

# spirax/sarco®

## BC 3100 Controller

### Description

The Spirax Sarco BC 3100 controller is part of an integrated range of boiler house equipment, designed for DIN rail or chassis mounting. The controller is used in conjunction with a Spirax Sarco conductivity sensor to monitor and control the concentration of total dissolved solids (TDS) in steam boilers, and for applications such as feedwater conductivity monitoring and condensate contamination detection.

For blowdown purposes, control is normally achieved by means of a valve which opens when the TDS rises above the set level and closes when the TDS returns to normal.

An adjustable high TDS alarm with relay output and a 0-20 mA or 4-20 mA output are included as standard.

The BC 3100 has six ranges, selected by an internal switch, and can be calibrated in ppm or  $\mu\text{S}/\text{cm}$ . Configuration labels are provided for the controller front panel and enclosure chassis plate.

The BC 3100 has a manually switched probe conditioning circuit (UK Patent No. 2276943), which allows the system to maintain its accuracy even when some boiler scaling is taking place. It should not be regarded as a substitute for adequate water treatment.

A Pt 100 temperature probe is also available to compensate the conductivity measurement for boilers where the working pressure varies, for coil boiler feed tanks, or for other water and condensate systems.

### Limiting conditions

Enclosure protection rating	IP 40
Maximum ambient temperature	131°F (55°C)
Accuracy for blowdown duties	$\pm 10\%$

### Installation

#### WARNING

**Isolate the mains supply before unplugging the controller as live terminals will be exposed in the controller base.**

The controller should be installed in an enclosure or control panel to provide environmental protection.

The controller may be mounted on a 'top hat' DIN rail using the mounting clip provided or the clip may be removed and the controller base screwed direct to a chassis plate.

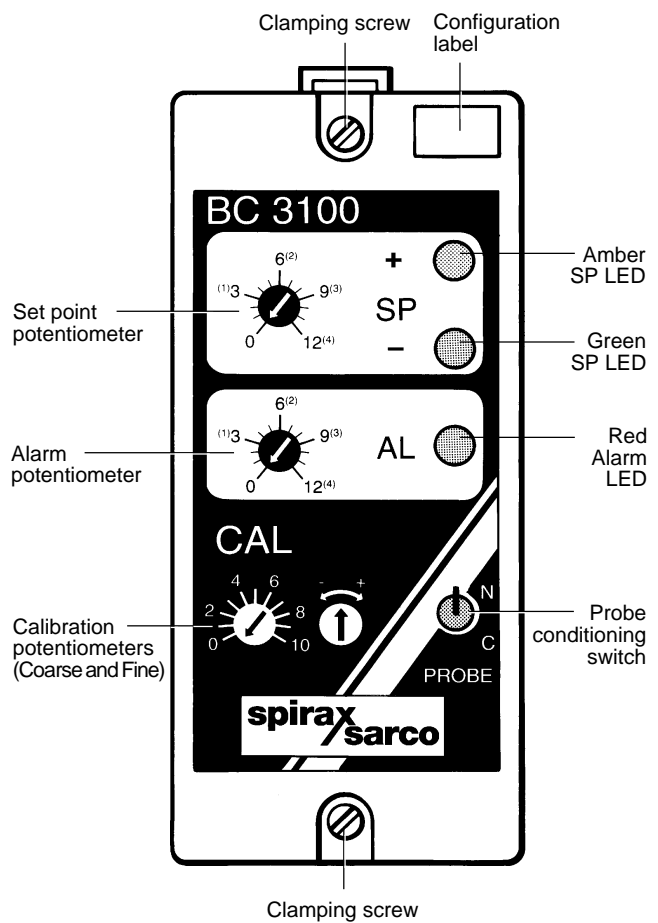
Screened cable is required for the probe. A suitable cable is Pirelli FP200 or Delta Crompton Firetuf OHLS, 1mm<sup>2</sup>. The same type of cable may be used for the mains wiring. Full wiring, commissioning and operating instructions are given in the Installation and Maintenance Instructions supplied with the controller.

### Technical data

Mains supply voltage	230 V setting	198-264 V
	115 V setting	99-121 V
	Frequency	50-60 Hz
	Maximum power consumption	6 VA
Ranges switch selectable	0-40	$\mu\text{S}/\text{cm}$ or ppm
	0-120	$\mu\text{S}/\text{cm}$ or ppm
	0-400	$\mu\text{S}/\text{cm}$ or ppm
	0-1200	$\mu\text{S}/\text{cm}$ or ppm
	0-4000	$\mu\text{S}/\text{cm}$ or ppm
	0-12000	$\mu\text{S}/\text{cm}$ or ppm

