Australian/New Zealand Standard™

Explosive atmospheres

Part 28: Protection of equipment and transmission systems using optical radiation





AS/NZS 60079.28:2007

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-014, Equipment for Explosive Atmospheres. It was approved on behalf of the Council of Standards Australia on 19 February 2007 and on behalf of the Council of Standards New Zealand on 6 April 2007.

This Standard was published on 26 April 2007.

The following are represented on Committee EL-014:

Association of Consulting Engineers Australia

Auckland Regional Chamber of Commerce

Australian Chamber of Commerce and Industry

Australian Electrical and Electronic Manufacturers Association

Australian Industry Group

Australian Institute of Petroleum Ltd

Australian Petroleum Production and Exploration Association

Committee EL-023

Electrical Compliance Testing Association

Electrical Regulatory Authorities Council

Energy Networks Association

Engineers Australia

Environmental Risk Management Authority of New Zealand

Institute of Electrical Inspectors

Institute of Instrumentation, Control and Automation Australia

Mining Electrical and Mining Mechanical Engineering Society

Ministry of Economic Development (New Zealand)

NSW Department of Primary Industries, Mineral Resources

National Electrical and Communications Association

New Zealand Association of Marine, Aviation and Power Engineers

New Zealand Employers and Manufacturers Association

Simtars (Natural Resources, Mines and Water)

WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

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 or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 06715.

AS/NZS 60079.28:2007

Australian/New Zealand Standard™

Explosive atmospheres

Part 28: Protection of equipment and transmission systems using optical radiation

First published as AS/NZS 60078.29:2007.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Equipment for Explosive Atmospheres.

The objective of this Standard is to explain the potential ignition hazard from equipment using optical radiation intended for use in explosive gas atmospheres.

This Standard is identical with, and has been reproduced from IEC 60079-28, Ed. 1.0 (2006), Explosive atmospheres – Part 28: Protection of equipment and transmission systems using optical radiation.

A number of footnotes have been added to correct minor typographical and grammatical errors.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text 'IEC 60079-28' should read 'AS/NZS 60079.28'.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

CONTENTS

			Page		
Int	roduction		iv		
1	Scope				
2	Normativ	e references	2		
3	Terms and definitions				
4	General requirements				
		ical equipment			
	•	k levels			
5		protection			
	5.1 General				
	5.2 Red	quirements for inherently safe optical radiation "op is"	6		
	5.3 Red	quirements for protected optical radiation "op pr"	8		
	5.4 Opt	ical radiation interlock with optical fibre breakage "op sh"	9		
	5.5 Sui	tability of types of protection	9		
6	Type veri	fications and tests	10		
	6.1 Tes	t set-up for ignition tests	10		
	6.2 Ref	erence test	10		
		t mixtures			
		its for pulse trains and pulses between 1 ms and 1 s duration			
7	Marking		12		
	7.1 Ge	neral	12		
		king information			
		amples of marking			
		mative) Reference test data			
An	nex B (info	rmative) Ignition mechanisms	14		
An	nex C (nor	mative) Ignition hazard assessment	19		
An	nex D (info	rmative) Typical optical fibre cable design	20		
An		rmative) Introduction of an alternative risk assessment method ssing "equipment protection levels" for Ex equipment	21		
Rik	•				
٠.٢	ograpny .				



The ic a nee previous i arenace are chare pasheaten at the limit selection	This is a free preview.	Purchase the	entire publication	at the link below:
--	-------------------------	--------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation