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ISO 9001

spirax sarco

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LP31 Level Probe

Description

The Spirax Sarco LP31 is used in conjunction with an LC3000 controller 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 LP31 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 LP31 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 LP31 can also be used as a simple (non self-monitoring) high or low level probe with an LC1300 level controller.

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

Available tip lengths mm (in)

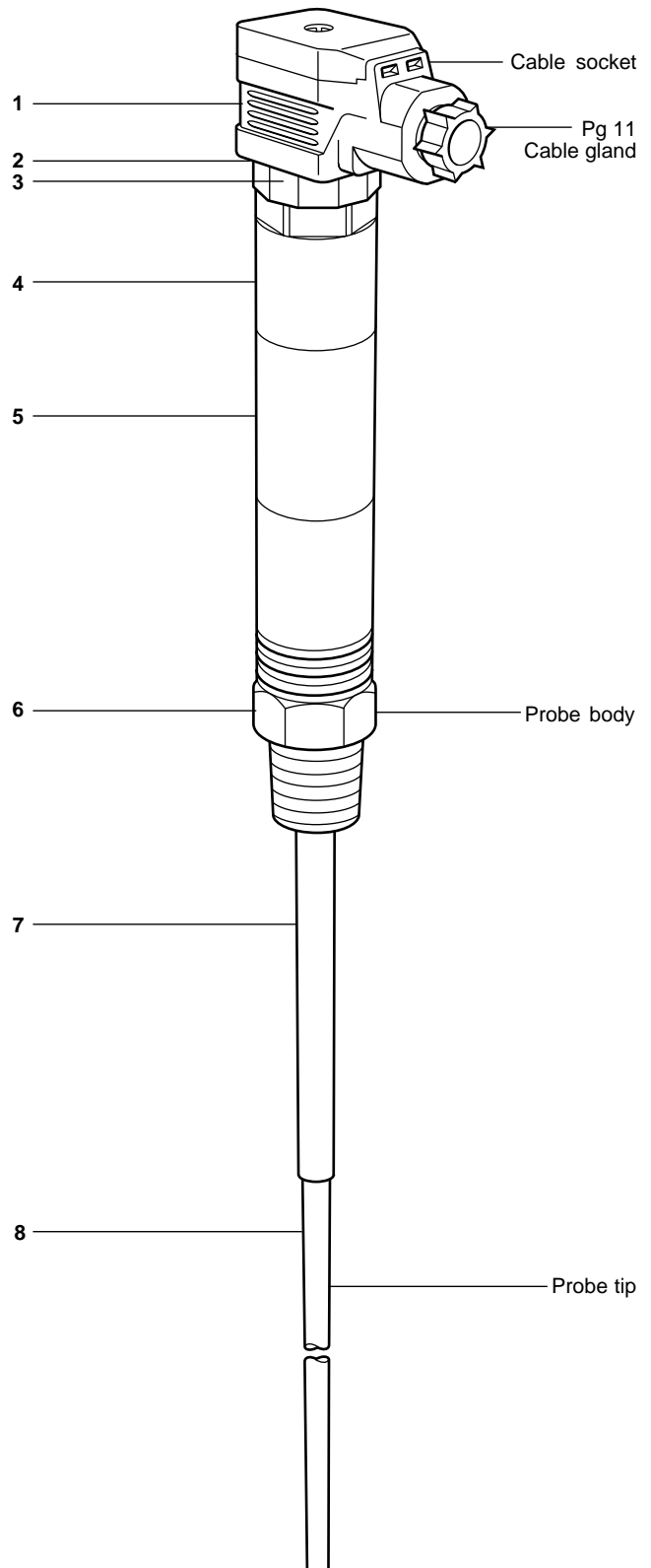
500 (19.7), 1000 (39.4) and 1500 (59).

