



CP40 Conductivity Probe

Description

The Spirax Sarco CP40 conductivity probe is used in conjunction with a controller to measure the conductivity (or TDS) of water, usually in a steam boiler for the purpose of monitoring and controlling blowdown.

The probe may be installed in a Spirax Sarco probe elbow, a screwed flange, or directly in a boiler connection. The CP40 is supplied in four nominal tip lengths, and is cut to the exact length required prior to installation.

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

Principal features:

- Conductivity probe for use with blowdown controllers.
- Suitable for use in steam boilers up to 32 bar g, 239 °C.
- All wetted parts in austenitic stainless steel/PTFE.
- Easily cut to length.

Caution:

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

Available tip lengths mm (inches)

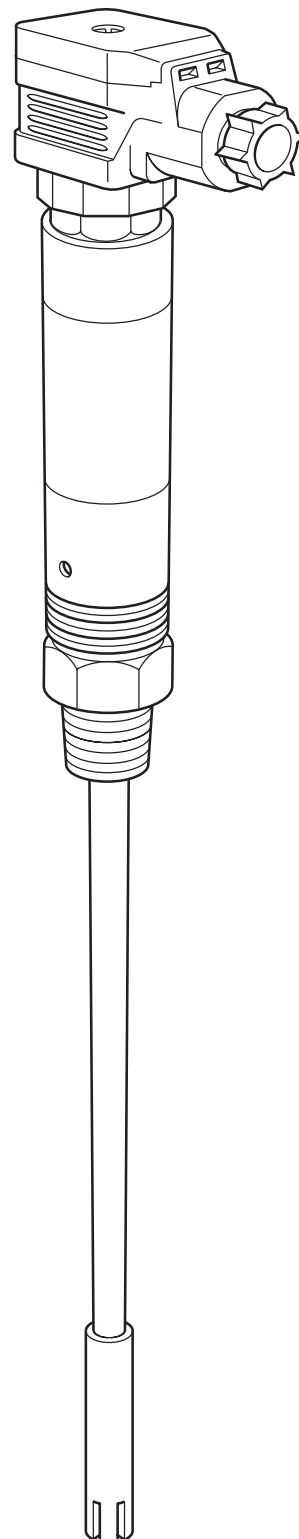
300 (11.8), 500 (19.7), 1000 (39.4) and 1500 (59).

