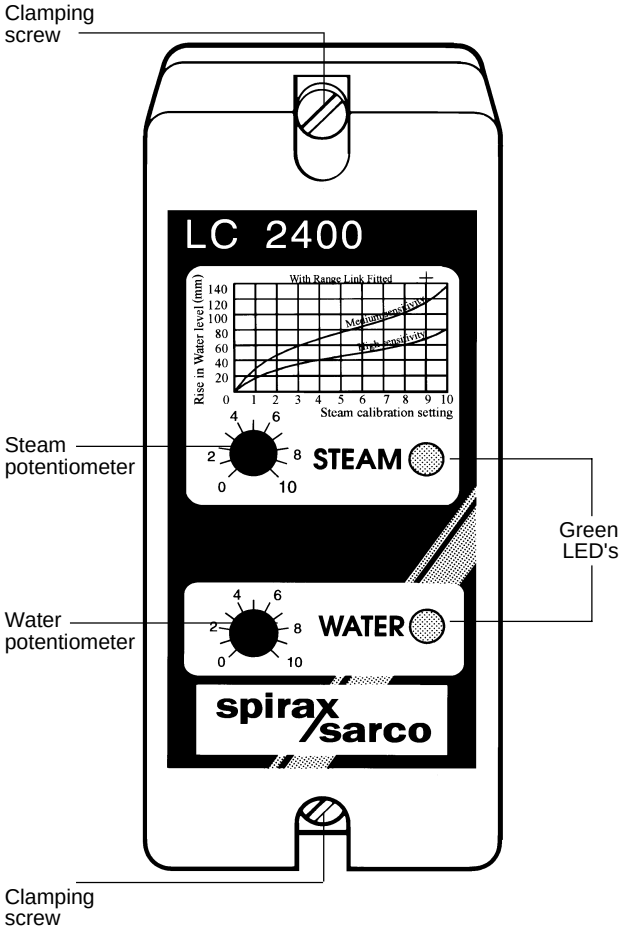
LC 2400 Controller

- Allows two or three element control of boiler water level
- Interfaces with Spirax Sarco LC 2200 or LC 2300 controllers
- Scales 4-20mA output signals from steam and water meters
- Loop powered - needs no batteries or mains connections

Description

The level of water in a steam boiler increases when a large steam demand is made, due to the effect of increased steam bubbles. This rise in water level can cause the feedwater valve to close.
Although the level of water has increased, the actual mass of water will be decreasing, a situation which requires the feedwater valve to open.
Two element control of boiler water level uses the output from a steam meter to alter the set point of a level controller in order to compensate for the tendency of the feedwater valve to close.
Under certain conditions where the boiler feedwater pressure varies considerably, perhaps due to other boilers drawing water, three element control provides even closer compensation.
The system uses the 4-20mA outputs from both a steam meter and a water meter, which overcomes any variations in boiler or feedwater pressure.
The Spirax Sarco LC 2400 is an interface device used to connect a level controller to the 4-20mA output signals from the steam meter and (where fitted), the water meter. The controller can be an LC 2200 (for an electrically actuated feed valve), or an LC 2300 (for a pneumatically actuated valve).
The LC 2400 has 'steam' and 'water' potentiometers which are used to scale the outputs of the meters. A green LED next to each potentiometer indicates that a signal is present.
Calibration is carried out by adjusting the steam potentiometer to give the required boiler water level at maximum steam demand. A graph on the front panel offers an alternative method of commissioning for systems using an LP 20 level probe fitted with the PA 20 pre-amplifier.
The water potentiometer is set to suit the water meter range.
Full commissioning, operating, and safety information is provided with each unit.



Limiting Conditions

Enclosure protection rating	IP 40
Maximum ambient temperature	131°F (55°C)
Maximum voltage drop:-	
Water input	10.5V
Steam input	5V

MATERIALS

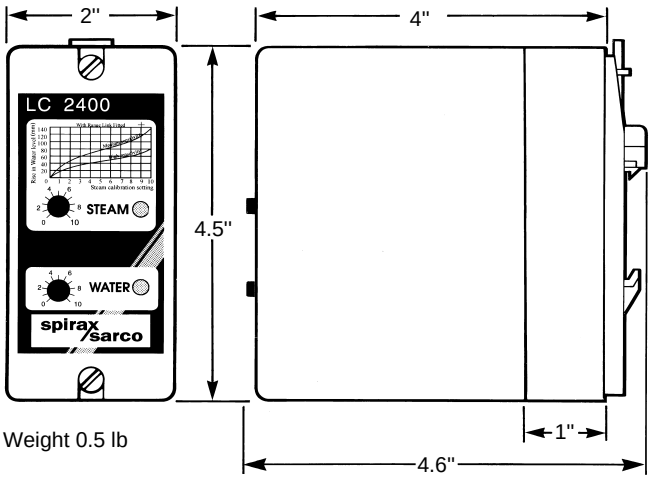
Case	Polystyrene
Baseplate	ABS (reinforced)

