Australian Government

**Department of Industry,
Science and Resources**

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S478

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.

BP Model Global Site System (GSS) Control System for Fuel Dispensers for Motor Vehicles

submitted by   BP Australia Pty Ltd
Level 17
717 Bourke Street
Docklands   VIC   3108

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, 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 approved – interim certificate issued	16/10/06
1	Pattern – certificate issued	12/01/07
2	Variant 1 approved – certificate issued	10/09/07
3	Pattern & variant 1 reviewed & updated – certificate issued	20/01/12
4	Pattern amended (controller) – pattern & variant 1 reviewed – variant 2 approved – certificate issued	19/02/16

Document History (cont…)

Rev	Reason/Details	Date
5	Variant 3 approved – certificate issued	24/11/16
6	Variant 4 provisionally approved – interim certificate issued	15/11/17
7	Pattern amended (number of dispensers removed, Figure 1 updated) - Variant 4 to 6 approved – certificate issued	2/07/18
8	Variant 7 approved – certificate issued	04/03/24

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S478' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S478' 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.*

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S478

1.   Description of Pattern   approved on 16/10/06

A BP model Global Site System (GSS) point of sale control system (Figure 1) to provide an attended self-service facility for compatible (#) approved fuel dispensers for motor vehicles. The GSS system includes the point of sale console, a back office server and a flowmeter controller which includes an Integration Technologies model Enabler2 PCI controller card and an Integration Technologies forecourt distribution module. May also be known as a model BP Global Site System or model GSS.

1.1   Field of Operation

•   The GSS system is approved for environmental class A, a climate-controlled environment between 5°C and 30°C.

•   The system can provide a self-serve arrangement for PEC 1000 series fuel dispensers (as described in the documentation of approval NSC 5/6A/92A), 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.

•   An additional POS console may be interfaced for multi-attended self-serve operation.

•   The nominal supply voltage is 240 V AC.

1.2   System Description

(i)   Point of Sale Console

The point of sale (POS) console (Figure 2a) comprises an IBM SurePOS 500 model 4840-563 touchscreen console, or other compatible (#) console, using a Microsoft Windows XP operating system running Retalix Storepoint version 1.6.xxxxx.xx software.

The console connects to other POS consoles, the flowmeter controller and the back office server via an Ethernet local area network (LAN).

The POS console is also connected to the following additional components:

•   An IBM model 4840-5902 purchasers' indicator (Figure 2b), or other compatible (#) purchasers' indicator;

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

- An Epson model TM-T88III receipt printer (Figure 2c) or equivalent (*); and

- An APC model BK350ei (Figure 2d) or model BK500ei (Figure 3b) uninterruptible power supply or equivalent (*) to provide operation under power failure.

Dispenser ('pump') status icons indicate the condition of the fuel dispensers controlled by the flowmeter controller (e.g. 'Delivering', 'Prepaid', or 'Awaiting Payment').

An additional POS console may be interfaced for multi-attended self-serve operation.

(ii) Flowmeter Controller

The flowmeter controller comprises an IBM M51 Think Centre model 8144CTO personal computer (Figure 3a) or equivalent (*) using a Microsoft Windows XP operating system running Integration Technologies PumpServer and Retalix PumpSrv version 4.0.xx.xxx software. An Integration Technologies model Enabler2 PCI controller card is installed into the controller to provide control and communications interface to the fuel dispensers and the POS console.

An Integration Technologies forecourt distribution module (FDM) enables communication with approved fuel dispensers and connects to the Integration Technologies model Enabler controller **as described in the documentation of approval NMI S518.**

An APC model BK500ei uninterruptible power supply (Figure 3b) is connected to provide operation under power failure.

(iii) Back Office Server

An IBM M51 Think Centre model 8144CTO personal computer or equivalent (*) acts as a server for transaction data and store management functions.

An APC model BK500ei uninterruptible power supply (Figure 3b) is connected to provide operation under power failure.

(*) '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.

(iv) Additional System Facilities

In addition, the system may include point of sale (POS) peripheral devices including cash drawers, barcode readers and an electronic funds transfer (EFT) facility. The peripheral devices shall not interact with the console in a way that would cause an incorrect indication of the measured volume or price.

1.3 Checking Facilities

(i) Uninterruptible Power Supply (UPS)

The system monitors the condition of the UPS and if an error or power failure is detected a visual warning is displayed on the operator's screen. The ability to authorise deliveries will be prevented until the detected error condition is resolved.

(ii) Receipt Printer

The system monitors the condition of the receipt printer and if an error is detected or the printer is out of paper, a visual warning is displayed on the operators screen. The ability to authorise a stored or held sale will be prevented until the detected error condition is resolved.

(iii) Purchasers' Indicator

A segment checking function to visually inspect the purchasers' indicator is provided.

