



Australian Government
Department of Industry, Science,
Energy and Resources

**National
Measurement
Institute**

**Supplementary Certificate of Approval
NMI S515**

VARIANT 4 VALID FOR VERIFICATION PURPOSES UNTIL 1 January 2023

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.

Gilbarco Model FLEXPAY Control System for Fuel Dispensers for Motor Vehicles

submitted by Gilbarco Australia Pty Ltd
 Dexus Estate, Block L, 391 Park Road
 Regents Park NSW 2143

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. July 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	16/07/08
1	Pattern approved – interim certificate issued	10/10/08
2	Pattern approved – certificate issued	10/03/09
3	Variant 1 provisionally approved – interim certificate issued	8/10/10
4	Variant 1 approved – certificate issued	24/03/11
5	Variant 2 approved – certificate issued	4/08/11
6	Pattern & variants 1 & 2 reviewed & updated – variant 3 approved – certificate issued	15/02/16

Document History (cont...)

Rev	Reason/Details	Date
7	Variant 4 provisionally approved – certificate issued	11/01/22

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S515' and only by persons authorised by the submitter.

Instruments (fuel dispensers) incorporating a component purporting to comply with this approval shall be marked 'NMI S515' in addition to the approval number of the instrument, 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 – Variant 4)

Provisional approval variant 4 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 variant 4 of this approval shall be marked with approval number 'NMI **PS**515' and only by persons authorised by the submitter. (Note: The '**P**' in the approval number may be a temporary marking.)

The variation to 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.

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 S515

1. Description of Pattern **provisionally approved on 16/07/08**
approved on 10/10/08

The pattern is a Gilbarco model FLEXPAY card-operated control system to provide attended self-service facility for compatible (#) approved fuel dispensers for motor vehicles for registered account customers only.

The FLEXPAY control system (Figure 1) includes at least a Gilbarco model FLEXPAY terminal (installed as part of a compatible (#) approved fuel dispenser), a Gilbarco model PAPCON payment processing controller, a Gilbarco Pump Integration Box (PIB), and a Postec model PCC4 flowmeter controller. The FLEXPAY terminal and the PCC4 controller operate using FLEXPAY software for use with compatible (#) approved POS systems.

1.1 Field of Operation

- The model FLEXPAY terminal and the Postec model PCC4 flowmeter controller are approved for environmental class N for outdoor use between -10°C and 55°C
- The model Gilbarco model PAPCON payment processing controller and the Gilbarco Pump Integration Box (PIB) are approved for environmental class B, an indoor environment between -10°C and 40°C.
- The model FLEXPAY terminal may provide attended self-service facility for registered account customers only.
- The nominal mains power supply voltage is 240 V AC.

1.2 System Description

The Gilbarco model FLEXPAY terminal is installed as part of a compatible (#) approved fuel dispenser (Figure 2) and has an integrated display module (Figure 3a) and a keypad (Figure 3b), and also a contact-less card-reader and/or 'fob' reader.

The Gilbarco model PAPCON payment processing controller (Figure 3c), the Gilbarco Pump Integration Box (PIB) (Figure 3d), and the Postec model PCC4 flowmeter controller (as described in the documentation of approval NSC S398) are located in the service station kiosk.

The FLEXPAY terminal and the PCC4 controller operate using FLEXPAY version 01:01:xx (may appear as 0101xx) software for use with compatible (#) approved POS systems.

The system may be connected to a receipt printer located either within the FLEXPAY unit or remotely (e.g. in the service station kiosk) for optional use by the customer either with or without the POS operator's assistance.

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

1.3 Operating Procedure

The FLEXPAY terminal may provide attended self-service facility for registered account customers only. The terminal has an integrated display module and keypad, and also a contact-less card-reader and/or 'fob' reader.

With the terminal in the idle state the card system screen in the fuel dispenser will prompt the customer to either present a card or lift a nozzle.

1) When the customer presents a registered account card at the terminal card reader in the dispenser, the system reserves the dispenser for card use only and the terminal display will prompt to enter a PIN

2) If the card and PIN are accepted, the display will prompt to lift a nozzle.

If the card or PIN are not accepted, the display will prompt to try again. Repeated rejections will force the system back to the idle state.

When the FLEXPAY system has approved the sale and the POS operator has authorised the dispenser from the kiosk, the dispenser will reset and start.

3) The customer may then deliver fuel.

