



## LP41

# High Integrity, Self-monitoring High Water Level Alarm Probe

### Description

The Spirax Sarco LP41 is used in conjunction with an LCS3051 level switch to provide a high integrity, self-monitoring alarm for detection of high water levels in steam boilers and other vessels.

The probe is normally installed direct in the boiler shell in a protection tube, but can be mounted in an external chamber if regulations permit.

The LP41 is supplied in three nominal tip lengths, and is cut to the exact length required prior to installation.

In normal operation, the tip is above the water level, and has a high resistance path to earth. If the water level rises to touch the probe tip, the resistance to earth drops, causing the alarm relays in the controller to be de-energised and the alarm to sound.

The LP41 is designed so that its tip and wiring connection integrity is monitored by the controller, causing an alarm signal in the event of a fault occurring.

The LP41 can also be used as a simple (non self-monitoring) high or low level probe with an LC1350 level switch.

A DIN 43650 cable socket with Pg 11 cable gland is supplied with the unit.

### Caution:

The probe is not suitable for outside installation without additional environmental protection.

### Available tip lengths mm (inches)

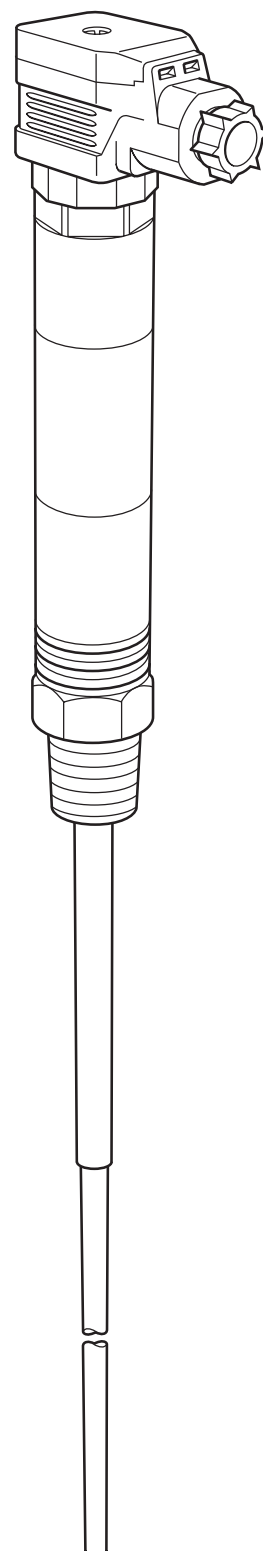
500 (19.7"), 1000 (39.4") and 1500 (59").

### Limiting conditions

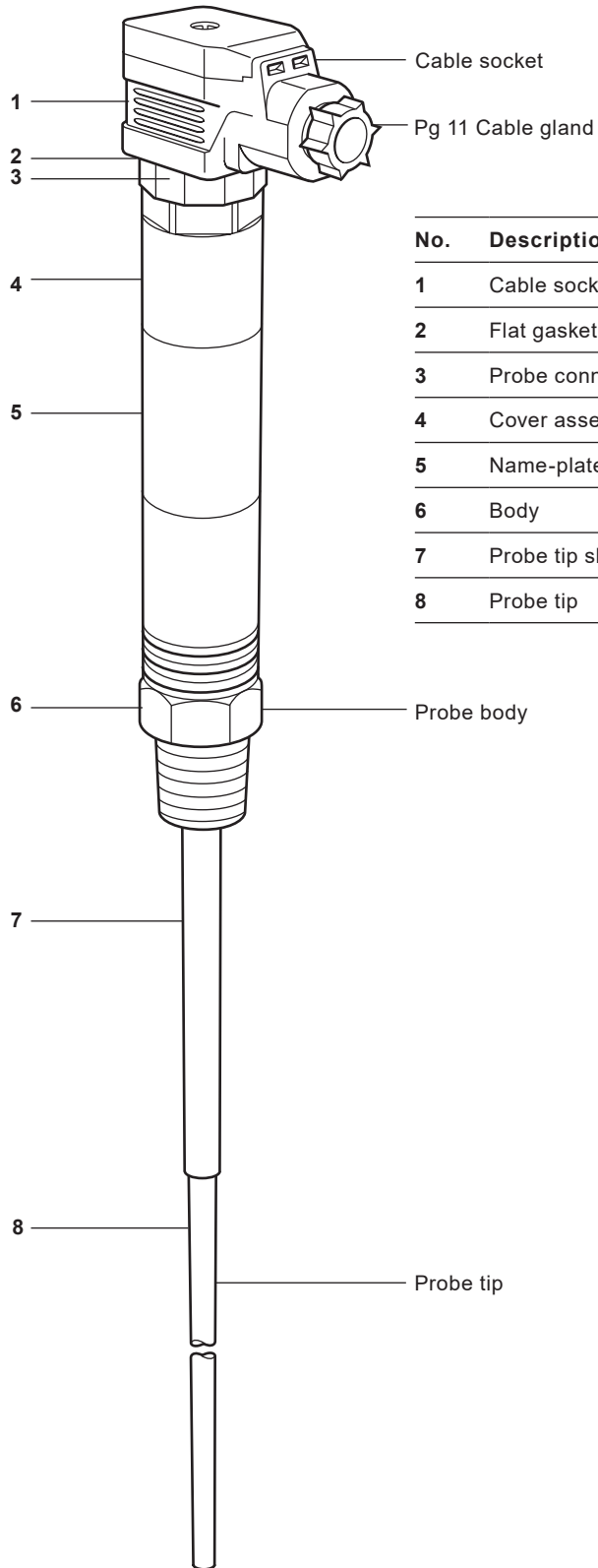
Nominal pressure rating	PN40	
Maximum boiler pressure	32 bar g	(464 psi g)
Maximum temperature	239 °C	(462 °F)
Maximum ambient temperature	70 °C	(158 °F)

