Australian Government

National Measurement Institute

12 Lyonpark Road, North Ryde NSW 2113

Cancellation

Supplementary Certificate of Approval

No S278A

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that the approval for use for trade granted in respect of the

PEC Model 8850 Control System for Fuel Dispensers for Motor Vehicles

submitted by Advantage Group (Aust.) Pty Limited
270 Pacific Highway
Crows Nest NSW 2065

has been cancelled in respect of new instruments as from 1 May 2006.

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

National Standards Commission

12 Lyonpark Road, North Ryde NSW

Supplementary Certificate of Approval

No S278A

Issued under Regulation 63
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the

PEC Model 8850 Control System for Fuel Dispensers for Motor Vehicles

submitted by Advantage Group (Aust.) Pty Limited
270 Pacific Highway
Crows Nest NSW 2065.

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.

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CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 January 2003, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No S278A and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S278A in addition to the approval number of the instrument.

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 Commission 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 the Commission's Document 106.

The Commission 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 Certificate No S1/0/A.

Special:

Instruments are only approved for installations incorporating the Commission-approved fuel dispensers for motor vehicles described in this approval, and may only be used for central unit price setting of fuel dispensers which have been Commission-approved with that facility.

Instruments are only approved for use with fuel dispensers Commission-approved prior to June 1998, as the instrument was not tested to the pattern approval requirements in force after that date.

DESCRIPTIVE ADVICE

Pattern: approved 12 December 1997

- A PEC model 8850 control system for use with Commission-approved fuel dispensers for motor vehicles fitted with PEC model Retron 80 indicators for use in attended service mode.

Variants: approved 12 December 1997

1. For use with certain Commission-approved indicators for certain fuel dispensers for motor vehicles.
2. For use with PEC model FST card-operated terminals.
3. For use with a PEC model 8850 site controller/console.
4. For use with an IBM model 350-P133 PC as the site controller.

Technical Schedule No S278A describes the pattern and variants 1 to 4.

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Variant: approved 9 August 2000

5. For use with up to 64 fuel dispensers.

Technical Schedule No S278A Variation No 1 describes variant 5.

FILING ADVICE

Certificate of Approval No S278A dated 1 February 2000 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S278A dated 19 September 2000
Technical Schedule No S278A dated 1 February 2000 (incl. Test Procedure)
Technical Schedule No S278A Variation No 1 dated 19 September 2000
Figures 1 to 8 dated 1 February 2000

Signed by a person authorised under Regulation 63 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

TECHNICAL SCHEDULE No S278A

Pattern: PEC Model 8850 Control System for Fuel Dispensers for Motor Vehicles.

Submittor: Advantage Group (Aust.) Pty Limited
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Pattern

A PEC model 8850 control system for use with Commission-approved fuel dispensers for motor vehicles fitted with PEC model Retron 80 indicators, in attended service mode.

The instrument is approved for use over a temperature range of 5°C to 30°C and is so marked.

1.1 The system (Figure 1)

The PEC model 8850 system may be used with up to 32 fuel dispensers for motor vehicles with a maximum of 16 displayed on any one visual display unit (VDU). The system comprises:

- a PEC model 8850 site controller (Figure 2);
- one or more PEC model 8850 operator's consoles with an integral printer (Figure 3) or without the integral printer (Figure 4) in which case an Epson model MTA external printer is fitted;
- a remote purchaser's indicator (Figure 3); and
- various indicating and/or printing devices for management purposes.

The system facilities include:

- a point of sale facility including a cash drawer or register;
- a facility for centrally setting the unit price (refer to the Special Conditions of Approval);
- a postpay or prepay facility;
- a pump stop and all pumps emergency stop function; and
- a temporary storage facility.

1.2 Site Controller

The PEC model 8850 site controller (Figure 2) controls the various functions of the system including the fuel dispensers, printer(s), operator's console(s) and purchaser's indicator. The site controller may be located remotely from the console(s). The site controller uses InterPOS version 4.x software.

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1.3 Operator's Console

The PEC model 8850 operator's console consists of a visual display unit (VDU) and keyboard connected directly to the site controller. The console provides a means of authorisation of the fuel dispensers. Consoles are fitted with either an integral printer (Figure 3a) or without the integral printer (Figure 3b) in which case an Epson model MTA external printer is fitted.

