National Standards Commission

Supplementary Certificate of Approval

No S236

Issued under Regulation 9
of the
National Measurement (Patterns of Instruments) Regulations

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

Solution Technology Model ST1 Driveway Flowmeter Control System

submitted by Solution Technology
9 Woodbine Court
Wantirna VIC 3152.

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

J. Birch.

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CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/2/93.
This approval expires in respect of new instruments on 1/2/94.

Instruments purporting to comply with this approval shall be marked NSC No S236 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 drawings and specifications 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 Certificates Nos S1/0 and/or S2/0, as appropriate.

Special:

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

DESCRIPTIVE ADVICE

Pattern: approved 27/1/88

- A Solution Technology model ST1 driveway flowmeter control system.

Variant: approved 14/3/88

1. With dual-memory facility.

Technical Schedule No S236 describes the pattern and variant 1.

Variants: approved 7/12/88

2. For connection to a Commission-approved Email MPP driveway flowmeter.

3. In alternative housings.

Variant: provisionally approved 7/12/88 - approved 27/11/89

4. With two model ST1 consoles connected together to control up to 32 driveway flowmeters.

Technical Schedule No S236 Variation No 1 describes variants 2 to 4.

Variant: approved 27/11/89

5. For use with various Commission-approved Gilbarco driveway flowmeters.

Technical Schedule No S236 Variation No 2 describes variant 5.

FILING ADVICE

Supplementary Certificate of Approval No S236 dated 5/5/89 is superseded by this Certificate and may be destroyed.

Notification of Change

The Provisional status of Variant 4 has now been removed, and the reference to "Provisional" in Technical Schedule No S236 Variation No 1 dated 5/5/89 should be deleted.

The documentation for this approval now comprises:

Supplementary Certificate of Approval No S236 dated 30/3/90
Technical Schedule No S236 dated 25/8/88
Technical Schedule No S236 Variation No 1 dated 5/5/89 (incl. Test Procedure)
Technical Schedule No S236 Variation No 2 dated 30/3/90
Test Procedure No S236 dated 25/8/88
Figures 1 and 2 dated 25/8/88

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No S236

Pattern: Solution Technology Model ST1 Driveway Flowmeter Control System.

Submittor: Solution Technology
9 Woodbine Court
Wantirna VIC 3152.

1. Description of Pattern

The pattern is a Solution Technology model ST1 control system (Figure 1) for use in any Commission-approved flowmetering system using any driveway flowmeter fitted with an Email Eclipse MVR79 series indicator.

1.1 Features

The system may be used with up to 16 driveway flowmeters in postpay mode only. The facilities of the system include:

- a touch panel visual display unit (VDU);
- an integral cash register and associated facilities;
- a printer for the vendor's record and purchaser's receipt;
- an optional manager's VDU for observation purposes only;
- a purchaser's indicator (Figure 2) which displays the price and pump number;
- a facility for setting up to 8 grades of fuel;
- a pump stop button and an all pumps emergency stop button; and
- central unit price setting which may also control forecourt unit price sign indicators.

1.2 Cash Register

The console incorporates cash register 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 Segment Check

On power up, the computer automatically performs a systems check, then displays a message on the VDU and causes the purchaser's indicator and the forecourt unit price indicator (if connected to the central unit price setting facility) to go through an all 8's routine.

1.4 Markings

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

Manufacturer's name or mark
Serial number
Model number
NSC approval number S236

1.5 Verification Provision

Provision is made for a verification mark to be applied.

2. Variant 1

With a dual-memory facility which allows two purchasers to operate simultaneously.

2.1 Operation

The first purchaser carries out a delivery of fuel and the transaction data (including the pump number) is indicated on both the purchaser's and vendor's indicators. Once the first purchaser has hung-up the nozzle but before the first transaction has been completed, and after a period of about 5 seconds, a second purchaser can be authorised for the same flowmeter. The word STACK appears on the screen and the details of the first transaction are stored in the console memory and can be shown on both the vendor's and purchaser's displays. The prompt M is displayed to indicate a stored transaction.

The details of the first delivery will be displayed by selecting its flowmeter number. The second transaction is still displayed on the purchaser's display and is not automatically transferred to the memory. The status of the transaction is indicated on the vendor's display.

2.2 Limitations

Only one transaction for each driveway flowmeter may be stored in memory at any time.

TEST PROCEDURE No S236

The following tests should be conducted in conjunction with any tests specified in the approval documents for the driveway flowmeters to which this instrument is connected.

1. Postpay Operation

At the console, authorise one or more driveway flowmeters.

(i) Deliver sufficient liquid to cause the price and volume indicators to move significantly off zero.

(ii) Stop the pump motor by returning the nozzle to its hang-up position.

(iii) Remove the nozzle from its hang-up position and check that the computer does not reset to zero and that the pump motor does not start.

(iv) At the console, check that the price and volume displayed are the same as the price and volume recorded from the driveway flowmeter.

(v) Repeat steps (i) to (iv) for a number of driveway flowmeters.

2. Price Setting

(i) Conduct a price change for one or more grades of fuel. Observe that the displays on the corresponding driveway flowmeter blank for one minute after the price change, and that the driveway flowmeter cannot be authorised during this period.