4) After the fuel delivery is completed and the nozzle is hung up the display will briefly show details of the delivery before returning to the idle state.

The offsite host system retains the original receipt record of the delivery.

The system provides an option for the customer to obtain a fuel delivery receipt from either the fuel dispenser (if fitted with a receipt printer) or from the POS system operator. The receipt format shall comply with the requirements of General Supplementary Certificate No S1/0/A, and is identified as a 'duplicate' receipt.

1.4 Descriptive Markings

Any fuel dispenser fitted with a Gilbarco model FLEXPAY terminal is marked with the following data (shown below at right) in addition to all other required markings as set out in the approval documentation for the dispenser:

Manufacturer's name or mark	Gilbarco
Pattern approval mark	NMI S515 (#)
Environmental class	N

(#) The characters 'NMI' may be omitted provided that the remaining characters clearly and unambiguously refer to the pattern approval mark.

1.5 Verification Provision

Provision is made for the application of a verification mark.

2. Description of Variant 1 **provisionally approved on 8/10/10** **approved on 24/03/11**

The Gilbarco model FLEXPAY B2B card-operated control system (Figure 4) to provide an alternative authorisation and payment process in unattended self-service facility for compatible (#) approved fuel dispensers.

The FLEXPAY B2B system has similar features to the pattern and includes:

- a FLEXPAY B2B outdoor terminal in a weatherproof enclosure
- a Postec model PCC4EX flowmeter controller located in the service station kiosk
- a Gilbarco 'Pump communication box'.

2.1 Field of Operation

- The model FLEXPAY B2B terminal is approved for environmental class N for outdoor use between -10°C and 55°C
- The model FLEXPAY B2B terminal may provide an unattended self-service facility
- The nominal mains power supply voltage is 240 V AC.

2.2 System Description

The FLEXPAY B2B stand-alone single or double-sided terminal (Figure 5) includes the following components, some of which are shown in Figures 3 and 4:

- 1 or 2 Gilbarco model FLEXPAY displays and keyboard units
- 1 or 2 magnetic strip card readers
- 1 or 2 receipt printers.

It may also include a contact-less card-reader, a bar code reader and/or 'fob' reader.

The Gilbarco model FLEXPAY B2B terminal and the Postec model PCC4EX controller operate using FLEXPAY version 01:01:xx software (may appear as 0101xx) for use with compatible (#) approved POS systems.

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

2.3 Electronic Funds Transfer Facilities

The control system includes Electronic Funds Transfer (EFT) facilities to allow authorisation of fuel by customers without a pre-existing arrangement with the supplier.

2.4 Uninterruptible Power Supply

An uninterruptible power supply (UPS) is included in the FLEXPAY B2B terminal to facilitate the conclusion of any deliveries in progress in the event of a power failure. The ability to authorise further transactions will be prevented until any detected error condition of the UPS is resolved.

2.5 Receipt Printer

The system monitors the condition of the receipt printer and provides a visual warning of an error. If the receipt printer is unavailable or out of paper, the FLEXPAY display unit will indicate that a receipt will not be available before a user agrees to authorise a fuel dispenser and continue with a fuel delivery.

2.6 Descriptive Markings

The FLEXPAY B2B terminal is marked with the following data (shown below at right):

Manufacturer's name or mark	Gilbarco
Model number
Serial number
Year of manufacture
Pattern approval mark	NMI S515 (#)
Environmental class	N

- (#) The characters 'NMI' may be omitted provided that the remaining characters clearly and unambiguously refer to the pattern approval mark

3. Description of Variant 2

approved on 4/08/11

The Gilbarco model FLEXPAY C card-operated control system (Figure 6) to provide either attended or unattended self-service facility for compatible (#) approved fuel dispensers for motor vehicles. This variant allows authorisation of fuel by customers without a pre-existing arrangement with the supplier.

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

3.1 System Description

The model FLEXPAY C system is configured as shown in the layout as shown in Figure 6 with card processing functionality now performed by the Postec model PCC4EX or PCC4PEX controller (as described in approval NMI S398).

The model FLEXPAY C may interface to the dispensers via one of two Gilbarco communication systems. Using either PLETH (Power Line Ethernet) technology, with a Pump Integration Box and Pay at Pump Controller communications box (shown as a PIB and a PAPCON respectively in Figure 1), or using Gilbarco Long Reach Ethernet (GLRE) with a Two-wire Box Mk2 and a Back Room Communications Module (shown as a TBM2 and a BRCM respectively in Figure 6). The Postec controller operates with FLEXPAY software (as described for the pattern) for use with compatible approved attended self-serve systems.