1.4 Markings and Notices

The POS console, flowmeter controller and back office server are marked with the following data (shown below at right):

Manufacturer's name or mark	Retalix (Israel) Limited
Name or mark of manufacturer's agent	……...
Model number	……...
Serial number	……...
Pattern approval mark	NMI S478
Year of manufacture	……...
Environmental class	5°C and 30°C

1.5 Verification Provision

Provision is made for the application of a verification mark.

2. Description of Variant 1   approved on 21/08/06

A BP model Global Site System (GSS) point of sale control system now running Retalix Storepoint version 1.6.6230.xx software.

The function of the uninterruptible power supply checking facility is adjusted so that a visual warning is displayed on power failure but additional deliveries may be authorised.

3. Description of Variant 2   approved on 19/02/16

A BP model Global Site System (GSS) point of sale control system which is similar to the pattern but the point of sale console and the flowmeter controller now operate on a Windows-based operating system.

4.   Description of Variant 3   approved on 24/11/16

The BP model Global Site System (GSS) point of sale control system now has the ability to operate in mixed-mode operation, providing registered customers the ability to authorise and dispense selected fuel products in an unattended self-service mode.

The unattended self-service facility is provided by the BPMe mobile application. The application operates on a compatible internet connected device, e.g. a smartphone, which allows authorisation of the fuel dispensers by registered customers with a BPMe customer account.

The BPMe mobile application identifies the customer site location using GPS co-ordinates to determine the availability of fuel dispensers for authorisation. Customers select a product and a pre-set amount, where the available dispenser incorporates a pre-set device, the dispenser is authorised to dispense providing all applicable criteria is met. Upon the completion of the fuel delivery the value of the fuel delivered is then charged to the customers registered account.

The BPme application shall not interact with the console in a way that would cause an incorrect indication of the measured volume or price.

Note: No printed receipt is provided by the BPme mobile application. A receipt is available for printing via the customers registered email or upon request from the site management.

5.   Description of Variant 4   provisionally approved on 15/11/17
approved on 2/07/18

With the Flowmeter Controller of the pattern described in **1.2 System Description** replaced by a Postec PCC4 controller or other controller variations as described in approval NMI S398.

5.1   Checking Facilities
The BP model Global Site System with a Postec PCC4 controller includes the checking facilities described in **1.3 Checking Facilities**.

A Postec Intelligent Purchaser Indicator (PIPI) is also connected to the Postec PCC4 controller to allow the recall of the stored transactions under power failure condition. If the connection to the PIPI from the controller and the Receipt Printer are interrupted the ability to authorise a stored or held sale will be prevented until the detected error condition is resolved.

6.   Description of Variant 5   approved on 2/07/18

A BP model Global Site System (GSS) point of sale control system now running Retalix Storepoint version 1.7.xxxx.xxxx software.

7.   Description of Variant 6   approved on 2/07/18

(i)   Self check out terminal

The BP model Global Site System is interfaced to an NCR model 7709 terminal (Figure 4) or equivalent (*) to provide self check out facility for attended self-service mode operation only.

Authorisation of fuel measurement can only be made by the attendant operated Global Site System Point of Sale console (Figure 5). The Self check out terminal enables customers to finalise post-payment fuel measurement transactions.

The Self check out terminal operates NCR SelfServ software version 6.x.x

(*)   '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.

7.1   Markings and Notices

The self check out terminal is also marked with the following data:

Manufacturer's name or mark	Retalix (Israel) Limited
Name or mark of manufacturer's agent	……...
Model number	……...
Serial number	……...
Pattern approval mark	NMI S478
Year of manufacture	……...
Environmental class	5°C and 30°C

7.2   Verification Provision

Provision is made for the application of a verification mark.

8.   Description of Variant 7   approved on 04/03/24

8.1   System Description

(i)   Point of Sale Console

The point of sale (POS) console described in **1.2 System Description** now operating Diebold Nixdorf Beetle A1050 touchscreen console, or other equivalent (*) PC based device.   A Diebold Nixdorf model D1101 or equivalent (*) LCD computer monitor is connected to the console and acts as a customer display in place of the purchasers indicator. A typical screenshot of the customer display is shown in Figure 6.

(ii)   Back Office Server and Flowmeter controller

The Back Office Server and Flowmeter controller described in **1.2 System Description** now operating on Lenovo ThinkStation P360 Tower or equivalent (*) PC based device.

(*)   '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.

TEST PROCEDURE No S478

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 Schedule 1 of the *National Trade Measurement Regulations 2009*.

Tests

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

1. Check the POS console software version numbers. The Retalix Storepoint version number is displayed in the lower left corner of the screen; the Retalix PumpSrv version number is accessed by selecting the 'Function Menu', 'Toggle', 'Audit Functions' then 'Display SW Version' buttons on the POS console.