1.3.1 Point of Sale Facility

The console incorporates point of sale (POS) terminal facilities and these shall not interact with the console in any way which would cause an incorrect indication of the measured volume or price.

1.3.2 Temporary Storage Facility

This facility allows two purchasers to operate simultaneously, i.e. a second transaction may be carried out while a previous transaction which has not yet been completed is retained in memory.

Only one transaction for each fuel dispenser may be stored in memory at any time.

The first purchaser carries out a delivery of fuel and the transaction data is indicated on both the purchaser's and vendor's indicators. After a period of not less than 5 seconds, and once the first purchaser has hung-up the nozzle but before the first transaction has been completed, a second purchaser can be authorised for the same dispenser. The details of the first transaction are temporarily stored in the memory, printed on a ticket (see sample below) and are shown on both the vendor's and purchaser's displays.

8850 MEMORY TRANSACTIONS
03/04/1999 15:30:18
SALE MOVED TO MEMORY PUMP 02
2.56 L 0.600 $/L $ 1.54
THIS IS NOT A RECEIPT

1.4 Sealing Provision

No sealing is required.

1.5 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

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1.6 Markings

Instruments carry the following markings, in the form shown at right:

Manufacturer's mark, or name written in full	.....
Model number	.....
Serial number of the instrument	.....
Pattern approval mark for the instrument	NSC No S278A
Operating temperature range	.....

2. Description of Variants

2.1 Variant 1

The pattern may be used with certain (*) Commission-approved fuel dispensers for motor vehicles fitted with any of the following indicators:

PEC MHP series
Email Eclipse MVR79 series
Email MPP (multi-product) series
Gilbarco MPP (multi-product) series
Gilbarco Electroline type

(*) Approved prior to June 1998 - refer to the Special Condition of Approval.

2.2 Variant 2

With a PEC model FST (Forecourt Service Terminal) card-operated terminal, which allows account transactions to be made either locally or remotely using electronic funds transfer (EFT) facilities. The FST is approved for use over a temperature range of -10°C to +40°C and is so marked.

The authorised cards may either be controlled distribution cards issued to selected users or financial institution cards available to the public.

The model FST unit may be in any of the following configurations:

- installed as a simple free standing or wall mounted unit (Figure 4a) for controlling up to 32 fuel dispensers; or
- fitted to one or both sides of a fuel dispenser (Figure 4b), in which case it may be known as a model FST CRIP. It has control only over that side to which is fitted; or
- a combination of the above.

Systems in which the model FST terminals are used (Figure 5) must include a model 8850 site controller (as described for the pattern) and may also include one or more model 8850 operator's consoles and/or the site controller itself using InterPos version 4.x software.

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The model 8850 operator's consoles are fitted with either an integral printer (Figure 3a) or without the integral printer (Figure 3b) in which case an Epson model MTA external printer is fitted.

The dispensers may be authorised either by the FST terminal or by a console.

The FST has the following features:

- an alphanumeric display used to generate prompts to guide the user through data entry functions;
- a keypad with 10 numeric keys, various account selection, alpha and function keys;
- a swipe card-reader through which the authorised card is read; and
- an integral receipt printer.

NOTES:

(i) All transaction data is recorded on the purchaser's receipt and the fuel dispenser will remain 'locked' (unable to be authorised) for a period of time so that the receipt details can be checked against the indicator.

(ii) The order of the operating procedure may vary with the financial institution requirements.

(iii) The authorised card(s) may contain restrictions and special conditions, e.g. limits on type and/or amount of fuel that the user may obtain, which may vary with the type of card and transaction utilised.

