

## Spiratec Type 40 Indicator and Indicator cable Installation and Maintenance Instructions

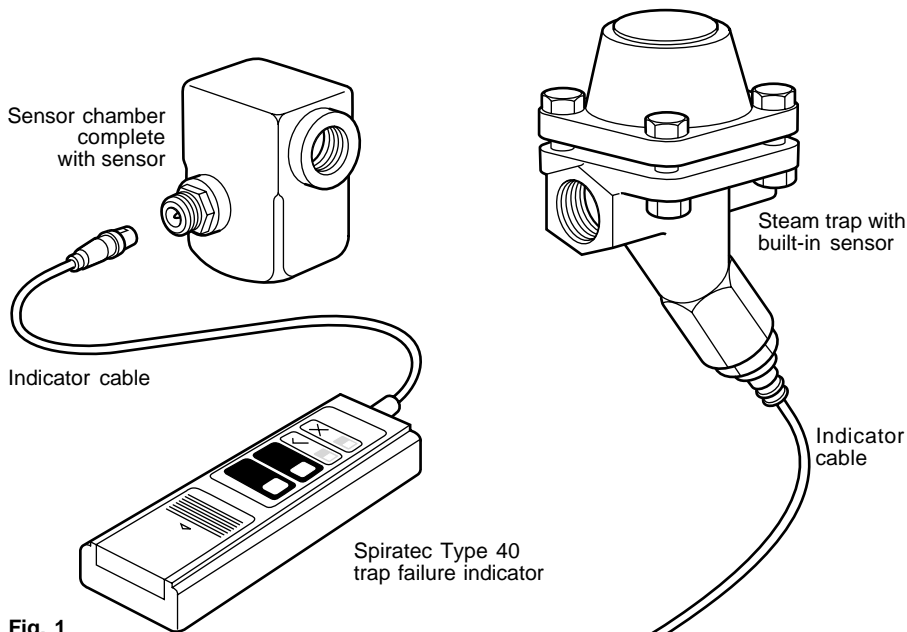


Fig. 1

### 1. General safety information

Please read Safety Information sheet IM-GCM-10 as well as any national or regional regulations, before installing/using this product.

The product is designed and constructed to withstand the forces encountered during normal use. Use of the product other than as a trap failure indicator could cause damage to the product and may cause injury or fatality to personnel.

**Warning: The Spiratec Type 40 indicator is not approved for use in hazardous areas in the EU.**

### 2. General product information

The Spiratec Type 40 trap failure indicator is a hand-held device used for the detection of steam leaks through steam traps. It should be used in conjunction with either a sensor chamber, complete with sensor, installed immediately upstream of a steam trap, or a steam trap with a built-in sensor.

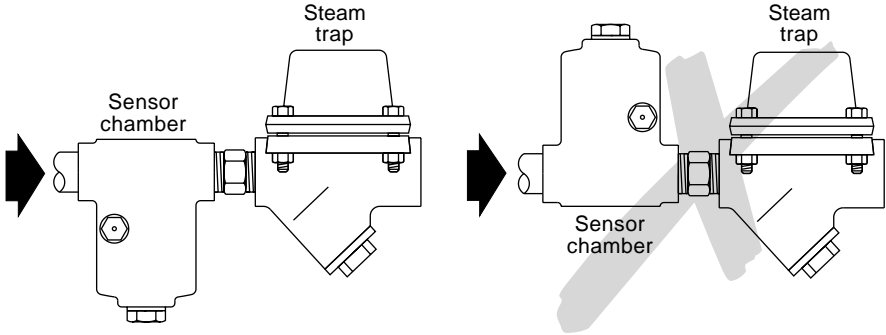
The Type 40 indicator unit is battery powered and comes complete with a cable assembly which can be plugged into either the sensor chamber or the steam trap with built-in sensor. In this way, a single Type 40 indicator can be used to check a number of sensor chambers or traps as required. For situations where access to the sensor chamber or trap is difficult, the connection to it can be made using a remote test point such as the Spiratec R1 or R12.

### 3. Installation

#### 3.1 Installation of the sensor chamber

Install the chamber immediately upstream of the trap (close-coupled) in a horizontal position, with the flow in the direction of the arrow on the body.