Each FLEXPAY payment terminal includes a contactless and/or contact and/or mag-strip card reader and may include a bar code reader. A receipt printer may or may not be fitted depending on the configured mode of operation. See section 3.3 below.

3.2 Payment Terminals

The payment terminal equipment may be fitted in any compatible (#) approved fuel dispenser as shown in Figure 2 or installed in an Outdoor Payment Terminal (OPT) as shown in Figure 7.

3.3 Checking Facilities

3.3.1 Attended mode operation:

When the control system is configured to operate in **attended** mode, it must be connected to a compatible (#) approved attended self-serve (point of sale, POS) control system with which the supplier controls authorisation of a delivery, i.e. a POS system operator must authorise the dispenser before each delivery can begin. An optional receipt printer and uninterruptible power supply (UPS) may be provided in the dispenser or in the OPT.

No additional checking facilities are required as the compatible self-serve control system must have the facility to provide additional primary indication where required. The system provides an option for the customer to obtain a fuel delivery receipt from either the fuel dispenser (if fitted with a receipt printer) or from the POS system operator.

3.3.2 Unattended mode operation:

When the control system is configured to operate in **unattended** mode a receipt printer and uninterruptible power supply shall be included at the payment terminal.

The UPS facilitates the conclusion of any deliveries in progress in the event of power failure. The ability to authorise further transactions will be prevented until any detected error condition of the UPS is resolved.

The system monitors the condition of the receipt printer and provides a visual warning of an error. If the receipt printer is unavailable or out of paper the FLEXPAY display unit will indicate that a receipt will not be available before a user agrees to authorise a fuel dispenser and continue with a fuel delivery.

4. Description of Variant 3

approved on 15/02/16

With a PCC4 forecourt controller and an Advantech or any equivalent (*) PC which operates as the payment processing gateway (Figure 8).

- (*) 'Equivalent' is defined to mean other proprietary equipment of the same or better specifications requiring no changes to the software specified in this approval for satisfactory operation of the system.

5. Description of Variant 4 provisionally approved on 11/01/22

The Gilbarco model FLEXPAY Outdoor Payment Terminal (OPT) M7 control system (Figure 9) to provide unattended self-service facility for compatible (#) approved fuel dispensers for motor vehicles. This variant (Figure 9) allows authorisation of fuel by customers without a pre-existing arrangement with the supplier.

The FLEXPAY OPT M7 system has similar features to the pattern and includes:

- a FLEXPAY OPT M7 terminal may be may be fitted in any compatible (#) approved fuel dispenser or installed in a separate weatherproof enclosure
- a DOMS model PSS5000 flowmeter controller as described in approval NMI S738

Each FLEXPAY OPT M7 terminal includes a contactless card reader, magnetic card reader, a receipt printer, a 5.7 inch or 12 inch display and a PIN pad.

- (#) '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.

TEST PROCEDURE

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

The maximum permissible errors applicable are those applicable to the fuel dispenser to which the instrument approved herein is fitted.

