

# National Standards Commission



## Supplementary Certificate of Approval

No S241

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

AND Model LC4103-K060 Load Cell

submitted by A & D Mercury Pty Ltd  
32 Dew Street  
Thebarton SA 5031.

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.

A handwritten signature in black ink, appearing to read 'J. Birch'. The signature is written in a cursive style with a long horizontal stroke extending to the left.

### CONDITIONS OF APPROVAL

This approval (except provisional variant 1) is subject to review on or after 1/4/93.  
This approval expires in respect of new instruments on 1/4/94.

Instruments purporting to comply with this approval shall be marked NSC No S241 and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S241 in addition to the approval number of the instrument.

It is the submitter'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 values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

**Special:** (for provisional variant 1)

The approval of variant 1 is subject to review on or after 1/7/91.

Instruments purporting to comply with this approval shall be marked NSC No PS241 and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No PS241 in addition to the approval number of the instrument.

### DESCRIPTIVE ADVICE

**Pattern:** approved 28/3/88

- An AND model LC4103-K060 load cell of 60 kg capacity.

**Variants:** provisionally approved 20/6/90 - approved 7/10/92

1. A model LC4103-K150 load cell of 150 kg capacity.

**Variants:** approved 20/6/90

2. A model LC4102-K030 load cell of 30 kg capacity.

Technical Schedule No S241 describes the pattern and variants 1 & 2.

**Variants:** approved 29/11/90

3. A model LC4204-K300 load cell of 300 kg capacity.

Technical Schedule No S241 Variation No 1 describes variant 3.

### FILING ADVICE

Supplementary Certificate of Approval No S241 dated 13/8/90 is superseded by this Certificate, and may be destroyed. Notification of Change No 1 dated 28/4/89 was incorporated into Technical Schedule No S241 dated 13/8/90. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S241 dated 16/4/91  
Technical Schedule No S241 dated 13/8/90  
Technical Schedule No S241 Variation No 1 dated 16/4/91  
Figures 1 and 2 dated 13/8/90



# National Standards Commission

## TECHNICAL SCHEDULE No S241

**Pattern:** AND Model LC4103-K060 Load Cell.

**Submittor:** A & D Mercury Pty Ltd  
32 Dew Street  
Thebarton SA 5031.

### 1. Description of Pattern

The pattern is an AND model LC4103-K060 load cell of 60 kg capacity (refer Figure 1 and Table 1) approved for use with a maximum of 3000 verification scale intervals. (Also known as Litra load cells.)

#### 1.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and in accordance with one of the methods shown in Figure 2.

#### 1.2 Markings

The following is the minimum data required to be marked on the load cells:

Manufacturer's name or mark  
Model number  
Serial number  
NSC approval number  
Maximum rated capacity

NSC No S241

### 2. Description of Variants

#### 2.1 Variant 1

An AND model LC4103-K150 load cell of 150 kg capacity (refer Table 1).

#### 2.2 Variant 2

An AND model LC4102-K030 load cell of 30 kg capacity (refer Table 1).

TABLE 1

Type: AND	LC4103 (*)	LC4103 (*)	LC4102 (*)
Maximum capacity	60 kg	150 kg	30 kg
Maximum number of verification scale intervals	(a) 3 000 (b) 3 000	(a) 3 000 (b) 3 000	(a) 3 000 (b) 3 000
Minimum value of verification scale interval	(a) 0.0145 kg (b) 0.0058 kg	(a) 0.0185 kg (b) 0.0463 kg	(a) 0.0028 kg (b) 0.0071 kg
Output rating (nominal)	1 mV/V	1 mV/V	1 mV/V
Input impedance (nominal)	400 ohms	400 ohms	400 ohms
Supply voltage (AC or DC)	12-15 V	12-15 V	12-15 V
Number of leads (plus shield)	4	4	4
Cable lengths ( $\pm 0.1$ m)	2 or 2.9 m	2 or 3 m	1.5 or 3 m

- (\*) Suffix according to capacity e.g. K060 for 60 kg load cell.
- (a) Instruments with automatic zero track.
- (b) Instruments without automatic zero track.