Pressure/temperature limits

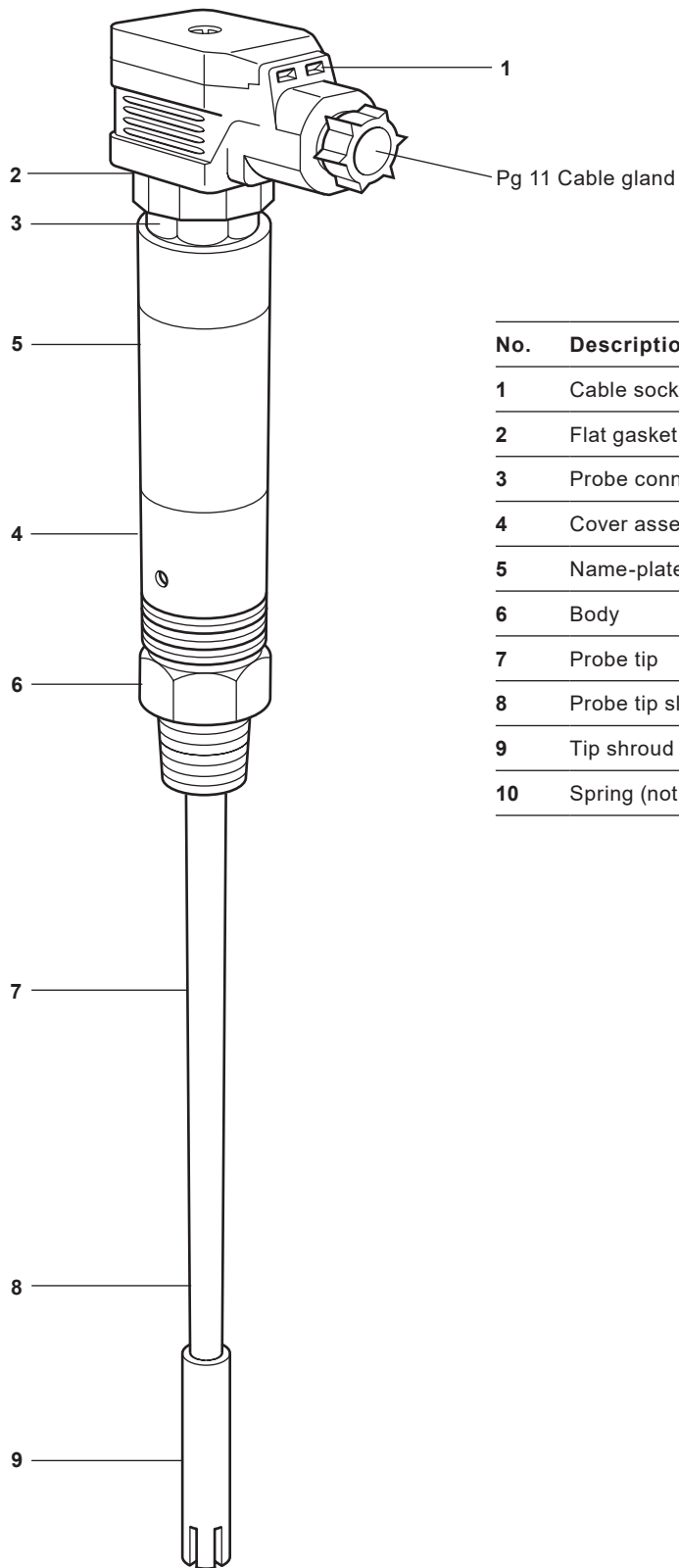
Nominal pressure rating		PN40
Maximum boiler pressure	32 bar g	(464 psi g)
Maximum operating temperature	239 °C	(462 °F)
Maximum ambient temperature	70 °C	(158 °F)
Designed for a maximum cold hydraulic test pressure of:	60 bar g	(870 psi g)

Technical data

Minimum distance from boiler tubes	20 mm	($\frac{3}{4}$ ")
Minimum immersion depth (Vertically installed probes)	100 mm	(4")
Maximum cable length (probe to controller)	See controller IMI	
Minimum conductivity	10 μ S/cm or 5 ppm	
Degree of protection	IP54	