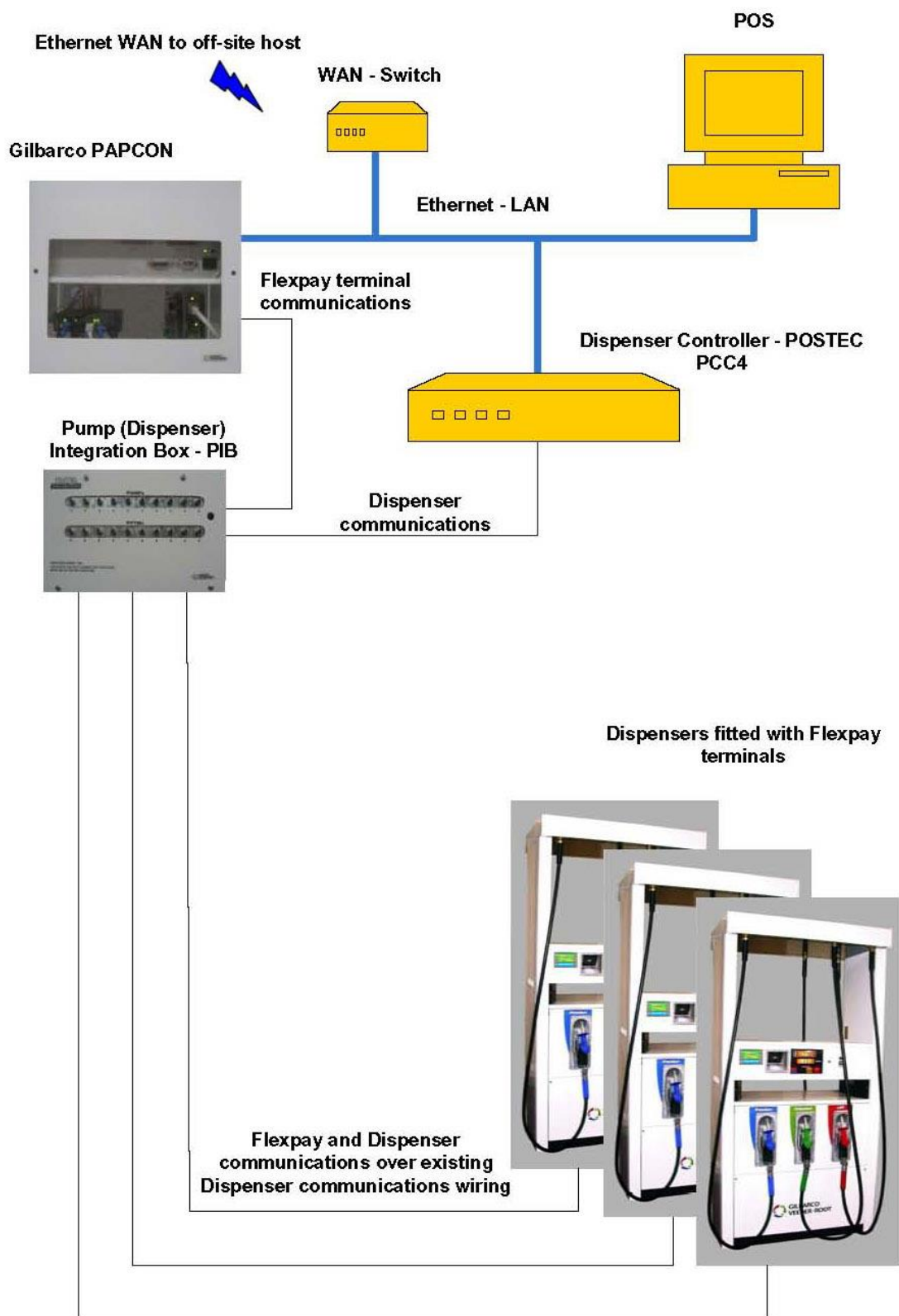
Note: Testing should be carried out on initial installation. Thereafter, it need not be done at every verification of the fuel dispensers but may be done periodically at the discretion of the verifying authority. Operation with an authorised test card can only be done in the presence of a representative of the submitter.

TEST PROCEDURE – VARIATION No 1

The FLEXPAY B2B terminal (Variant 1) shall be tested in accordance with the TEST PROCEDURE above for the pattern, and in addition:

1. Check that the system identifies, displays and prints the correct data for the corresponding number allocated to the fuel dispenser.
2. Authorise a delivery and check that the delivery details on the fuel dispenser agree with the receipt obtained.
3. Remove paper from the receipt printer to check that when the receipt printer is unavailable, a warning is provided before authorisation of a fuel dispenser can occur.

FIGURE S515 – 1



Typical Gilbarco Model FLEXPAY Control System Layout (pattern)

FIGURE S515 – 2



(a) Gilbarco Electroline (Petrol and LPG)



(b) Gilbarco Enterprise



(c) PEC 9000



(d) Email MPP

Typical Gilbarco Model FLEXPAY Terminal Installations
in Various Approved Fuel Dispensers (pattern & variants)