# National Standards Commission

TECHNICAL SCHEDULE No S241

VARIATION No 1

**Pattern:** AND Model LC4103-K060 Load Cell.

**Submitter:** A & D Mercury Pty Ltd  
32 Dew Street  
Thebarton SA 5031.

## 1. Description of Variant 3

An AND model LC4204-K300 load cell of 300 kg capacity (refer Table 2) approved for use with a maximum of 3000 verification scale intervals.

TABLE 2

Type: AND Model LC4204-K300

Maximum capacity	300 kg
Maximum number of verification scale intervals	(a) 3 000 (b) 3 000
Minimum value of verification scale interval	(a) 0.012 kg (b) 0.031 kg
Output rating (nominal)	1.5 mV/V
Input impedance (nominal)	400 ohms
Supply voltage (nominal)	12 V (AC or DC)
Number of leads (plus shield)	4
Cable lengths ( $\pm 0.1$ m)	1, 1.5, 2, 3, or 5 m

- (a) Instruments with automatic zero track.
- (b) Instruments without automatic zero track.



# NATIONAL STANDARDS COMMISSION

S241  
28/4/89

## NOTIFICATION OF CHANGE

### SUPPLEMENTARY CERTIFICATE OF APPROVAL No S241

#### CHANGE No 1

The following change is made to the approval documentation for the  
AND Litra Model LC4103-K060 Load Cell

submitted by   A & D Mercury Pty Ltd  
                  32 Dew Street  
                  Thebarton SA 5031.

In Technical Schedule No S241 dated 22/7/88, the value for Cable Length given in Table 1 should be amended to read "2 m or 2.9 m".

Signed

Executive Director

## National Standards Commission



### NOTIFICATION OF CHANGE

#### SUPPLEMENTARY CERTIFICATE OF APPROVAL No S241

#### CHANGE No 2

The following changes are made to the approval documentation for the

AND Model LC4103-K060 Load Cell

submitted by A & D Mercury Pty Ltd  
32 Dew Street  
Thebarton SA 5031.

1. In Supplementary Certificate of Approval No S241 dated 16/4/91, The Provisional status for Variant 1 is hereby removed, and the following amendments are required;
  - (a) The DESCRIPTIVE ADVICE relating to Variant 1 is amended to read, in part:  
  
"Variant: provisionally approved 20/6/90 - approved 7/10/92"
  - (b) The **Special Conditions of Approval** (for provisional variant 1) should be deleted.
  - (c) In the FILING ADVICE, the references to Table 1 dated 13/8/90 and Table 2 dated 16/4/91 should be deleted, and the following added:  
  
"Table 1/2 dated 30/10/92"

NOTE: Table 1/2 is attached herein.



2. In Technical Schedule No S241 dated 13/8/90 and its Variation No 1 dated 16/4/91, Tables 1 and 2 are replaced by Table 1/2 attached herein which has been brought up-to-date.

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.

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TABLE 1/2

Type: AND	LC4204 (*)	LC4103 (*)	LC4103 (*)	LC4103 (*)	LC4102 (*)
Maximum capacity	300 kg	150 kg	60 kg	30 kg	30 kg
Maximum number of verification scale intervals	3000	3000	3000	3000	3000 kg
Minimum value of verification scale interval	0.031 kg	0.0463 kg	0.0145 kg	0.0071 kg	0.0071 kg
Minimum dead load output return for multi-range instruments (DR)	0.02 kg	0.012 kg	0.009 kg	0.005 kg	0.005 kg
Output rating (nominal)	1.5 mV/V	1 mV/V	1 mV/V	1 mV/V	1 mV/V
Input impedance (nominal)	400 ohms	400 ohms	400 ohms	400 ohms	400 ohms
Supply voltage (AC or DC)	12 V	12-15 V	12-15 V	12-15 V	12-15 V
Cable length ( $\pm 0.1$ m)	1, 1.5, 2, 3 or 5 m	2 or 3 m	2 or 2.9 m	1.5 or 3 m	1.5 or 3 m
Number of leads (plus shield)	4	4	4	4	4

(\*) Suffix according to capacity, e.g. K060 for 60 kg load cell.

