



**American Water Works  
Association**

*Dedicated to the World's Most Important Resource®*

**ANSI/AWWA C707-10(R16)**  
(Revision of ANSI/AWWA C707-05)  
Reaffirmed without revision 2016

**AWWA Standard**

# Encoder-Type Remote- Registration Systems for Cold-Water Meters

Reaffirmed without revision Jan. 16, 2016  
Reaffirmation approved by American National Standards Institute Aug. 31, 2015

Effective date: May 1, 2016.  
First edition approved by AWWA Board of Directors Jan. 26, 1975.  
This edition approved Jan. 27, 2010.  
Approved by American National Standards Institute Aug. 3, 2010.



**Documents**  
Document Sharing Hub

Copyright © 2016 American Water Works Association. All Rights Reserved.

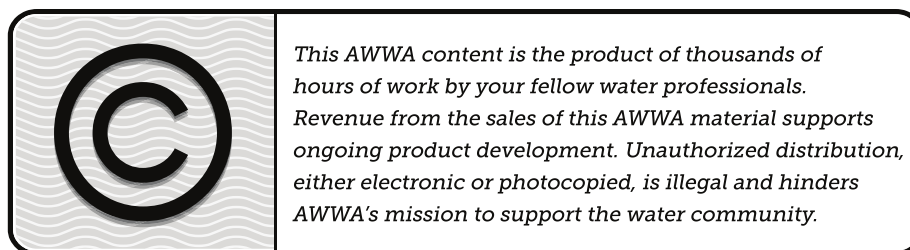
## AWWA Standard

This document is an American Water Works Association (AWWA) standard. It is not a specification. AWWA standards describe minimum requirements and do not contain all of the engineering and administrative information normally contained in specifications. The AWWA standards usually contain options that must be evaluated by the user of the standard. Until each optional feature is specified by the user, the product or service is not fully defined. AWWA publication of a standard does not constitute endorsement of any product or product type, nor does AWWA test, certify, or approve any product. The use of AWWA standards is entirely voluntary. This standard does not supersede or take precedence over or displace any applicable law, regulation, or code of any governmental authority. AWWA standards are intended to represent a consensus of the water supply industry that the product described will provide satisfactory service. When AWWA revises or withdraws this standard, an official notice of action will be placed on the first page of the Official Notice section of *Journal – American Water Works Association*. The action becomes effective on the first day of the month following the month of *Journal – American Water Works Association* publication of the official notice.

## American National Standard

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether that person has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review, and users are cautioned to obtain the latest editions. Producers of goods made in conformity with an American National Standard are encouraged to state on their own responsibility in advertising and promotional materials or on tags or labels that the goods are produced in conformity with particular American National Standards.

**CAUTION NOTICE:** The American National Standards Institute (ANSI) approval date on the front cover of this standard indicates completion of the ANSI approval process. This American National Standard may be revised or withdrawn at any time. ANSI procedures require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of publication. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036; 212.642.4900; or emailing [info@ansi.org](mailto:info@ansi.org).



ISBN-13, print: 978-1-62576-161-3

eISBN-13, electronic: 978-1-61300-381-7

DOI: <http://dx.doi.org/10.12999/AWWA.C707.16>

---

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information or retrieval system, except in the form of brief excerpts or quotations for review purposes, without the written permission of the publisher.

Copyright © 2016 by American Water Works Association  
Printed in USA

# Committee Personnel

The AWWA Standards Committee on Water Meters, which reaffirmed this standard without revision, had the following personnel at the time:

Thomas A. Kelly Jr., *Chair*

Michael L. Mastic, *Secretary*

## *General Interest Members*

|                                                                                 |        |
|---------------------------------------------------------------------------------|--------|
| D. Faber, Faber & Associates, Columbus, Ind.                                    | (AWWA) |
| R.C. Graff, Poway, Calif.                                                       | (AWWA) |
| C.C. Hannah, Johnson Controls Inc., Lubbock, Texas                              | (AWWA) |
| D.E. Hood, M.E. Simpson Company Inc., Valparaiso, Ind.                          | (AWWA) |
| M.C. Johnson, Utah State University, Logan, Utah                                | (AWWA) |
| M.J. Kebles, Water Industry Consultant, Las Vegas, Nev.                         | (AWWA) |
| F.S. Kurtz,* Standards Engineer Liaison, AWWA, Denver, Colo.                    | (AWWA) |
| M.L. Mastic,† MARS Company, Ocala, Fla.                                         | (AWWA) |
| R.A. Richter, National Institute of Standards and Technology, Gaithersburg, Md. | (AWWA) |
| F.S. Salser Jr., Floyd S. Salser Jr. & Associates MARS Company, Ocala, Fla.     | (AWWA) |
| R. San Giacomo, R & D Engineering P.C., Orchard Park, N.Y.                      | (AWWA) |

