

# spirax/sarco®

## SPIRA-tec® Steam Loss Detector System Type 30 (for use with SSL1 Sensor)

The SPIRA-tec® 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  $\surd$  means a trap which is working correctly, i.e. closing to steam, and a red light  $\times$  indicates a trap which is allowing steam to pass.

### Sample Specification

SPIRA-tec 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.

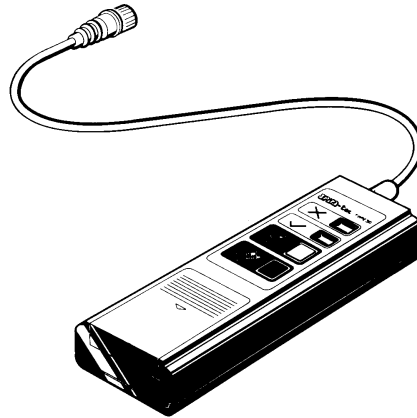
The hand-held indicator box shall have positive colored pass and fail lights, an internal circuit check facility and be UL listed as intrinsically safe for use in hazardous locations. An indicator cable 4 feet shall be provided with each box.

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.

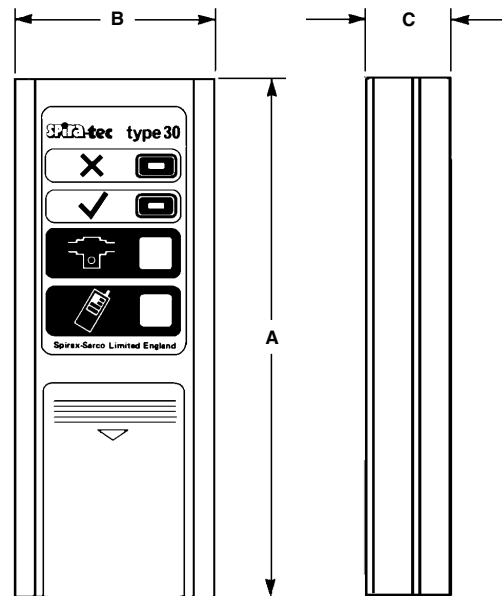
The system shall test for steam loss by detecting the presence or absence of condensate using the difference in conductivities of water and steam. Trap operation shall be indicated by a green (pass) light or a red (fail) light on the indicator box.

### Indicator Cable

A four-foot-long indicator cable of twin core, Teflon insulated, Hytel 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 Hytel sheathing will withstand 230°F (110°C).



Plug into SSL1 Sensor on sensor chamber, IFT with SSL1, strainer connector with SSL1 (IPC20, IPC21).



### Dimensions (nominal) in inches and millimeters

A	B	C	Weight (without battery)
6.2	2.4	1	4.6 oz
157	62	25	130 g

### Spare Parts

The indicator cable is available as a spare part. To order, specify cable only.

# SPIRA-tec® Steam Loss Detector System Type 30

## Purpose

The SPIRA-tec 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  $\checkmark$  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  $\times$  signal.

## Installation

The sensor chamber with SSL1 sensor should be fitted immediately upstream of the trap, in a horizontal line with the direction of flow according to the arrow on the body, or a trap with Integral SSL1 Sensor. The cable from the indicator should be disconnected from the sensor chamber or remote test point after checking.

Air and other incondensable gases present at the trap on start-up should be allowed to dissipate to avoid a false red signal.

Blast discharge traps may cause a temporary red flicker, but green over most of the cycle shows the trap to be working properly.

## Batteries

Type 30 Indicator – One 9 volt battery.