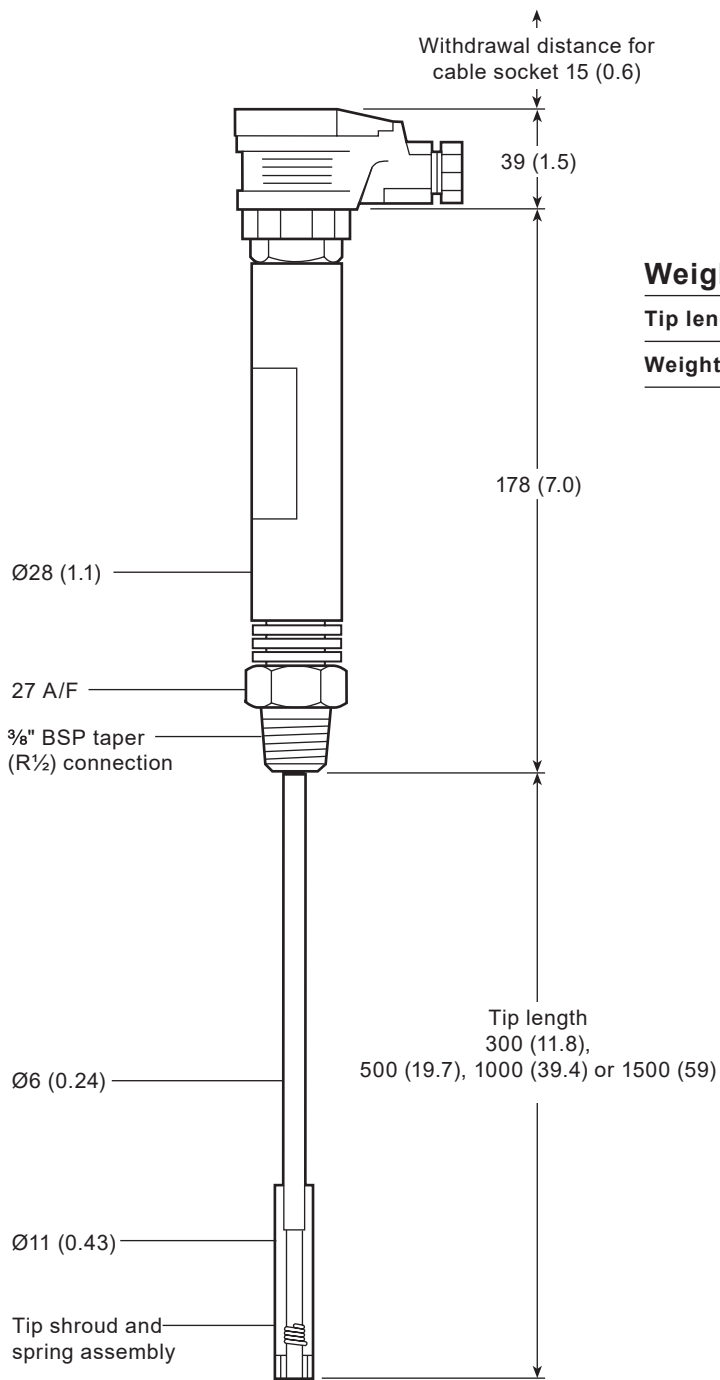


Materials



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	Type 316Ti W/S No. 1.4571
7	Probe tip	Austenitic stainless steel	ASTM A276 316L
8	Probe tip sleeving	PTFE	
9	Tip shroud	PTFE	
10	Spring (not shown)	Austenitic stainless steel	BS 2056 316 S42

Dimensions (approximate) in millimetres (inches)



Weights (approximate) in kg (lb)

Tip length	300 mm	500 mm	1 000 mm	1 500 mm
Weight	0.49 (1.08)	0.58 (1.28)	0.71 (1.55)	0.85 (1.86)

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:

Probes with tip lengths up to 500 mm can be installed vertically or horizontally. Longer probes must be installed vertically. The probe must be installed in a position where it can sense the conductivity of the boiler water, away from the feedwater inlet if possible.

Install the probe in a 3/8" BSP female connection.

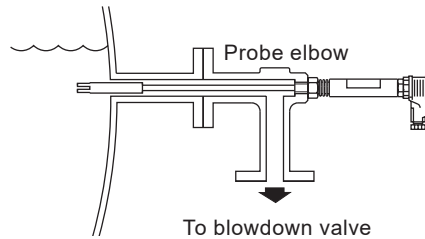
Note: Do not install the probe outdoors without additional weather protection.

Maintenance note:

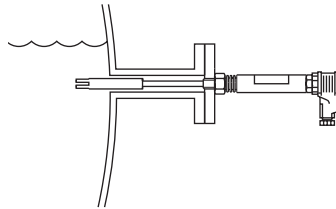
No special maintenance is required.

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

Typical installation on a probe elbow, ideally on the horizontal centre line of the boiler.
A maximum tip length of 500 mm must be adhered to on horizontal applications.



Typical horizontal installation on a boiler standpipe (screwed or flanged).



How to specify

Conductivity probes shall be Spirax Sarco type CP40 with a PTFE probe and stainless steel tip and body. They shall have a DIN 43650 cable socket with a Pg 11 cable gland.

How to order

Example: 1 off Spirax Sarco CP40 conductivity probe with a 3/8" BSP taper connection and a tip length of 500 mm.

Spare parts

The spare parts available are detailed below. No other parts are supplied as spares.

Available spares

Tip shroud and spring assembly

Stock No. 4031282

How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state which product they are for.

Example: 1 off Tip shroud and spring assembly for a Spirax Sarco CP40 conductivity probe.