>Battery size</td>
<td>2 x 12V 2.1AH sealed lead acid</td>
<td>2.3kg</td>
<td>2.3kg</td>
</tr>
<tr>
<td>Weight (excluding batteries)</td>
<td>245mm high x 313mm wide x 92mm deep</td>
<td>8 Zone</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>8 Zone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Note: On the 4-8 zone panels the total current available for the field devices is 800mA at 28VDC. This current must be shared between the alarm circuits and aux. Supply.

---

For further information contact your local Tyco Fire and Integrated Solutions office on:

- **Aberdeen**
  Tel: 01224 894292

- **Barnsley**
  Tel: 01226 702000

- **Belfast**
  Tel: 02890 813699

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  Tel: 0121 623 1000

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  Tel: 0117 9277271

- **Dudley**
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- **Dublin**
  Tel: 00 3531 496 6077

- **East Kilbride**
  Tel: 013552 25132

- **Manchester**
  Tel: 0161 205 2321

- **Newcastle**
  Tel: 0191 497 6333

- **Slough**
  Tel: 01753 574111

- **Swansea**
  Tel: 00 3531 496 6077

- **Swindon**
  Tel: 01793 572810

- **Wigan**
  Tel: 01257 427164

---

P ro t e c t i n g  l i f e,  p r o p e r t y  a n d  t h e  e n v i r o n m e n t
**S65 Conventional Ionisation Detector**

**product profile**

> **features**
- ASICS for increased reliability
- Sleek shape - pure white finish
- Polarity insensitive
- High environmental performance
- Easy to clean
- Easy to install
- Smooth action, one-way-fit base
- Diode base available for BS5839 “detector removal” systems
- Non-diode base available

> **description**

The Series 65 range comprises ionisation and optical smoke detectors and 5 grades of heat detector, all with enhanced performance, high reliability and elegant shape. The sensing part of the S65 ionisation smoke detector consists of two chambers. One is an open, outer chamber, the other, an internal semi-sealed reference chamber.

Mounted in the reference chamber is a low activity radioactive foil of Americium 241, which enables current to flow between the inner & outer chambers when the detector is powered up. As smoke enters the detector, it causes a reduction of the current flow in the outer chamber and hence an increase in the voltage measured at the junction between the two chambers. The voltage increase is monitored by the electronic circuitry, which triggers the detector into the alarm state at a preset threshold. An externally visible LED will light up when the detector changes to alarm state.

**specifications**

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>EL13 - 0300 S65 Conventional Ionisation Smoke Detector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordering Code</td>
<td>EL13 - 0375 S65 Conventional Detector Base - Diode Fitted</td>
</tr>
<tr>
<td>Ordering Code</td>
<td>EL13 - 0370 S65 Conventional Detector Base - No Diode Fitted</td>
</tr>
<tr>
<td>Supply Voltage:</td>
<td>9 - 33V DC</td>
</tr>
<tr>
<td>Max Quiescent Current:</td>
<td>@24V: 45μA</td>
</tr>
<tr>
<td>Alarm Current:</td>
<td>@24V: 52mA</td>
</tr>
<tr>
<td>Alarm Indication:</td>
<td>Red LED</td>
</tr>
<tr>
<td>Normal Operating Temp (no icing):</td>
<td>-20 to +60°C</td>
</tr>
<tr>
<td>Size of Detector:</td>
<td>42mm high x 100mm diameter</td>
</tr>
<tr>
<td>Size of Detector in Base:</td>
<td>50mm high x 100mm diameter</td>
</tr>
</tbody>
</table>

