Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Supplementary Certificate of Approval

NMI S393

Issued by the Chief Metrologist 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 instruments herein described.

DME Model MOBICOM Calculator/Indicator for Liquid-measuring Systems

submitted by Flo-Gineering Pty Ltd
3/43 Leighton Place
Hornsby NSW 2015

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.

This approval has been granted with reference to document NMI R 117 Measuring Systems for Liquids Other than Water, dated June 2011.

This approval becomes subject to review on 1/10/22, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern provisionally approved – interim certificate issued	20/09/01
1	Pattern approved – certificate issued	27/07/04
2	Pattern reviewed & amended – notification of change issued	24/03/11
3	Pattern reviewed & amended (submittor address) – Variant 1 approved – certificate issued	6/09/17

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S393' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S393' in addition to the approval number of the instrument, and only by persons authorised by the submittor.

Instruments purporting to comply with this approval and currently marked 'NSC P393' may be re-marked 'NMI S393' but only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) 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 document NMI P 106.

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

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

Mr Darryl Hines

TECHNICAL SCHEDULE No S393

1. Description of Pattern provisionally approved on 20/09/01 approved on 27/07/04

A DME model MOBICOM calculator/indicator (Figure 1) for use in milk-measuring systems incorporating an approved DME or Diessel electromagnetic flowmeter approved for accuracy class 0.5.

1.1 Field of Operation

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

Signal input	±5 V DC
Power supply (nominal)	24 V DC
Accuracy class	0.5
Environmental class	I
Ambient temperature range	–25°C to 55°C

1.2 Features

The features of the MOBICOM calculator/indicator (software version 1.33-022S, Mc144sXX.H86 and Mc200bXX.H86) are:

- 4 x 20 character wide-angle liquid crystal display (LCD);
- A (resettable) LCD display for indicating the quantity delivered in 1.0 L scale intervals;
- LED indicators for pump status;
- A display of the daily quantity delivered (resettable) and the total quantity (nonresettable) by pressing the appropriate keys on the keypad;
- An alphanumeric display for the operator communication and for the indication of error messages;
- Access to calibration (see clause **1.7 Sealing Provision**);
- A numeric keypad with function keys for the entry and retrieval of data;
- An alphanumeric data display;
- Input/output sockets for the connection of auxiliary and/or peripheral devices, including printers; and
- Pump start/stop funtions, etc
- An optional GPRS modem for wireless data transfer **(#)** (requiring software version Mc200bXX.H86).

(#) Data transfer is non-metrological.

1.3 Printer

The DME model MOBICOM calculator/indicator may be connected to a DME model 112T printer or equivalent (*) for printing receipts and barcodes. The thermal printing mechanism is fitted with a metal enclosure and shielded cable and operates at 9 to 40 V DC.

(*) ‘Equivalent’ is defined to mean other proprietary equipment of the same or better specifications requiring no changes to the software specified in this approval for satisfactory operation of the system.

1.4 Power Supply

The calculator/indicator operates with a 10 to 30 V DC supply. The volume display is retained on power failure. The totaliser value is stored in the non-volatile memory.

1.5 Checking Facilities

A segment check is performed, displaying all “8s” on power up.

The calculator/indicator will display errors if the pulses are out of phase or the flow direction is incorrect causing the metering to stop, displaying “invalid measurement”.

The software version number is displayed when the calculator/indicator is turned on.

1.6 Descriptive Markings and Notices

Each measuring system shall bear the following information, placed together either on the indicating device or on a data plate:

Pattern approval mark	NMI No S393
Manufacturer’s identification mark or trade mark	…..
Meter model	…..
Serial number of the instrument	…..
Environmental class	I

The minimum measured quantity V_{min} of the measuring system shall in all cases be visible on the indicating device to the user during the measurement.

1.7 Sealing Provision

To prevent access to the calibration and set-up parameters, the calculator/indicator can be secured by covering the holes in the metal plate over jumper blocks J1, J2, J3 and J6. The attachment of the metal plate to the cabinet should be sealed with sealing wire through the holes in the two sealing screws provided, or alternatively by means of destructible adhesive labels. Note that the ‘program enable’ switch in the terminal box must be set to the ‘off’ position.

2. Description of Variant 1 approved on 6/09/17

With the MOBICOM calculator indicator operation software version v144.XXX, v145.XXX and v200.XXX.

TEST PROCEDURE

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

The maximum permissible errors are specified in the *National Trade Measurement Regulations 2009*.

FIGURE S393 – 1

DME Model MOBICOM Calculator/Indicator for Liquid-measuring Systems

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