(iv) In the event of a power failure occurring while a delivery is in progress, a receipt is printed if requested by the customer prior to the delivery, and there may be a discrepancy between the values printed on the receipt and the values displayed on the fuel dispenser. In this case, the following is printed on the receipt:

POWER FAILURE

RECEIPT IS CORRECT

RECORD OF TRANSACTION

2.3 Variant 3

With the PEC model 8850 site controller also used as the operator's console. A maximum of 32 fuel dispensers for motor vehicles can be controlled by the console, with up to 16 fuel dispensers being displayed on the visual display unit (VDU) at any one time**.** The site controller/operator's console uses InterPos version 4.x software and runs on OS/2 operating system. The system (Figure 6) comprises:

- a PEC model 8850 site controller/operator's console;
- a vendor's VDU indicator and remote purchaser's indicators;
- an Epson model MTA printer for the purchaser's receipt; and
- a conventional or/and point of sale keyboard.

The system has the same facilities as described for the pattern.

2.4 Variant 4

With an IBM model 350-P133 PC replacing the PEC model 8850 as the site controller described in the pattern (Figure 7). The 350-P133 PC has the same functions as the site controller.

If InterPos version 4.x software is installed, the terminal may also operate as the operator's console in which case the system (Figure 8) comprises:

- an IBM model 350-P133 PC site controller/operator's console;
- a vendor's VDU indicator and remote purchaser's indicators;
- an Epson model MTA printer for the purchaser's receipt; and
- a conventional or/and point of sale keyboard.

A maximum of 32 fuel dispensers can be controlled by the same console, with up to 16 fuel dispensers being displayed on the visual display unit (VDU) at any one time.

The system has the same facilities as described for the pattern.

TEST PROCEDURE

Instruments should be tested in accordance with any tests included in the approval documentation for the fuel dispenser/s for motor vehicles to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Inspector's Handbook.

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

1. Postpay Mode (including *temporary storage test*)

Preset transactions can only be initiated from one of the consoles. Any console may then be used to monitor and to complete the transaction.

(i) At any fuel dispenser, remove a nozzle from its hang-up position.

(ii) Authorise the dispenser at the operator's console.

(iii) At the dispenser deliver sufficient fuel to cause the price and quantity indicators to move significantly off zero. Stop the dispenser by returning the nozzle to its hang-up; check that the details of the transaction are displayed on the vendor's indicator/s and record the details of the delivery. Remove the nozzle from its hang-up position again and check that the dispenser indicator does not reset to zero.

(iv) At the console/s, check that the price and volume displayed are the same as the price and volume recorded from the dispenser. At the same dispenser perform another delivery as per (i) above; check that the details of the transactions are displayed consecutively, in the **CURRENT** and **MEMORY** columns adjacent to the dispenser number on the console display.

(v) Make sure that a receipt displaying the details of the **MEMORY** transaction is printed automatically when the transaction is placed in the memory column.

(vi) Attempt to authorise a third delivery from the same dispenser; this should not be possible.

(vii) Complete the transaction. Check that both **CURRENT** and **MEMORY** columns are now clear from all consoles.

(viii) Repeat steps (i) to (vii) for a number of dispensers.

2. Prepay

(i) Conduct a suitable prepay test on one or more fuel dispensers. Observe that the dispenser stops at the preset value.

(ii) For a partially completed delivery, observe that the dispensers cannot be authorised by another console for at least 1 minute after the nozzle has been hung-up.

A "**Refund**" notice appears on the display after the nozzle is hung-up if a prepay delivery is not fully completed.

3. FST Terminal Test

To check the operation of the FST card-operated terminal a special 'weights and measures' card may be used. This card allows a delivery to be authorised and recorded through the FST without interfering with its financial aspects.

The 'weights and measures' test card operation is authorised by the FST manager's card and allows one delivery to be authorised and recorded.

(i) Obtain the manager's assistance to authorise the 'weights and measures' test card.

(ii) Swipe the test card through the FST card reader.

(iii) Answer the prompts to authorise a transaction from a fuel dispenser. Select YES when prompted for a receipt for the transaction.

(iv) Make a delivery from the selected for dispenser.

(v) Complete the transaction and compare the printed values on the receipt with those displayed on the indicators of the selected dispenser.

(vi) Repeat steps (i) to (v) for a number of dispensers.

(vii) Repeat steps (i) to (iv) and simulate a power failure during the delivery.

