



Australian Government  
Department of Industry,  
Science and Resources

**National  
Measurement  
Institute**

36 Bradfield Road, West Lindfield NSW 2070

**Supplementary Certificate of Approval  
NMI S473**

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.

Radiant Systems Model Radiant POS Tiger Control System for Fuel Dispensers for Motor Vehicles

submitted by NCR Australia Pty Ltd  
87 Corporate Drive  
Heatherton VIC 3202

**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**

<b>Rev</b>	<b>Reason/Details</b>	<b>Date</b>
0	Pattern approved – interim certificate issued	18/08/06
1	Pattern approved – certificate issued	4/09/06
2	Pattern amended – variants 1 & 2 approved – interim certificate issued	17/06/08
3	Pattern amended – variants 1 & 2 approved – certificate issued	9/07/08
4	Pattern & variants 1 & 2 reviewed & updated – certificate issued	24/05/12
5	Variant 3 approved – interim certificate issued	29/04/15
6	Variant 3 approved – certificate issued	12/10/15

Document History (cont...)

Rev	Reason/Details	Date
7	Pattern Amended (Submitted by) – Variant 4 approved – certificate issued	06/09/23

CONDITIONS OF APPROVAL

**General**

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S473' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S473' 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 Certificate 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*.

**Darryl Hines**  
Manager  
Policy and Regulatory Services

TECHNICAL SCHEDULE No S473

**1. Description of Pattern** **approved on 18/08/06**

The pattern is a Radiant Systems (##) model Radiant POS Tiger point of sale control system (Figure 1) to provide an attended self-service facility for compatible (#) approved fuel dispensers for motor vehicles. The fuel dispensers are controlled by the Radiant POS control system through the Radiant Systems model Tiger flowmeter controller.

(##) May also be known as 'NCR' instruments of the same model.

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

**1.1 Field of Operation**

- The Radiant POS operator console, model Tiger flowmeter controller (Figure 2) and the back office server are approved for environmental class A, a climate-controlled environment between 5°C and 30°C.
- The system can provide a self-serve arrangement for up to 32 approved Gilbarco fuel dispensers or other compatible (#) approved fuel dispensers.
- The system allows post-payment or pre-payment deliveries; in the latter case the fuel dispenser must incorporate a pre-set device.
- The system allows up to two transactions per fuel dispenser, i.e. current sale on the fuel dispenser and a stored transaction.
- The system operates in a single mode operation, i.e. authorisation of dispensers via attended method only.
- Additional Radiant POS operator consoles may be interfaced for multi-attended self-serve operation.
- The nominal supply voltage is 240 V AC.

**1.2 System Description**

(i) Operator Console

The Radiant POS operator console (Figure 3a) is comprised of an interactive touch-sensitive operator display including a built-in card reader, operating with Radiant POS version 6.x software.

The operator console connects to other operator consoles and a back office server via an Ethernet connection. Other devices connect via RS232 and USB communication ports.

The operator console includes the following additional components:

- A SOLA uninterruptible power supply (UPS) of 750 VA rating or equivalent (\*) UPS. (Note that the submitter should be consulted regarding any acceptable alternative UPS.)
  - A Radiant Systems 2x20 segment customer display (Figure 3c).
- (\*) '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.

- An Epson model TM-T88II M129B or equivalent (\*) receipt printer (Figure 3d). A sample receipt is shown in Figure 4.
- (\*) '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.

The following devices are optional:

- A cash drawer (Figure 3f).
- A barcode scanner (Figure 3e).
- A Radiant Systems model Dragonfly colour display unit, hinged to the operator display or mounted separately (Figure 3b).

(ii) Flowmeter Controller

The Radiant model Tiger flowmeter control unit (Figure 2), which may also known as the model P830 or model P831, provides the interface between the Radiant POS system and the fuel dispensers. The controller connects to the Radiant POS via an Ethernet network through an appropriate hub.

(iii) Back Office Server

An IBM compatible back office server acts as a file server for the Radiant POS control system.

### 1.3 Checking Facilities

(i) Flowmeter Controller

The model Tiger flowmeter controller receives the fuel sale data (unit price, litres dispensed and total price) directly from the fuel dispenser(s). Transmitted data is verified with a checksum.

(ii) Back Office Server

If an error occurs with the back office file server the Radiant POS system will indicate the failure and signal that an error has occurred. The POS console will enter a 'Fault Tolerant' mode and will not permit further transactions if the data storage available on the console is filled.

(iii) Uninterruptible Power Supply (UPS)

The Radiant POS operator console monitors the expected remaining battery life on the UPS and the function of the POS console is maintained until the battery level drops below 15 minutes of power remaining. Once the UPS has reached this point the memory storage ability of the system will be disabled.

If a problem with the UPS occurs which prevents the UPS from signalling expected power remaining, the memory storage facility will be disabled.

An indication on the operator console advises of any significant conditions in the UPS.

(iv) Printer

If the printer is unavailable a message is displayed on the operator console reporting the details of the error that has occurred with the printer.

(v) Customer Display

If the connection to the customer display is interrupted or an error occurs with the display the memory storage ability will be disabled. An error message is also displayed on the operator console warning that the display is disconnected. A visual segment checking facility is provided to verify display operation.

**1.4 Verification Provision**

The Radiant POS has provision for a verification mark to be applied.

**1.5 Sealing Provision**

No sealing is required for this instrument.

