

This is a preview of "ISO 26684:2015". [Click here to purchase the full version from the ANSI store.](#)

First edition
2015-05-01

Intelligent transport systems (ITS) — Cooperative intersection signal information and violation warning systems (CIWS) — Performance requirements and test procedures

*Systèmes intelligents de transport (ITS) — Systèmes d'avertissement
d'information et de violation du signal d'intersection coopérative
(CIWS) — Exigences de performance et modes opératoires d'essai*



Reference number
ISO 26684:2015(E)

© ISO 2015

This is a preview of "ISO 26684:2015". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 26684:2015". Click here to purchase the full version from the ANSI store.

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	2
5 Classification	3
5.1 System configuration.....	3
5.2 System configuration.....	3
6 Functional requirements	4
6.1 CIWS state diagram.....	4
6.1.1 CIWS states.....	5
6.2 Transition criteria.....	5
6.2.1 Criterion (1): RSE activation.....	5
6.2.2 Criterion (2): RSE deactivation.....	6
6.2.3 Criterion (3): OBE activation.....	6
6.2.4 Criterion (4): OBE deactivation.....	6
6.2.5 Class II criterion (5): Warning activation.....	6
6.2.6 Class II criterion (6): Warning deactivation.....	6
6.3 Functional requirements of OBE.....	6
6.3.1 Acquisition of travel direction.....	6
6.3.2 Acquisition of vehicle position.....	6
6.3.3 Acquisition of vehicle speed.....	6
6.3.4 Identification of traffic signal information.....	6
6.3.5 Judgement of warning necessity and warning contents (Class II).....	6
6.3.6 Timing of warning output.....	7
6.3.7 Timing of warning termination.....	7
6.3.8 HMI display contents.....	7
6.4 Functional requirements of RSE.....	7
6.4.1 Data sets.....	7
6.4.2 Communication range.....	7
6.4.3 Communication delay.....	7
6.5 CIWS system performance.....	7
6.5.1 System capabilities.....	7
6.5.2 Provision of information.....	8
6.5.3 Warning threshold for signal violation.....	8
7 Test requirements	9
7.1 Test vehicle.....	9
7.2 Test site.....	9
7.2.1 Environmental conditions.....	9
7.2.2 Geometric conditions.....	10
7.2.3 RSE location for the systems providing communication only at X_{AL}	10
7.3 Test procedure.....	10
7.3.1 Test method.....	10
Bibliography	12

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 204, *Intelligent transport systems*.

This is a preview of "ISO 26684:2015". [Click here to purchase the full version from the ANSI store.](#)

Introduction

The main system function of cooperative intersection signal information and violation warning systems (CIWS) is to warn drivers who are about to violate an intersection's traffic signal to stop at the prescribed location. The CIWS is intended to provide a cooperative vehicle and infrastructure system that reduces the likelihood and severity of crashes at signalized intersections by providing the signal phase information and/or by warning the driver that an intersection signal violation is about to occur. The system uses information communicated from the roadside infrastructure to determine if a warning should be given to a driver.

The purpose of implementing CIWS is to reduce violations of traffic signals at signalized intersections to: (a) reduce fatalities, (b) reduce the number and/or severity of injuries, and (c) reduce property damage associated with collisions.

This International Standard addresses CIWS for use in road vehicles approaching signalized intersections.

This International Standard may be used as a system level standard by other standards, which extend the CIWS to a more detailed standard utilizing wireless communication technologies. Issues such as the specific requirements for the function and performance of communication technology or traffic control facilities (including traffic signal controllers) will not be considered in this International Standard.