



Australian Government
Department of Industry,
Innovation and Science

National Measurement Institute

Supplementary Certificate of Approval NMI S454

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.

Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

submitted by Compac Industries Ltd
 52 Walls Road
 Penrose 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 becomes subject to review on **1/03/22**, and then every 5 years thereafter.

DOCUMENT HISTORY

| Rev | Reason/Details | Date |
|-----|---|----------|
| 0 | Pattern & variant 1 approved – certificate issued | 28/02/05 |
| 1 | Variant 2 approved – certificate issued | 15/10/07 |
| 2 | Variant 3 and 4 approved – interim certificate issued | 30/04/08 |
| 3 | Pattern & variant 1 reviewed – variant 5 approved – variants 3 and 4 cancelled – certificate issued | 16/09/10 |
| 4 | Variant 6 approved – certificate issued | 22/09/11 |
| 5 | Pattern and variants 1 to 6 reviewed & updated – certificate issued | 13/12/16 |

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S454' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S454' in addition to the approval number of the instrument, and 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*.



Mario Zamora

TECHNICAL SCHEDULE No S454

1. Description of Pattern **approved on 28/02/05**

The pattern is a Compac model DCA ('Driveway Card Acceptor') card-operated control system (Figure 1) to provide unattended self-service operation for fuel dispensers fitted with Compac model C4000 indicators or other compatible (#) approved fuel dispensers for motor vehicles.

(#) 'Compatible' is defined to mean that no additions/changes to the hardware/software specified in this approval are required for satisfactory operation of the system.

1.1 Field of Operation

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

- The DCA control system is approved for environmental class N for outdoor use between -10°C and 55°C.
- The system can provide a self-service arrangement for up to 32 compatible approved fuel dispensers fitted with Compac model C4000 indicators (as described in the documentation of approval NSC S377) or other compatible approved indicators.
- The nominal supply voltage is 240 V AC.

1.2 System Description

The DCA control system is a standalone card-operated terminal that allows unattended self-serve operation of fuel dispensers. Payment is authorised prior to delivering fuel via magnetic customer card reader and/or PIN pad.

The device is housed in a weatherproof housing (Figure 2) and has a Customer Interface Module (CIM) installed at the front, which consists of a card reader, keypad, liquid crystal display (LCD) and receipt printer in a single unit.

The DCA control system contains the Compac Communicator Controller circuit board (Figure 3) using software EA-B-01:80.xx (*), and provides communication and control of the fuel dispensers.

An uninterruptible power supply unit (UPS) to provide operation under power failure condition. Note: The UPS supplied was a Sola model of 550 VA rating – the submitter should be consulted regarding the acceptability of alternative power supply units, which must also be compatible with clause **1.3 (i)**.

(*) Minor revision versions are denoted by 'xx'. Minor revisions shall not impact on the metrological control functions of the software

1.3 Checking Facilities

(i) Uninterruptible Power Supply (UPS)

The system monitors the condition of the uninterruptible power supply, and if an error condition is detected it prevents a new transaction being started (authorised).

(ii) Receipt Printer

If the receipt printer in the CIM is unavailable or out of paper, the LCD will display that a receipt will not be available before a user enters their card or identification number to authorise a transaction.

(iii) Memory Facilities

Prior to a dispenser being authorised the device checks the status and availability of memory for storage of the transaction. If there is insufficient memory available, no further transactions can be authorised.

1.4 Verification Provision

Provision is made for the application of a verification mark.

1.5 Markings

The DCA control system is marked with the following data, together in one location:

| | |
|-----------------------------|----------|
| Manufacturer's name or mark | |
| Model number | |
| Serial number | |
| Pattern approval number | NMI S454 |
| Environmental class | Class N |

2. Description of Variant 1 **approved on 28/02/05**

A Compac model RAS ('Remote Authorisation Station') control system which is similar to (and externally identical to) the pattern (model Compac DCA, Figure 2) except that it does not contain the Compac Communicator controller. The Communicator controller circuit board is replaced by a C4000 circuit board, which allows the RAS to communicate with other approved Compac control systems to provide additional unattended self-service operation, e.g. with the pattern (model DCA) or the model Commander (as described in the documentation of approval NMI S340A).

3. Description of Variant 2 **approved on 15/10/07**

With a Compac model OPT (online payment terminal) unit (Figure 4) replacing the Customer Interface Unit described for the pattern.