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- **Aberdeen**
  - Tel: 01224 894292
- **Birmingham**
  - Tel: 0121 623 1000
- **Dublin**
  - Tel: 00 3531 496 6077
- **Manchester**
  - Tel: 0161 205 2321
- **Swansea**
  - Tel: 01792 465 006
- **Barnsley**
  - Tel: 01226 702000
- **Bristol**
  - Tel: 0117 9277271
- **Dudley**
  - Tel: 01384 458 993
- **Newcastle**
  - Tel: 0191 497 6333
- **Swindon**
  - Tel: 01793 572810
- **Belfast**
  - Tel: 02890 813699
- **Crayford**
  - Tel: 01322 552410
- **East Kilbride**
  - Tel: 013552 25132
- **Slough**
  - Tel: 01753 574111
- **Wigan**
  - Tel: 01257 427164

Protecting life, property and the environment
S65 Conventional Heat Detector

product profile

> features
- ASICS for increased reliability
- Sleek shape - pure white finish
- Polarity insensitive
- High environmental performance
- Easy to clean
- Easy to install
- Smooth action, one-way-fit base
- Diode base available for BS5839 “detector removal” systems
- Non-diode base available

> description
The Series 65 range comprises ionisation and optical smoke detectors and 5 grades of heat detector, all with enhanced performance, high reliability and elegant shape. The S65 heat detectors can be reset, operating via a pair of thermistors to sense heat. One thermistor is exposed to the ambient temperature and the other is sealed. In normal conditions the two thermistors register similar temperatures, but in fire, the temperature recorded by the exposed thermistor will increase rapidly, resulting in an imbalance of thermistors and causing the detector to change to the alarm state. Rate of rise detectors are designed to detect a fire as the temperature increases, but they also have a fixed upper limit at which the detector will go into alarm if the rate of increase has been too slow to trigger the detector earlier. Fixed heat detectors only change to the alarm state at a preset temperature. Externally, the heat detectors are distinguished from smoke detectors by having wide openings to the surrounding atmosphere to allow good movement of air around the external thermistor.

specifications

| Ordering Code | EL13 - 0315 S65 Conventional Heat Detector 65°C |
| Ordering Code | EL13 - 0320 S65 Conventional Heat Detector 75°C |
| Ordering Code | EL13 - 0325 S65 Conventional Heat Detector 90°C |
| Ordering Code | EL13 - 0330 S65 Conventional Heat Detector 90°C (Static Head) |
| Ordering Code | EL13 - 0375 S65 Conventional Detector Base - Diode Fitted |
| Ordering Code | EL13 - 0370 S65 Conventional Detector Base - No Diode Fitted |
| Supply Voltage: | 9-33V DC |
| Max Quiescent Current: | @24V: 53µA |
| Alarm Current: | @24V: 52mA |
| Alarm Indication: | Red LED |
| Normal Operating Temp (no icing): | -20 to +105°C |
| Size of Detector: | 42mm high x 100mm diameter |
| Size of Detector in Base: | 50mm high x 100mm diameter |
Roshni Sounders

product profile

> features

- High Sound Output
- Low Current Consumption
- 32 Tones User Selectable
- Automatic Synchronisation
- Volume Control
- Base Compatible with the Clarifire, Flashni & IB Beacon

specifications

Ordering code EL03 - 0155 - Deep Base; EL03 - 0160 Shallow Base

<table>
<thead>
<tr>
<th>Model</th>
<th>Roshni LP</th>
<th>Roshni</th>
<th>Roshni (no second tone available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage range</td>
<td>9 - 28v D.C.</td>
<td>10 - 240v A.C.</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>16 mA at 24v D.C.</td>
<td>35 mA at 240v A.C.</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25ºC to +70ºC</td>
<td>-10ºC to +55ºC</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>ABS</td>
<td>N/A</td>
<td>Deep &amp; U Base - 325g</td>
</tr>
<tr>
<td>Ingress protection</td>
<td>IP65</td>
<td>N/A</td>
<td>Deep &amp; U Base - 325g</td>
</tr>
<tr>
<td>Weight</td>
<td>Shallow base - 240g</td>
<td>Shallow base - 300g</td>
<td>N/A Deep &amp; U Base - 325g</td>
</tr>
<tr>
<td></td>
<td>Deep &amp; U base - 275g</td>
<td>Deep &amp; U base - 335g</td>
<td></td>
</tr>
<tr>
<td>Dimension</td>
<td>Shallow Base - 93mm x 63mm deep</td>
<td>Shallow Base - 93mm dia x 75mm deep</td>
<td>N/A Deep &amp; U Base - 93mm dia x 105mm deep</td>
</tr>
<tr>
<td></td>
<td>Deep &amp; UBase - 93mm dia x 93mm deep</td>
<td>Deep &amp; UBase - 93mm dia x 105mm deep</td>
<td></td>
</tr>
<tr>
<td>Sound Output (using tone 3)</td>
<td>102dB(A) at 24v D.C.</td>
<td>100dB(A) at 240v A.C.</td>
<td>100dB(A) at 240v A.C.</td>
</tr>
<tr>
<td>Tones</td>
<td>32</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Colours</td>
<td>Red or White as standard (others available on request)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For further information contact your local Tyco Fire and Integrated Solutions office on:

Aberdeen
Tel: 01224 894292

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Slough
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Swansea
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Swindon
Tel: 01793 572810

Wigan
Tel: 01257 427164

P r o t e c t i n g  l i f e ,  p r o p e r t y  a n d  t h e  e n v i r o n m e n t
Conventional Platform Sounder

product profile

> features

- Ideal for use in conjunction with all major conventional detectors
- Aesthetic, low profile design
- Excellent sound dispersion
- Four distinct, selectable tones
- Easy to install
- Manufactured from quality materials

> description

The conventional platform sounder has been developed to cater for the growing requirement for sounder & detector combinations. With an overall height of only 25mm, the platform sounder combines low profile looks with a high, clear sound output. A substantial area for wire entry, coupled with rising clamp terminals, gives users of the platform sounder the benefit of easy, rapid installation.

Each sounder operates within the frequency range of 800 to 1000 Hz as specified by the BS5839 standard. Tones are available by selecting Warble, Sweep or Pips via the jumper on the top face. The Continuous tone is selected via the terminal array and is also used as a second stage alarm if a third wire is fitted.

specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordering Code</td>
<td>2601/021 Conventional Platform Sounder</td>
</tr>
<tr>
<td>Ordering Code</td>
<td>2601/022 White Cover Plate for 2601/021</td>
</tr>
<tr>
<td>Supply Voltage:</td>
<td>8-35V DC</td>
</tr>
<tr>
<td>Current Frequency:</td>
<td>800-1000Hz</td>
</tr>
<tr>
<td>Current Requirement:</td>
<td>9mA</td>
</tr>
<tr>
<td>Sound Output:</td>
<td>@ 1 metre: 91dBA</td>
</tr>
<tr>
<td>Protection Rating:</td>
<td>IP42</td>
</tr>
<tr>
<td>Number of tone options:</td>
<td>4</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>Diameter 106mm Depth 25mm</td>
</tr>
</tbody>
</table>

For further information contact your local Tyco Fire and Integrated Solutions office on:

<table>
<thead>
<tr>
<th>Location</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>01224 894292</td>
</tr>
<tr>
<td>Barnsley</td>
<td>01226 702000</td>
</tr>
<tr>
<td>Belfast</td>
<td>02890 813699</td>
</tr>
<tr>
<td>Birmingham</td>
<td>0121 623 1000</td>
</tr>
<tr>
<td>Bristol</td>
<td>0117 9277271</td>
</tr>
<tr>
<td>Dudley</td>
<td>01384 458 993</td>
</tr>
<tr>
<td>East Kilbride</td>
<td>013552 25132</td>
</tr>
<tr>
<td>Slough</td>
<td>01753 574111</td>
</tr>
<tr>
<td>Wigan</td>
<td>01257 427164</td>
</tr>
</tbody>
</table>

Visit our website at: www.tycofts.co.uk

Protecting life, property and the environment
Conventional Bed-Head Sounder

product profile

> features

- Aesthetic and discrete design
- Excellent lateral sound dispersion
- Four distinct, selectable tones
- Manufactured from quality materials
- Cost effective design

> description

The Bed-Head Sounder is ideal for applications such as hotels, hospitals and sheltered accommodation where a discrete sounder that meets the requirements of BS5839 is required. The stylish nose cone reflects sound back onto the front plate, giving a wide distribution of sound. Consequently this sounder may be used in corridors where a more dispersed sound is required. Each bed-head sounder has a choice of four tones including Warble, Sweep and Pips selected from a jumper fitted to the printed circuit board. The Continuous tone is selected via the terminal array and is also used as a second stage alarm if a third wire is fitted.