Ensure that a receipt is printed bearing the following statement:

POWER FAILURE

RECEIPT IS CORRECT

RECORD OF TRANSACTION

S278A
19 September 2000

TECHNICAL SCHEDULE No S278A

VARIATION No 1

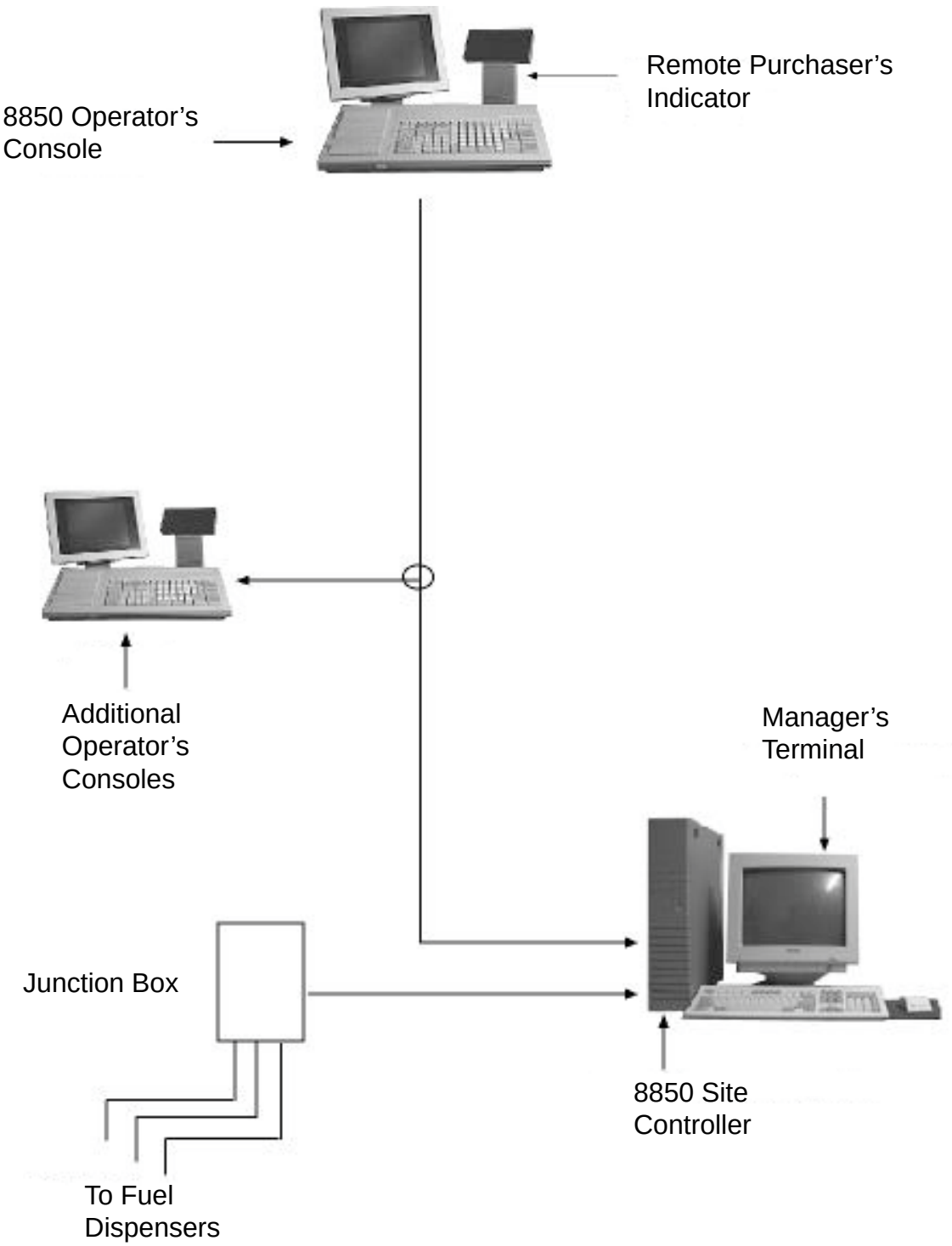
Pattern: PEC Model 8850 Control System for Fuel Dispensers for Motor Vehicles.

Submittor: Advantage Group (Aust.) Pty Limited
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Variant 5

For use with up to 64 fuel dispensers for motor vehicles with a maximum of 16 displayed on any one visual display unit (VDU).