## *Producer Members*

|                                                                 |        |
|-----------------------------------------------------------------|--------|
| F.J. Begale,† Badger Meter, Milwaukee, Wis.                     | (AWWA) |
| T.D. Bianchi,† Neptune Technology Group Inc., Tallahassee, Ala. | (AWWA) |
| D. Casper,† Mueller Systems, Cleveland, N.C.                    | (AWWA) |
| G.H. De Jarlais, Badger Meter, Milwaukee, Wis.                  | (AWWA) |
| A. Dudley, Itron, West Union, S.C.                              | (AWWA) |
| L. Gregory, RG3 Meter Company Inc., Longview, Texas             | (AWWA) |
| A. Hendey Sr., Hendey Meter, Beaumont, Calif.                   | (AWWA) |
| R.N. Koch, Master Meter Inc., Pittsburgh, Pa.                   | (AWWA) |
| D.J. Kullmann, Neptune Technology Group Inc., Marietta, Ga.     | (AWWA) |
| M. Laird,† Metron-Farnier, Boulder, Colo.                       | (AWWA) |
| J.F. Panek Jr., McCrometer Inc., Rowley, Iowa                   | (AWWA) |

---

\* Liaison, nonvoting

† Alternate

|                                                   |         |
|---------------------------------------------------|---------|
| J. Pintok,* RG3 Meter Company Inc., Sanford, Fla. | (AW/WA) |
| J.A. Reiss,* Elster AMCO Water LLC, Ocala, Fla.   | (AW/WA) |
| M. Shamley, Metron-Farnier, Boulder, Colo.        | (AW/WA) |
| T. Smith,* Sensus, Raleigh, N.C.                  | (AW/WA) |
| S.M. Swanson, Sensus, Uniontown, Pa.              | (AW/WA) |
| M.A. Thomas, Mueller Systems, Cleveland, N.C.     | (AW/WA) |
| W.J. Vetter,* Master Meter Inc., Mansfield, Texas | (AW/WA) |
| A.M. Watson, Elster AMCO Water LLC, Ocala, Fla.   | (AW/WA) |

*User Members*

|                                                                                          |         |
|------------------------------------------------------------------------------------------|---------|
| M.J. Aragon, Denver Water, Denver, Colo.                                                 | (AW/WA) |
| M.C. Bowen, City of Columbus, Division of Water, Columbus, Ohio                          | (AW/WA) |
| A. Carlsson, Desert Water Agency, Palm Springs, Calif.                                   | (AW/WA) |
| W.F. Dunnill, Consolidated Utility District of Rutherford County,<br>Murfreesboro, Tenn. | (AW/WA) |
| W.M. Garfield, Arizona Water Company, Phoenix, Ariz.                                     | (AW/WA) |
| D. Griffin, City of Winnipeg Water and Waste Department, Winnipeg, Man.                  | (AW/WA) |
| P.A. Hayes, Mammoth Community Water District, Mammoth Lakes, Calif.                      | (AW/WA) |
| N.D. Kaufman, Truckee Donner Public Utility District, Truckee, Calif.                    | (AW/WA) |
| T.A. Kelly Jr., Washington Suburban Sanitary Commission, Laurel, Md.                     | (AW/WA) |
| A. Land, Dallas Water Utilities, Dallas, Texas                                           | (AW/WA) |
| S.U. Mills-Wright,† Standards Council Liaison, City of Arlington, Arlington, Texas       | (AW/WA) |
| K.C. Molli, Veolia Water North America, Chicago, Ill.                                    | (AW/WA) |
| J.A. Novak, Milwaukee Water Works, Milwaukee, Wis.                                       | (AW/WA) |
| D. Strub, Austin Water Utility, Austin, Texas                                            | (AW/WA) |

---

\* Alternate

† Liaison, nonvoting

# Contents

*All AWWA standards follow the general format indicated subsequently. Some variations from this format may be found in a particular standard.*

| SEC.                   | PAGE                                             | SEC.     | PAGE                            |
|------------------------|--------------------------------------------------|----------|---------------------------------|
| <b><i>Foreword</i></b> |                                                  | 1.2      | Purpose ..... 1                 |
| I                      | Introduction ..... vii                           | 1.3      | Application..... 1              |
| I.A                    | Background..... vii                              | <b>2</b> | <b>References</b> ..... 2       |
| I.B                    | History ..... vii                                | <b>3</b> | <b>Definitions</b> ..... 2      |
| II                     | Special Issues..... vii                          | <b>4</b> | <b>Requirements</b>             |
| II.A                   | Metrication ..... vii                            | 4.1      | Materials ..... 3               |
| III                    | Use of This Standard ..... vii                   | 4.2      | Design..... 4                   |
| III.A                  | Purchaser Options and<br>Alternatives ..... viii | <b>5</b> | <b>Verification</b> ..... 8     |
| III.B                  | Modification to Standard ..... viii              | <b>6</b> | <b>Delivery</b>                 |
| IV                     | Major Revisions..... viii                        | 6.1      | Marking..... 8                  |
| V                      | Comments ..... viii                              | 6.2      | Packaging and Shipping ..... 8  |
| <b><i>Standard</i></b> |                                                  | 6.3      | Affidavit of Compliance ..... 8 |
| <b>1</b>               | <b>General</b>                                   |          |                                 |
| 1.1                    | Scope ..... 1                                    |          |                                 |

This page intentionally blank.

