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United Kingdom of Great Britain  
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OIML Certificate No  
R117/2007-GB1-16.05

## OIML CERTIFICATE OF CONFORMITY

Issuing authority: **NMO**  
Person responsible: **Max Linnemann – Head of Certification Body**  
Applicant: **Liquid Controls, LLC**  
**105 Albrecht Drive**  
**Lake Bluff, IL 60044**  
**USA**  
Manufacturer: **The applicant**

Identification of the certified pattern: **Electronic calculator and indicator model Masterload II**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organisation of Legal Metrology (OIML):

### **OIML R117 - Edition 2007(E) for accuracy class: 0.5**

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

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Issue Date: **02 November 2016**  
NMO Reference: **P02003**



**G Stones**  
**Technical Manager**  
*For and on behalf of the Head of Certification Body*

NMO | Stanton Avenue | Teddington | TW11 0JZ | United Kingdom  
Tel +44 (0) 20 8943 7272 | Fax +44 (0) 20 8943 7270 | Web [www.gov.uk/government/organisations/regulatory-delivery](http://www.gov.uk/government/organisations/regulatory-delivery)  
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The conformity was established by testing and examination as described in the associated Evaluation Report P02003/2 which includes 18 pages.

## 1 INTRODUCTION

The Masterload II meter register (Figure 1), is a vehicle mounted electronic calculating / indicating device for interruptible systems for measuring liquids other than water with an accuracy class 0.5.

The Masterload II system is suitable for use with any compatible approved meters.

## 2 CONSTRUCTION

### 2.1 Prime Parts with Metrological Function

Manufacturer	Item	Model Number
Meggitt	Electronic Display Unit	BEMY106-XX
Meggitt	PSU	BEMY105-YY
Eltomatic	Pulse Transmitter	BMMZ333ZZ

where:

XX – Dependant on display configuration

YY – Dependant on 12 Vdc or 24 Vdc

ZZ – Dependant on meter type

The PSU provides a permanent signal to the 'deadman' circuit. If an error occurs the signal is lost and the switch is activated.

### 2.2. Software and checksum

Software ID	Issue	CRC-32	MD5
PO80 for Processor	6.2	81725CC1	3AEAF930DC54D827314F2753ED8C7E44
PO81 for PSU	1.7	9E7E2050	DBBCBDE93FCB13D07ABFD36CA442C0CD

Both the processor and PSU software are stored in the EPROM and displayed under flag 00. These cannot be changed without changing the EPROM. The checksum indicated above is a unique identification of the software. Any change to or corruption of the software will result in a different checksum. Checksum is verified at the time the software is written to the EPROM at the factory. The checksum can also be verified in a laboratory to ensure that only software identified by the above checksum is loaded on the EPROM. Once the housing is sealed, EPROM cannot be removed.

### 2.3 Temperature Compensation

The Masterload II may implement temperature compensation, by utilising a PRT probe model BEMY1115 probe part number ZEMZ0309-02.

## 3 SEALINGS

The Processor/Display unit has an access plug to allow entry into the setup mode/flags. This plug has a hole drilled through it, as does the adjacent screw in the bottom left corner of the display which secures the facia/glass to the box (Figure 2). A sealing wire and seal are fixed once the calibration has taken place to prevent unauthorised access and the removal of facia/glass to prevent access to EPROM.

The pulser transmitter is sealed to the meter housing using sealing wire and seals as shown in Figure 3.

**4 OPERATION**

As described in operation manual TP0025 (Trim File TS0904/0002).

**5 FIGURES**

- Figure 1 Masterload II Display**
- Figure 2 Display Sealing Points**
- Figure 3 Pulse Transmitter Sealing**

**6 AUTHORISED ALTERNATIVES**

**6.1** Having alternative model designations, as detailed below, for the **Prime Parts with Metrological Function** as described in Section 2.1.

<b>Manufacturer</b>	<b>Item</b>	<b>Model Number</b>
Meggitt	Electronic Display Unit	BEMY106A-XX
Meggitt	PSU	BEMY105A-YY
Eltomatic	Pulse Transmitter	BMMZ333ZZA

Note:

- XX – Dependant on display configuration
- YY – Dependant on 12 Vdc or 24 Vdc
- ZZ – Dependant on meter type

**CERTIFICATE HISTORY**

<b>ISSUE NO.</b>	<b>DATE</b>	<b>DESCRIPTION</b>
R117/2007-GB1-16.05	02 November 2016	Certificate first issued.
-	-	No revisions have been issued.



Figure 1 Masterload II Display

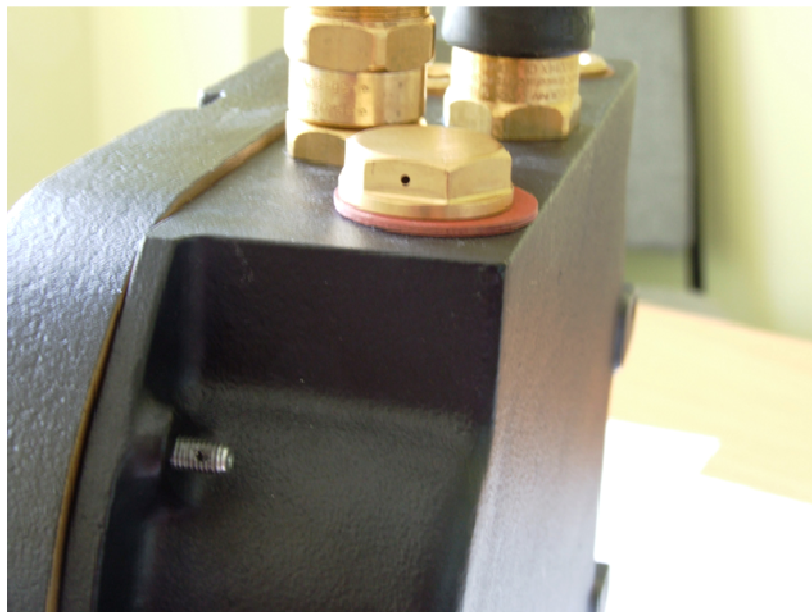


Figure 2 Display Sealing Points



**Figure 3**      **Pulse Transmitter Sealing**