<table>
<thead>
<tr>
<th>specifications</th>
<th>2601/014 Bed-head Sounder White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordering Code</td>
<td>8-35V DC</td>
</tr>
<tr>
<td>Supply Voltage:</td>
<td>800-1000Hz</td>
</tr>
<tr>
<td>Current Frequency:</td>
<td>9mA</td>
</tr>
<tr>
<td>Current Requirement:</td>
<td>@ 1 metre: 97dBA</td>
</tr>
<tr>
<td>Sound Output:</td>
<td>IP43</td>
</tr>
<tr>
<td>Protection Rating:</td>
<td>4</td>
</tr>
<tr>
<td>Number of tone options:</td>
<td>86mm high x 86mm wide x 46.5mm deep</td>
</tr>
<tr>
<td>Dimensions:</td>
<td></td>
</tr>
</tbody>
</table>

For further information contact your local Tyco Fire and Integrated Solutions office on:

Aberdeen
Tel: 01224 894292

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Slough
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Swansea
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Swindon
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Wigan
Tel: 01257 427164
S65 Conventional Optical Smoke Detector

product profile

> features

- ASICS for increased reliability
- Sleek shape - pure white finish
- Polarity insensitive
- High environmental performance
- Easy to clean
- Easy to install
- Smooth action, one-way-fit base
- Diode base available for BS5839 “detector removal” systems
- Non-diode base available

> description

The Series 65 range comprises ionisation and optical smoke detectors and 5 grades of heat detector, all with enhanced performance, high reliability and elegant shape. Optical smoke detectors incorporate a pulsing LED located in a labyrinth within the detector housing. The labyrinth is designed to exclude light from any external source. At an angle to the LED is a photo-diode, which normally does not register the column of light emitted by the LED. In the event of smoke from a fire entering the labyrinth the light pulse from the LED will be scattered and hence registered by the photodiode. If the photo-diode “sees” smoke on the two following pulses, the detector changes to the alarm state and the indicator LED will light up. This detector is distinguished from the ionisation smoke detector by having an indicator LED, which is clear in quiescent state but produces red light in alarm. The optical detectors are easy to disassemble and clean without the necessity of returning them to the factory.

specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordering Code</td>
<td>EL13 - 0310 S65 Conventional Optical Smoke Detector</td>
</tr>
<tr>
<td>Ordering Code</td>
<td>EL13 - 0375 S65 Conventional Detector Base - Diode Fitted</td>
</tr>
<tr>
<td>Ordering Code</td>
<td>EL13 - 0370 S65 Conventional Detector Base - No Diode Fitted</td>
</tr>
<tr>
<td>Supply Voltage:</td>
<td>9-33V DC</td>
</tr>
<tr>
<td>Max Quiescent Current:</td>
<td>@24V: 45µA</td>
</tr>
<tr>
<td></td>
<td>@24V: 52mA</td>
</tr>
<tr>
<td>Alarm Current:</td>
<td>Clear LED, Red in Alarm</td>
</tr>
<tr>
<td>Alarm Indication:</td>
<td>-20 to +60°C</td>
</tr>
<tr>
<td>Normal Operating Temp (no icing):</td>
<td>42mm high x 100mm diameter</td>
</tr>
<tr>
<td>Size of Detector:</td>
<td>50mm high x 100mm diameter</td>
</tr>
<tr>
<td>Size of Detector in Base:</td>
<td></td>
</tr>
</tbody>
</table>

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- Birmingham: Tel: 0121 623 1000
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Protecting life, property and the environment
Intrinsically Safe Manual Call Points

product profile

When activated, the intrinsically safe callpoint not only interrupts the polling cycle to indicate to the control panel that it has been operated, but also reports its address. Thus an alarm and its location can be reported in less than 0.2 seconds. Full details of the principles of operation and the electrical description are published in the XP95 Engineering Product Guide. XP95 I.S. manual callpoints have the same operating characteristics as the standard versions. They are available in two types of housing and in a number of versions.

