



Cert. No. LRQ 0963008

ISO 9001

## BT1000 Boiler Blowdown Timer

- For time controlled blowdown of steam boilers
- Purpose designed unit with adjustable blowdown interval and duration
- Programmable delay prevents boilers blowing down in rapid succession
- Timer checks for correct closing of blowdown valve
- No batteries - settings and elapsed time stored in non-volatile memory

### Description

The Spirax Sarco BT1000 blowdown timer is a dual voltage cyclic timer for the control of blowdown intervals and their duration on steam boilers.

For multiple boiler installations, up to nine timers can be linked, preventing more than one boiler blowing down at a time. A time delay can be programmed to prevent different boilers blowing down in rapid succession. This feature avoids the possibility of overloading a blowdown vessel or pit which could lead to water being discharged to drain at too high a temperature. The timer can be wired to a switch box on the blowdown valve actuator to monitor valve operation and release an alarm relay if the blowdown valve fails to close fully within a certain period. The timer cannot, however, be used to indicate that the valve has opened fully.

The BT1000 may also be used to open a small bore valve, e.g. a solenoid valve, on a timed basis to control TDS for those situations where a conductivity system is not wanted or is not possible.

The timer front panel has a four digit LED display and two push buttons to select functions and set parameters. In 'run' mode, the display will normally show a continuous display of the time to the next programmed blowdown in hours and minutes with a decimal point flashing at two second intervals.

An external key switch may be mounted on the boiler panel and wired to lock the blowdown valve off or to open it 'manually'. The BT1000 can also be used as a cumulative timer by wiring it to operate only when the boiler is actually firing, and so can be used where boilers only operate intermittently, as in the case of stand-by boilers. Full commissioning and operating information is supplied with each unit.

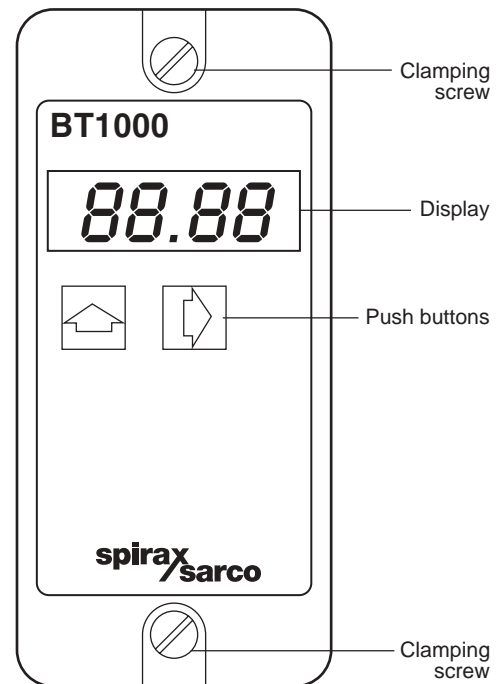
This product complies with the requirements of the Electromagnetic Compatibility Directive 89/336/EEC by meeting the standards of:  
- Emissions EN 61326: 1997 A1 and A2 Class B equipment Table 4.  
- Immunity EN 61326: 1997 A1 and A2 Industrial Locations.

### Technical data

The supply voltage is selected during installation.

|                           |   |                |
|---------------------------|---|----------------|
| Mains supply voltage      | 230 V setting   | 198 V - 264 V  |
|                           | 115 V setting   | 99 V - 132 V   |
| Frequency                 | 50 - 60 Hz  |                |
| Fuse type                 | 100 mA (T) 20 mm anti-surge type  |                |
| Maximum power consumption | 6 VA  |                |
| Time between blowdowns    | 0 - 99 hours  |                |
| Accuracy (typical)        | 5 seconds/day   |                |
| Time of blowdown          | Main blowdown   | 0 - 99 seconds |
|                           | Small bore blowdown   | 0 - 0.99 hours |
|                           | Pause time<br>(Minimum interval between blowdowns from different boilers) | 0 - 9.9 hours  |

**Caution:** Relays must be protected by an external 3 A quick-blow fuse.



### Materials

|  |                 |
|--|-----------------|
| Enclosure base and connector           | NORYL SE1 GFN 2 |
| Enclosure cover and intermediate plate | R - ABS 90.00   |

### Limiting conditions

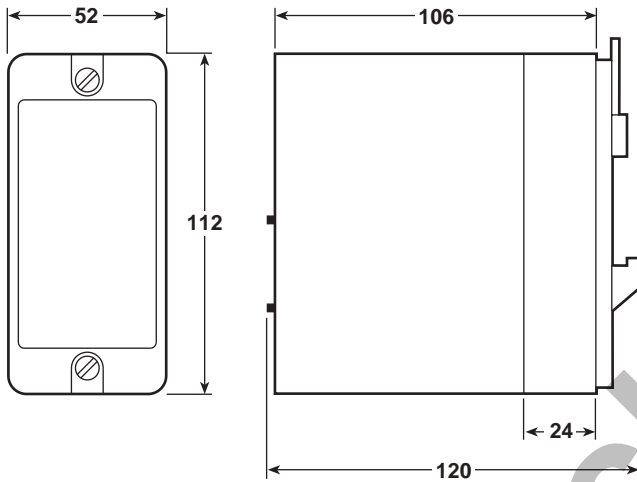
|                             |       |
|-----------------------------|-------|
| Enclosure protection rating | IP40  |
| Maximum ambient temperature | 55°C  |
| Minimum ambient temperature | 0°C   |
| Maximum cable length        | 100 m |

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**Dimensions/weight (approximate) in mm and g**

|        |     |
|--------|-----|
| Weight | 500 |
|--------|-----|

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**How to specify**

Programmable blowdown timer with digital display, valve malfunction alarm, and linking capacity.

**How to order**

**Example:** 1 off Spirax Sarco BT1000 boiler blowdown timer.

**Safety information, installation and maintenance**

This document does not contain sufficient information to install the product safely. See the Installation and Maintenance Instructions supplied with the product, which gives full wiring, commissioning and operating instructions.

Attention is drawn to Safety Information Leaflet IM-GCM-10, as well as to any national regulations concerning blowdown. In the UK, guidance is given in HSE Guidance Note PM60. In particular, your attention is drawn to the danger of working on a shut down boiler whilst other boilers are operating.

**Warning:**

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

**Installation note:**

The controller must be installed in an enclosure or control panel to provide environmental and impact protection.

Spirax Sarco can supply suitable enclosures. 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.