The device is housed in a weatherproof housing (Figure 4) and consists of a card reader, a keypad, a liquid crystal display (LCD), a receipt printer and an integral uninterruptible power supply. The unit includes additional components to utilise EFTPOS features

4. Description of Variant 3 **approved on 30/04/08** **cancelled on 16/09/10**

Without the receipt printer and uninterruptible power supply described for the pattern in which case instruments are suitable for use by registered users only.

5. Description of Variant 4 **approved on 30/04/08** **cancelled on 16/09/10**

The pattern or variant 3 now installed within any compatible approved (#) Compac fuel dispenser for motor vehicles. Figure 5 shows a typical installation.

6. Description of Variant 5 **approved on 16/09/16**

For use with software version EA-B-01:82.xx (*), to provide communication and control of compatible (#) NMI-approved LNG fuel dispensers.

7. Description of Variant 6 **approved on 22/09/11**

For use with software version ED-B-01:82.xx (*), to provide communication and control of compatible (#) NMI-approved LNG fuel dispensers.

This variant is similar to variant 5 however the software version has been upgraded and now supports the use of HID tags (HID Global RFID tags) for authorisation.

- (*) Minor revision versions are denoted by 'xx'. Minor revisions shall not impact on the metrological control functions of the software.
- (#) 'Compatible' is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system.

TEST PROCEDURE

Instruments shall be tested in conjunction with any test specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

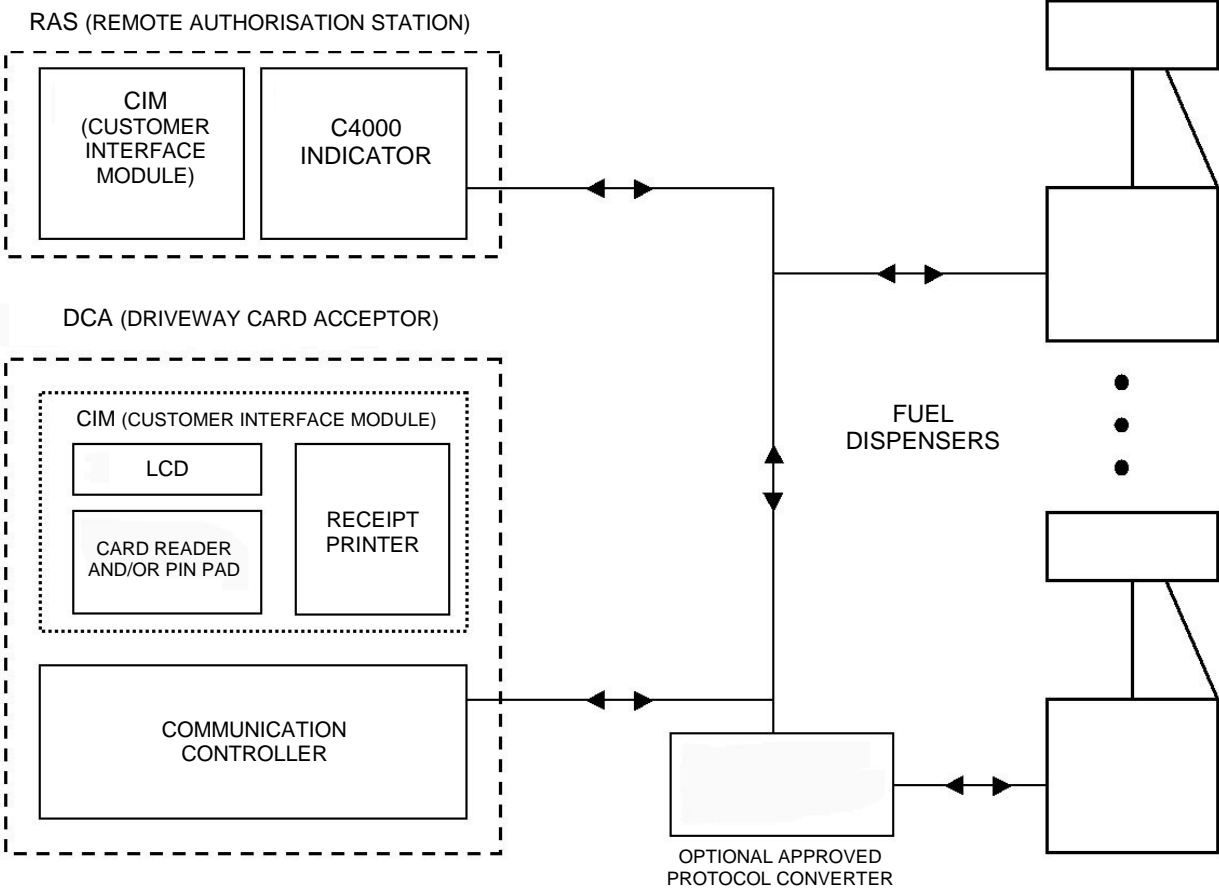
The maximum permissible errors are specified in the *National Trade Measurement Regulations 2009*.