The standard callpoint is based on the KAC waterproof model and is a red, break glass callpoint, part number 55000-940. This model is also available in other colours and a protective lift-up flap is available.

Table 4 shown above gives full details of KAC based versions and part numbers.

For heavy duty applications, a robust manual callpoint based on a model by MEDC is available. This model is made of glass reinforced polyester and may be ordered as a break glass or pushbutton callpoint and in a variety of colours. Break glass models may be supplied with or without a stainless steel protective flap.

Table 5 shown overleaf gives part numbers and full details of MEDC based callpoints.

MEDC based break glass units have two M20 cable entries on the bottom face of the back-box. Pushbutton units have one M20 cable entry on the bottom face and one on the top face. Other cable entry configurations can be provided to special order.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Colour</th>
<th>Type</th>
<th>IP Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL13-0750</td>
<td>Red</td>
<td>Without flap</td>
<td>65</td>
</tr>
<tr>
<td>EL13-0755</td>
<td>Red</td>
<td>With flap</td>
<td>65</td>
</tr>
<tr>
<td>55000-942</td>
<td>Yellow</td>
<td>Without flap</td>
<td>65</td>
</tr>
<tr>
<td>55000-943</td>
<td>Yellow</td>
<td>With flap</td>
<td>65</td>
</tr>
<tr>
<td>55000-944</td>
<td>Blue/White</td>
<td>Without flap</td>
<td>65</td>
</tr>
<tr>
<td>55000-945</td>
<td>Blue/White</td>
<td>With flap</td>
<td>65</td>
</tr>
</tbody>
</table>

Table 4. KAC based manual callpoints
Intrinsically Safe Manual Call Points

**Product Profile**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Colour</th>
<th>Type</th>
<th>IP Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>55000-960</td>
<td>Red</td>
<td>Breakglass</td>
<td>66</td>
</tr>
<tr>
<td>55000-962</td>
<td>Yellow</td>
<td>Breakglass</td>
<td>66</td>
</tr>
<tr>
<td>55000-964</td>
<td>Blue</td>
<td>Breakglass</td>
<td>66</td>
</tr>
<tr>
<td>55000-966</td>
<td>Black/Yellow stripes</td>
<td>Breakglass</td>
<td>66</td>
</tr>
<tr>
<td>55000-961</td>
<td>Red</td>
<td>Breakglass with flap</td>
<td>66</td>
</tr>
<tr>
<td>55000-963</td>
<td>Yellow</td>
<td>Breakglass with flap</td>
<td>66</td>
</tr>
<tr>
<td>55000-965</td>
<td>Blue</td>
<td>Breakglass with flap</td>
<td>66</td>
</tr>
<tr>
<td>55000-967</td>
<td>Black/Yellow stripes</td>
<td>Breakglass with flap</td>
<td>66</td>
</tr>
<tr>
<td>55000-970</td>
<td>Red</td>
<td>Pushbutton</td>
<td>66</td>
</tr>
<tr>
<td>55000-971</td>
<td>Yellow</td>
<td>Pushbutton</td>
<td>66</td>
</tr>
<tr>
<td>55000-972</td>
<td>Blue</td>
<td>Pushbutton</td>
<td>66</td>
</tr>
<tr>
<td>55000-973</td>
<td>Black/Yellow stripes</td>
<td>Pushbutton</td>
<td>66</td>
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</tbody>
</table>

Table 5. MEDC-based manual callpoints

**Specifications**

Specifications are typical and given at 23°C and 50% relative humidity unless otherwise stated. Technical data for the I.S. manual callpoint is identical to that for the standard version, except for the information below.

