

# ANSI/CAN/IAPMO Z1349-2021



*Standard for*  
**Devices for Detection, Monitoring or  
Control of Plumbing Systems**



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## **ANSI/CAN/IAPMO Z1349-2021**

### **Devices for Detection, Monitoring or Control of Plumbing Systems**

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# Contents

## Preface

## IAPMO Plumbing Standards Committee

## IAPMO Z1115/Z1349 Technical Subcommittee

<b>1</b>	<b>Scope</b>	<b>1</b>
1.1	General	1
1.2	Terminology	2
1.3	Units of Measurement	2
1.4	Amendments	2
<b>2</b>	<b>Reference Publications</b>	<b>2</b>
<b>3</b>	<b>Definitions and Abbreviations</b>	<b>3</b>
3.1	Definitions	3
3.2	Abbreviations	4
<b>4</b>	<b>General Requirements</b>	<b>5</b>
4.1	General	5
4.2	Joints and Connections	5
4.3	Materials	5
4.4	Toxicity and Lead Content	5
4.5	Elastomers	6
4.6	Lubricants	6
4.7	Electrical Components	6
4.8	Environmental Protection for Outdoor Installation	7
4.9	Valve Override	7
4.10	Pressure and Temperature Design Requirements	7
<b>5</b>	<b>Testing Requirements</b>	<b>8</b>
5.1	Test Specimen, Conditions and Supporting Documentation	8
5.2	Copper Alloys with More than 15% Zinc (Zn)	8
5.3	Chlorine/Chloramine Resistance	9
5.4	Shut-off Tightness	9
5.5	Flowing Closure (Valve Override)	9
5.6	Excessive Pressure	10
5.7	Life Cycle	10
5.8	Thermal Endurance	10
5.9	Flowing Closure (Electronic)	10
5.10	Alarm Response	11
5.11	Remote and Hardwired Operation Test	15

<b>6</b>	<b>Marking and Accompanying Literature</b>	<b>15</b>
6.1	Markings	15
6.2	Visibility	15
6.3	Installation, Care and Maintenance Instructions	15
6.4	Additional Notifications	16
<b>Figure</b>		
1	Test Set-up	16

# Preface

This is the first edition of IAPMO Z1349, Devices for Detection, Monitoring or Control of Plumbing Systems. This Standard supersedes IAPMO IGC 115-2013<sup>e1</sup>, *Automatic Water Leak Detection Devices* and IAPMO IGC 349-2018<sup>e1</sup>, *Electronic Plumbing Supply System Integrity Protection Devices*.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was developed by the IAPMO Z1349 Technical Subcommittee and approved by the IAPMO Plumbing Standards Committee in accordance with the *ANSI Essential Requirements: Due process requirements for American National Standards, IAPMO Policies and Procedures for Consensus Development of American National Standards, SCC Requirements and Guidance - Accreditation of Standards Development Organizations*, and *IAPMO Policies and Procedures for Development of National Standards of Canada*. This Standard was approved as an American National Standard on January 15, 2021 and as a National Standard of Canada on February 16, 2021 it will be reviewed before February 16, 2025.

## Notes:

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- (2) *This standard was developed in accordance with the IAPMO procedures accredited as meeting the criteria for American National Standards and as a National Standard of Canada. The IAPMO Standards Committee that approved this Standard was balanced to assure that individuals from competent and concerned interests had an opportunity to participate. During its development, this Standard was made available for public review, thus providing an opportunity for additional input from industry, academia, regulatory agencies, and the public at large.*
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  - (d) *rationale for the change.*

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J.A. Ballanco	JB Engineering and Code Consulting, P.C. Munster, Indiana, USA	
S. Ducharme	Piping Industry Technical College/UA Local 254 Winnipeg, Manitoba, Canada	
K. Ernst	Oakville Stamping & Bending Limited Oakville, Ontario, Canada	
L. Gill	IPEX Management Inc. Oakville, Ontario, Canada	
A. Granzow	NIBCO, Inc. Elkhart, Indiana, USA	
M. Guard	Regulosity LLC Wauwatosa, Wisconsin, USA	
R. Hyer	Testing Engineers International Salt Lake City, Utah, USA	
C.J. Lagan	Lixil Water Technologies Piscataway, New Jersey, USA	
D. Mann	CA State Pipe Trades Livermore, California, USA	
R. Mata	American Society of Plumbing Engineers (ASPE) Mentor, Ohio, USA	
A. Moscovich	Reed Water Concord, Ontario, Canada	
D. Orton	NSF International Ann Arbor, Michigan, USA	

