



**CSA
Group**

CSA/ANSI LNG 3.18-2018
(ISO 12614-18:2014, MOD)
National Standard of Canada



CSA/ANSI LNG 3.18-2018
Road vehicles — Liquefied natural gas (LNG) fuel
system components — Part 18: Gas temperature
sensor
(ISO 12614-18:2014, MOD)



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CSA/ANSI LNG 3.18-2018

June 2018

Title: *Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 1: Gas temperature sensor*

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National Standard of Canada

CSA/ANSI LNG 3.18-2018 Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 18: Gas temperature sensor (ISO 12614-18:2014, MOD)

Prepared by
International Organization for Standardization



Reviewed by



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Interprovincial Gas Advisory Council

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CSA/ANSI LNG 3.18-2018

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 18: Gas temperature sensor (ISO 12614-18:2014, MOD)

CSA Preface

This is the first edition of CSA/ANSI LNG 3.18, *Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 18: Gas temperature sensor*, which is an adoption, with North American deviations, of the identically titled ISO (International Organization for Standardization) standard 12614-18 (first edition, 2014-07-01). At the time of publication, ISO 12614-18:2014 is available from ISO in English only. CSA Group will publish the French version when it becomes available from ISO.

For brevity, this Standard will be referred to as “CSA/ANSI LNG 3.18” throughout.

The North American deviations are intended to

- a) correct inaccuracies; and
- b) replace references to ISO and IEC Standards with references to U.S. and CSA Group Standards, where applicable.

This Standard is intended to be used in conjunction with CSA/ANSI LNG 3.1-2018, *Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 1: General requirements and definitions* (adopted ISO 12614-1:2014, with Canadian deviations) and CSA/ANSI LNG 3.2-2018, *Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 2: Performance and general test methods* (adopted ISO 12614-2:2014, with Canadian deviations).

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

This Standard was reviewed for North American adoption by the CSA Subcommittee on Liquefied Natural Gas Vehicle Fueling Connection Devices, LNG 1, under the jurisdiction of the CSA Technical Committee on Natural Gas Transportation and the CSA Strategic Steering Committee on Transportation. It has been formally approved by the Technical Committee and by the Interprovincial Gas Advisory Council.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group. This Standard was approved by the American National Standards Institute (ANSI) as an American National Standard on June 1, 2018.

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- a) Standard designation (number);
- b) relevant clause, table, and/or figure number;
- c) wording of the proposed change; and
- d) rationale for the change.

CSA Group acknowledges that the adoption of this Standard was made possible, in part, by the financial support of



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North American deviations

The following deviations are intended to meet local product requirements and to align with energy efficiency requirements of relevant Canadian regulators.

International Standard ISO 12614-18:2014 (first edition) forms the basis for CSA/ANSI LNG 3.18, which contains the following deviations in addition to those shown in CSA/ANSI LNG 3.1-2018 and CSA/ANSI LNG 3.2-2018.

[Replace all references to “ISO 12614-1” with “CSA/ANSI LNG 3.1”]

[Replace all references to “ISO 12614-2” with “CSA/ANSI LNG 3.2”]

1 Scope

[Replace the first sentence with the following]

CSA/ANSI LNG 3.18 specifies tests and requirements for the gas temperature sensor, a liquefied natural gas fuel system component mounted after the heat exchanger–vaporizer and before or on the CNG automatic valve, intended for use on the types of motor vehicles defined in ISO 3833.

[Add the following note]

NOTE 3A For North American application, all references to working pressure are considered to be equivalent to maximum allowable working pressure (MAWP).

2 Normative references

[Add the following]

Where reference is made to CSA Group publications, such reference shall be considered to refer to the latest edition and all amendments published to that edition. This Standard refers to the following publications, and the years shown indicate the latest editions available at the time of printing.

The following National Standards of Canada, published by CSA Group, are adoptions of ISO Standards. The requirements of these CSA Group Standards shall take precedence over the International Standards on which they are based. Any reference within CSA/ANSI LNG 3.18 to the International Standard shall be replaced by reference to the equivalent Canadian Standard. Any reference to International Standards that are adopted as National Standards of Canada subsequent to the publication of CSA/ANSI LNG 3.18 shall be replaced by the relevant National Standard of Canada.

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CSA/ANSI LNG 3.1-2018

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 1: General requirements and definitions

[Replaces ISO 12614-1:2014]

CSA/ANSI LNG 3.2-2018

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 2: Performance and general test methods

[Replaces ISO 12614-2:2014]

ISO (International Organization for Standardization)

3833:1977

Road vehicles — Types — Terms and definitions

4 Marking

[Add the following item to the list in the first paragraph]

cA) the serial number or date code.

[Delete Item f) from the list in the second paragraph]

5 Construction and assembly

5.2

[Replace this Clause with the following]

The gas temperature sensor shall be mounted on the outlet pipeline of the vaporizer of liquefied natural gas and before or on the automatic shut-off valve or on the automatic shut-off valve body.

5.3

[Delete this Clause]

5.4

[Delete this Clause]

5.5

[Delete this Clause]

5.6

[Delete this Clause]

5.7

[Delete this Clause]

6 Test

Table 1 – Tests applicable

[Replace this Table with the following]

Test	Test applicable	Test procedure as required by CSA/ANSI LNG 3.2	Specific test requirements of this Standard
Hydrostatic strength	X*	X*	X* (see Clause 6.2)
Leakage	X*	X*	
Excess torque resistance	X	X	
Bending moment	X*	X*	
Corrosion resistance	X	X	
Oxygen ageing	X	X	
Electrical overvoltages	X	X	
Non-metallic material immersion	X	X	
Vibration resistance	X	X	
Brass material compatibility	X	X	
Insulation resistance	X	X	
Minimum operating voltage	X	X	

* If applicable.

6.3 Leakage

[Delete this Clause]

6.4 Insulation resistance

[Delete this Clause]

6.5 Minimum operating voltage

[Delete this Clause]

**Road vehicles — Liquefied natural gas
(LNG) fuel system components —**

**Part 18:
Gas temperature sensor**

*Véhicules routiers — Équipements pour véhicules utilisant le gaz
naturel liquéfié (GNL) comme combustible —*

Partie 18: Capteur de température de gaz





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Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Marking	2
5 Construction and assembly	2
6 Test	2
6.1 Applicability	2
6.2 Hydrostatic strength	3
6.3 Leakage	3
6.4 Insulation resistance	3
6.5 Minimum operating voltage	3
Bibliography	4