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 system 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. Remove paper from the receipt printer to check that when the receipt printer is unavailable, a warning message is displayed on the POS console and the ability to authorise a stored delivery is disabled.

    Note: For POS systems of Variant 4 the ability to authorise a stored delivery is disabled when both the receipt printer and the PIPI display are unavailable or disconnected.

6. Perform a segment check by selecting the 'Function Menu', 'Toggle', 'Audit Functions', then 'Run Customer Display Test' buttons on the POS console.

For systems with Self check out terminal (Variant 6)

7. Check that the self check out terminal identifies, displays and prints the correct data for the corresponding number allocated to the fuel dispenser.

FIGURE S478 – 1
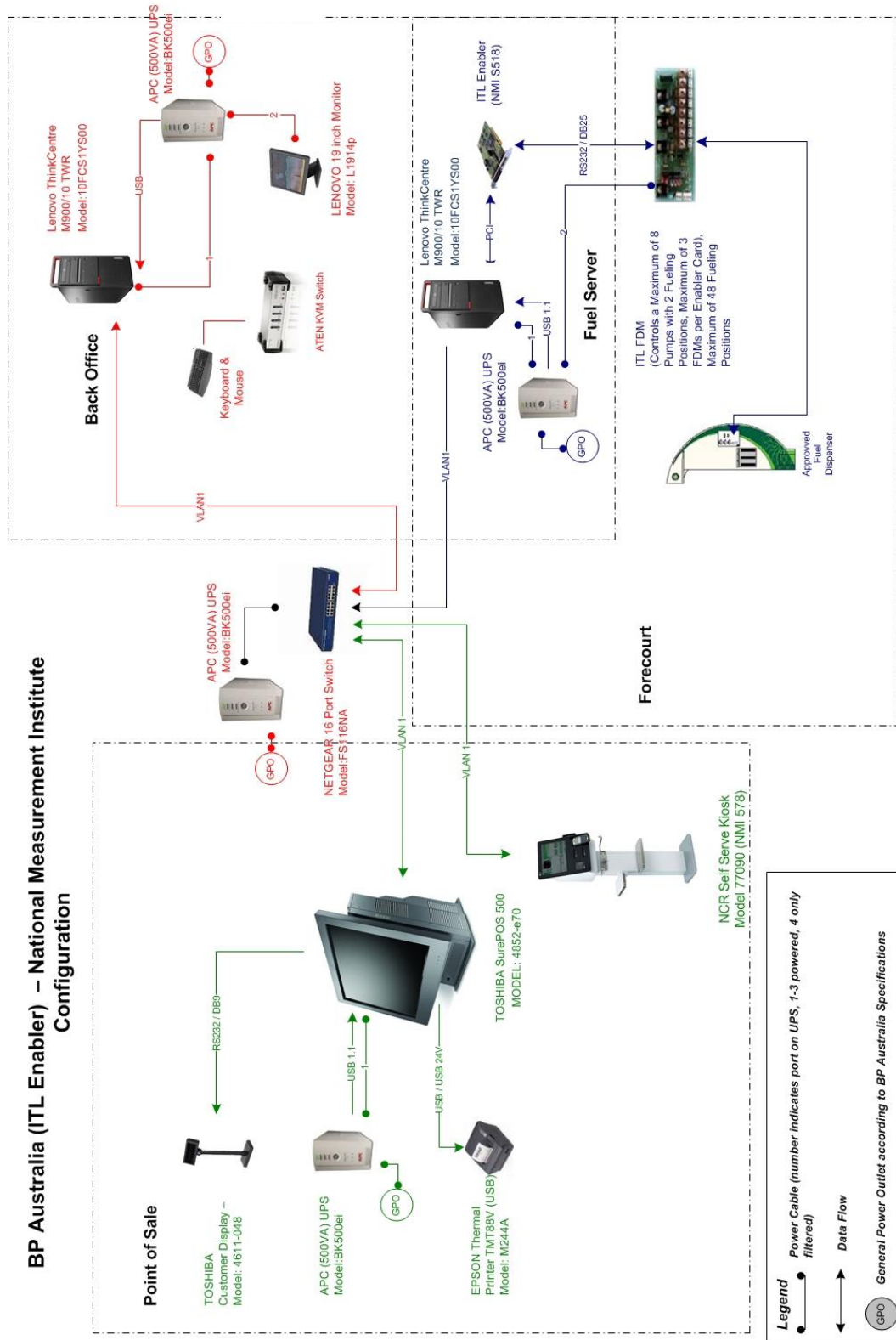
BP Model Global Site System (GSS) Control System Typical System Overview