Approved Models and Capacities

# National Standards Commission



## NOTIFICATION OF CHANGE

### SUPPLEMENTARY CERTIFICATE OF APPROVAL No S241

### CHANGE No 3

The following change is made to the approval documentation for the

AND Model LC4103-K060 Load Cell

submitted by A & D Mercury Pty Ltd  
32 Dew Street  
Thebarton SA 5031.

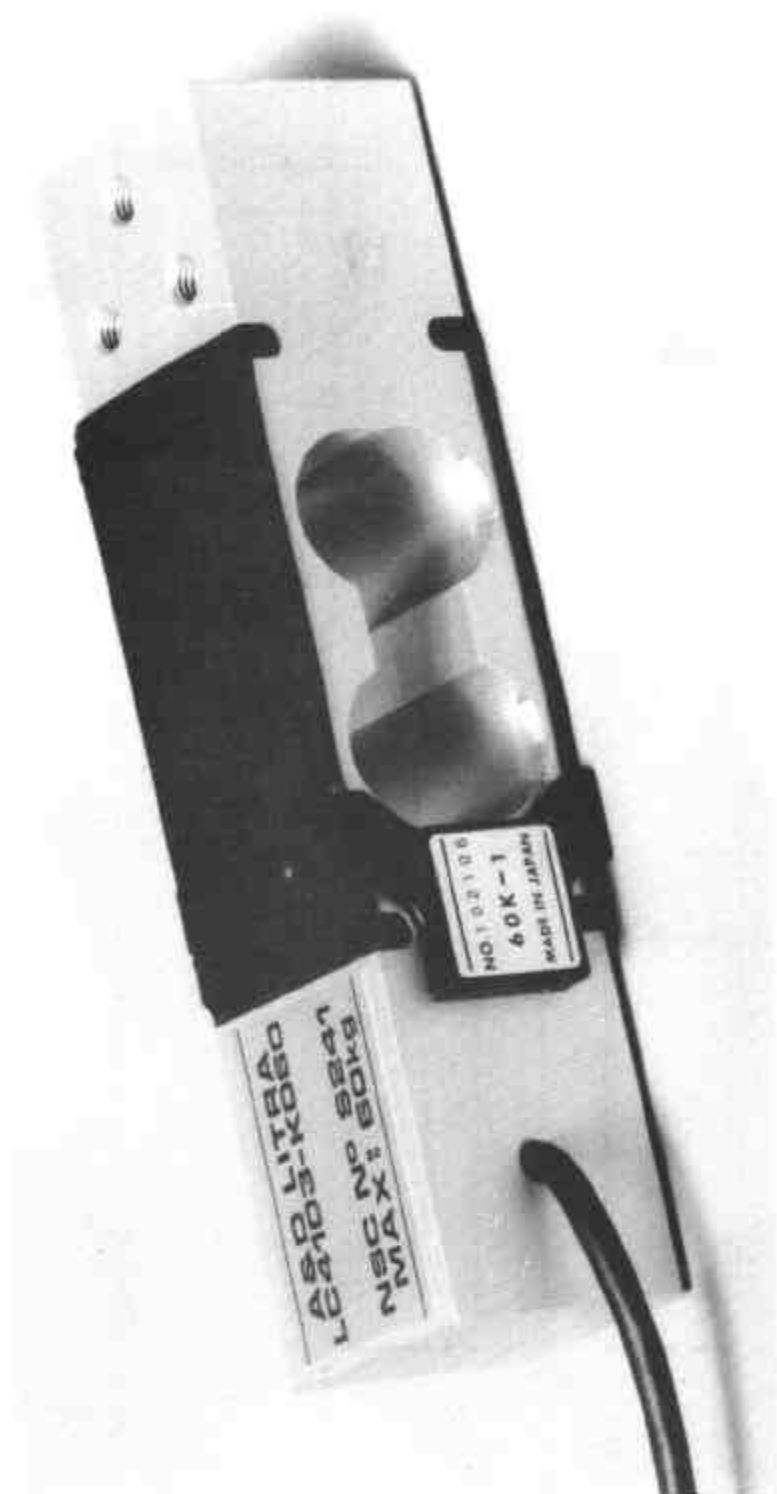
In Supplementary Certificate of Approval No S241 dated 16/4/91, the Condition of Approval referring to the expiry of the approval should be amended to now read:

"This approval expires in respect of new instruments on 31/12/94."

