



Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 14/2/16

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.

AMPY Metering Model EM1200 Class 1 Electricity Meter

submitted by Landis+Gyr
 60 O'Riordan Street
 Alexandria NSW 2015

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, *Pattern Approval and Initial Verification of Electricity Meter and Associated Transformers: Definitions, Metrological and Technical Requirements*, July 2004.

This approval becomes subject to review on 31/12/15, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – interim certificate issued	24/06/04
1	Pattern & variant 1 approved – certificate issued	9/08/04
2	Pattern amended (submitter name, etc.) – notification of change issued	13/01/09
3	Pattern & variant 1 reviewed – notification of change issued	19/01/11
4	Pattern & variant 1 amended (internal clocks), reviewed & updated – certificate issued	8/11/13
5	Variant 2 approved – interim certificate issued	26/06/14
6	Variant 2 amended (validity) – interim certificate issued	3/10/14
7	Variant 2 approved – certificate issued	10/12/14

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI (or NSC) 14/2/16' 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 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.

A handwritten signature in black ink, appearing to read 'Dr A Rawlinson', with a horizontal line underneath.

Dr A Rawlinson

TECHNICAL SCHEDULE No 14/2/16

1. Description of Pattern

approved on 24/06/04

An AMPY Metering model EM1200 Class 1 electronic single phase direct connect static watt hour meter (Figure 1) used to measure electrical energy. May also be known as Landis+Gyr instruments 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 60°C
 - limit range of operation -25 to 70°C
- Rated voltage 240 V AC
- Rated currents:

Rated current, I_b	10 A
Maximum current, I_{max}	100 A
Current, L_m	100 A
Current, L_t	100 A
Current, L_1	40 A
Current, L_2	40 A

N.B. The L ratings refer to the load ratings for relays
- Meter constant 1 Wh/imp
- Accuracy class 1

1.2 Features/Functions

- Two (2) elements
- Electronic (LCD) digital indicator
- Active energy measurement (Class 1)
- Optical port
- One (1) or 2 (two) relays (40 A rating)
- Internal crystal-controlled and/or synchronous clocks
- Bottom connect five terminal (double neutral terminal) rectangular base

1.3 Verification Provision

Provision is made for the application of a verification mark.

1.4 Sealing Provision

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

1.5 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 number	NMI (or NSC) 14/2/16
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
	L_m ... A
	L_t ... A
	L_1 ... A
	L_2 ... A
Accuracy index	Class 1

(*) Optional marking.

2. Description of Variant 1

approved on 24/06/04

An AMPY Metering (aka Landis+Gyr) model EM1200 having any of the following optional features/functions:

- One (1) element
- One (1) RS232 or RS485 communications port
- Boost button
- Four terminal (single neutral terminal) rectangular base
- Load profile memory
- No relays

3. Description of Variant 2

approved on 26/06/14

An AMPY Metering (aka Landis+Gyr) model EM1200 'plug in' meter (Figure 3) having the following features/functions:

- Two (2) elements
- One (1) RS232 or RS485 communications port
- Boost button
- Five terminal (single neutral terminal) plug-in socket base
- Load profile memory
- Current, $L_T = 63$ A

TEST PROCEDURE No 14/2/16

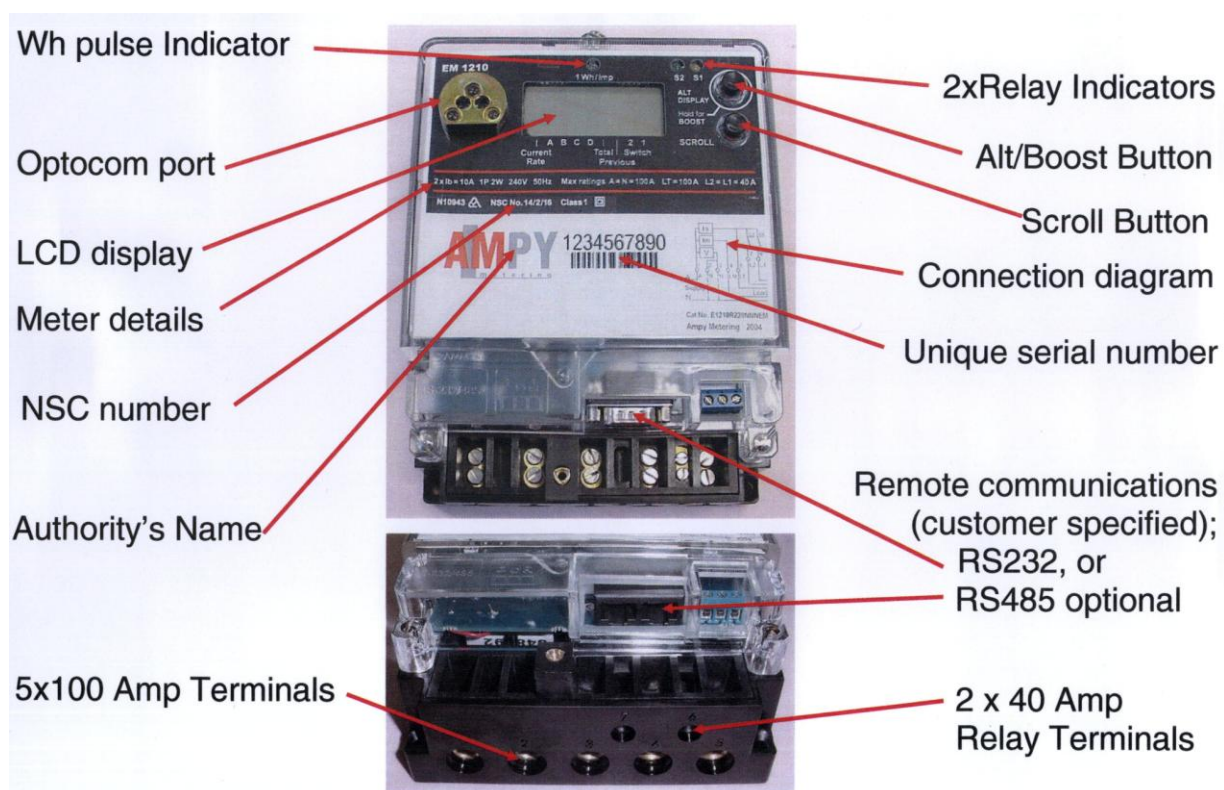
Instruments tested for initial verification shall comply with the certificate of approval and technical schedule, and the maximum permissible errors for verifications at the operating conditions in effect at the time of verification.

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 14/2/16 – 1



AMPY Metering (aka Landis+Gyr) Model EM1200 Class 1 Electricity Meter
(The Pattern)

FIGURE 14/2/16 – 2



**(2) standard
sealing locations**



Seal - front

The sealing devices are a plated copper ferrule crimped onto galvanised steel wire. The crimping process imprints 'EMV' on the front side and a unique number on the rear.



Seal - rear

Showing Typical Sealing of Model EM1200

FIGURE 14/2/16 – 3



AMPY Metering (aka Landis+Gyr) Model EM1200 'plug in' Meter (Variant 2)
(incl. Typical Sealing)

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