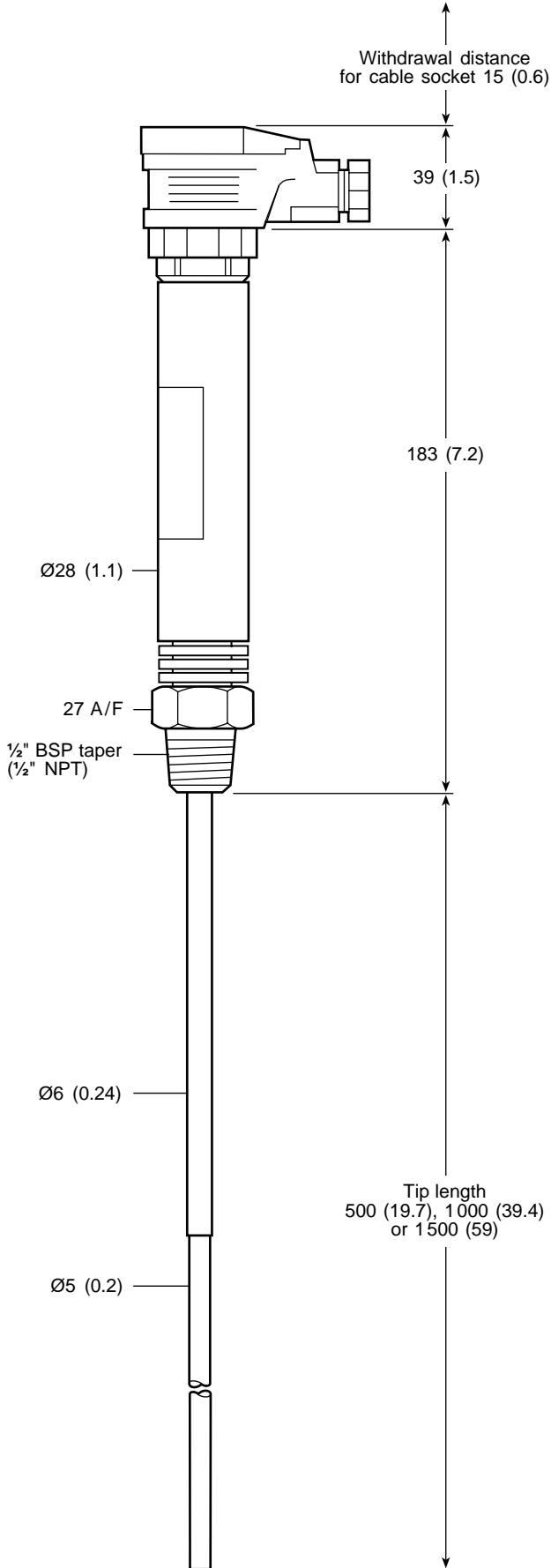
Limiting conditions

Maximum boiler pressure	32 bar g (464 psi g)
Maximum temperature	239°C (462°F)
Maximum ambient temperature	70°C (158°F)
Maximum probe cable length	50 metres (164 ft)
Cable socket protection rating	IP65
Minimum conductivity	LC1300 1 μ S/cm or 1 ppm
	LC3000 30 μ S/cm or 30 ppm

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)**Important note**

All boiler water level and alarm controls require regular testing and inspection. For specific testing instruction for Spirax Sarco systems please see separate literature.

Installation

This document does not contain sufficient information to install the product safely. See the Installation and Maintenance Instructions supplied with the product for full details.

The LP31 tip is cut to length and de-burred prior to installation. Additional environmental protection is needed for installation outdoors.

The probe is installed in a 1/2" BSP parallel (1/2" NPT) thread using PTFE tape.

How to specify

High integrity high level alarm probes shall be Spirax Sarco self-monitoring type LP31 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 LP31 probe (BSP) with 1000 mm tip.

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

Tip length	500 mm	1000 mm	1500 mm
Weight	0.51 (1.1)	0.59 (1.3)	0.67 (1.5)