**Device Part No:**
See Tables 4 and 5

**Supply Wiring:**
Two wire supply polarity sensitive

**Terminal Functions:**
L1: positive supply
L2: negative supply
Notes: 1. I.S. detectors are polarity sensitive

**Supply Voltage:**
14-22V DC

**Quiescent current:**
230µA

**Operating temperature:**
-20°C to +40°C (T5)
-20°C to +60°C (T4)

**IP Rating:**
See Tables 4 and 5

**BASEEFA Certificate No:**
Ex94C2443

**Classification:**
E Ex ia IIC T5 (T4 at Ta ≤60°C)

**Dimensions:**
Part No. 55000-940 (KAC based MCP)
124mm x 124mm x 60mm.
Weight = approx. 400g.

Part No. 55000-961 (MEDC baesd MCP)
126mm x 120mm x 114mm - pushbutton callpoint)
Weight = approx. 1.20 kg.

For further information contact your local Tyco Fire and Integrated Solutions office on:

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<thead>
<tr>
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<tbody>
<tr>
<td>Aberdeen</td>
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<tr>
<td>Barnsley</td>
<td>01226 702000</td>
</tr>
<tr>
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<td>02890 813699</td>
</tr>
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<td>Bristol</td>
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<td>Wigan</td>
<td>01257 427164</td>
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Protecting life, property and the environment
Intrinsically Safe Ionisation Smoke Detector

product profile

> description

The sensing part of the detector consists of two chambers - one open, outer chamber and a reference chamber within. Mounted in the reference chamber is a low-activity radioactive foil of Americium 241, which enables current to flow across the inner and outer chambers when the detector is powered up.

As smoke enters the detector, it causes a reduction in the current flow in the outer chamber and hence an increase in the voltage measured at the junction between the two chambers. This analogue voltage signal is converted to a digital signal by the electronic circuitry and transmitted to the control panel on interrogation. The microprocessor in the control equipment then compares the signal with stored data and initiates a pre-alarm or fire alarm as smoke density increases. When a fire condition exists, the panel instructs the detector to switch on its indicator LED.

Full details of the principles of operation and electrical description are published in the XP95 Engineering Product Guide. Information on the performance of XP95 in adverse environmental conditions is also given in this guide. XP95 I.S. detectors have the same operating characteristics as the standard versions.
Intrinsically Safe Ionisation
Smoke Detector

product profile

Specifications

Specifications are typical and given at 23°C and 50% relative humidity unless otherwise specified.

Technical data for the I.S. ionisation detector is identical to that for the standard version, except for the information given below.

Detector Part No:
EL13-0715

Base Part No:
EL13-0730

Supply Wiring:
Two wire supply polarity sensitive

Terminal Functions:
L1: positive supply
L2: negative supply and remote LED negative
+R: remote LED positive

Notes:
1. I.S. detectors are polarity sensitive
2. There is no requirement for series resistance on remote LED lines

Supply Voltage:
14-22v DC

Quiescent current:
300 μA

Operating temperature:
-20°C to +40°C (T5)
-20°C to +60°C (T4)

Remote LED current:
1 mA (internally limited)

Guaranteed temperature range:
(no condensation or icing)
-20°C to +60°C

BASEEFA Certificate No:
Ex94C2406

Classification:
E Ex ia IIC T5 (T4 at Ta ≤ 60°C)

> safety note

In the United Kingdom, ionisation smoke detectors are subject to the requirements of the Radioactive Substances Act 1960 and to the Ionising Radiations Regulations 1985 made under the provisions of the Health and Safety At Work Act 1974. XP95 detectors have been independently tested by the National Radiological Protection Board (NRPB) and found to conform to all the requirements specified in the “Recommendations for ionisation chamber smoke detectors in implementation of radiation protection standards”. Apollo Fire Detectors can give guidance on storage and handling. At the end of their useful life of 10 years, XP95 ionisation smoke detectors should be returned to Apollo for safe disposal.
Intrinsically Safe Heat Detector

product profile

> description

The I.S. heat detector is distinguishable from the I.S. smoke detectors by its low airflow resistance case, which allows good contact between the sensing thermistor and the surrounding area.