FIGURE S515 – 3



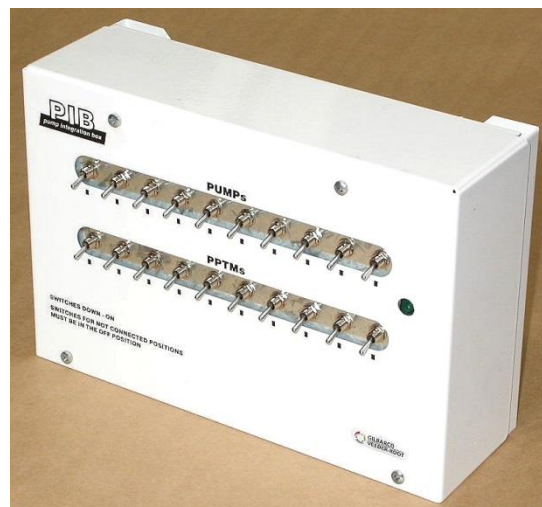
(a) Typical FLEXPAY display unit



(b) Typical FLEXPAY keyboard



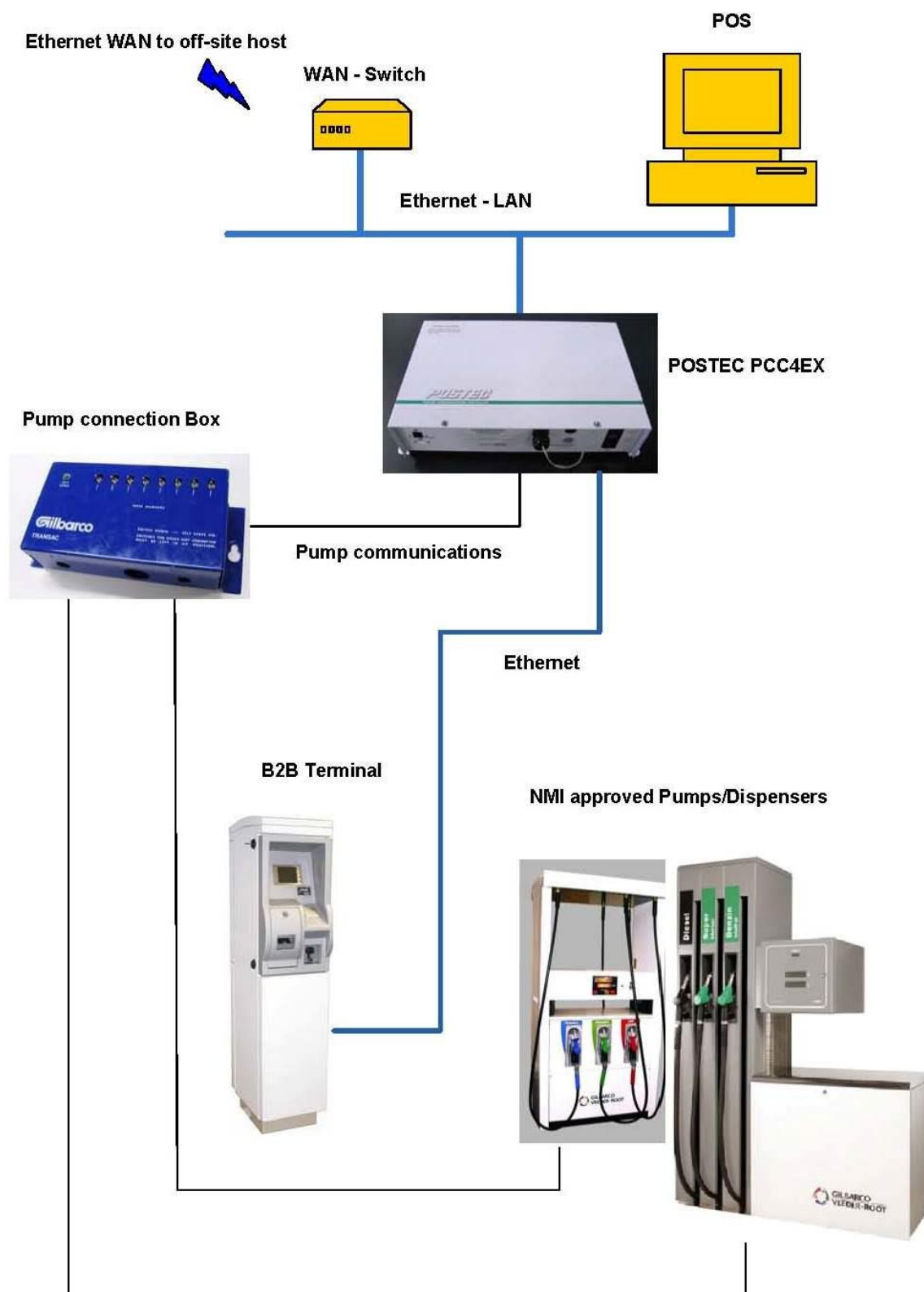
(c) Typical PAPCON (payment processing controller) unit



