



Australian Government

National Measurement
Institute

Bradfield Road, West Lindfield NSW 2070

Interim Provisional Supplementary Certificate of Approval NMI PS568

VALID FOR VERIFICATION PURPOSES UNTIL 13 OCTOBER 2012

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.

Veeder-Root Model EMR³ Calculator/Indicator for Liquid-measuring Systems

submitted by Gilbarco Australia Pty Ltd
 20 Highgate Street
 Auburn NSW 2144

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 117-1, Measuring Systems for Liquids Other than Water, dated July 2004.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern provisionally approved – interim certificate issued	13/07/12

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI PS568' and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI PS568' in addition to the approval number of the instrument, 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 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.

Special Conditions of Approval: (Provisional Approval)

This approval is limited to five (5) instruments only, the locations or serial numbers of which may be obtained from the National Measurement Institute. The submitter shall advise NMI in writing of the proposed location and/or serial number of each instrument prior to it being initially verified.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI PS568' and only by persons authorised by the submitter. (Note: The 'P' in the approval number may be a temporary marking.)

The approval will remain provisional pending completion of satisfactory testing and evaluation.

NMI may attend and carry out in-situ testing in conjunction with the verification testing.

The submitter shall provide NMI with copies of test results from the initial verification and all subsequent tests.

In the event of unsatisfactory performance, or of suitable test results not being received by NMI the approval may be cancelled (or altered).

The submitter shall implement such modifications as required by NMI. In the event that such modifications (if any are required by NMI) are not made to the satisfaction of NMI prior to 13 September 2012, this approval may be withdrawn.

1. Description of Pattern provisionally approved on 13/07/12

The pattern is a Veeder-Root model EMR³ calculator/indicator use with compatible (#) NMI-approved liquid-measuring systems.

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

- Input pulse rate less than 1666.7 Hz
- Input voltage ranges:
 - for the calculator/indicator 12 V DC to 24 V DC
 - for the pulse generator 5 V DC
 - for the printer 24 V DC
- Liquid temperature range -10°C to 50°C
- Environment temperature range -25°C to 55°C
- Non-linearity correction facility

(#) 'Compatible' is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system including all checking facilities.

The model EMR³ calculator/indicator includes an alphanumeric liquid crystal display and may also have a keypad attached. The model EMR³ unit may receive measurement pulses for the measurement transducer or it may be fitted with an internal pulser unit mechanically linked to the flowmeter.

The maximum volume displays are:

99 999.9 L when the resolution is set to 0.1

9 999 999 L when the resolution is set to 1

The accumulated total is displayed up to 99 999 999 L before rolling over to 0. The total can be reset to zero via the calibration mode.

The model EMR³ operates with version 349785-001 main operational software.

The model EMR³ unit may be fitted internally with an Oak Grigsby model 94Q100-B3-00350 or Bourns model ENS1J-489-L00100 internal pulse transmitter with optic sensors to provide an TTL channel pulse output. Alternatively, the model EMR³ unit may be used with a Veeder-Root model 7649 or other compatible (#) NMI-approved external pulse transmitter.

The Veeder-Root model 0845893 interconnect box provides intrinsically safe power and contains the main operational software. It also provides the control interface between the calculator/indicator and the rest of the measuring system.

An Epson model TM-U295 dot matrix slip printer or any other equivalent (*) printer is used. It is used for printing delivery dockets showing the date and time of the delivery, the docket number, the quantity delivered, the price and other operator entered details.

The model EMR³ calculator/indicator is configured either for a single k-factor or up to eight k-factors to define the relationship between the volume throughput and the pulses generated by the measurement transducer.

- (#) 'Compatible' is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system including all checking facilities.
- (*) 'Equivalent' is defined to mean other proprietary equipment of the same or better specifications requiring no changes to software for satisfactory operation of the complete system including all checking facilities.

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



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