Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Certificate of Approval

NMI 14/2/64

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.

Landis+Gyr Model EM5400 Class 0.5 Electricity Meter

submitted by Landis+Gyr
Level 10, 241 O'Riordan Street
Mascot NSW 2020

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use as a legal measuring instrument 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 *Electricity Meters. Part 1: Metrological and Technical Requirements*, July 2012.

This approval becomes subject to review on 1/07/18, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – certificate issued	11/06/13
1	Variants 2 & 3 approved – certificate issued	30/03/15
2	Variant 4 approved – interim certificate issued	22/12/15
3	Variant 5 approved – interim certificate issued	4/03/16
4	Variants 4 & 5 approved – certificate issued	8/03/16

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number ‘NMI 14/2/64’ 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 Certificate 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 14/2/64

1. Description of Pattern approved on 11/06/13

A Landis+Gyr model EM5400 Class 0.5 electronic polyphase current transformer (CT) operated 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		3 or 4
• 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		63.5 (110) – 240 (415) V AC
• Rated currents:	Rated current, I_n	1 A
	Maximum current, I_{max}	10 A
• Meter constant		0.1 Wh/imp
• Accuracy class		0.5

1.2 Features/Functions

- Three (3) elements
- Electronic (LCD) digital indicator
- an internal synchronous clock
- Panel mount type housing

1.3 Verification Provision

Provision is made for the application of a verification mark.

1.4 Descriptive Markings and Notices

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 14/2/64
Number of phases	...
Number or wires	...
Reference frequency	... Hz
Meter constant	...
Rated voltage	... AC
Rated currents:	I_n ... A
	I_{max} ... A
Accuracy index	Class ...

1.5 Sealing Provision

Provision is made for the instrument to be sealed by the application of one or more mechanical seals (Figure 1).

2. Description of Variant 1 **approved on 11/06/13**

The Landis+Gyr model EM5400 Class 0.2 current transformer (CT) operated meter which has the same specifications as listed for the pattern in clause **1.1 Field of Operation** except that the accuracy class is 0.2.

3. Description of Variant 2 **approved on 30/03/15**

The Landis+Gyr model EM5400 Class 0.5 current transformer (CT) operated meter which has the same specifications as listed for the pattern in clause **1.1 Field of Operation** except as follows:

- Rated currents: Rated current, I_n 5 A
  Maximum current, I_{max} 20 A
- Meter constant 0.2 Wh/imp
- Accuracy class 0.5

4. Description of Variant 3 **approved on 30/03/15**

The Landis+Gyr model EM5400 Class 0.2 current transformer (CT) operated meter which has the same specifications as listed for the pattern in clause **1.1 Field of Operation** except as follows:

- Rated currents: Rated current, I_n 5 A
  Maximum current, I_{max} 20 A
- Meter constant 0.2 Wh/imp
- Accuracy class 0.2

5. Description of Variant 4 **approved on 22/12/15**

Model EM5400 as a Class 0.2 meter having the same field of operation as described for the pattern except that the maximum current, I_{max} is 6 A.

6. Description of Variant 5 **approved on 4/03/16**

Model EM5400 as a Class 0.5 meter having the same field of operation as described for the pattern except that the maximum current, I_{max} is 6 A.

TEST PROCEDURE No 14/2/64

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.

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 14/2/64 – 1

Landis+Gyr Model EM5400 Class 0.5 Electricity Meter
(Including Typical Mechanical Sealing)

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