



Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

No 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

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

The approval of variants 5 and 6 have been granted with reference to document NMI R 81, *Dynamic Measuring Devices and Systems for Cryogenic Liquids*, dated August 2009.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 March 2015, and then every 5 years thereafter.

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

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

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.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

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

DESCRIPTIVE ADVICE

Pattern: approved 25 February 2005

- A Compac model DCA control system for use with compatible approved fuel dispensers for motor vehicles.

Variant: approved 25 February 2005

1. A Compac model RAS control system.

Technical Schedule No S454 describes the pattern and variant 1.

Variant: approved 12 October 2007

2. With a Compac model OPT (online payment terminal) unit.

Technical Schedule No S454 Variation No 1 describes variant 2.

Variants: approved 30 April 2008

cancelled 1 October 2010

3. Without certain components and for registered users only.
4. The Compac model DCA control system integral in certain approved fuel dispensers.

Interim Certificate No S454 Variation No 2 describes variants 3 and 4 – no final Certificate and Technical Schedule were ever issued for these variants.

Variant: approved 15 September 2010

5. For use with compatible NMI-approved LNG fuel dispensers.

Technical Schedule No S454 Variation No 2 describes variant 5.

Variant: approved 22 September 2011

6. For use with compatible NMI-approved LNG fuel dispensers and with RFID tag authorisation.

Technical Schedule No S454 Variation No 3 describes variant 6.

FILING ADVICE

Supplementary Certificate of Approval No S454 dated 15 October 2007 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S454 dated 16 September 2010
Technical Schedule No S454 dated 28 February 2005 (incl. Test
Procedure)

Technical Schedule No S454 Variation No 1 dated 15 October 2007
Technical Schedule No S454 Variation No 2 dated 16 September 2010
(incl. Note)

Technical Schedule No S454 Variation No 3 dated 22 September 2011
Figures 1 to 3 dated 28 February 2005
Figure 4 dated 15 October 2007

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



TECHNICAL SCHEDULE No S454

Pattern: Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

Submittor: Compac Industries Ltd
52 Walls Road
Penrose Auckland NEW ZEALAND

1. Description of Pattern

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 hardware/software are required for satisfactory operation of the complete system including all checking facilities.

1.1 Field of Operation

- 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.

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

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)**.

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/Certification Provision

The DCA control console has provision for a certification/verification mark to be applied.

1.5 Markings

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

Manufacturer's name or mark
Model number
Serial number
NSC approval number	S454
Environmental class	Class N

2. Description of Variant 1

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).

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 Uniform Test Procedures.

The maximum permissible errors applicable are those applicable to the fuel dispenser to which the pattern is connected, as stated in the approval documentation for the dispenser.

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.

TECHNICAL SCHEDULE No S454

VARIATION No 1

Pattern: Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

Submittor: Compac Industries Ltd
52 Walls Road
Penrose Auckland NEW ZEALAND

1. Description of Variant 2

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.

TECHNICAL SCHEDULE No S454

VARIATION No 2

Pattern: Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

Submittor: Compac Industries Ltd
52 Walls Road
Penrose Auckland NEW ZEALAND

1. Description of Variant 5

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

(*) 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 including all checking facilities.

NOTES

1. Interim Certificate No S454 Variation No 2 describes variants 3 and 4 – no final Certificate and Technical Schedule were ever issued for these variants. The approval of variants 3 and 4 has been cancelled.
2. The date at which this approval becomes due for review has been amended following completion of a review.

TECHNICAL SCHEDULE No S454

VARIATION No 3

Pattern: Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

Submittor: Compac Industries Ltd
52 Walls Road
Penrose Auckland NEW ZEALAND

1. Description of Variant 6

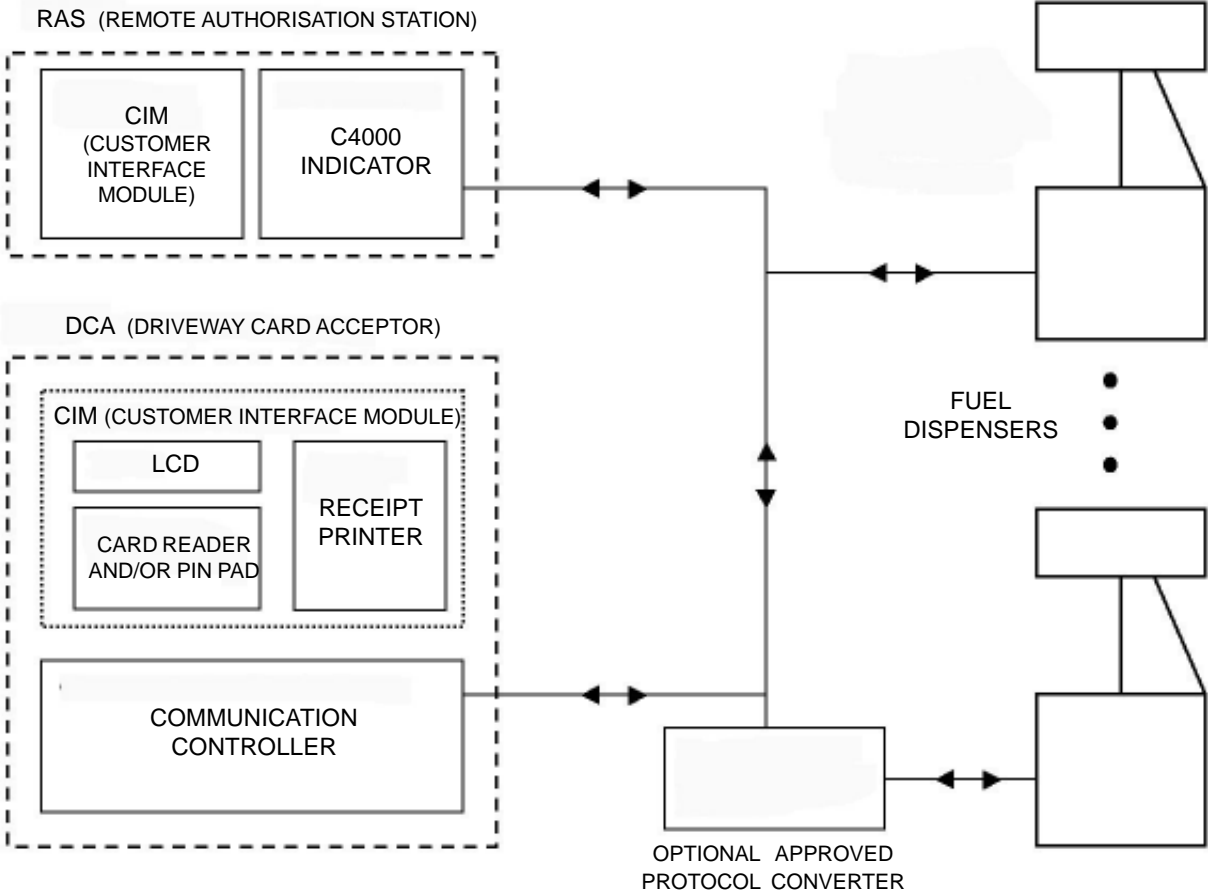
For use with software version ED-B-01:82.xx (*), to provide communication and control of compatible (#) NMI-approved LNG fuel dispensers.

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 including all checking facilities.

FIGURE S454 – 1



Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

S454
28 February 2005

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