(ii) Changing the price of a grade of fuel whilst a delivery is in progress shall not take effect until 15 seconds after the delivery is completed.

3. Dual-memory Facility

Conduct a test of this facility using the operational details given in the Technical Schedule.

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No S236

VARIATION No 1

Pattern: Solution Technology Model ST1 Driveway Flowmeter Control System.

Submittor: Solution Technology
9 Woodbine Court
Wantirna VIC 3152.

1. Desciption of Variants

1.1 Variant 2

For connection to a Commission-approved Email MPP flowmeter system with or without a Commission-approved Email control console.

1.2 Variant 3

In alternative housings.

1.3 Provisional Variant 4

Two identical ST1 consoles when connected together to control up to 32 driveway flowmeters. Each console has assigned to it 16 flowmeters, nominally flowmeters 1 to 16 or 17 to 32, which it is responsible for controlling independently of the other 16 flowmeters. A console can also access any flowmeter to which it is not specifically assigned if the other console is also switched on.

The networking enables the following operations controlled by one console to be processed by the other, for all 32 flowmeters:

- flowmeter authorisation, sales transactions, voiding;
- pump stop and emergency stop;
- flowmeter status display screen;
- central unit price setting which may also control forecourt unit price sign indicators (refer Special Conditions of Approval); and
- common management functions (e.g. shift details, total sales).

TEST PROCEDURE

For the dual system (variant 4) check the following:

1. When a driveway flowmeter is authorised from one console it cannot also be authorised from the other; and

2. On completion of a delivery, it should not be possible to pay off the transaction on both consoles.

National Standards Commission

TECHNICAL SCHEDULE No S236

VARIATION No 2

Pattern: Solution Technology Model ST1 Driveway Flowmeter Control System.

Submittor: Solution Technology
9 Woodbine Court
Wantirna VIC 3152.

1. Desciption of Variant 5

For connection to a Commission-approved flowmetering system using Gilbarco model Multi-product and/or Trimline driveway flowmeters.

National Standards Commission

NOTIFICATION OF CHANGE

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S236

CHANGE No 1

The following change is made to the approval documentation for the

Solution Technology Model ST1 Driveway Flowmeter Control System

submitted by Solution Technology
9 Woodbine Court
Wantirna VIC 3125.

In Technical Schedule No S236 Variation No 2 dated 30/3/90, the Description of Variant 5 is amended by including reference to Gilbarco Highline driveway flowmeters, so that the Variant now reads:

> "For connection to a Commission-approved flowmetering system using Gilbarco model Multi-product and/or Trimline and/or Electroline and/or Highline driveway flowmeters."

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

National Standards Commission

NOTIFICATION OF CHANGE

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S236

CHANGE No 2

The following change is made to the approval documentation for the

Solution Technology Model ST1 Driveway Flowmeter Control System

submitted by Solution Technology Pty Ltd
9 Woodbine Court
Wantirna VIC 3152.

In Technical Schedule No S236 dated 25 August 1988, Clause **1.5 Verification Provision** should be replaced by the following:

1.5 Verification/Certification Provision

Provision is made on the controller for a verification/certification mark to be applied.

The ST1 system shall be re-verified/certified if the controller is replaced; however, other components of the system may be replaced without the system needing to be re-verified/certified.

Only Trade Measurement Authorities are authorised to verify and re-verify instruments; only a licensee appointed by a Trade Measurement Authority under a servicing licence, or an employee of the licensee, is authorised to certify instruments.

Components which may be replaced are stand alone items and are connected to the controller by a single data plug. The components are:

Console/Visual Display Unit (*)
Purchaser Display (*)
Receipt Printer (*)
Power supply/conditioning unit
Cash drawer
Personal identification number (PIN) keypad
Bar code scanner
Personal computer

(*) The replacement units for these components shall be of the same type and shall be supplied by the submittor. They are identified by the Solution Technology logo.

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Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

