



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Cancellation
Certificate of Approval
No 4/9/3

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that the approval for use for trade granted in respect of the

Southern Cross Pure Water Systems Model SXW-001 Water Dispensing
Instrument

submitted by Southern Cross Pure Water Systems
 10 Quarry Lane
 Byron Bay NSW 2481

has been cancelled in respect of new instruments as from 1 April 2011.

Signed by a person authorised by the Chief Metrologist
to exercise his powers under Regulation 60 of the
National Measurement Regulations 1999.

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the bottom.



Australian Government

National Standards Commission

12 Lyonpark Road, North Ryde NSW 2113 Australia

Certificate of Approval

No 4/9/3

Issued under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the

Southern Cross Pure Water Systems Model SXW-001 Water Dispensing Instrument

submitted by Southern Cross Pure Water Systems
10 Quarry Lane
Byron Bay NSW 2481.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 June 2008, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 4/9/3 and only by persons authorised by the submitter.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the Commission and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with the Commission's Document NSC P 106.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

DESCRIPTIVE ADVICE

Pattern: provisionally approved 18 February 2003
approved 19 May 2003

- A Southern Cross Pure Water Systems model SXW-001 coin-operated water dispensing instrument.

Technical Schedule No 4/9/3 describes the pattern.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 4/9/3 dated 29 September 2003
Technical Schedule No 4/9/3 dated 29 September 2003 (incl. Test Procedure)
Figures 1 to 5 dated 29 September 2003

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

A handwritten signature in black ink, appearing to be 'J. H. H.', is written on a light-colored rectangular background.

TECHNICAL SCHEDULE No 4/9/3

Pattern: Southern Cross Pure Water Systems Model SXW-001 Water Dispensing Instrument

Submittor: Southern Cross Pure Water Systems
10 Quarry Lane
Byron Bay NSW 2481

1. Description of Pattern

A Southern Cross Pure Water Systems model SXW-001 coin-operated water dispensing instrument approved to deliver purified drinking water in pre-set quantities from 1 to 20 litres.

1.1 Field of Operation

The field of operation of the measuring system is determined by the following characteristics:

- For use with water supplied from a mains (reticulated) supply
- Nominal power supply 240 V AC
- Ambient temperature range 5°C to 40°C

1.2 The System (Figures 1 and 2)

- A purchaser's control panel (Figure 3) incorporates 4 push-button-operated switches each assigned to any whole-litre pre-set quantity from 1 to 20 litres. The quantity and price assigned to each pre-set quantity is shown adjacent to that button. A notice indicates compatible coins which can be inserted.

A fifth push-button is provided for use by the purchaser to pause the delivery.

- The control panel also incorporates a 4 digit LED numeric display which shows the amount of cash inserted. The Southern Cross Pure Water Systems model Microcoin S4 coin acceptor incorporates a coin-validation device, a coin return chute, and a 'Sold Out' indicating light, which lights up when there is insufficient water to deliver the largest pre-set quantity or when the ultraviolet sanitising light (filter) fails.
- The instrument incorporates a compartment for placing a container into which the water can be delivered. A spout for dispensing the water into the container is located at the top-centre of the compartment.
- A Southern Cross Pure Water Systems model SXW-001 electronic controller (Figure 4) provides all the control and sensing functions necessary for the production and dispensing of purified water.
- The Southern Cross Pure Water Systems Microcoin S4 coin acceptor sends the signal to the programmable logic controller inside the SXW-001 controller which dispenses volume through the ABB model V100 15 mm water meter (Figure 5) which gives an output of 2 pulses per litre.

- A Flojet model 04300-242 pump supplies water to the dispensing nozzle via a carbon filter and a ultraviolet steriliser unit.
- A supply tank of 160 litres capacity is fitted with 2 liquid level sensing probes which monitor the water level in the tank. If there is less than 18 litres in the tank, the liquid level sensing probes transmit this information to the electronic controller and a delivery of any quantity is prevented. When this occurs the 'Sold Out' light is illuminated.

1.3 Operation

A pre-set quantity of purified water is measured when the corresponding button on the purchaser's control panel is pressed. All buttons except for the 'pause' are rendered inoperative through this cycle. By pressing the 'pause' button a delivery may be paused to allow for realigning of the purchaser's bottle or to change containers; after 12 seconds the system automatically continues to complete the pre-set quantity.

A delivery cycle is initiated by inserting the appropriate coins for the quantity required and pressing the selected quantity button on the purchaser's control panel. The amount of cash inserted is shown on the 4 digit LED numeric display. If a coin inserted is not accepted it is returned through the coin return chute, which will also occur if insufficient supply is detected in the supply tank; in this case the 'Sold Out' light will be illuminated.

Once the selected quantity button is pressed the coin acceptor transmits a signal to the programmable logic controller (PLC) which opens the solenoid valves allowing water to be dispensed. The PLC receives pulses from the flowmeter as the water is going through and when the predetermined pulses are picked-up by the PLC, the solenoid valves are closed stopping the delivery.

1.4 Verification/Certification Provision

Provision is made for a verification/certification mark to be applied to the ABB model V100 water meter.

1.5 Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full
Pattern approval mark for the instrument	NSC No 4/9/3
Quantities for which the instrument is verified	1 – 20 L
Approved for dispensing	Purified water

In addition, the quantities dispensed, expressed in L, and the price, expressed in \$, are displayed adjacent to the relevant push-button on the purchaser's control panel.