(d) Typical PIB (pump integration box) unit

Some Typical Gilbarco Model FLEXPAY Control System Components
(pattern & variants)

FIGURE S515 – 4



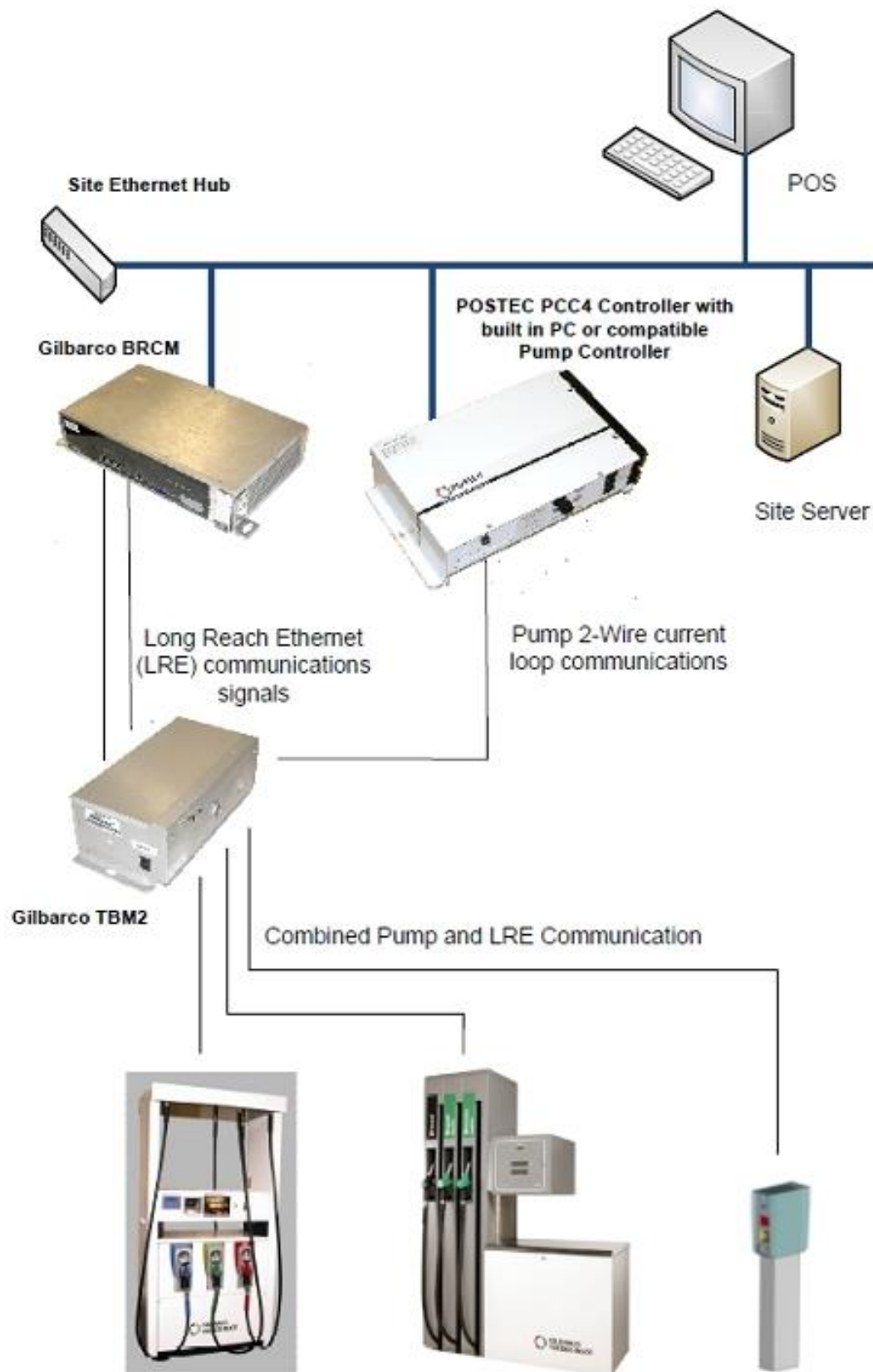
Typical Gilbarco Model FLEXPAY B2B Control System Layout
(variant 1)

FIGURE S515 – 5



Gilbarco Model FLEXPAY B2B Terminal (variant 1)

