



**Australian Government**  
**National Measurement  
Institute**

Bradfield Road, West Lindfield NSW 2070

**Notification of Change**  
**Certificate of Approval No 14/2/9**  
**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

Elster Model A140-SB1MABG-A Electricity Meter

submitted by Elster Metering Pty Ltd  
55 Northcorp Blvd  
Broadmeadows VIC 3047.

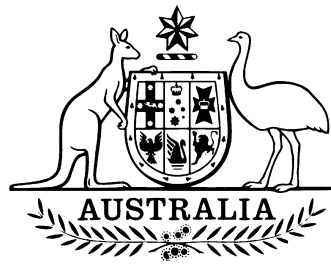
In Certificate of Approval No 14/2/9 dated 17 February 2003;

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 April 2012, and then every 5 years thereafter."
2. The FILING ADVICE should be amended by adding the following:  
"Notification of Change No 1 dated 17 February 2003  
Notification of Change No 2 dated 21 September 2007"

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

A handwritten signature in black ink, appearing to be 'J. G. T.', is located in the bottom right corner of the page.

14/2/9  
17 February 2003



## National Standards Commission

12 Lyonpark Road, North Ryde NSW

### Certificate of Approval

**No 14/2/9**

Issued 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

Elster Model A140-SB1MABG-A Electricity Meter

submitted by Elster Metering Pty Ltd  
(formerly ABB Australia Pty Limited)  
55 Northcorp Blvd  
Broadmeadows VIC 3047.

**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 April 2007, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 14/2/9 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 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 NSC P106.

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

### DESCRIPTIVE ADVICE

**Pattern:** approved 19 March 2002

- An Elster model A140-SB1MABG-A single phase Class 1 electronic watt hour meter used to measure electrical energy.

**Variants:** approved 19 March 2002

1. Various models of the A120 series.
2. Certain other models of the A120 and A140 series and with certain optional features.

Technical Schedule No 14/2/9 describes the pattern and variants 1 & 2.

### FILING ADVICE

Certificate of Approval No 14/2/9, its Technical Schedule and Figures 1 and 2 all dated 16 May 2002, are superseded by this Certificate, Technical Schedule and Figures 1 and 2, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 14/2/9 dated 17 February 2003  
Technical Schedule No 14/2/9 dated 17 February 2003 (incl. Test Procedure)  
Figures 1 and 2 dated 17 February 2003

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.



## TECHNICAL SCHEDULE No 14/2/9

**Pattern:** Elster Model A140-SB1MABG-A Electricity Meter.

**Submittor:** Elster Metering Pty Ltd  
55 Northcorp Blvd  
Broadmeadows VIC 3047.

### 1. Description of Pattern

An Elster model A140-SB1MABG-A single phase Class 1 electronic direct connected multirate watt hour meter (Figure 1) used to measure electrical energy.

#### 1.1 Field of Operation

- Number of phases 1
- Number of wires 2
- Reference frequency 50 Hz
- Reference ambient temperature ranges:
  - specified range of operation -10 to 60°C
  - limit range of operation -25 to 70°C
- Rated voltage 230 V AC
- Rated currents: Basic current,  $I_b$  10 A  
Maximum current,  $I_{max}$  100 A
- Accuracy index 1

#### 1.2 Features/Functions

- 1 element
- 1 optical port
- liquid crystal display
- 1 LED pulse output
- internal clock and calendar with battery-backup
- multi-rate structure
- security and event logging
- a load profile memory
- bottom connected

#### 1.3 Verification/Certification

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

#### 1.4 Sealing Provision

Provision is made for the calibration adjustments to be sealed by the application of a mechanical seal (Figure 2).

## 1.5 Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark	...
Model designation	...
Serial number	...
Pattern approval mark	NSC No 14/2/9
Number of phases	...
Number of wires	...
Reference frequency	... Hz
Temperature limits (if other than -10 to 60°C)	... to ...°C
Meter constant	...
Rated voltage	... AC
Rated currents:	$I_b$ ... A
	$I_{max}$ ... A
Accuracy index	...

## 2. Description of Variants

### 2.1 Variant 1

Various models of the A120 series which have the features of the pattern except they are not fitted with a load profile memory.

### 2.2 Variant 2

Other models of the A120 and A140 series, having different features/functions to the pattern. Note that A120/A140 is the basic series number – the full model number has a variety of additional alphanumeric characters, some representing non-metrological functions, e.g. the pattern is the model A140-SB1MABG-A.

Instruments may be fitted with a number of optional features/functions, some of which are reflected in the model number as identified above. Options include:

- pulsing output (DIN SO/EN 62053-31)
- 1 RS232 communications port

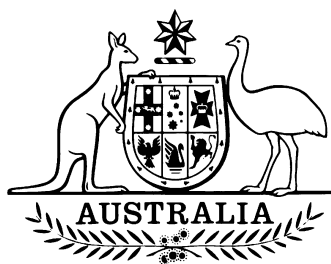
### TEST PROCEDURE

Instruments tested for initial verification shall comply with the certificate of approval and technical schedule, and the maximum permissible errors for initial and subsequent verifications/certifications at the operating conditions in effect at the time of verification.

### TESTS

1. AC Voltage Test - at initial verification only.
2. Running With No Load - at subsequent verifications/certifications.
3. Starting.
4. Accuracy.

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17 February 2003



## National Standards Commission

12 Lyonpark Road, North Ryde NSW

### Notification of Change

### Certificate of Approval No 14/2/9

### Change No 1

The following changes are made to the approval documentation for the

ABB Model A140-SB1MABG-A Electricity Meter

submitted by ABB Australia Pty Limited  
88-120 Beresford Road  
Lilydale VIC 3140.

Certificate of Approval No 14/2/9, its Technical Schedule and Figures 1 and 2 all dated 16 May 2002, are superseded by the Certificate, Technical Schedule and Figures 1 and 2 attached herein, and may be destroyed.

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.



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17 February 2003

FIGURE 14/2/9 - 1



Elster Model A140-SB1MABG-A Electricity Meter

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FIGURE 14/2/9 - 2



Without Terminal Cover and Showing Sealing