FIGURE S278A - 1



PEC Model 8850 Control System (Pattern)

FIGURE S278A - 2

PEC Model 8850 Site Controller

FIGURE S278A - 3

(a) PEC Model 8850 Operator's Console
With Integral Printer

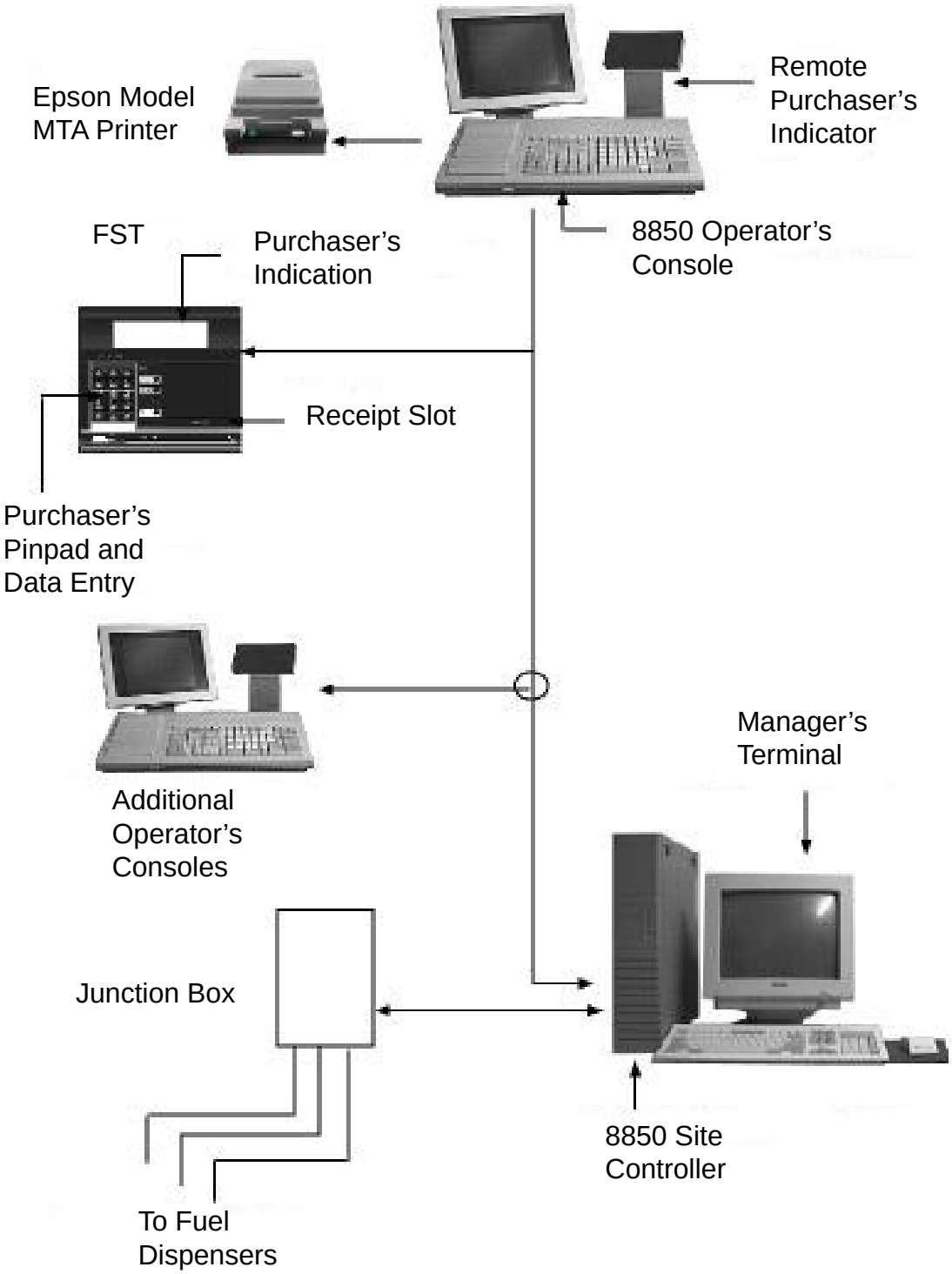
(b) PEC Model 8850 Operator's Console
Without an Integral Printer
(External Printer Not Shown)