FIGURE S515 – 6



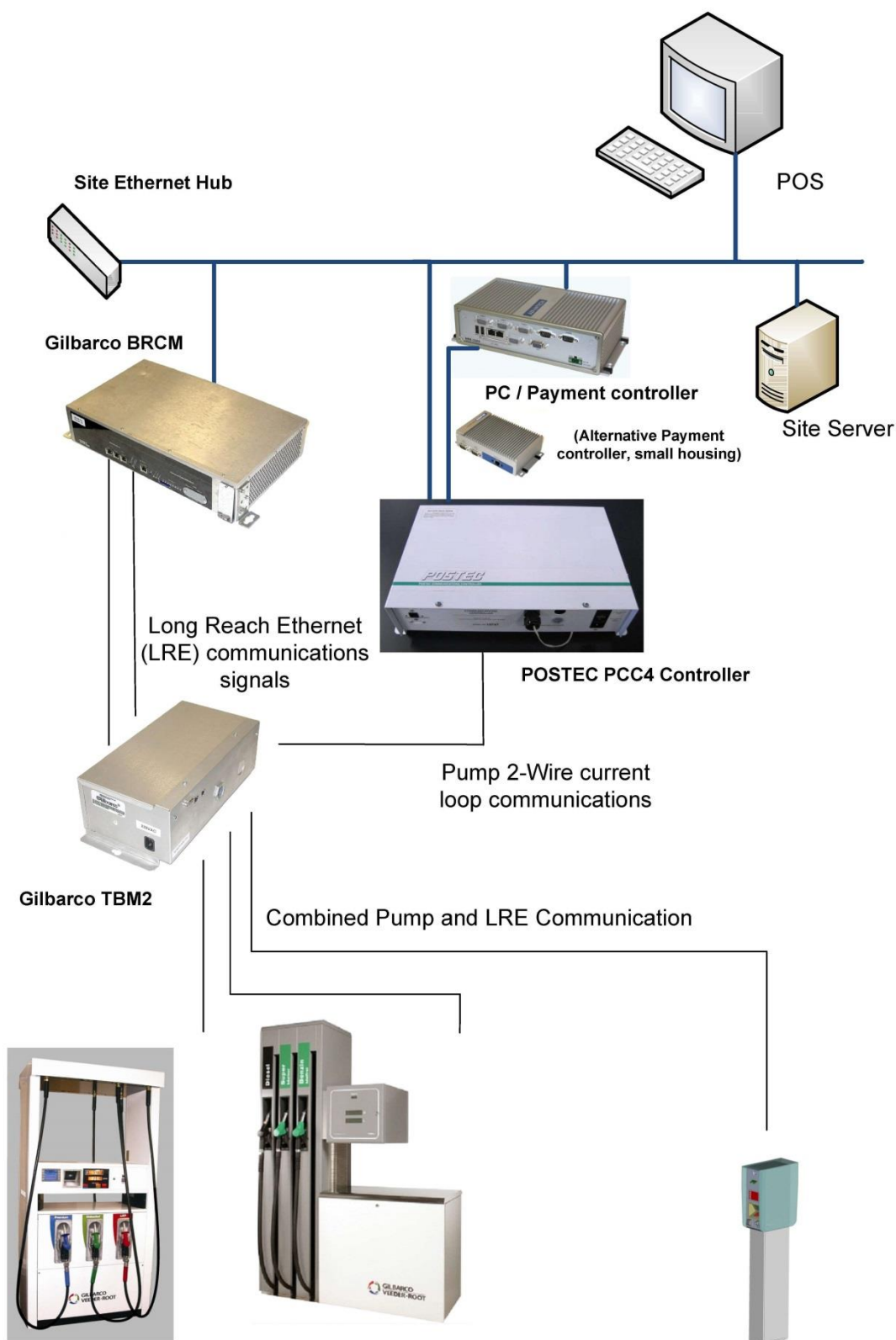
Typical Gilbarco Model FLEXPAY C Control System Layout
(variant 2)

FIGURE S515 – 7



Typical Gilbarco Model FLEXPAY C Outdoor Payment Terminal (OPT)
(variant 2)

FIGURE S515 – 8



Typical Gilbarco Model FLEXPAY Outdoor Payment Terminal (OPT)
With PCC4 forecourt controller and an Advantech or any equivalent PC
(variant 3)

FIGURE S515 – 9



Typical Gilbarco Model FLEXPAY Outdoor Payment Terminal (OPT) M7
With DOMS PSS5000 forecourt controller (variant 4)

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