



Australian Government



Pattern Approved non-urban Water Meters

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Acknowledgement of the Traditional Owners of the Murray–Darling Basin

The Murray–Darling Basin Authority pays respect to the Traditional Owners and their Nations of the Murray–Darling Basin. We acknowledge their deep cultural, social, environmental, spiritual and economic connection to their lands and waters.

The guidance and support received from the Murray Lower Darling Rivers Indigenous Nations, the Northern Basin Aboriginal Nations and our many Traditional Owner friends and colleagues is very much valued and appreciated.

Aboriginal people should be aware that this publication may contain images, names or quotations of deceased persons.

Version control		
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Purpose

In June 2018 the Australian Government and the Murray–Darling Basin states agreed to the [Murray–Darling Basin Compliance Compact](#) which commits them to actions to strengthen compliance with water management rules in the Basin. The availability and use of water meters that meet the requirements of the relevant Australian Standard is particularly important if the community is to have confidence in water compliance arrangements.

Part three of the Compliance Compact sets out actions related to Metering and Measurement, which include the commitment to publish metering policies and implementation plans addressing meter accuracy, coverage, transmission of data, and a timetable for installation, auditing and maintenance of the meter fleet. It also includes a commitment to report annually on progress with their implementation plans.

This document sets out the range of pattern approved meters currently available in Australia and is directly linked to efforts to meet the requirement of 3.8 of the Compliance Compact:

3.8 The Australian Government and Basin States will work with each other, jurisdictions, testing laboratories, meter manufacturers and industry to set a timetable for delivering a comprehensive range of pattern approved meters.

What is a pattern approved meter?

The National Measurement Institute of Australia checks non-urban water meters for compliance with the Australian Standard for Non-Urban water meters (AS4747). If the meter passes testing, it is pattern approved as compliant with the requirements for closed conduit meters (NMI-M10); or with the requirements for open channel meters (NMI-M11); or with the requirements of equivalent overseas standards.

A pattern approved meter complies with these requirements within the operating ranges specified by the meter manufacturer.

Schedule 1. Closed conduit meters

Pattern Approved closed conduit meters

A meter in this category has been tested by an accredited laboratory and met the Australian Pattern Approval requirements (NMI M 10) for Closed Conduit Meters. These meters can be installed within the operating range specified by the meter manufacturer and certified by the National Measurement Institute.

The National Measurement Institute maintains the official list of Pattern Approved meters for trade purposes, including urban and non-urban meters.

[Link: Australian Government \(NMI\) list of Certificates of Approval – 14/3 water utility meters](#)

The following table lists the *non-urban water meters* which are Pattern Approved by the National Measurement Institute. Using the link above and the Certificate of Approval number from the left-hand column of the table, you can download the Pattern Approval certificate documents for each approved meter.

Certificate of Approval number	Meter Model / Meter technology	Approved sizes (DN = nominal internal pipe diameter in millimetres)	Approved maximum continuous (Q3) flowrates m ³ /h
14/3/21	Krohne Waterflux 3070 Electromagnetic	DN25 – DN600	10 – 6,300
14/3/24	Siemens MAG8000 Electromagnetic	DN50 – DN1200	63 – 12,500
14/3/29	Arad Octave DN50 Ultrasonic	DN50 – DN300	40 – 1000
14/3/30	ABB AquaMaster3 FEV2 Electromagnetic	DN40 – DN200	40 – 1,000
14/3/32	Aquamonix / Pentair I500 Electromagnetic	DN50 – DN1035	10 – 1,952
14/3/34	Sensus WP-Dynamic Inferential turbine (mechanical)	DN40 – DN400	25 – 2,000
14/3/36	Euromag MUT 2200 EL Electromagnetic	DN40 – DN1000	25 – 3,600

Certificate of Approval number	Meter Model / Meter technology	Approved sizes (DN = nominal internal pipe diameter in millimetres)	Approved maximum continuous (Q3) flowrates m ³ /h
14/3/42	Rubicon Sonaray Pipe Meter Ultrasonic	DN600	42 – 1,313
14/3/44	Arad WSTsb Woltman type (mechanical)	DN50 – DN300	63 – 1,000
14/3/46	ABB AquaMaster4 Electromagnetic	DN40 – DN300	25 – 1,600
14/3/49	Krohne Optiflux 2300C Electromagnetic	DN25 – DN1800	16 – 25,000
14/3/50	Siemens MAG5100W Electromagnetic	DN50 – DN1200	63 – 16,000
14/3/52	Elster Q4000 Electromagnetic	DN50 – DN200	63 – 1,000

Provisionally approved closed conduit meters

A meter in this category has been tested by an accredited laboratory but it does NOT YET fully meet the Australian Pattern Approval requirements (NMI M 10) for Closed Conduit Meters. These meters may be installed within the operating range specified by the meter manufacturer and the National Measurement Institute will issue additional conditions on the Provisional Approval certificate.

CAUTION: Meters in this category may not be accepted as pattern approved meters for the purposes of state and territory metering requirements. When the National Measurement Institute issues an unconditional certificate of compliance, the meters can be accepted.

Certificate of approval number	Meter Model / Meter technology	Provisionally Approved sizes (DN = internal pipe diameter in millimetres)	Maximum continuous (Q3) flowrates m ³ /h

Note: No closed conduit meters currently have provisional pattern approval

Schedule 2. Open channel meters

Pattern Approved open channel meters

A meter in this category has been tested by an accredited laboratory and met the Australian Pattern Approval requirements (NMI M 11) for Open Channel Meters. These meters can be installed within the operating range specified by the meter manufacturer and certified by the National Measurement Institute.

Certificate of approval number	Meter Model / Meter technology	Approved sizes (Channel dimensions)	Approved maximum continuous (Q3) flowrates m ³ /h

Note: No open channel meters currently have pattern approval

Provisionally approved open channel meters

A meter in this category has been tested by an accredited laboratory but it does NOT YET fully meet the Australian Pattern Approval requirements (NMI M 11) for Open Channel Meters. These meters may be installed within the operating range specified by the meter manufacturer and the National Measurement Institute will issue additional conditions on the Provisional Approval certificate.


CAUTION: Meters in this category may not be accepted as pattern approved meters for the purposes of state and territory metering requirements. When the National Measurement Institute issues an unconditional certificate of compliance, the meters can be accepted.


Certificate of approval number	Meter Model / Meter technology	Provisionally Approved sizes (Channel dimensions)	Maximum continuous (Q3) flowrates m ³ /h


Note: No open channel meters currently have provisional pattern approval

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