### Technical data

Maximum probe cable length	See level switch/controller IMI	
Minimum conductivity	LCS1350	0.5 µS/cm
	LCS3051	10 µS/cm
Degree of protection	IP54	

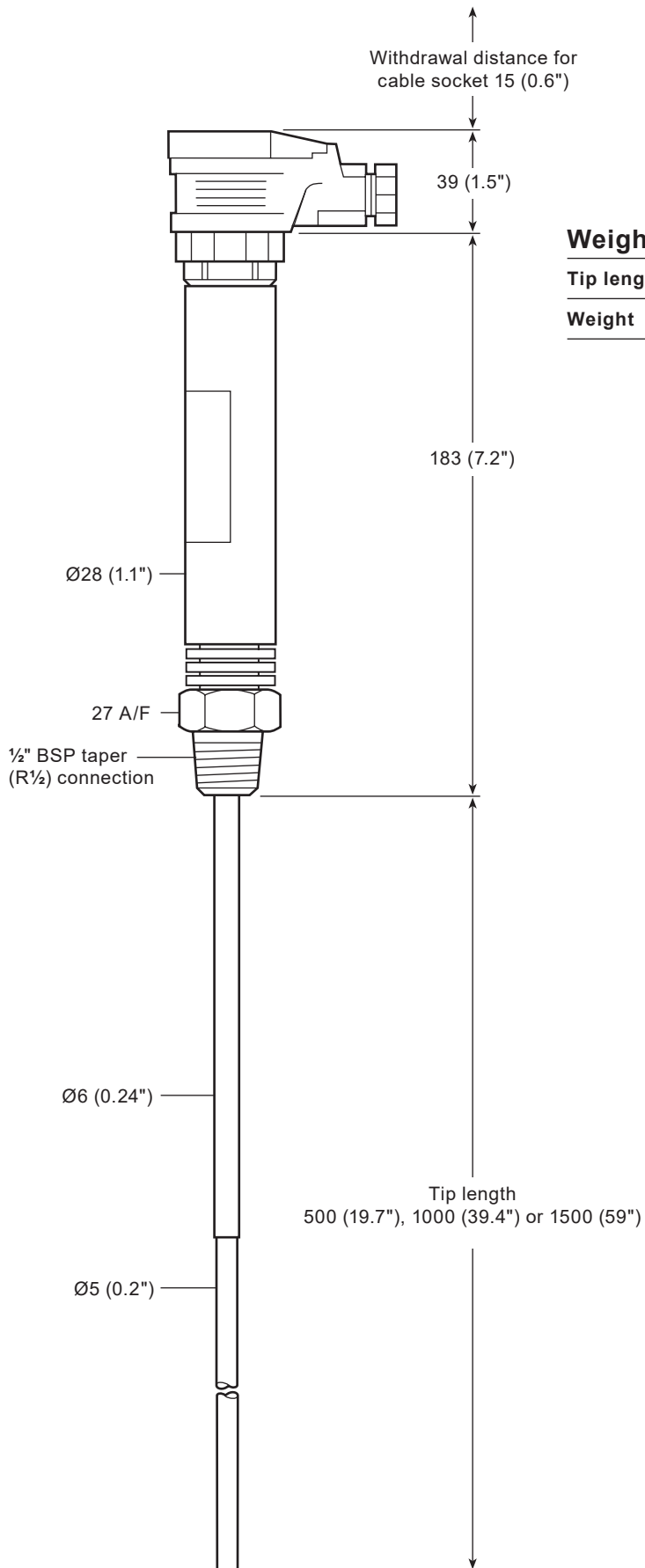


## Materials



No.	Description	Material	
1	Cable socket	Polyamide, glass filled	
2	Flat gasket	Silicone rubber	
3	Probe connector	Polyamide, glass filled	
4	Cover assembly	Austenitic stainless steel	
5	Name-plate	Polycarbonate	
6	Body	Austenitic stainless steel	BS EN 10088-3 (1.4306)
7	Probe tip sleeving	PTFE	
8	Probe tip	Austenitic stainless steel	ASTM A276 316L

**Dimensions (approximate) in millimetres (inches)**



**Weights (approximate) in kg (lb)**

Tip length	500 mm	1000 mm	1500 mm
Weight	0.61 (1.34)	0.75 (1.64)	0.88 (1.94)

## Safety information, installation and maintenance

This document does not contain sufficient information to install the product safely. See the Installation and Maintenance Instructions provided with each unit.

### Installation note:

The LP41 tip is cut to length and de-burred prior to installation. The LP41 has been designed to work with a Spirax Sarco LCS3051 level switch or LCS1350 level switch.

A protection tube is required for boiler shell or turbulent tank fitting.

Install the probe in a 1/2" BSP parallel female connection using PTFE tape.

**Note: Do not install the probe outdoors without additional weather protection.**

### Maintenance note:

No special maintenance is required.

Boiler water level controls do, however, require periodic testing and inspection, which is described in separate literature.

## Spare parts

There are no available spare parts for this unit.

## How to specify

High integrity high level alarm probes shall be Spirax Sarco self-monitoring type LP41 with an austenitic stainless steel body and probe tip, PTFE probe sleeving, and DIN 43650 cable socket with Pg 11 cable gland. They shall be cut to length on installation and be used with an appropriate Spirax Sarco controller.

## How to order

**Example:** 1 off Spirax Sarco LP41 high integrity, self-monitoring, high water level alarm probe with 1 000 mm (39.4") tip.