The 5000 Series is an early warning infra-red transit heat sensor, which can trigger at temperatures as low as 100°C, when monitoring materials being transported on conveyor systems, before they have reached the ember or flame condition.

Its unique dual detector enhanced Infra-red monitoring has been created to detect black heat. Black body emissions occur for all material, the sensor is designed to detect a change in these emissions even at relatively low temperatures, when the material moves through its field of view.

Air purging from a mains operated Air Purged Blower (APB) feed is used to maintain a positive air pressure in the sensor enclosure, and ensures the prevention of dust settling on the sensor window. The air supply is monitored by a pressure switch, which on air failure is signalled as a fault status.

The 5410 incorporates within the unit a series of user programmable SIL switches. Option selection including detector sensitivity settings, auto/manual reset sequence selection and single / coincidence voting from the two individual internal detectors for the alarm trip and shutdown outputs.

The sensor air pressure and signal cable connections are fault monitored and fail safe. The controller incorporates an auxiliary fault input and common fault output contact.

Fike Safety Technology Ltd
Unit 31 Springvale Industrial Estate, Cwmbran NP44 5BD
Tel: 01633 865 558 | Email: fstinfo@fike.com | www.fike.co.uk
**5000 Series: Model 5410**

**Infra-Red Transit Heat Sensor**

**Specification**

- **Detectors:** 2off—Employing reflective cone optical focus system
- **Spectral Filter:** 5 to 14μm wide band
- **Sensitivity:** 10 to 40μm
- **Transit Speed:** 0.5 6m/s
- **Sensor Head:** 1.5Kg (IP66)
- **Supply voltage:**
  - Relay Mode: 11mA Quiescent
  - Low Power Mode: 1.8 mA Normal Mode
  - <350μA Fault
  - 5mA Fire + Alarm Load
- **Temperature:** -20°C to +70°C
- **Outputs:**
  - Alarm Contact: 1 Pole C/O
  - Trip Contact: 1 Pole C/O
  - Fault Contact: 1 Pole C/O
  - Rating: 30 Vdc—500mA
- **Indicators:**
  - Internal: 2 off red channel LED’s
  - External: 1 Red LED (Normal-Off, Fire Trip-On)
  - 1 Green LED (Normal-On, Fault-Off)
- **Auxiliary Input:** PSU / Charger etc.
- **Purge Air:** Input Fitting 45mm Hose Adaptor

**System Setup**

The sensor is located above or beside the materials transit path (conveyor, roadway, etc.) by means of the adjustable mounting bracket and aligned such that the monitored hazard passes through the sensor’s field of view. The distance and angle of the sensor determine the width of the monitored path.

Typically conveyor widths of 1.6 to 4.2 m can be monitored with a sensor mounted 1.0 to 1.5 m above the conveyor at an angle of 0° to 55° (see separate datasheet).

**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5410: Polycarbonate, 5040 (230 vac) APB, 4 metre x 45mm flexible air hose and clips, mounting arm and bracket</td>
<td>710-007</td>
</tr>
<tr>
<td>5410: Polycarbonate, 5041 (115 vac) APB, 4 metre x 45mm flexible air hose and clips, mounting arm and bracket</td>
<td>710-009</td>
</tr>
<tr>
<td>Sensor 5410, including bracket</td>
<td>720-012</td>
</tr>
<tr>
<td>5040 Air Purge Blower 230 Vac</td>
<td>710-040</td>
</tr>
<tr>
<td>5041 Air Purge Blower 115 Vac</td>
<td>710-041</td>
</tr>
</tbody>
</table>

The chart (left) indicates the correlation between the temperature and size of ‘hot spot’ anomalies for a typical installation to produce one or more detector channel activations at various trigger level settings. Exact response is dependant on the emissivity factor of the monitored material, sensor orientation and target speed.

This document is only intended to be a guideline and is not applicable to all situations.

Information subject to full disclaimer at www.fike.com/disclaimer