



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

Bradfield Road, West Lindfield NSW 2070

## **Certificate of Approval**

### **No 14/2/37**

Issued by the Chief Metrologist 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 gREX ZG A7 Electricity Meter

submitted by Elster Metering Pty Ltd  
55 Northcorp Boulevard  
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.

This approval has been granted with reference to document NMI M 6, *Pattern Approval and Initial Verification of Electricity Meter and Associated Transformers: Definitions, Metrological and Technical Requirements*, July 2004.

#### **CONDITIONS OF APPROVAL**

This approval becomes subject to review on 1 February 2014, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 14/2/37' 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 documentation lodged with the National Measurement Institute (NMI) 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 document NMI P 106.

The National Measurement Institute 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 29 January 2009

- An Elster model gREX ZG A7 electronic single phase Class 1 direct connected static watt hour meter used to measure electrical energy.

Technical Schedule No 14/2/37 describes the pattern.

#### FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 14/2/37 dated 10 March 2009

Technical Schedule No 14/2/37 dated 10 March 2009 (incl. Test Procedure)

Figure 1 dated 10 March 2009

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, consisting of a large, stylized 'J' or 'G' shape followed by a horizontal line and a small flourish.

## TECHNICAL SCHEDULE No 14/2/37

**Pattern:** Elster Model gREX ZG A7 Electricity Meter

**Submitter:** Elster Metering Pty Ltd  
55 Northcorp Boulevard  
Broadmeadows VIC 3047

### 1. Description of Pattern

An Elster model gREX ZG A7 electronic single phase Class 1 direct connected static watt hour meter (Figure 1) used to measure electrical energy.

#### 1.1 Field of Operation

The field of operation of the measuring system is determined by the following characteristics:

- 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 240 V AC
- Rated currents: Basic current,  $I_b$  5 A  
Maximum current,  $I_{max}$  100 A
- Accuracy index 1

#### 1.2 Features/Functions

- One (1) element.
- Liquid crystal digital indicator having six (6) digits.
- Active energy measurement (Class 1).
- 2-way FHSS radio communications.
- ANSI-compliant optical interface.
- Bottom connect rectangular base.

In addition, meters may have service control and/or load control switches.

#### 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 one or more mechanical seals (Figure 1).

### 1.5 Descriptive Markings

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's name or mark	...
Model designation	...
Serial number	...
Pattern approval mark	NMI 14/2/37
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	Class 1

(\*) Optional marking.

### 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.

FIGURE 14/2/37 – 1



Elster gREX ZG A7 Series Electricity Meter (including typical sealing)