Fibre Optic - Linear Heat Detection
LTS 200 Sensor Control Unit

The LTS 200 is a Linear Heat Detection system specifically designed for fire protection applications. It is able to measure temperature profiles at thousands of points simultaneously along a sensor cable which may be up to 2km in length. The LTS 200 can be configured with a 2km loop or two radial circuits each of 2km (4km in total). In fire prevention, the LTS 200 is able to determine not only the current position but also the progression of the fire by measuring the temperature along the sensor cable in real time.

Optical fibre offers several important advantages as a sensing medium. Signals are immune to electromagnetic interference thereby ensuring integrity of electrically noisy areas, for example around power and transformers. As no electric current is used in the sensing fibre and the fibre is relatively inert and dielectric (non conducting) medium, it is safe technology to use in hazardous environments.

Opto-Electronics Unit

The system consists of a LTS 200 Linear Heat Detection system module housed in a lockable wall mounted steel enclosure with sealed gland plates to provide IP54 protection. The enclosure also contains a fibre splice housing to protect the splices made between the sensing cable and the supplied pigtails. Alternatively the system can be supplied suitable for mounting in a 19” inch rack.

LED’s mounted on the front panel of the cabinet indicate system status: Power On, System fault, Sensor Fault and Alarm.

A relay module is contained within the LTS 200 unit providing 32 volt-free contacts as standard for connection to end user systems. The volt-free contacts are terminated with screw terminal connector blocks within the wall-mount cabinet to simplify installation. Two of these relays are dedicated to system and Sensor Fault and are not reconfigurable.

Features

When configured in a loop, in the event of a break in the sensor fibre, or significant increase in optical loss, the LTS 200 indicates an alarm and the system automatically measures from both ends of the fibre, ensuring continued fire protection over the entire fibre length.

Unbeatable reliability, with over 1300 devices installed and 1 million + days of operation.

Embedded software enables the LTS 200 to operate independently of an external controller via TCP/IP or RS232 serial connector eg. PC.

Up to 600 programmable zones, each with individual alarm thresholds. Up to 32 outputs can be fed directly to an end user system via relays. Additional outputs to cover all zones can be achieved via Modbus protocol interface.

Fibre optic sensor cable is not affected by electromagnetic interference and is well suited to dusty, hazardous conditions.

Applications

Cable Tunnels, Ducts & Mezzanines
Escalators & Moving Walkways
Petro-Chemical
Refrigerated Stores & Cold Rooms
Ceiling Voids & Attic Spaces
Conveyor, Bearing Protection
Car Parks, Open Storage areas
Warehousing, Racking Protection
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Specification

Performance
Sampling resolution. 1m
Fibre length per circuit 2km
Circuits Available in 1 or 2 circuit options
A1R - System response defined by EN54 part 5:2000
Class 1 - Laser classification when assessed in accordance with EN60825-1 2001

Physical

<table>
<thead>
<tr>
<th>Rack Mounted</th>
<th>Wall Mounted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packed</td>
<td>Unpacked</td>
</tr>
<tr>
<td>Width</td>
<td>560mm</td>
</tr>
<tr>
<td>Depth</td>
<td>510mm</td>
</tr>
<tr>
<td>Height</td>
<td>260mm</td>
</tr>
<tr>
<td>Weight</td>
<td>8kg</td>
</tr>
</tbody>
</table>

Environmental
Operating temp. - 5°C to 40°C
Storage temp. - 40°C to 65°C
Humidity 5% to 95% RH (non condensing)

Power
dc power 24vdc nominal
Power rating: Typ. 18W
Maximum 25w

EMC Compliance
CE Conformity EN50082-2 (immunity); EN50130-4 (immunity)
Railway EN50121 part 4

Ordering Information

LTS 200 Sensor Control Units

<table>
<thead>
<tr>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall Mounted</td>
</tr>
<tr>
<td>Single Circuit</td>
</tr>
<tr>
<td>Twin Circuit</td>
</tr>
<tr>
<td>Rack Mounted</td>
</tr>
<tr>
<td>Single Circuit</td>
</tr>
<tr>
<td>Twin Circuit</td>
</tr>
<tr>
<td>Fibre-optic Cable</td>
</tr>
<tr>
<td>SensorLine (Thermoplastic)</td>
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<tr>
<td>SensorTube (Metal)</td>
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