



**Australian Government**  
**Department of Industry,  
Science and Resources**

**National  
Measurement  
Institute**

36 Bradfield Road, West Lindfield NSW 2070

**Certificate of Approval**  
**NMI 14/3/13**

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.

Sensus Model 220C 15 mm Water Meter

submitted by        Sensus Germany GmbH & Co.KG  
                          Industriestraße 16  
                          Ludwigshafen am Rhein  
                          Rhineland-Palatinate 67063  
                          GERMANY

**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 R 49-1, *Water Meters Intended for the Metering of Cold Potable Water, Part 1: Metrological and Technical Requirements*, March 2009.

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**

<b>Rev</b>	<b>Reason/Details</b>	<b>Date</b>
0	Pattern approved – certificate issued	23/11/2009
1	Pattern amended (change of company) – certificate issued	24/02/2026

## CONDITIONS OF APPROVAL

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 14/3/13' 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.

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



**Phillip Mitchell**  
Acting Manager  
Policy and Regulatory Services

## TECHNICAL SCHEDULE No 14/3/13

### 1. Description of Pattern

**approved on 23/11/2009  
amended on 24/02/2026**

A Sensus model 220C 15 mm class 2 positive displacement meter (Figure 1) used to measure cold potable water for domestic supply for trade.

#### 1.1 Field of Operation

The following characteristics determine the field of operation of the measuring system:

Minimum flow rate, Q <sub>1</sub> :	0.0125 m <sup>3</sup> /h
Transition flow rate, Q <sub>2</sub> :	0.02 m <sup>3</sup> /h
Maximum continuous flow rate, Q <sub>3</sub> :	2.5 m <sup>3</sup> /h
Overload flow rate, Q <sub>4</sub> :	3.125 m <sup>3</sup> /h
Flow rate ratio, Q <sub>3</sub> /Q <sub>1</sub> :	200
Temperature class:	T30
Maximum admissible temperature:	30 °C
Limiting condition (water temperature):	50 °C
Maximum admissible pressure:	1600 kPa
Pressure loss class:	Δp 63
Accuracy class:	2
Flow profile sensitivity class:	U0/D0
Orientation:	Any
Flow Direction:	Forward only

#### 1.2 Features/Functions

A positive displacement volumetric rotary piston-type class 2 water meter of a size which is normally connected to a 15 mm pipe and is approved for metering domestic supply and has features/functions as listed below:

Connection type:	Screw thread (type G ¾ B).
Display:	A mechanical digital indicator having a series of eight aligned digits giving a maximum display of 9999.9999 kL or m <sup>3</sup> in 0.1 L increments.
Communications <sup>(1)</sup> :	Provision for the attachment of a supplementary device for data transmission.
Meter length:	115 mm.

- (1) The pattern and variants may be fitted and/or configured with the communication options listed in this Certificate. However, the primary indication of volume displayed by the indicating device of the meter is the approved indication of volume.

### 1.3 Descriptive Markings

Instruments are marked with the following data, either grouped or distributed on the casing, the indicating device dial or an identification plate:

Manufacturer's name or mark	Sensus
Serial number	...
Pattern approval number	NMI 14/3/13
Numerical value of maximum continuous flow rate, $Q_3$ ...	
Flow rate ratio, $Q_3/Q_1$	...
Unit of measurement	$m^3$
Temperature class <sup>(1)</sup>	T30
Maximum admissible pressure <sup>(2)</sup>	1600 kPa
Pressure loss class <sup>(3)</sup>	63 kPa or $\Delta p$ 63
Orientation <sup>(4)</sup>	Any
Flow profile sensitive class <sup>(5)</sup>	U0/D0
Direction of flow	→ or similar
Accuracy class <sup>(6)</sup>	2

(1) Optional for temperature class T30 meters

(2) Optional for meters with MAP = 1400 kPa

(3) Optional for pressure loss class  $\Delta p$  63

(4) Optional for meters approved for all orientations

(5) Optional for U0/D0 class meters

(6) Optional for accuracy class 2 meters

### 1.4 Verification/Certification

Provision is made for the application of a verification/certification mark.

### 1.5 Sealing Provision

Instruments shall include one or more devices which can be sealed so as to prevent dismantling or modification of the instrument without damaging the device(s). The device(s) may incorporate the verification/certification mark.

## TEST PROCEDURE

Water meters tested for verification shall comply with the Certificate of Approval, Technical Schedule, and the maximum permissible errors for verification at the operating conditions in effect at the time of verification. Maximum permissible errors for the verification of water meters are given in the *National Trade Measurement Regulations 2009* (Cth).

Water meters shall be verified in accordance with the following national instrument test procedures:

- NITP 14.0 – Utility meters – general requirements
- NITP 14.3 – Utility meters – water meters

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

FIGURE 14/3/13 – 1



(Top View)



(Side View)

Sensus Model 220C 15 mm Water Meter