**Note:** Install the sensor chamber only as shown in Figure 2.

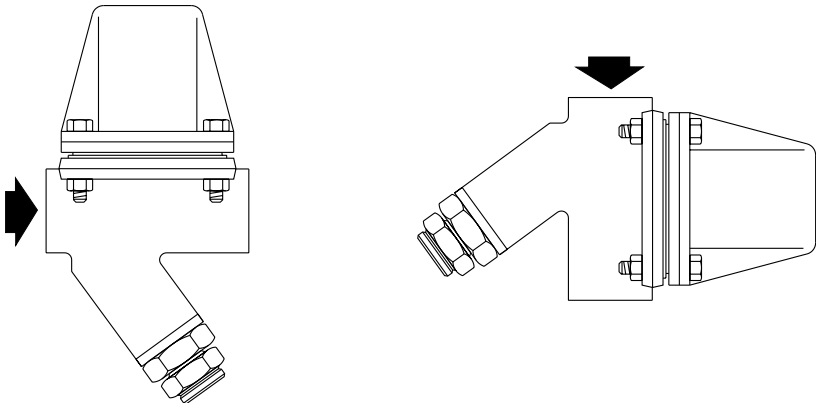


**Fig. 2** Correct installation

Incorrect installation

#### 3.2 Installation of the steam trap which incorporates a built-in sensor

Where the steam trap incorporates a sensor, there is no need to install a separate sensor chamber. Detailed installation instructions are supplied with the steam trap. Generally, the trap should be installed in a horizontal line with the cover at the top for optimum performance, although vertical installation (with downward flow) is acceptable (see Figure 3). No other attitude will give acceptable performance.



**Fig. 3** Preferred installation

Acceptable installation

#### 3.3 Pressure/temperature limits:

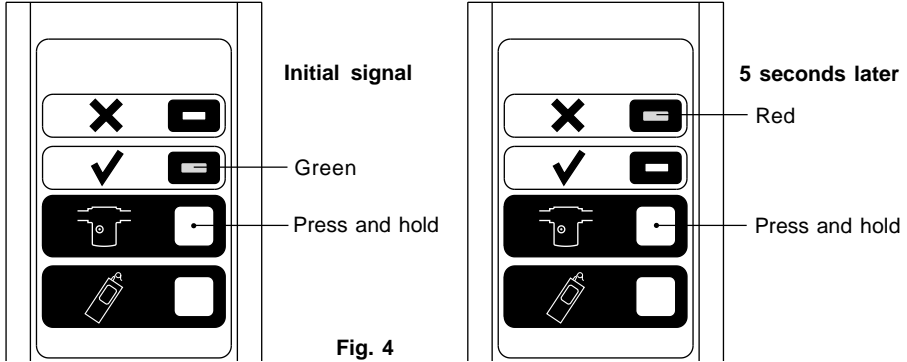
- Sensor chamber - 32 bar g @ 239°C (464 psi g @ 462°F).
- Steam traps with a built-in sensor - this depends on the trap but in all cases should not exceed 32 bar g @ 239°C (464 psi g @ 462°F).
- The sensor chamber should not be installed when superheated steam conditions can occur at the steam trap.

## 4. Operation

### To fit the indicator battery:

1. Remove the battery cover by unscrewing the socket head cap screw and sliding the cover downwards.
2. Fit one 9 volt PP3 battery.
3. Replace the battery cover and tighten the screw.
4. Test the indicator.

### To test the Spiratec Type 40 indicator and cable assembly:



1. Plug the cable into the socket on the indicator. Do **not** plug the other end of the cable into the sensor.
2. Press and hold down the upper button (sensor chamber symbol). The **Green** LED will light for approximately 5 seconds before being replaced by the **Red** LED, which will then remain lit as long as the button is held down (see Figure 4).
3. Press and hold down the lower button marked with the Type 40 indicator symbol. The **Green** LED signal will light and stay on until the button is released (see Figure 5).
4. If the tests in 2 and 3 above do **not** give the correct results, the PP3 battery needs replacing or a fault exists with the cable assembly or the Spiratec Type 40 trap failure indicator. Repeating tests 2 and 3 with the cable unplugged from the indicator will determine if it is the cable assembly or the indicator that is faulty.

### To operate the Spiratec Type 40 indicator:

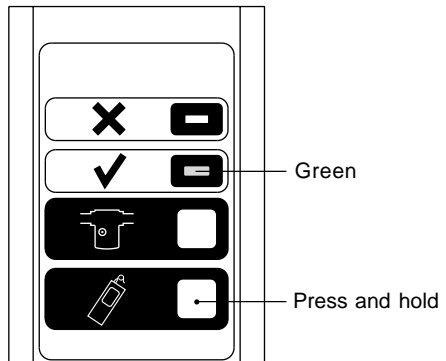
1. Plug the cable into the indicator socket and the sensor (sensor chamber, steam trap or remote test point).
2. Press the upper button (sensor chamber symbol):  
**Green** LED on - trap passing no live steam.  
**Red** LED on or continuous **Red-Green** flicker indicates that the trap is faulty - passing live steam.

### Special conditions:

**Plant start-up:** Allow time to clear air in the system, consequently avoiding a false **Red** LED signal.

**Blast action traps** may evacuate the sensor chamber causing a false **Red** LED signal.

**Allow** cycle to be completed and re-check.



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## 5. Maintenance

The Spiratec Type 40 indicator needs no maintenance itself. We recommend that the sensor be removed periodically to clean it and to inspect the insulation. Any pitting of the insulation indicates the sensor needs replacement.

Frequency of inspection will depend on the condition of the condensate.

## 6. Spare parts

The Spiratec Type 40 indicator cable is available as a spare.

The 9 V PP3 batteries may be purchased through the normal suppliers.