Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 14/2/181

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.

Itron model Riva T electricity meter.

submitted by Itron Australasia Pty Ltd
8 Rosberg St
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 has been granted with reference to document NMI M 6-1 *Active-Energy Electricity Meters. Part 1: Metrological and Technical Requirements*, June 2022.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	09/06/26
1	Pattern amended (temperature - limit range of operation, environment added to descriptive markings), Variant 1 approved – certificate issued	04/11/26

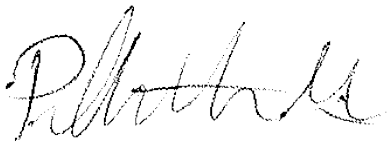
CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number ‘NMI 14/2/181’ 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.

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



Phillip Mitchell
A/g Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 14/2/181

1. Description of Pattern

approved on 09/06/26

amended on 04/11/26

An Itron Australasia Pty Ltd model Riva T polyphase 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: 3
- Number of wires: 4
- Reference frequency: 50 Hz
- Reference ambient temperature ranges:
  - specified range of operation: −40 to 55 °C
  - limit range of operation: −40 to 70 °C
- Rated voltage: 3 × 230/400 V AC
- Rated currents: Basic current, I_b: 5 A
  - Maximum current, I_{max}: 100 A
- Meter constant: 1000 imp/kWh
- Accuracy class: 1

1.2 Features/Functions

- Liquid crystal digital indicators with a maximum display of 8 digits, featuring configurable decimal placement and selectable units (Wh/kWh)
- Internal crystal clock
- Measurement in both positive and negative directions (export and import).

1.3 Verification Provision

Provision is made for the application of a verification mark.

1.4 Sealing Provision

Provision is made for mechanical sealing devices and parameters that have a metrologically significant effect and that determine the measurement result by the application of mechanical seals (Figure 2) and solid state sealing. The meter is designed such that the housing cover cannot be removed without causing permanent damage.

1.5 Descriptive Markings

Instruments are clearly and permanently marked with the following data, in the vicinity of the indicating device, in the form shown right:

Manufacturer's mark, or name written in full	……..
Model designation	……..
Serial number	……..
Pattern approval mark	NMI 14/2/181
Number of phases	……..
Number or wires	……..
Reference frequency	…….. Hz
Temperature limits (if other than −10 to 55 °C)	.... to …. °C
Meter constant	……..
Rated voltage	…….. AC
Rated currents:	I_b …… A
	I_{max} ……. A
Accuracy class	……..
Environment	Indoor use only

1.6 Harmonics

Instruments purporting to comply with this approval are suitable for use where the harmonics do not exceed those specified in NMI M 6-1:2022.

1.7 Description of Variant 1 approved on 04/11/26

An Itron Australasia Pty Ltd model Riva T for outdoor use (Figure 3) having the same Field of Operation and Features/Functions as the pattern. Applicable meters are not marked 'Indoor use only'.

TEST PROCEDURE No 14/2/181

Instruments tested for 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.

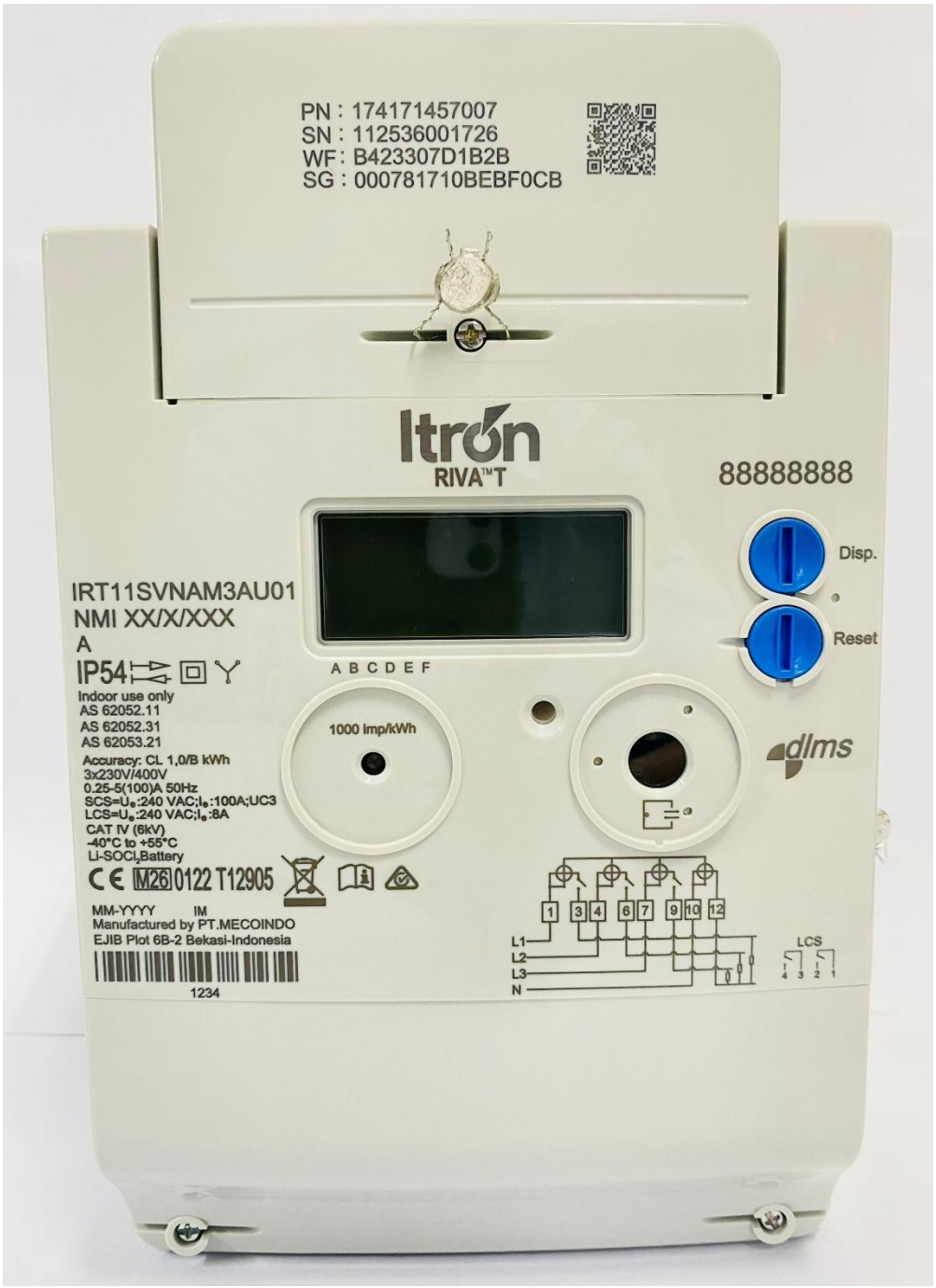
The maximum permissible errors are specified in the *National Trade Measurement Regulations 2009* (Cth).

Electricity meters shall be verified in accordance with the following National Instrument Test Procedures:

- NITP 14.0 – Utility Meters – general requirements
- NITP 14.2 – Utility Meters – electricity meters

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

FIGURE 14/2/181 – 1



Itron Model Riva T electricity meter (pattern)

FIGURE 14/2/181 – 2



Example of mechanical sealing

FIGURE 14/2/181 – 3



Itron Model Riva T electricity meter (Variant 1)

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