The device monitors temperature by using a single thermistor network, which provides a voltage output proportional to the external air temperature. The voltage signal is processed and transmitted to the control equipment in the same way as in the case of the ionisation smoke detector.

Full details of the principles of operation and the electrical description are published in the XP95 Engineering Product Guide. XP95 I.S. detectors have the same operating characteristics as the standard versions.

> XP95 I.S. Base

The base for the intrinsically safe range is not identical with that for the standard range. This ensures that standard detectors cannot inadvertently be fitted to an intrinsically safe system. For full details of the XP95 address mechanism, refer to the XP95 Engineering Product Guide.

Fig.1 Terminal Connections. Part No. 45681-215
**Intrinsically Safe Heat Detector**

**product profile**

| specifications |  
|----------------|---
| Specifications are typical and given at 23°C and 50% relative humidity unless otherwise specified. Technical data for the I.S. heat detector is identical to that for the standard version, except for the information given below. | 
| **Supply Voltage:** | 14-22V DC |
| **Quiescent current:** | 300 µA |
| **Operating temperature:** | -20ºC to +40ºC (T5) -20ºC to +60ºC (T4) |
| **Remote LED current:** | 1 mA (internally limited) |
| **Guaranteed temperature range:** | (no condensation or icing) -20ºC to +60ºC |
| **BASEEFA Certificate No:** | Ex94C2406 |
| **Classification:** | E Ex ia IIC T5 (T4 at tA ≤ 60ºC) |
| Detector Part No: | EL13-0725 |
| Base Part No: | EL13-0730 |
| Supply Wiring: | Two wire supply polarity sensitive |
| Terminal Functions: | L1 : positive supply L2 : negative supply and remote LED negative +R : remote LED positive |
| Notes: | 1. I.S. detectors are polarity sensitive 2. There is no requirement for series resistance on remote LED lines |

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Protecting life, property and the environment
### Specifications

Specifications are typical and given at 23°C and 50% relative humidity unless otherwise specified.

Technical data for the I.S. optical detector is identical to that for the standard version, except for the information below.

**Detector Part No:**
EL13-0720

**Base Part No:**
EL13-0730

**Supply Wiring:**
Two wire supply polarity sensitive

**Terminal Functions:**
- L1: positive supply
- L2: negative supply and remote LED negative
- +R: remote LED positive

Notes:
1. I.S. detectors are polarity sensitive
2. There is no requirement for series resistance on remote LED lines

**Supply Voltage:**
14-22V DC

**Quiescent current:**
340 µA

**Operating temperature:**
-20°C to +40°C (T5)
-20°C to +60°C (T4)

**Remote LED current:**
1 mA (internally limited)

**Guaranteed temperature range:**
(no condensation or icing)
-20°C to +60°C

**BASEEFA Certificate No:**
Ex94C2406

**Classification:**
E Ex ia IIC T5 (T4 at tA ≤60°C)

---

### Description

Optical smoke detectors incorporate a pulsing LED located in a labyrinth within the housing of the detector. The labyrinth is designed to exclude light from any external source. At an angle to the LED is a photo-diode, which, in clear air conditions, does not receive light directly from the LED. The detector transmits a clear air signal to the control panel. When smoke enters the labyrinth, light is scattered onto the photo-diode and the signal to the panel increases. The signal is processed by the electronic circuitry and transmitted to the control equipment in exactly the same way as in the case of the ionisation smoke detector.

Full details of the principles of operation and the electrical description are published in the XP95 Engineering Product Guide. XP95 I.S. detectors have the same operating characteristics as the standard versions.