AS/NZS 2276.3:2002
Reconfirmed 2017

Australian/New Zealand Standard™

Cables for traffic signal installations

Part 3: Loop cable for vehicle detectors

Standards Australia

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-003, Electric Wires and Cables. It was approved on behalf of the Council of Standards Australia on 7 May 2002 and on behalf of the Council of Standards New Zealand on 9 May 2002. It was published on 30 May 2002.

The following are represented on Committee EL-003:

Australasian Railway Association
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Canterbury Manufacturers Association New Zealand
Department of Defence, Australia
Department of Mineral Resources, N.S.W.
Electrical Contractors Association of New Zealand
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Institution of Engineers, Australia
Ministry of Economic Development (New Zealand)
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 01101.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF
AS/NZS 2276.3:2002
Cables for traffic signal installations
Part 3: Loop cable for vehicle detectors

RECONFIRMATION NOTICE

Technical Committee EL-003 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 10 October 2016.

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The following are represented on Technical Committee EL-003:

Australian Cable Makers' Association
Australian Industry Group
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
National Electrical and Communications Association
Queensland University of Technology

NOTES

Australian/New Zealand Standard™

Cables for traffic signal installations

Part 3: Loop cable for vehicle detectors

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-003, Electric Wires and Cables, to supersede AS 2276.3—1992 and NZS/AS 2276.3—1992.

The objective of the Standard is to provide manufacturers and suppliers with requirements for loop cables intended for the construction of inductive type vehicle-detector loops for traffic signal installations.

The cable is designed for use at frequencies in the range 20 kHz to 200 kHz. For convenience, the conductor specified herein is taken from AS/NZS 1125, *Conductors in insulated electric cables and flexible cords*, even though AS/NZS 1125 is applicable to general wiring and normally excludes these higher frequencies.

The insulation materials specified for the loop cable are cross-linked polyethylene (X-90UV) or electric cable grade polypropylene (PP).

The choice of insulation was determined by the requirements for material having a low relative permittivity and a low temperature coefficient of relative permittivity, and being capable of withstanding the mechanical stresses on cables when installed in road slots. Constructional dimensions of the cable were determined by such requirements as mechanical strength, the limited dimensions of road slots, and the need to minimize variation in capacitance to earth, caused by changes in moisture content of the road slot filling.

This Standard differs from the previous edition, as follows:

(a) The Standard has been published as a Joint Australian/New Zealand Standard.

(b) The insulation materials have been referenced to AS/NZS 3808.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

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1 SCOPE

This Standard specifies requirements for single-core cable intended for the construction of inductive vehicle-detector loops for traffic signal installations operating in the frequency range 20 kHz to 200 kHz, and suitable for installation in slots cut into the road surface, the slots being subsequently filled with a suitable sealant.

The cable is intended for operation in extra-low voltage (ELV) circuits and may be accommodated in unsegregated cable enclosures together with low voltage (LV) cables.

NOTE: Purchasing guidelines are given in Appendix A.

2 REFERENCED DOCUMENTS

The following Standards are referred to in this Standard:

AS	
1049	Telecommunication cables—Insulation, sheath and jacket
AS/NZS	
1125	Conductors in insulated electric cables and flexible cords
1660	Test methods for electric cables, cords and conductors
1660.2.1	Method 2.1: Insulation, extruded semi-conductive screens and non-metallic sheaths—Methods for general application
1660.3	Method 3: Electrical tests
3808	Insulating and sheathing materials for electric cables

3 DEFINITIONS

For the purpose of this Standard, the relevant definitions given in the referenced Standards and those below apply.

3.1 Routine tests

Tests made by the manufacturer on each manufactured length of cable to check that each length meets the specified requirements.

3.2 Sample tests

Tests made by the manufacturer on samples of completed cable, or components taken from the completed cable, so as to verify that the finished product meets the design specification.

3.3 Type tests

Tests made before supplying on a general commercial basis a type of cable covered by this Standard, to demonstrate satisfactory performance characteristics that meet the intended application. These tests are of such a nature that, after they have been made, they need not be repeated unless changes are made in the cable materials or design which might change the performance characteristics.