TEST PROCEDURE

Instruments should be tested in conjunction with any relevant tests.

Maximum Permissible Error at Verification/Certification

The maximum permissible error applied during a verification/certification test is $\pm 1.5\%$ of the quantity measured.

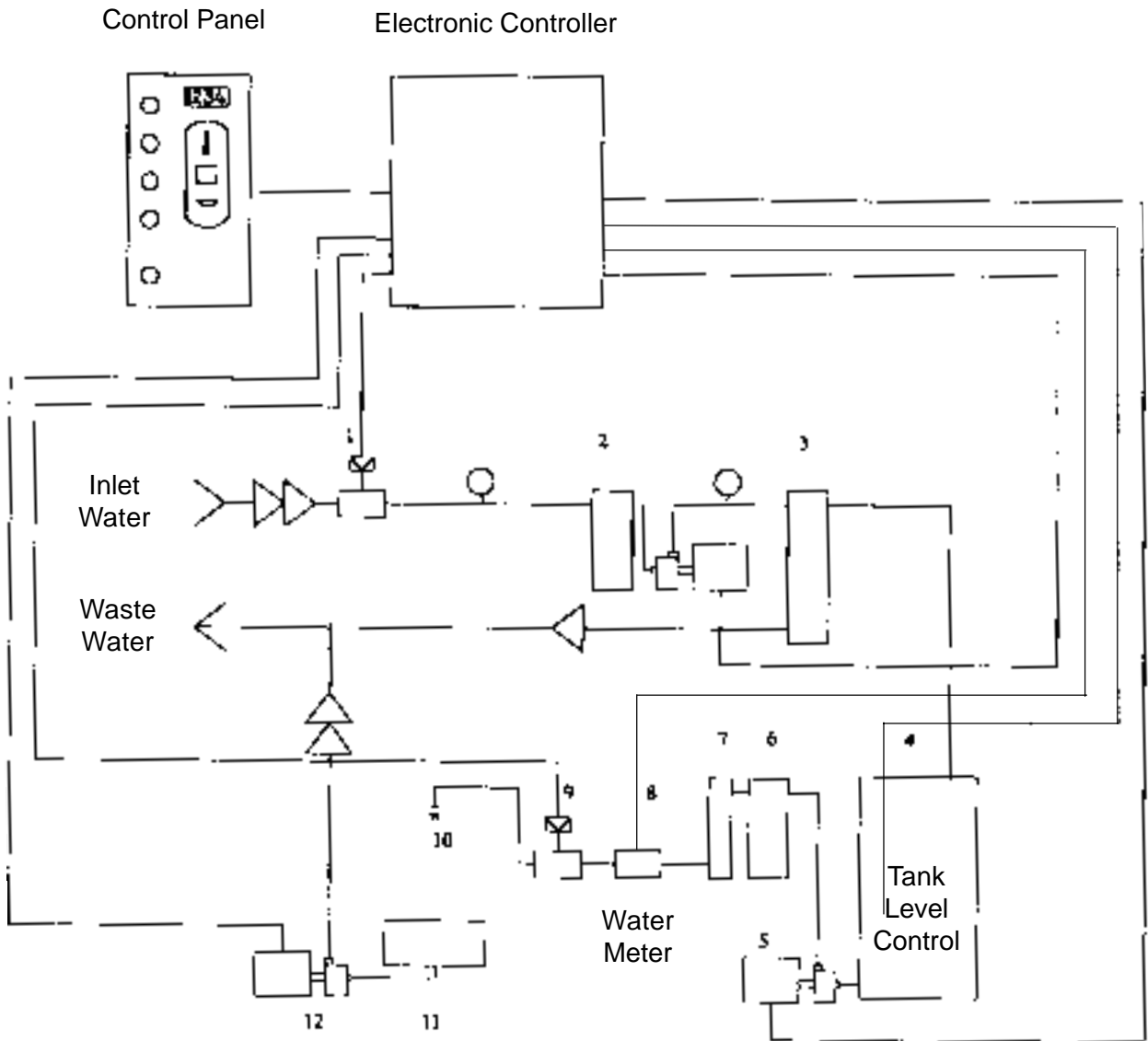
Delivery Completion Test

Whilst a delivery is being made, press the same operating button a second time; no further delivery should take place until the initial delivery is completed

Low-level Cut-out Test

Partially empty the supply tank so that no more than 18 litres of water is remaining and attempt a delivery. Observe that the "Sold Out" LED illuminates and ensure that delivery of any quantity is not possible.

FIGURE 4/9/3 – 2



- | | | | | | |
|---|---|------------------------|----|---|---------------------|
| 1 | - | Inlet solenoid valve | 7 | - | Ultraviolet filter |
| 2 | - | Filters | 8 | - | Water meter |
| 3 | - | Reverse osmosis filter | 9 | - | Dispensing solenoid |
| 4 | - | Storage tank | 10 | - | Dispensing nozzle |
| 5 | - | Dispensing pump | 11 | - | Overflow sump |
| 6 | - | Filter | 12 | - | Overflow sump pump |

FIGURE 4/9/3 – 3



Purchaser's Control Panel

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FIGURE 4/9/3 – 4



Model SXW-001 Electronic Controller

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FIGURE 4/9/3 – 5



ABB Model V100 Water Meter