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.



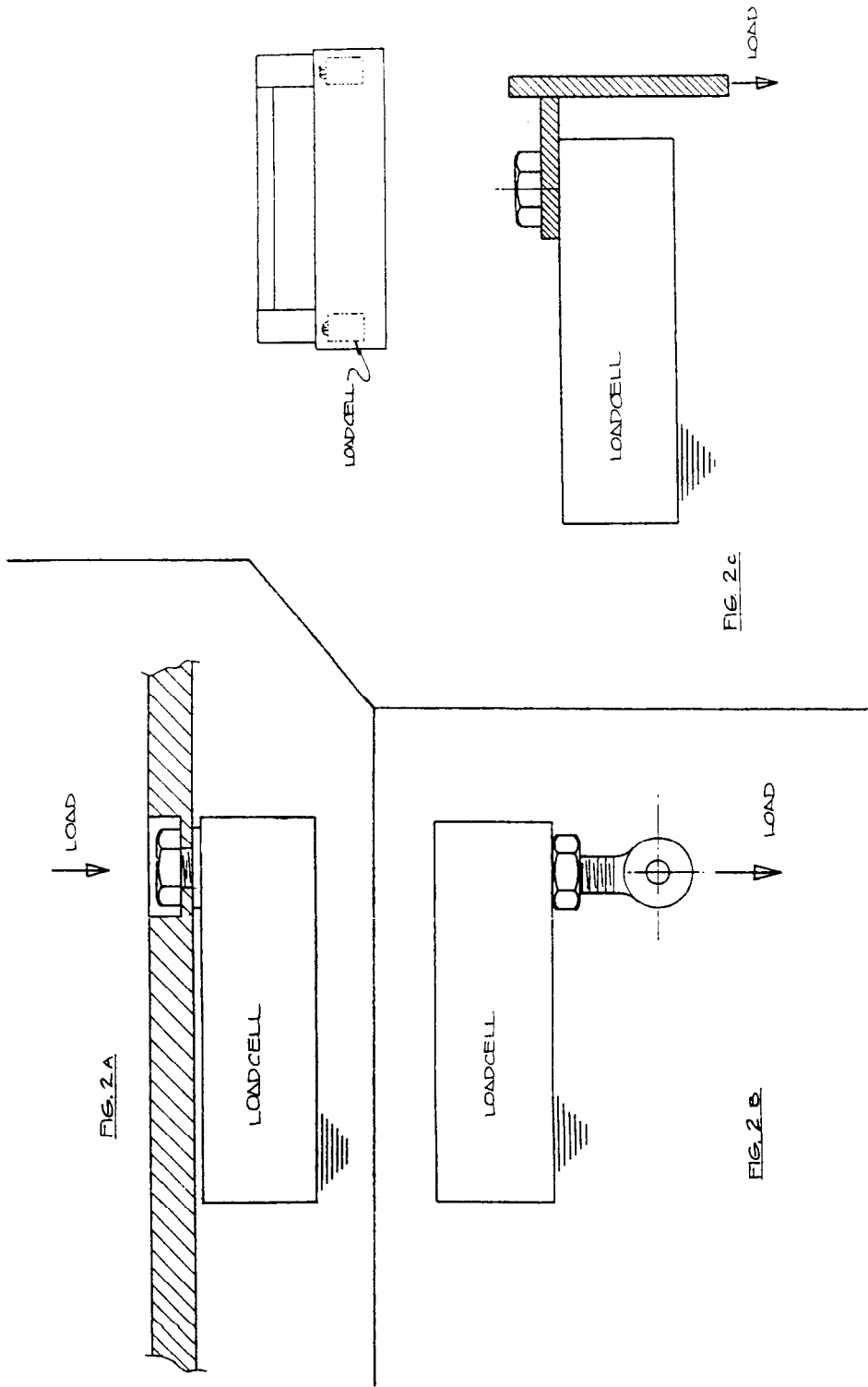
Figure S241 - 1



S241  
13/8/90

AND LC4103 Load Cell

Figure S241 - 2



Typical Mounting Methods

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