Nederlandse voornorm

NVN-ISO/TS 18625

(en)

Containers - Container Tracking en Monitoring Systemen (CTMS): Voorschriften (ISO/TS 18625:2017,IDT)

Freight containers - Container Tracking and Monitoring Systems (CTMS): Requirements (ISO/TS 18625:2017,IDT)

ICS 55.180.10

november 2017

Als Nederlandse voornorm is aanvaard:

- ISO/TS 18625:2017,IDT

Normcommissie 345024 'Containers en wissellaadbakken'

©2017 Koninklijk Nederlands Normalisatie-instituut
Postbus 5059, 2600 GB Delft
Telefoon (015) 2 690 390, Fax (015) 2 690 190

NVN-ISO/TS 18625:2017

TECHNICAL SPECIFICATION

ISO/TS 18625

First edition
2017-10

Freight containers — Container Tracking and Monitoring Systems (CTMS): Requirements

Conteneurs de fret — Système de suivi et de surveillance : Exigences

Reference number
ISO/TS 18625:2017(E)

COPYRIGHT PROTECTED DOCUMENT

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword ..... **iv**

Introduction ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **2**

4 Abbreviated terms **2**

5 General information **2**

5.1 System architecture 2
5.2 System functions 3
5.3 System operation 4
5.4 System interfaces 5
5.5 System data management 5
5.6 System data safeguard measures 5
5.7 System levels of performance 6
5.8 Communications 6
5.8.1 General 6
5.9 Breadth of capability 7
5.10 Depth of capability 7

6 CTMS system requirements **7**

6.1 Operational scenarios 7
6.1.1 General 7
6.1.2 "Event Library": Journey segments and associated events 7
6.2 Specific system requirements 8
6.2.1 General 8
6.2.2 Physical/structural requirements 9
6.2.3 Environmental requirements 9
6.2.4 Operational and performance requirements 9
6.3 Readability 9
6.3.1 General 9
6.3.2 Container monitoring 10
6.4 Accuracy and reliability of the CTMS 10
6.5 Data 10

7 Container Tracking Device (CTD) **11**

7.1 General device information (variety/range of devices) 11
7.2 Device installation/mounting 11
7.3 General device functions for security 11

8 Infrastructure elements **12**

8.1 General 12
8.2 Data interface(s) 12
8.3 Other infrastructure elements (any other non-device distributed elements) 12

9 Safety and regulatory considerations **12**

Annex A (informative) **Event library** **14**

Bibliography **18**

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 voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 104, *Freight containers*, Subcommittee SC 4, *Identification and communication*.

Introduction

Through communication with a broad range of potential Container Tracking and Monitoring System (CTMS) users, much has been learned about needed capabilities and the timeline for providing certain solution levels. Initially, it was assumed that the most immediate needs would be for high-tier (i.e. high-capability) solutions to protect dangerous or valuable cargoes. Potential users made clear that point solutions for dangerous or valuable cargoes have already been developed for these needs. These point solutions are in use today. Instead, the most immediate potential demand seems to be for "low-tier" solutions that deliver a minimal but important capability at low cost, capable of being broadly deployed and used. Starting at the low tier reflects a building block approach that can be expanded as technology and requirements permit.

This document summarizes the aforementioned discussions. This document provides a systemic approach for automatic identification, tracking and monitoring for freight containers. Specifically, it provides guidance for the requirements (operational and otherwise) for a system, and its enabling devices, used to track, monitor and/or report the status of the container according to the needs, requirements and specifications determined by the user. The CTMS would provide

a) an unambiguous unique identification of the container,

b) location of the container with a selectable degree of precision as defined by the user of the system (there are various options for accuracy and it is left to the user to determine what is best for the application), and

c) status, where applicable, of container condition parameters as defined by the user of the system which may include parameters related to container environment, container condition, container integrity, container load status, etc.

The collection of this information is done through one or more selectable communications interfaces. The format, frequency and granularity in which the information is accessed and presented will be defined by the user of the system and is outside the scope of this document.

Though not used in this document, recognition is given to the standardization work of

— ISO/IEC JTC 1/SC 31 in the area related to air interface, data semantic and syntax construction, conformance and identification, location and security of items,

— ISO/IEC/TR 24729-4, and

— ISO/TC 104 in the area of freight container security, including electronic seals [(e-seals) ISO 18185 (all parts)] and container identification.