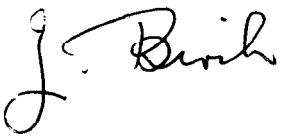
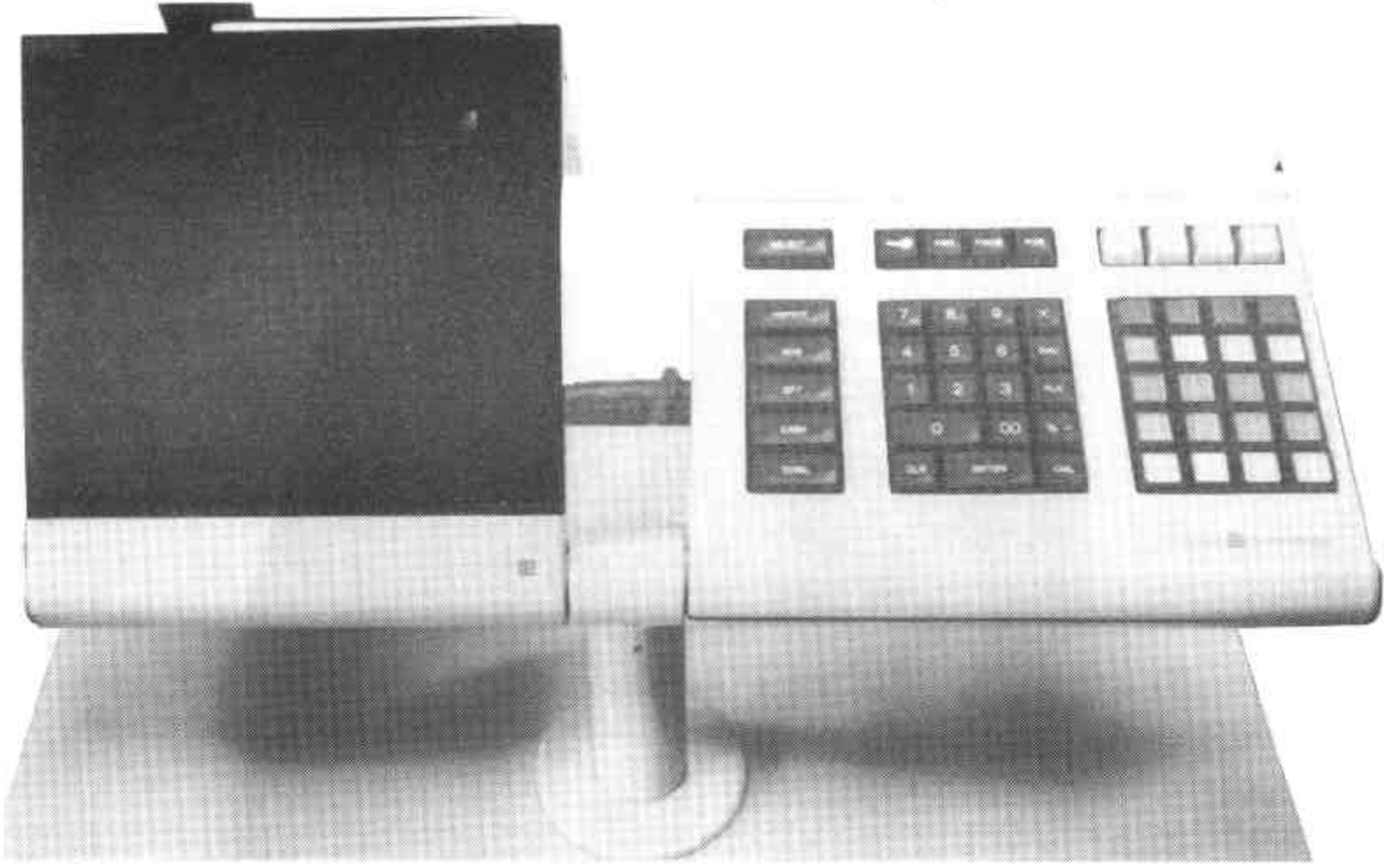
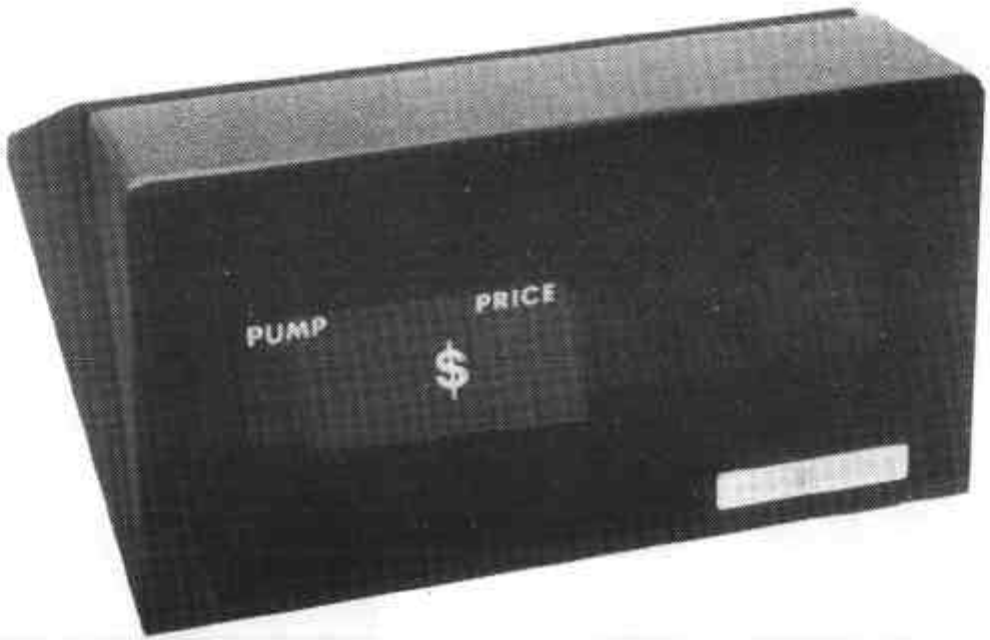


FIGURE S236 - 1



Solution Technology Model ST1 Controller

FIGURE 5236 - 2



Purchaser's Indicator