The maximum permissible errors applicable are those applicable to the fuel dispensers to which the instrument approved herein is fitted, as stated in the approval documentation for the fuel dispensers or in Schedule 1 of the *National Trade Measurement Regulations 2009*.

Points 2-6 are required at commissioning, thereafter may be conducted at the discretion of the inspecting officer.

1. Check the DCA software version number. The version number is displayed on the front liquid crystal display (LCD) during the power on initialisation sequence.
2. Check that the unit price change for the grade of fuel is implemented to the allocated fuel dispensers when they are available for authorisation.
3. Check that the control console identifies, displays and prints the correct data for the corresponding number allocated to the fuel dispenser.
4. Authorise a delivery and check that the delivery details on the fuel dispenser agree with the receipt obtained.
5. Check that when principal power supply is disconnected from uninterruptible power supply, the fuel dispenser cannot be authorised.
6. Remove paper from receipt printer to check that when the receipt printer is unavailable an appropriate message is displayed on the front LCD.

FIGURE S454 – 1



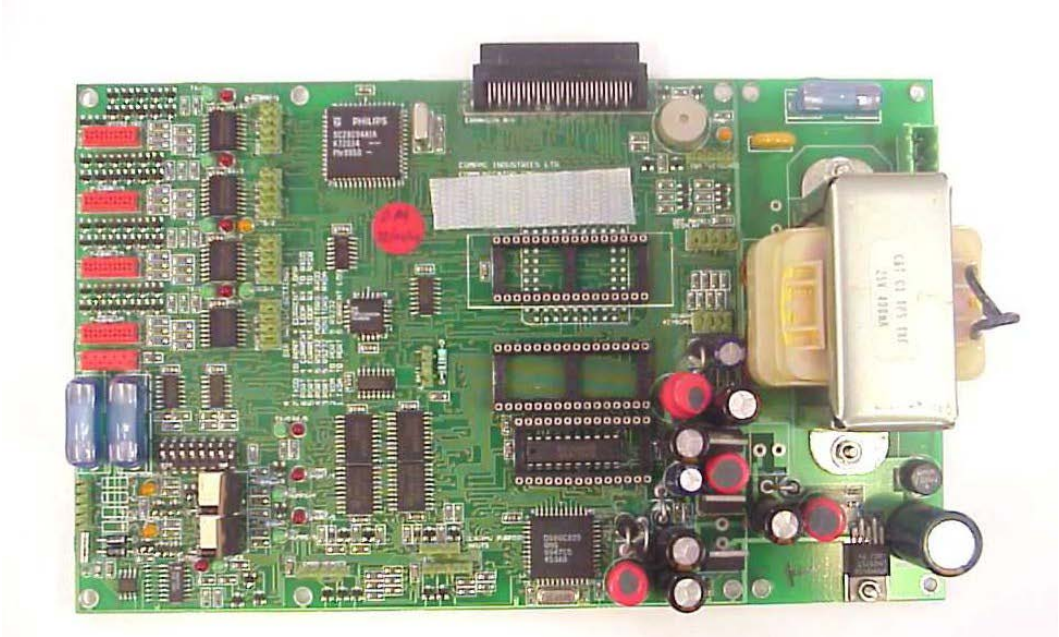
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FIGURE S454 – 2



Compac Model DCA/RAS Card-Operated Terminal

FIGURE S454 – 3



Compac Communicator Controller Circuit Board

FIGURE S454 – 4



Compac Model OPT (Online Payment Terminal) Unit