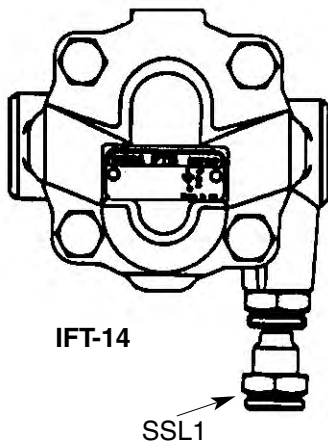
## Component Specifications

TIS 2.701, Sensor Chambers

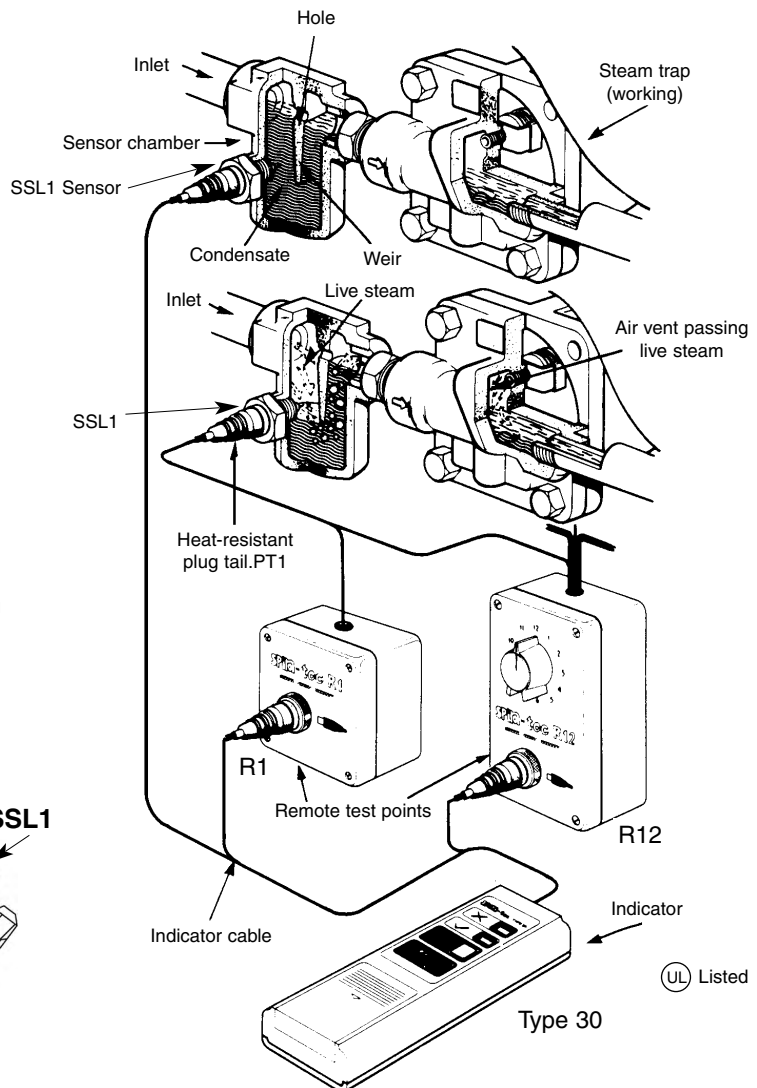
TIS 2.702, Remote Test Points

TIS 2.704, Automatic Monitor

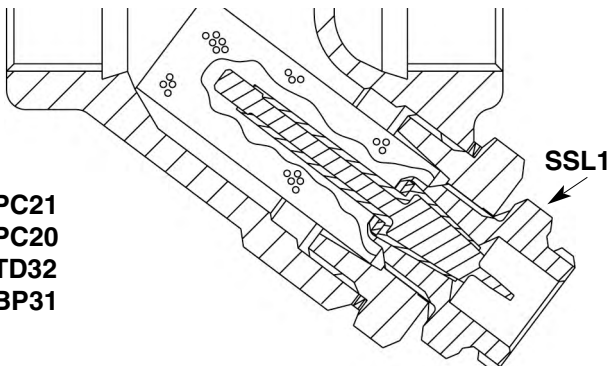
### Intrap Sensing



### Chamber Sensing



IPC20 and IPC21 are strainer connectors with a spiratec SSL1 Sensor



IPC21  
IPC20  
ITD32  
IBP31

UL Listed

TI-2-700-US 06.04