New Wireless Version

3M Gas & Flame Detection is proud to introduce its wireless system with the OLCT 80 field detector/transmitter. This new model allows wireless connectivity in ATEX 1 zones. The maximum range is 3km, line of sight. The type of network selected will depend on the number of field detectors, the area coverage and the network architecture.

Signal Processing

OLCT 80 is ideal for transmitting signal data in a wide range of industrial detection and alarm system applications.

Transceiver operates at a universally accepted frequency of 2.4 GHz / 900 MHz and is able to transmit signal data from its analog or Modbus outputs.

The wireless version of the OLCT 80 eliminates wiring costs and is very easy to commission in the field. The device can be associated with our MX 43 control panel, touch screens and audible or visible alarms.

Wireless network integrity, security and reliability are guaranteed by using FHSS technology (Frequency Hopping Spread Spectrum).
**Proposed Solutions**

**Point-to-point**

One master - One slave

The 4-20mA signal is transmitted from one point to another.

**Star Configuration or Star Topology**

One master - Several slaves

This secured wireless network consists of a radio frequency network system built around a master.

The signal is transmitted to the master which provides a digital output communication. One master can monitor up to 49 slave devices.

**MESH Topology**

One master - Several repeaters

The signal is transmitted to the master which provides RS485 (Modbus RTU), analog (4-20 mA) or logic (On/Off) output.

49 slaves maximum per network. Each OLCT 80 is configured as a repeater and several networks can co-exist.

*Nota bene:* power the OLCT 80 wireless with 16 to 30 Vdc (230 or 110 VAc/24Vdc, batteries, solar panels).
**Technical specifications**

<table>
<thead>
<tr>
<th><strong>Transmitter</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensor</strong></td>
</tr>
<tr>
<td><strong>Material</strong></td>
</tr>
<tr>
<td><strong>Detected gases</strong></td>
</tr>
<tr>
<td><strong>Pre-calibrated sensor</strong></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
</tr>
<tr>
<td><strong>Display</strong></td>
</tr>
<tr>
<td><strong>Cable entry</strong></td>
</tr>
<tr>
<td><strong>Loop impedance with OLDHAM controller at 21 V DC</strong></td>
</tr>
<tr>
<td><strong>Ingress protection</strong></td>
</tr>
</tbody>
</table>

**Specifications antenna**
- Frequency band: 900 MHz or 2400 MHz - to be specified when ordering
- Impedance: 50 Ω
- Gain: 2dBi
- Power: 2 watts

**Range (line of sight)**
- 3200 meters / 2 miles (2.4 Ghz) |
- 9600 meters / 6 miles (900 MHz)

**Approvals**
- Ex d IIB T5 for OLCT 80 with flameproof sensor
- Ex d ia IIB T4 for OLCT 80 with intrinsically safe sensor certificate INERIS 03ATEX0240X

**Operating temperature**
- -20°C to +60°C

**Analog input**
- 2 x 4-20 mA analog input (load resistance 120 Ω)

**Output signal**
- Relays: 3 dry relay contacts (Fault, A1, A2)
- Analog: Standardized 4-20 mA output
- Digital: One serial RS485 output
- Signal faults: Current output < 0.5 mA
- Alarms: 2 programmable thresholds per channel

**Relays**
- 3 relays, RCT change over
- Relay rating: 2 A @250 VAC or 30 VDC

**Load resistance**
- 500 Q