



Australian Government
**Department of Industry, Science,
Energy and Resources**

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

**Interim
Provisional
Supplementary Certificate of Approval
NMI PS821**

VALID FOR VERIFICATION PURPOSES UNTIL 1 October 2022

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.

Invenco Model C1-100 Controller for Fuel Dispensers for Motor Vehicles

submitted by Invenco Group Ltd
Level 2, 7-11 Kawana Street
Northcote 0627
AUCKLAND NEW ZEALAND

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 is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern provisionally approved – interim certificate issued	23/09/21

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI PS821' 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 Certificate No S1/0B.

Special Conditions of Approval: (Provisional Approval)

This approval is limited to ten (10) sites only, the locations of which may be obtained from the National Measurement Institute. The submitter shall advise the **National Measurement Institute – Pattern Approval Laboratory** in writing of the proposed location 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 PS821' 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.

In the event of unsatisfactory performance 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, this approval may be withdrawn.

1. Description of Pattern **provisionally approved on 23/09/21**

An Invenco model C1-100 controller that operates as the controller for compatible (#) approved self-service control systems for Fuel Dispensers for Motor Vehicles

(#) '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.

1.1 Field of Operation

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

- The controller can provide a self-serve arrangement for Production Engineering 1000 series fuel dispensers, or other compatible (#) NMI approved fuel dispensers.
 - The controller may facilitate operation in attended or unattended self-service arrangements when interfaced with a compatible (#) NMI approved control system for Fuel Dispensers for Motor Vehicles.
 - Environmental temperature range: -10°C and 55°C (Class N)
 - Power supply input: 240 V AC
- (#) 'Compatible' is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system.

1.2 System Description

The Invenco model C1-100 controller (Figure 2) provides the interface between a NMI approved self-service control system and the NMI approved fuel dispensers.

(i) Controller

The Invenco model C1-100 controller is a standalone device with communication interfaces to compatible fuel dispensers and an external self-service control system. The controller provides the self-service control system with the fuel dispenser control functions.

(ii) Controller Software

Invenco version R15.00.0007 software operating on a Linux based operating system provides the software interface to the controller for the configuration and control of fuel dispensers.

1.3 Checking Facilities

The C1-100 controller receives the fuel sale data (unit price, litres dispensed and total price) directly from the fuel dispenser(s). The controller monitors the status of connected fuel dispensers. Error checking verifies that transmitted data is correct.

Additional system checking facilities may be required when the controller is used in an attended or unattended self-service system.

Note: The checking facilities are described in the approval documentation for the point of sale system that is interfaced to the controller.

1.4 Verification Provision

The C1-100 controller does not require a separate verification mark

1.5 Sealing Provision

The C1-100 controller does not require sealing.

1.6 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's name or mark
Manufacturer's designation (model number)
Pattern approval number	NMI PS821
Year of manufacture
Serial number of the instrument

TEST PROCEDURE

Instruments shall be tested in conjunction with any tests specified in the approval documentation for the instruments to which the pattern is connected, as appropriate, and 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*.

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



Darryl Hines
Manager
Policy and Regulatory Services

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