FIGURE S278A - 4

(a) PEC Model FST Terminal (Variant 2)

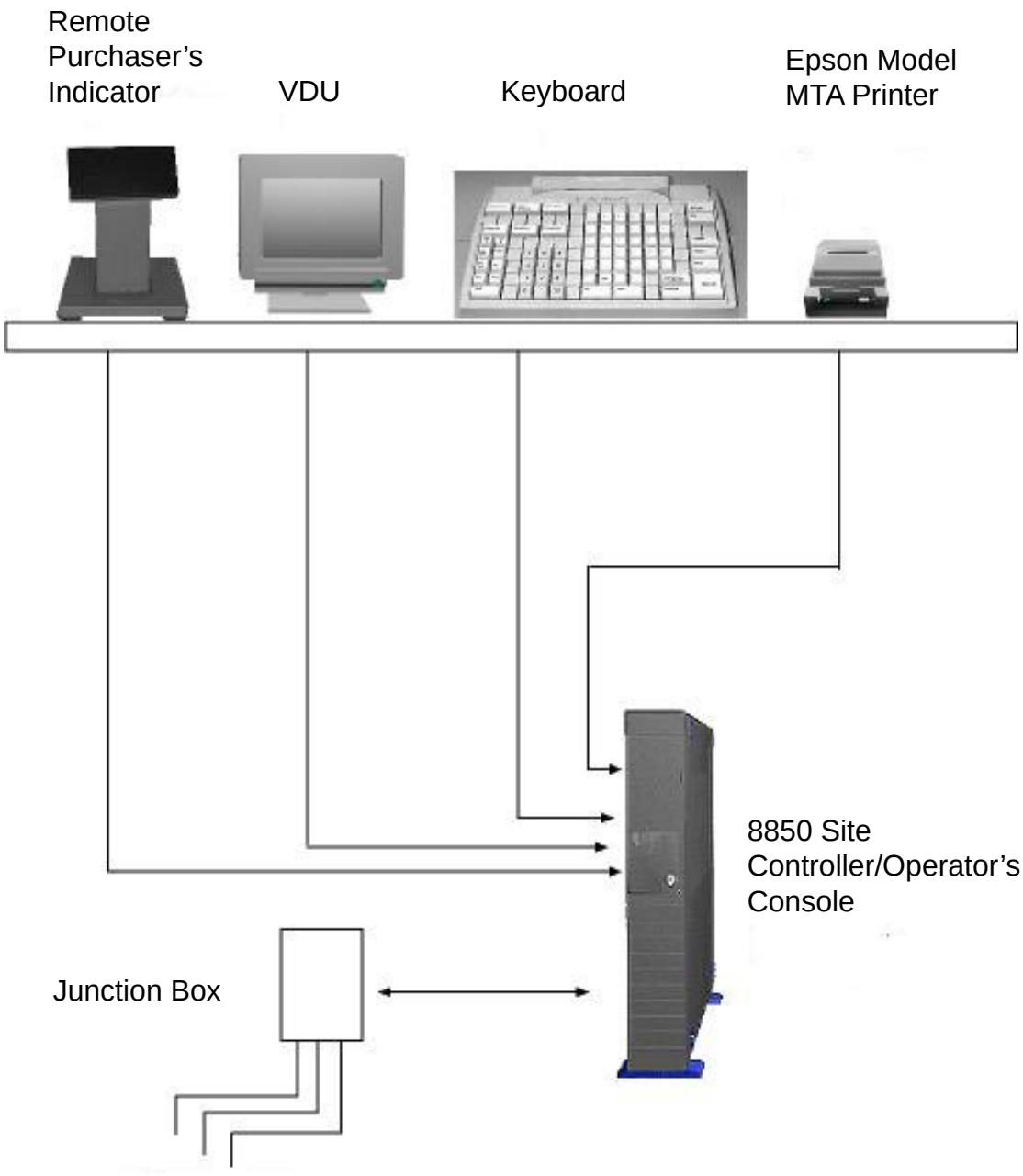
(b) PEC Model FST CRIP Terminal
in a Typical Dispenser Installation (Variant 2)