S.A. Remedios	Remedios Consulting, LLC London, Ontario, Canada	
R. Rice	Senior Mechanical Inspector, Retired Maplewood, Minnesota, USA	
D. Rousseau	Multi Sciences Expertise Inc. Blainville, Quebec, Canada	
K. Wong	Uponor Mississauga, Ontario, Canada	
K. Thompson	IAPMO Ontario, California, USA	<i>Staff Liaison</i>
H. Aguilar	IAPMO Ontario, California, USA	<i>Secretary</i>

## ***IAPMO Z1115/Z1349 Technical Subcommittee***

C. DeSmet	FloLogic Inc. Raleigh, North Carolina, USA	<i>Chair</i>
R. Houle	Reliance Worldwide Corporation Atlanta, Georgia, USA	<i>Vice-Chair</i>
G. Banas	Water Security Solutions, LLC Naples, Florida, USA	
S. Banerjee	PHYN LLC Torrance, California, USA	
M. Gibeault	Kohler Co. Kohler, Wisconsin, USA	
D. Gleiberman	SLOAN Los Angeles, California, USA	
M. Guard	Regulosity LLC Wauwatosa, Wisconsin, USA	
M. Malatesta	Lixil Water Technologies Piscataway, New Jersey, USA	
R. Mata	American Society of Plumbing Engineers Mentor, Ohio, USA	
J Matson	Viega LLC Broomfield, Colorado, USA	
M. Novellino	Watts Water Technologies North Andover, Massachusetts, USA	
S. Rawalpindiwala	Kohler Co. Kohler, Wisconsin, USA	
K. Thompson	IAPMO Ontario, California, USA	<i>Staff Liaison</i>
H. Aguilar	IAPMO Ontario, California, USA	<i>Secretary</i>

# ANSI/CAN/IAPMO Z1349-2021

## Devices for Detection, Monitoring or Control of Plumbing Systems

### 1 Scope

#### 1.1 General

**1.1.1** This standard covers devices for detection, monitoring or control of water supply and distribution systems in sizes DN 8 to DN 300 (NPS-1/4 to NPS-12) for commercial and residential applications and specifies requirements for materials, performance testing, environmental limitations, installation, and markings.

**1.1.2** Devices for detection, monitoring or control of plumbing systems, hereinafter referred to as “devices”, covered by this standard govern plumbing systems through features such as:

- (a) Automatic shut-off or electronic alarm notification or isolation of the supply piping when conditions are detected indicating a leak or equipment malfunction (e.g. automatic water leak detection and control device).
- (b) Detecting the presence of water external to the piping system.
- (c) Establishing normal water flow patterns and monitoring for anomalies.
- (d) Monitoring of the hydraulic conditions (e.g. water pressure, temperature, or flow) within the main or branch circuit.
- (e) Monitoring of the local environment that may indicate potential for freeze conditions; or
- (f) Monitoring of the local environment for moisture that may indicate a leak (e.g. Physical Water/Moisture Detection Devices).
- (g) Monitoring of environmental conditions.
- (h) Ongoing analysis of sensor readings or system conditions to ensure monitoring of system integrity.
- (i) Pressure based or other means of micro leak testing for detection of pinhole leaks or dripping fixtures; or
- (j) Provide hardwired or remote access to control a valve (e.g. remotely controlled valves).

**Note:** Several common terms are used to identify devices covered under this standard a few examples of such terms are Water Leak Detection Device, Automatic Water Leak Detection Device, Leak Detection and Control Device, Adaptive Plumbing System Monitoring and Control Device, and Electronic Plumbing Supply System Integrity and Protection Device.