FIGURE S478 − 2

(a) POS Console

(b) Purchasers' Indicator

(c) Receipt Printer

(d) APC Model BK350ei UPS

FIGURE S478 – 3

(a)   Flowmeter Controller
(IBM M51 Think Centre Model
8144CTO Personal Computer)

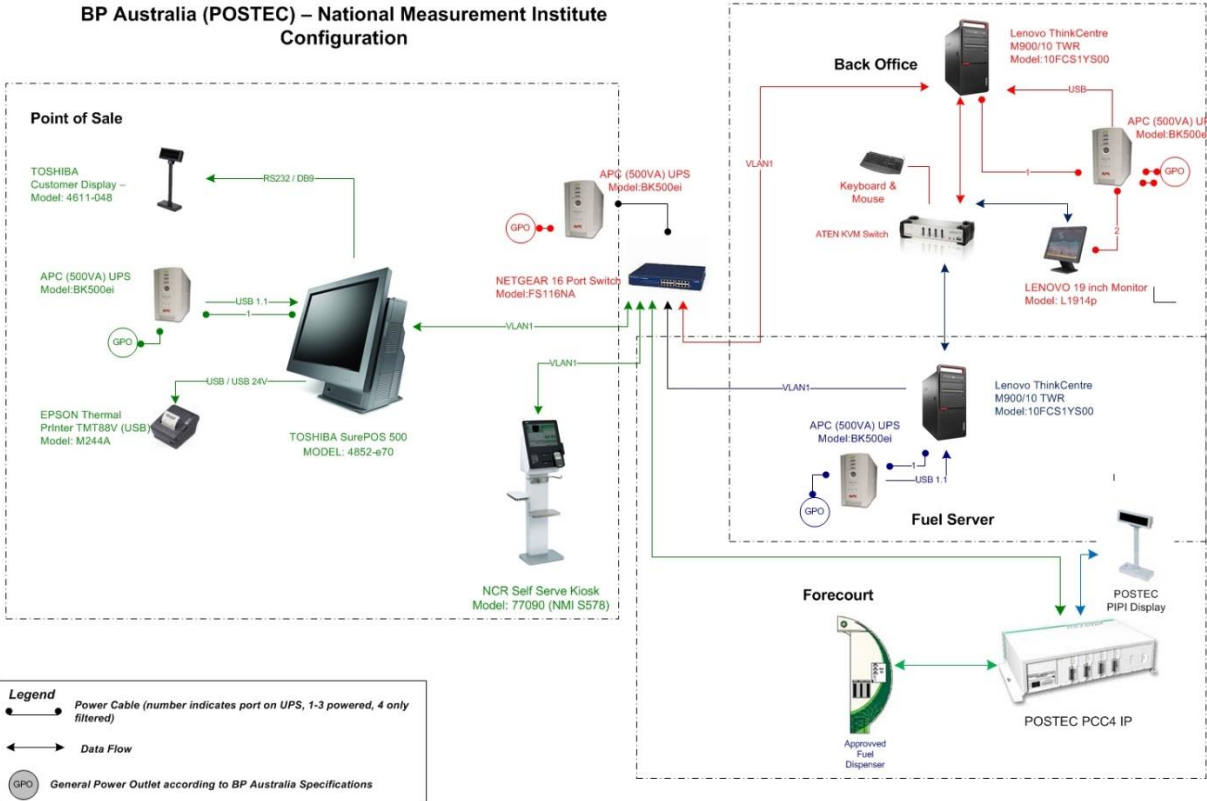(b)   APC Model BK500ei UPS

FIGURE S478 – 4

NCR model 7709 Self check out terminal (Variant 6)

FIGURE S478 – 5

BP Global Site System typical system overview with Postec PCC4 Controller
(Variant 4) and Self check out terminal (Variant 6)

FIGURE S478 – 6

1 WHITE CHOC RASPBERRY		
		$1.66

QTY	Description	Price/Ea	Total
1	WBC COFFEE SMALL 8OZ	$3.90	$3.90
1	ULT.UNL		$14.23
	PUMP: 1		
	LITRES: 7.91 @ 1.801 $/L		
1	WBC CAFE ESPRESSO CO	$4.00	$4.00
	Price Override from: $4.90		
1	WBC CAFE ESPRESSO MA	$5.60	$5.60
	Staff Discount		-$0.56
	Balance : $5.04		
1	WBC CAFE COFFEE EXTR		VOID
2	WHITE CHOC RASPBERRY	$1.67	$3.34
	Reduced from: $2.00		
1	WHITE CHOC RASPBERRY	$1.66	$1.66
	Reduced from: $2.00		
	Total Promotion Saving: $1.00		
		Total:	**$32.17**

Typical customer display (Variant 7)

~ End of Document ~