FIGURE S278A - 5



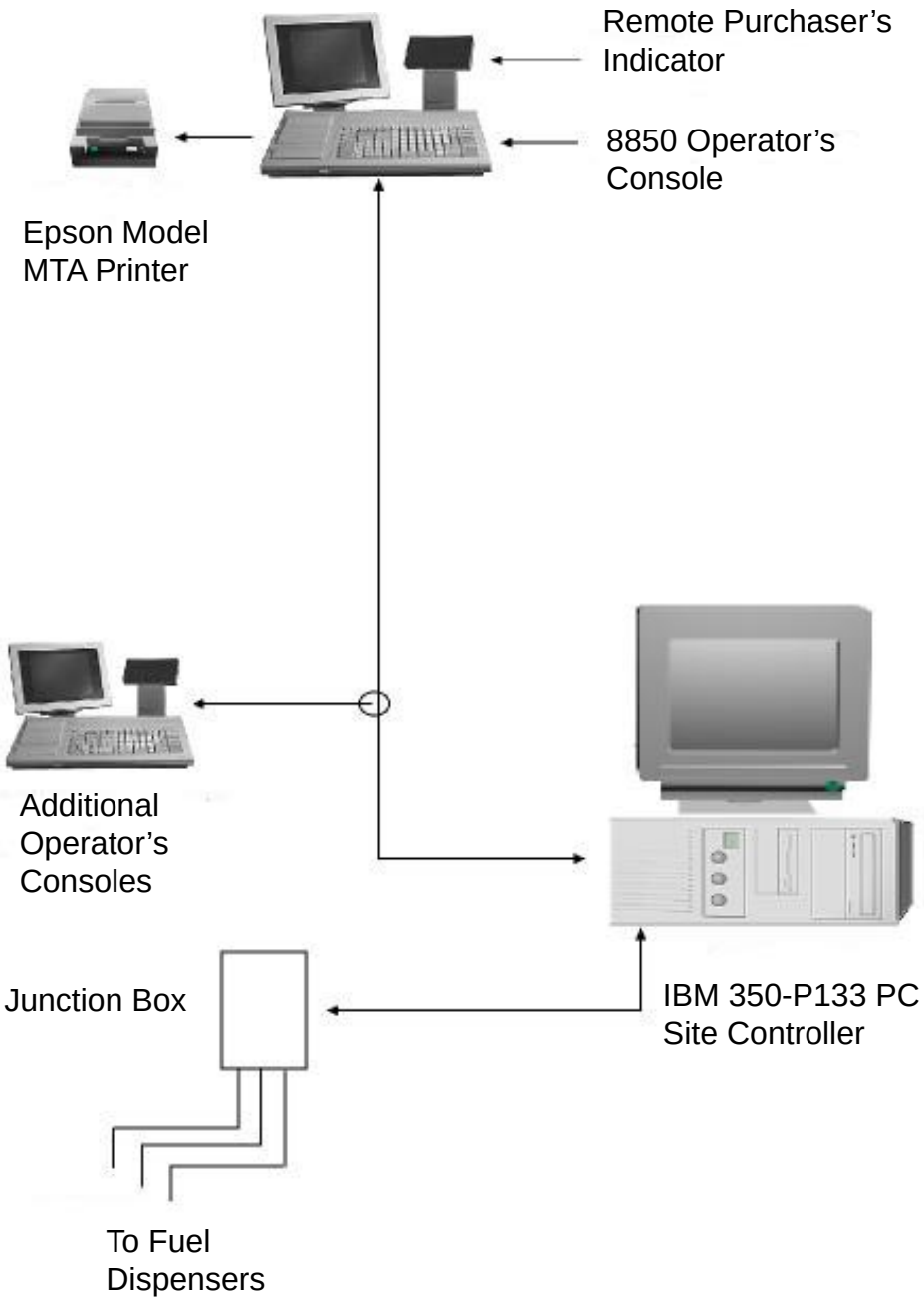
Typical System - Variant 2

FIGURE S278A - 6



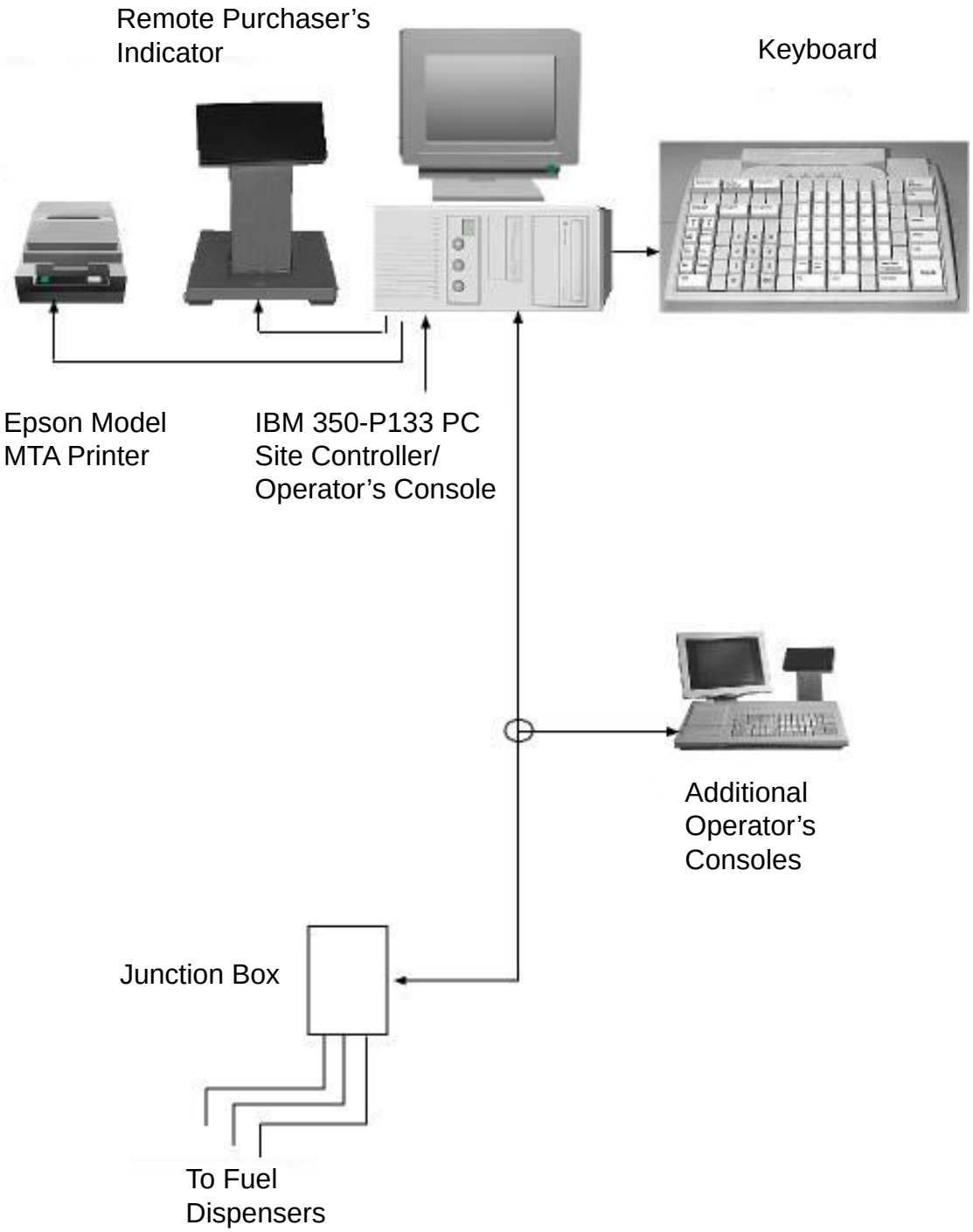
Typical System, Variant 3, Using a Model 8850 as the Site Controller/ Operator's Console

FIGURE S278A - 7



Typical System, Variant 4, Using an IBM 350-P133 PC as the Site Controller

FIGURE S278A - 8



Typical System, Variant 4, Using an IBM 350-P133 PC as the Site Controller/ Operator's Console