Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 14/2/18

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 instruments herein described.

Actaris Model ACE1000 SMO Electricity Meter

submitted by Itron Australasia Pty Limited
8 Rosberg Road
WINGFIELD SA 5013

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 of the **pattern and variant 1** was 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 – **that approval expires in respect of new instruments on 31/12/15.**

This approval has been granted with reference to document NMI M 6-1 *Electricity Meters. Part 1: Metrological and Technical Requirements*, July 2012.

The approval of **variant 2** becomes subject to review on **1/06/20**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – interim certificate issued	30/05/05
1	Pattern & variant 1 approved – certificate issued	12/09/05
2	Pattern reviewed & amended (including Test Procedure) – variant 2 approved – certificate issued	4/02/11
3	Pattern & variants 1 & 2 amended (outdoor use) – notification of change issued	15/04/11
4	Pattern & variants 1 & 2 updated & amended (change of submittor name) – certificate issued	28/03/13
5	Pattern & variants 1 & 2 reviewed & amended (approval status) – certificate issued	11/06/15

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number ‘NMI 14/2/18’ 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.

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

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

Dr A Rawlinson

TECHNICAL SCHEDULE No 14/2/18

1. Description of Pattern approved on 30/05/05

An Actaris model ACE1000 SMO electronic single phase Class 1 indoor direct connect static watt hour meter (Figure 1) used to measure electrical energy. May also be known as Itron meters of the same model.

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 45°C
  - limit range of operation -20 to 55°C
- Rated voltage 240 V AC
- Rated currents: Basic current, I_b 10 or 20 A
  Maximum current, I_{max} 100 A
- Accuracy index 1

1.2 Features/Functions

- One (1) element
- Mechanical digital indicator having a maximum display of 99999.9 kW h.
- Four terminal rectangular base

1.3 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 14/2/18
Number of phases	...
Number or wires	...
Reference frequency	... Hz
Meter constant	...
Rated voltage	... AC
Rated currents:	I_b ... A
	I_{max} ... A
Accuracy index	Class 1

1.4 Verification Provision

Provision is made for the application of a verification mark.

1.5 Sealing Provision

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

2. Description of Variant 1 approved on 30/05/05

With a pulse output (DIN 43 864).

3. Description of Variant 2 approved on 4/02/11

An Itron (or Actaris) model ACE1000 SMO electronic single phase Class 1 direct connect static watt hour meter (Figure 3) which is similar to the pattern including field of operation except as listed below:

- Reference ambient temperature ranges:
  - specified range of operation -10 to 60°C
  - limit range of operation -20 to 70°C
- Rated currents: Basic current, I_b 10 A

Instruments complying with this variant are approved for outdoor use.

TEST PROCEDURE No 14/2/18

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

The maximum permissible errors are specified in the *National Trade Measurement Regulations 2009* (Cth).

Meters shall be verified in accordance with NITP 14 *National Instrument Test Procedures for Utility Meters*.

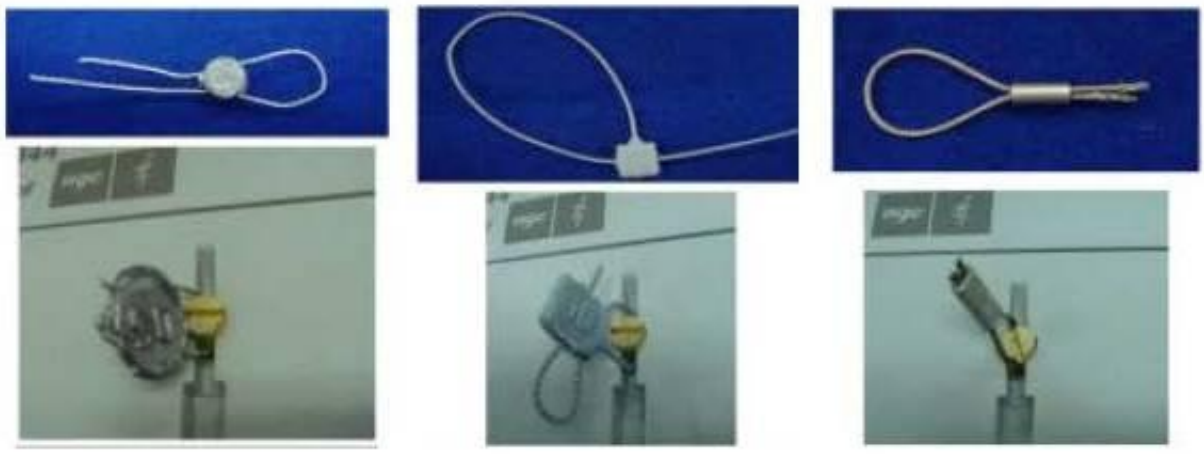
Evidence of verification shall be confirmed via the meter serial number and certificate of verification issued by a utility meter verifier in accordance with NITP 14.

NOTE: NMI reserves the right to vary this procedure. Any such variation shall be notified in writing by NMI.

FIGURE 14/2/18 – 1

Itron Model ACE2000 Type 292 Electricity Meter (The Pattern)

FIGURE 14/2/18 – 2



Alternative Seals

Showing Typical Mechanical Seals

FIGURE 14/2/18 – 3

Itron Model ACE1000 SMO Electricity Meter (Variant 2)

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