TECHNICAL SPECIFICATION **ISO/TS 18625:2017(E)**

Freight containers — Container Tracking and Monitoring Systems (CTMS): Requirements

1 Scope

This document is intended to be applicable to freight containers as defined in ISO 668 as well as to other freight containers not defined in ISO 668 and to container ancillary equipment such as road and terminal chassis, generator sets and power packs.

This document provides guidance for the requirements (operational and otherwise) for a system, and its enabling devices, used to track, monitor and/or report the status of the container, hereinafter referred to as the Container Tracking and Monitoring System (CTMS). The use of a CTMS is optional. The party opting to use a CTMS is hereafter referred to as the "user of the system" or just the "user". The user, which can be, e.g. a shipper, a consolidator, a logistics service provider or a container owner or operator, will identify and specify its specific requirements and usages of the CTMS pursuant to specific use cases defined by that party (see Clause 6). This document establishes a tiered approach to the CTMS. The tiered approach is described in 5.2 and 5.3.

A CTMS in conformance with this document, provides for interoperability in regard to both data transfer and data interpretation neither of which may be hindered by systems claiming such conformance.

The CTMS elements addressed in this document include the following:

a) a set of requirements for transferring information to and from a container tracking device to/from an automatic data processing systems by, e.g. air interface through RF or optical means;

b) data for transmission to/from automatic data processing systems;

c) functional requirements necessary to ensure consistent and reliable operation of the CTMS;

d) features to inhibit malicious or unintentional alteration and/or deletion of the information content of the CTMS.

Specifically excluded from the scope of this document is the processing and display of data by the users' information system hereinafter referred to as the Operator Information Management system (OIMS). Also specifically excluded is the specific identification, tracking and monitoring of cargo packed or filled in the container.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17712, *Freight containers — Mechanical seals*

ISO 18185-2, *Freight containers — Electronic seals — Part 2: Application requirements*

ISO 18185-3, *Freight containers — Electronic seals — Part 3: Environmental characteristics*

ISO/IEC 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

IEC 60533, *Electrical and electronic installations in ships — Electromagnetic compatibility (EMC) — Ships with a metallic hull*

Bestelformulier

Stuur naar:

NEN Standards Products & Services
t.a.v. afdeling Klantenservice
Antwoordnummer 10214
2600 WB Delft

NEN Standards Products & Services

Postbus 5059
2600 GB Delft

Vlinderweg 6
2623 AX Delft

T (015) 2 690 390
F (015) 2 690 271

www.nen.nl/normshop

Ja, ik bestel

__ ex. NVN-ISO/TS 18625:2017 en Containers - Container Tracking en Monitoring Systemen (CTMS): Voorschriften € 80.61

Wilt u deze norm in PDF-formaat? Deze bestelt u eenvoudig via www.nen.nl/normshop

Gratis e-mailnieuwsbrieven

Wilt u op de hoogte blijven van de laatste ontwikkelingen op het gebied van normen, normalisatie en regelgeving? Neem dan een gratis abonnement op een van onze e-mailnieuwsbrieven. www.nen.nl/nieuwsbrieven

Gegevens

Bedrijf / Instelling

T.a.v. O M O V

E-mail

Klantnummer NEN

Uw ordernummer BTW nummer

Postbus / Adres

Postcode Plaats

Telefoon Fax

Factuuradres (indien dit afwijkt van bovenstaand adres)

Postbus / Adres

Postcode Plaats

Datum Handtekening

Retourneren

Fax: 015 2 690 271
E-mail: klantenservice@nen.nl
Post: NEN Standards Products & Services,
t.a.v. afdeling Klantenservice
Antwoordnummer 10214,
2600 WB Delft
(geen postzegel nodig).

Voorwaarden

- De prijzen zijn geldig tot 31 december 2018, tenzij anders aangegeven.
- Alle prijzen zijn excl. btw, verzend- en handelingskosten en onder voorbehoud bij o.m. ISO- en IEC-normen.
- Bestelt u via de normshop een pdf, dan betaalt u geen handeling en verzendkosten.
- Meer informatie: telefoon 015 2 690 391, dagelijks van 8.30 tot 17.00 uur.
- Wijzigingen en typefouten in teksten en prijsinformatie voorbehouden.
- U kunt onze algemene voorwaarden terugvinden op: www.nen.nl/leveringsvoorwaarden.