Installation

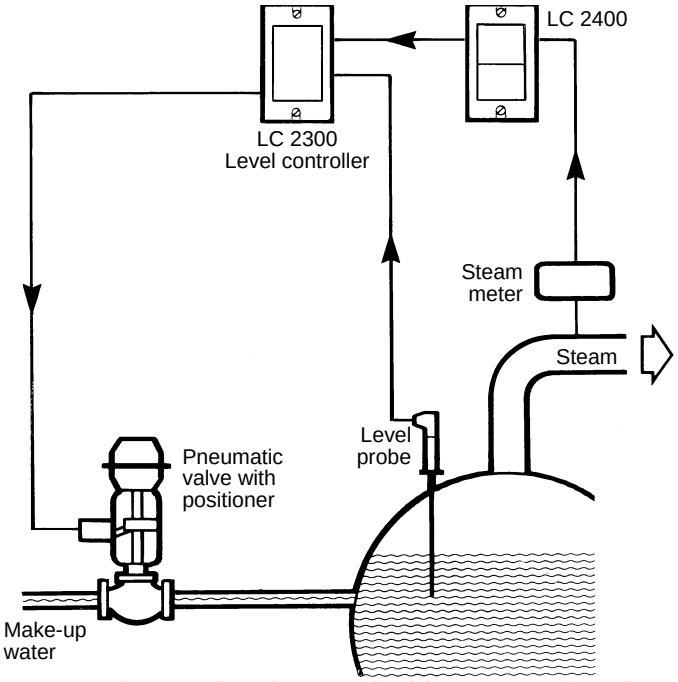
The controller should be installed in an enclosure or control panel to provide environmental protection.
CAUTION: Allow 15mm spacing between adjacent units for air circulation.
The controller may be mounted on a 'top hat' section DIN rail using the mounting clip provided, or the clip may be removed and the controller base screwed direct to a chassis plate.
Screened cable is recommended for the LC 2400 wiring.

Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.
In the interests of development and improvement of the product, we reserve the right to change the specification.

Dimensions (approximate) in inches

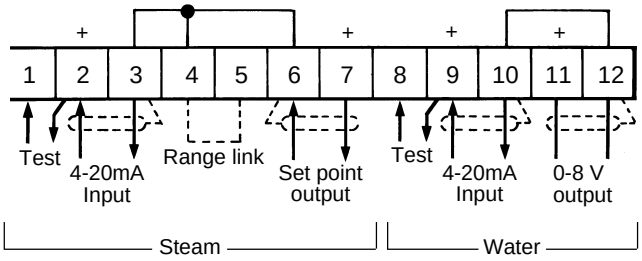


Weight 0.5 lb



Two element level control with pneumatic valve

General Wiring Diagram

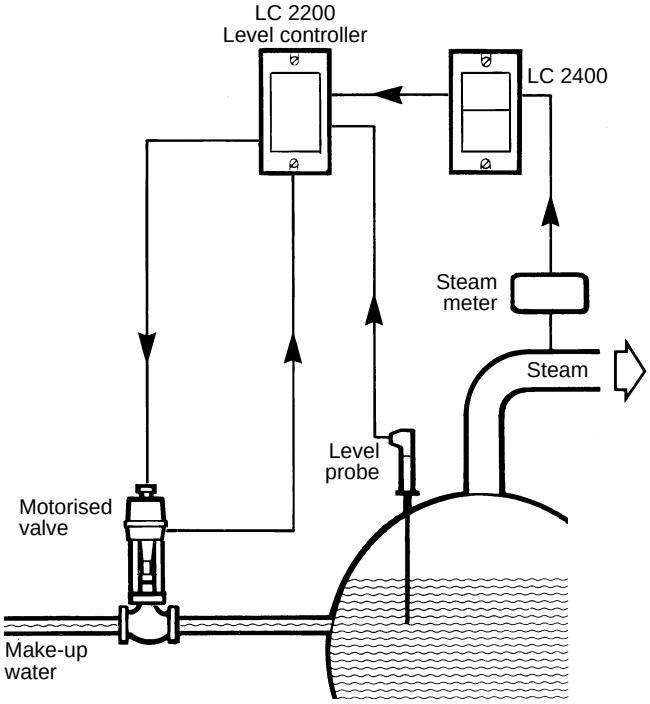


How to Specify

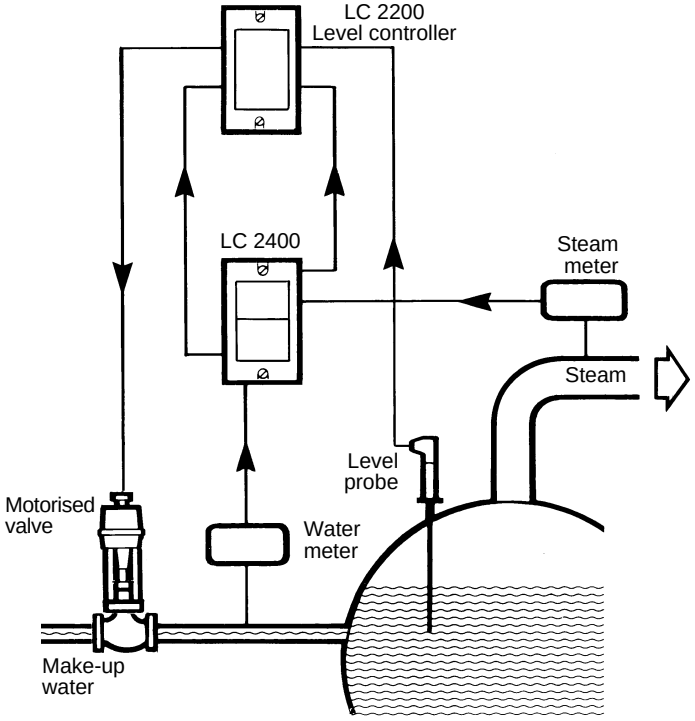
Loop powered two/three element controller with steam and water potentiometers and signal LED's.

How to Order

Spirax Sarco LC 2400 controller



Two element level control with electrically actuated valve



Three element level control with electrically actuated valve

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