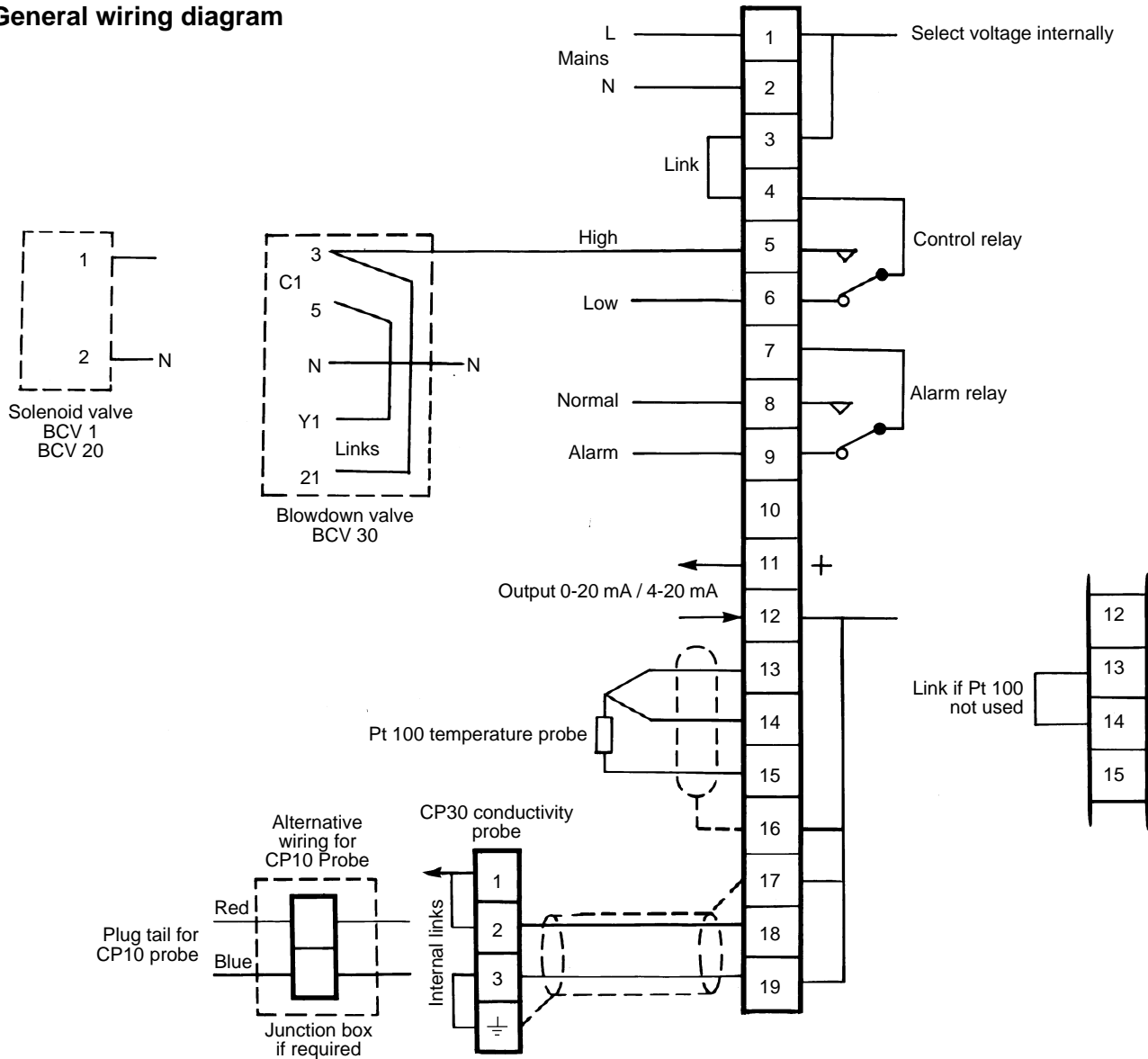
### Materials

Case	Polystyrene
Baseplate	ABS



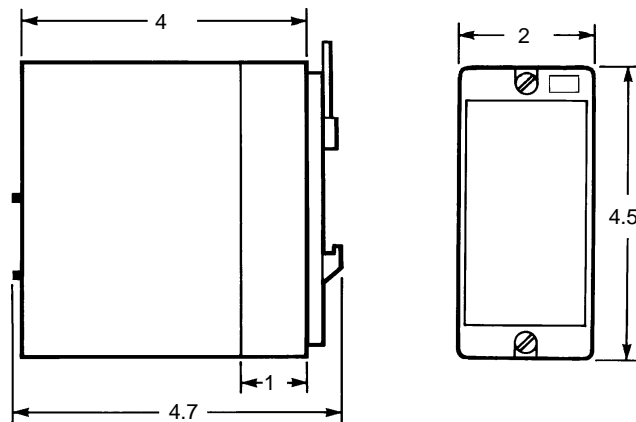
# BC 3100 Controller

## General wiring diagram



## Dimensions (approximate) in inches

Weight 1lb.



## How to specify

Blowdown controller, DIN rail/chassis mounting, with probe conditioning facility.

## How to order

1 - Spirax Sarco BC 3100 controller.

TIS 9.115 US 09.99