# Sieger Searchline Excel Specifications

**Available Gases:** Methane, Ethane, Propane, Butane, Pentane, Ethylene, Propylene, Ethanol, Methanol.

**Range:** 0 to 5 LELm.

**Recommended Alarm Settings:**
- (Low) 1.0 LELm
- (High) 3.0 LELm

**Path Lengths:**
- Short Range 5 to 40m (15 to 130 ft.)
- Medium Range 40 to 120m (130 to 390 ft.)
- Long Range 120 to 200m (390 to 650 ft.)

**Speed of Response:** T90 less than 3 seconds (under normal operating conditions).

**Output Signal:**
- 4 to 20mA (maximum loop resistance 600 ohms; source & sink available) and RS485.
- 21mA Over range.
- 4 to 20mA Normal operation (0 to 5 LELm).
- 3mA(1) Dirty optics.
- 2.5mA(1) Beam blocked.
- 2mA(1) Inhibit.
- 0mA Fault.

**Digital Output:** Modbus RS485 multi drop. Using DVC100(m) or DX100(m).

**Operating Temperature:** -40 to +65°C (-40 to 150°F).

**Operating Humidity:** 0 to 99% RH (non-condensing).

**Operating Pressure:** 91.5 to 105.5 KPa (915 to 1055 mbar) (non-compensated).

**Warm-up Time:** Less than 5 minutes (operational), or less than 1 hour (fully stabilised).

**Power Supply:** 18V to 32V dc.

**Power Consumption:**
- Short Range TX: 3.5 / 5.0*W maximum.
- Medium and Long Range TX: 5.5 / 7.5*W maximum.
- RX: 8W maximum.

**Enclosure Material:** 316 stainless steel.

**Weight (incl. mounting bracket):**
- Short Range TX: 3.5kg.
- Medium and Long Range TX: 7kg.
- RX: 3.5kg.

**Vibration:**
- 2 to 60Hz, max ptp amplitude 1mm.

**Misalignment Tolerance:**
- Short Range ±0.5º (±~35cm at 40m).
- Medium Range ±0.5º (±~104cm at 120m).
- Long Range ±0.5º (±~170cm @ 200m).

**EMC Standards:** EN50270:1999

**Performance Approval:** FM performance approved.

**Safety Approval:**
- ATEX: Exd IIC T5(-40°C to +65°C).
- Exd IIC T6(-40°C to +40°C).
- UL: Class 1 Div 1 Groups B,C + D and Class 1 Zone 1 AEx d IIB + H2 (Tamh -40°C to +65°C).
- CSA: Class 1 Div 1 Groups B,C + D, T5 and Exd IIC T5 (Tamh -40°C to +65°C).
- FM: Class 1 Div 1 Groups B,C and D
- Other: SAA, GOST.
- Independently assessed to IEC61508

**I.P. Rating:**
- IP66 and IP67.

(1) User programmable.

* Turboheating activated (standard feature; user selectable). This is recommended for the most severe weather conditions.
# Specification

<table>
<thead>
<tr>
<th><strong>Available Gas Calibrations:</strong></th>
<th>Methane*</th>
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<tbody>
<tr>
<td><strong>Detection Range:</strong></td>
<td>0-100% LEL</td>
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<tr>
<td><strong>Minimum Alarm Thresholds:</strong></td>
<td>20% LEL (&gt;0.5 to 2.5m duct width) 10% LEL (&gt;2.5m to 5m duct width)</td>
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<tr>
<td><strong>Speed of Response:</strong></td>
<td>T90 &lt; 1 second</td>
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</tbody>
</table>
| **Output Signals**            | Measuring range: 4-20mA sink or source (Default current source)  
Over range: 21mA  
Warning: 3mA  
Beam Block: 2.5mA  
Inhibit: 2mA  
Fault: 0mA |
| **Diagnostics:**              | RS 485 serial link |
| **Digital Output:**           | Modbus RS485 multi drop. (Using DVC100(m) or DX100(m)). |
| **Operating Temperature:**    | -40 to +65°C (-40 to 150°F) ambient. Contact Honeywell Analytics for high temperature applications. |
| **Operating Humidity:**       | 0-99% (non condensing) |
| **Operating Pressure:**       | 91.5 - 105.5 kPa (non compensated) |
| **Repeatability:**            | 5.0% LEL (<1 metre duct width) 2.5% LEL (>1 metre duct width) |
| **Warm-up Time:**             | <1 hour (fully stabilised) |
| **Power Supply:**             | 18 to 32V DC |
| **Power Consumption:**        | Unit: 13W max. Heated Reflector Panel: 6W (nom) @ 24Vdc |
| **Enclosure Material:**       | 316 Stainless steel |
| **IP Rating:**                | IP66 and IP 67 |
| **Weight:**                   | Transceiver 13kg, reflector panel 2.0kg (>0.5 to 2.5m duct width), 4kg (>2.5 to 5.0m duct width) |
| **Vibration:**                | 2-60 Hz, max ptp amplitude 1mm |
| **EMC Standards:**            | EN50270:1999 |
| **Performance Approval:**      | FM performance approved |
| **Safety Approvals:**         | ATEX: II 2 G  
EEExd IIC T5 (-40 to +65°C).  
EEExd IIC T6 (-40 to +40°C)  
Heated Panel: EEExd IIC T4 (-40 to +60°C)  
UL: Class 1, Div 1, Groups B, C and D Class 1, Zone 1, AEx d IIB + Hydrogen  
(Amb -40°C to +65°C) |

*Contact Honeywell Analytics for other gases and approvals