**1.6 Markings**

The Radiant POS console, flowmeter controller and back office server are marked with the following data:

Manufacturer's identification mark or trade mark	.....	(##)
Manufacturer's designation (model number)	.....	
Serial number	.....	
Year of manufacture	.....	
Pattern approval mark	S473	
Environmental class	Class A	

(##) Instruments may be known as 'Radiant Systems' or 'NCR' units of the same models.

**2. Description of Variant 1** **approved on 9/07/08**

With a Radiant model V3.1 distribution module (Figure 5) to provide the interface to PEC, Compac, Email or other compatible (#) approved fuel dispensers.

**3. Description of Variant 2** **approved on 9/07/08**

With a Radiant model PEC Pump Interface Board (PIB) (Figure 6) to provide the interface to PEC, Compac or other compatible (#) approved fuel dispensers.

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

**4. Description of Variant 3** **approved on 29/04/15**

With an NCR model Panther flowmeter control unit (Figure 5a), instead of the model Tiger control unit described for the pattern, to provide the interface between the Radiant POS system and the fuel dispensers.

A Radiant Systems model C700 graphical display (Figure 5b) may be connected to the Operator Console as an alternate indication for the customer.

## **5. Description of Variant 4**

**approved on 06/09/23**

With the NCR model Panther flowmeter control unit described in variant 3 operating updated software version NCR Radiant POS 202x.x.

The Panther flowmeter control unit also now operates on a Linux based operating system.

### **TEST PROCEDURE No S473**

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.

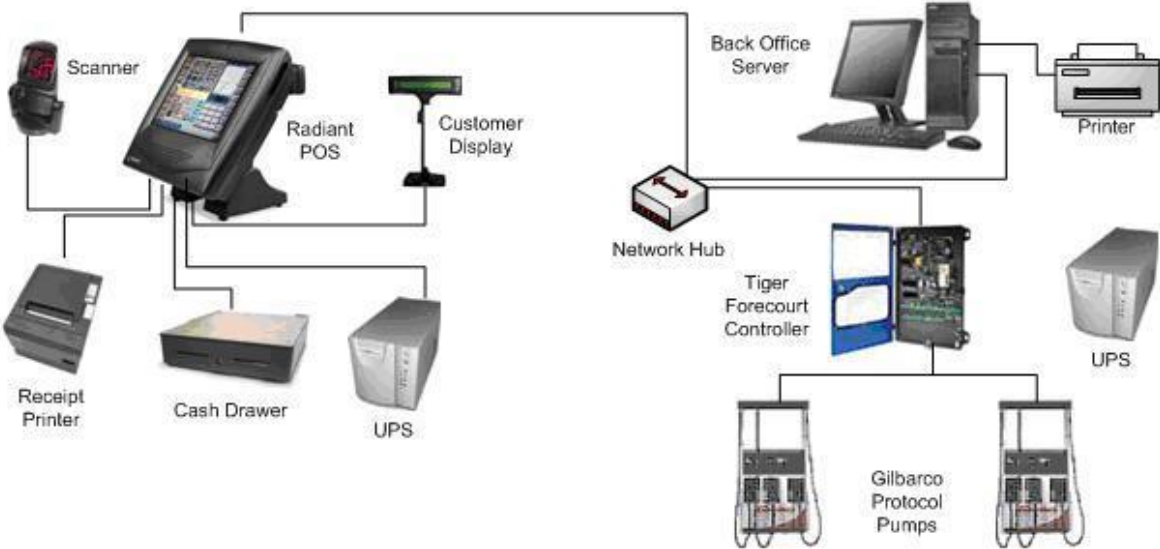
#### **Tests**

Points 2-4 are required at commissioning, thereafter may be conducted at the discretion of the inspecting officer.

1. Check the Radiant POS software version. Pressing the 'Other Functions' button followed by the 'Version Info' button from the main POS screen can access software versions.
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 and the customer display identify and display the correct data for the corresponding number allocated to the fuel dispenser.

Check that when the customer display is disconnected from the POS console (simulation of fault), the fuel dispenser cannot be authorised for a second delivery unless the transaction for the first delivery has been completed.

FIGURE S473 – 1



Radiant Systems Model Radiant POS Tiger Control System (Pattern)

FIGURE S473 – 2



Radiant Systems Model Tiger Flowmeter Controller



FIGURE S473 – 3



(a) Operator Console



(b) Operator Console and 'Dragonfly' Display



(c) Customer Display



(d) Epsom Receipt Printer



(e) Barcode Scanner



(f) Cash Drawer

Major Components of a Model Radar POS Tiger Control System



FIGURE S473 – 4

**WELCOME TO  
RADIANT SYSTEMS**  
ACN: 006 967 175  
44-46 Little Ryrie Street  
Geelong  
03 5225 5000  
ABN: 88 888 888 022

**TAX INVOICE**

**Fuel Sale**  
**Pump Number:**1 Unleaded  
13.04 Litres x \$0.899/Litre           \$11.72 \*  
1 COKE 375ML EA                       \$1.90 \*  
1 DIET COKE 1.5L EA                   \$3.50 \*  
1 Rounding                               -\$0.02

Balance Due:                               \$17.10  
Tendered:  
Cash                                       \$20.00  
Change Due:                               \$2.90

Total Includes GST                       \$1.56  
\* - Indicates items with GST

Operator: Manager,A                       Register: 1  
Tran Seq No: 31584109    7/10/03 15:53:43

THANK YOU FOR SHOPPING WITH  
**RADIANT SYSTEMS**  
PLEASE RETAIN THIS RECEIPT

Typical Receipt

FIGURE S473 – 5



(a) NCR Model Panther Flowmeter Control Unit and  
(b) Radiant Systems Model C700 Display Unit (Variant 3)

~ End of Document ~