The Spiratec Type 30 Indicator is a portable, battery-operated instrument designed to detect the presence of a steam leak in a steam trap (when used with a sensor chamber) and to indicate this condition on an LED indicator.

**Limiting Operating Conditions**

Max. Ambient Temperature 104°F (40°C)

**Construction Materials**

The Indicator Box is a polyamide plastic enclosure housing the electronic circuit.

**Operation**

Full instructions are included with each indicator. The indicator incorporates a test circuit which will show whether the battery needs renewing or the indicator is faulty. To test for steam loss, plug indicator into sensing chamber ahead of trap. In essence, a green light √ means a trap which is working correctly, i.e. closing to steam, and a red light x indicates a trap which is allowing steam to pass.

**Sample Specification**

Spiratec steam leak detection system shall be comprised of an in-line sensor chamber or trap with Integral Sensor and a portable indicator box and cable for test purposes.

Sensor chambers, fitted before each trap, shall have ductile iron or steel bodies with screwed or socket weld connections, and incorporate a level-sensing electrode.

The hand-held indicator box shall have positive colored pass and fail lights, an internal circuit check facility and be UL listed as intrinsically safe for use in hazardous locations. An indicator cable 4 feet shall be provided with each box.

Optional items shall include a hand-operated remote test box for testing either a single trap or up to 12 traps, an automatic remote electronic monitoring system for up to 16 traps, a blanking plug to prevent ingress of dirt and cable plug tails of either of the push fit type or screw-on connection style.

The system shall test for steam loss by detecting the presence or absence of condensate using the difference in conductivities of water and steam. Trap operation shall be indicated by a green (pass) light or a red (fail) light on the indicator box.

**Indicator Cable**

A 4ft (1.25m) indicator cable of twin core, Teflon insulated, Hytrel sheathed cable is provided with the indicator. It has connections on the ends for the Sensor Chamber or trap (if trap has Integral Sensor) and the Type 30 indicator. The Hytrel sheathing will withstand 230°F (110°C).

**Dimensions (nominal) in inches and millimeters**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Weight (without battery)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2</td>
<td>2.4</td>
<td>1</td>
<td>4.6 oz</td>
</tr>
<tr>
<td>157</td>
<td>62</td>
<td>25</td>
<td>130 g</td>
</tr>
</tbody>
</table>

**Spare Parts**

The indicator cable is available as a spare part. To order, specify cable only.
Purpose
The Spiratec trap failure indicator is designed to indicate whether a steam trap is working correctly. It consists of a permanently installed sensor chamber and an indicator which is plugged into the sensor chamber for testing and removed when the testing is completed.

Operation
Trap Working
Condensate flows to the steam trap, under the weir. A small hole in the top of the weir balances the pressure on either side and ensures that the sensor on the upstream side is submerged in condensate. When the sensor is connected to the indicator, the circuit is complete and gives a green √ signal.

Trap Passing Steam
Steam volume in the sensor chamber increases, raising the pressure difference across the weir. The upstream condensate level drops to expose the sensor, breaking the circuit to give a red x signal.

Component Specifications
TIS 2.701, Sensor Chambers
TIS 2.702, Remote Test Points
TIS 2.704, Automatic Monitor

Batteries
Type 30 Indicator – One 9 volt battery.

IPC20 and IPC21 are strainer connectors with a spiratec SSL1 Sensor

IFT-14
SSL1

Chamber Sensing
Steam trap (working)
Sensor chamber
Inlet
Hole
Condensate
Weir
Inlet
Live steam
SSL1
Air vent passing live steam
Heat-resistant plug tail, PT1
Remote test points
R1
R12
Indicator cable
Indicator
Type 30
UL Listed

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