Australian Government

National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Notification of Change
Supplementary Certificate of Approval No S362
Change No 2

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

The following changes are made to the approval documentation for the

A & D Model AD-4401 Digital Indicator

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

In Supplementary Certificate of Approval No S362 dated 30 November 1998;

1. The Condition of Approval referring to the review of the approval should be amended to read:

   "This approval becomes subject to review on 1 November **2013**, and then every 5 years thereafter."

2. The FILING ADVICE should be amended by adding the following:

   "Notification of Change No 1 dated 23 January 2004
   Notification of Change No 2 dated 13 February 2009"

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

Supplementary Certificate of Approval

No S362

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

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

A & D Model AD-4401 Digital Indicator

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

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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 November 2008, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No S362 and only by persons authorised by the submittor.

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Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S362 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 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.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

DESCRIPTIVE ADVICE

Pattern: approved 19 October 1998

- An A & D model AD-4401 digital indicator.

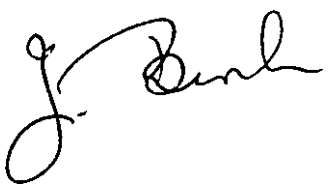
Technical Schedule No S362 describes the pattern.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S362 dated 30 November 1998
Technical Schedule No S362 dated 30 November 1998 (incl. Table 1 and Test Procedure)
Figure 1 dated 30 November 1998

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.



TECHNICAL SCHEDULE No S362

Pattern: A & D Model AD-4401 Digital Indicator.

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

1. Description of Pattern

An A & D model AD-4401 digital indicator (Figure 1 and Table 1) which is approved for use with up to 3000 verification scale intervals and which may be fitted with output sockets for the connection of auxiliary and/or peripheral devices.

1.1 Zero

Zero is automatically corrected to within ±0.25e whenever power is applied and whenever the instrument comes to rest within 0.5e of zero.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

The instrument has an initial zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2 Tare

A semi-automatic subtractive taring device may be fitted having a capacity of up to the maximum capacity of the instrument.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Verification/Certification Provision

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

1.5 Additional Functions

The indicator may be fitted with the following features:

- Secondary display. This display may be configured to show additional data which is not to be used for trade. The display is differentiated by cross-hatching.
- Batching facility. This facility provides additional functions used for batching operations. Only the indications of static weight values are approved for trade use.

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1.6 Sealing Provision

Provision is made for the calibration adjustment to be sealed by means of the sealing screw and pin on the front panel of the indicator.

1.7 Markings

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

Manufacturer's mark, or name written in full	A & D Company Ltd
Indication of accuracy class	(III)
Maximum capacity	*Max* ..... kg *
Minimum capacity	*Min* ..... kg *
Verification scale interval	*e =* ..... kg *
Serial number of the instrument	……
Pattern approval mark for the indicator	NSC No S362

* These markings are also shown near the display of the result if they are not already located there.

In addition, instruments not greater than 100 kg capacity shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

TABLE 1 — Specifications

Maximum number of verification scale intervals	3000
Minimum sensitivity	0.8 μV/scale interval
Excitation voltage	10 V DC
Maximum excitation current	230 mA

TEST PROCEDURE

Instruments should be tested in conjunction with any tests specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Inspector's Handbook.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads on initial verification/certification for loads, *m*, expressed in verification scale intervals, e, are:

$\pm 0.5\ e$ for loads $0 \leq m \leq 500$;
$\pm 1.0\ e$ for loads $500 < m \leq 2\,000$; and
$\pm 1.5\ e$ for loads $2\,000 < m \leq 10\,000$.

S362
23 January 2004

Australian Government

National Standards Commission

12 Lyonpark Road, North Ryde NSW 2113 Australia

Notification of Change

Supplementary Certificate of Approval No S362

Change No 1

The following change is made to the approval documentation for the

A & D Model AD-4401 Digital Indicator

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

In Supplementary Certificate of Approval No S362 dated 30 November 1998, the Condition of Approval referring to the review of the approval should be amended to read:

> "This approval becomes subject to review on 1 November 2008, and then every 5 years thereafter."

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

FIGURE S362 - 1

A & D Model AD-4401 Digital Indicator