Irish Standard
I.S. EN 15969-1:2022

Version 4.00

NSAI
Standards

Tanks for transport of dangerous goods - Digital interface for the data transfer between tank vehicle and with stationary facilities - Part 1: Protocol specification - Control, measurement and event data

I.S. EN 15969-1:2022 V4.00

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Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 15969-1:2022 V4.00 is the version of the NSAI adopted European document EN 15969-1:2022, *Tanks for transport of dangerous goods - Digital interface for the data transfer between tank vehicle and with stationary facilities - Part 1: Protocol specification - Control, measurement and event data,* including any Corrections, Amendments etc. to EN 15969-1:2022.

This normative document by CEN/CENELEC the elaboration of which includes a public enquiry, followed by a Formal Vote of CEN/CENELEC national members and final ratification. This European Standard is published as an identical national standard and every conflicting national standard will be withdrawn. The content of a European Standard does not conflict with the content of any other EN (and HD for CENELEC).

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15969-1

October 2022

Supersedes EN 15969-1:2017

English Version

Tanks for transport of dangerous goods - Digital interface for the data transfer between tank vehicle and with stationary facilities - Part 1: Protocol specification - Control, measurement and event data

Citernes destinées au transport de matières dangereuses - Interface numérique pour le transfert de données entre des véhicules-citernes et des installations fixes - Partie 1 : Spécifications du protocole - Contrôle, données de mesure et d'événements

Tanks für die Beförderung gefährlicher Güter - Digitale Schnittstelle für den Datenaustausch zwischen Tankfahrzeugen und stationären Einrichtungen - Teil 1: Protokollspezifikation - Steuerungs-, Mess- und Ereignisdaten

This European Standard was approved by CEN on 19 September 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 15969-1:2022) has been prepared by Technical Committee CEN/TC 296 "Tanks for the transport of dangerous goods", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15969-1:2017.

In comparison with the previous edition, the following technical modifications have been made:

— Figure 11 corrected;

— Subclause 7.3.11 "Trailer coupled (variable TRAILER)" added;

— Subclause 7.5.9 "Duplicate print (DUPLICATE)" added;

— Table 55 "Fields of records of ORDER.PLAN" Index 19 to 21 added;

— In subclause 7.13.4 Value V for planned transaction in process and unplanned transaction in process added;

— Table 67 "L file record types" in Index L1137 Bit 3 added;

— Table 67 "L file record types" Index L1147 added;

— Table 67 "L file record types" Index L1205 added;

— Table 67 "L file record types" in Index L2002 event codes 80 to > 100 added;

— Table 67 "L file record types" Index L4007 and L4008 added;

— Table 67 "L file record types" in Index L4206 delivery path 25 to 36 and 80 to 86 added;

— Table 67 "L file record types" Index L4207 and L4208 added;

— Table 67 "L file record types" Index 94 Diagnose added;

— Node tree in Figure A.1 revised.

EN 15969, *Tanks for transport of dangerous goods — Digital interface for the data transfer between tank vehicle and with stationary facilities*, consists of 2 parts:

— *Part 1: Protocol specification — Control, measurement and event data*;

— *Part 2: Commercial and logistic data.*

This document forms part of a coherent standards programme comprising the following standards:

— EN 13616-1, *Overfill prevention devices for static tanks for liquid fuels — Part 1: Overfill prevention devices with closure device*;

— EN 13616-2, *Overfill prevention devices for static tanks for liquid fuels — Part 2: Overfill prevention devices without a closure device*;

— EN 13922, *Tanks for transport of dangerous goods — Service equipment for tanks — Overfill prevention systems for liquid fuels*;

— EN 14116, *Tanks for transport of dangerous goods — Digital interface for product recognition devices for liquid fuels*;

— EN 15207, *Tanks for the transport of dangerous goods — Plug/socket connection and supply characteristics for service equipment in hazardous areas with 24 V nominal supply voltage*;

— EN 15208, *Tanks for transport of dangerous goods — Sealed parcel delivery systems — Working principles and interface specifications*;

— EN 15969-2, *Tanks for transport of dangerous goods — Digital interface for the data transfer between tank vehicle and with stationary facilities — Part 2: Commercial and logistic data*.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

FTL is an acronym for **F**uel **T**ruck **L**ink, the interface between electronic system(s) on board of a tank vehicle (tank-vehicle-equipment) and any external computer, e.g. an on-board-computer installed in the driver's cabin; for illustration see Figure 1.
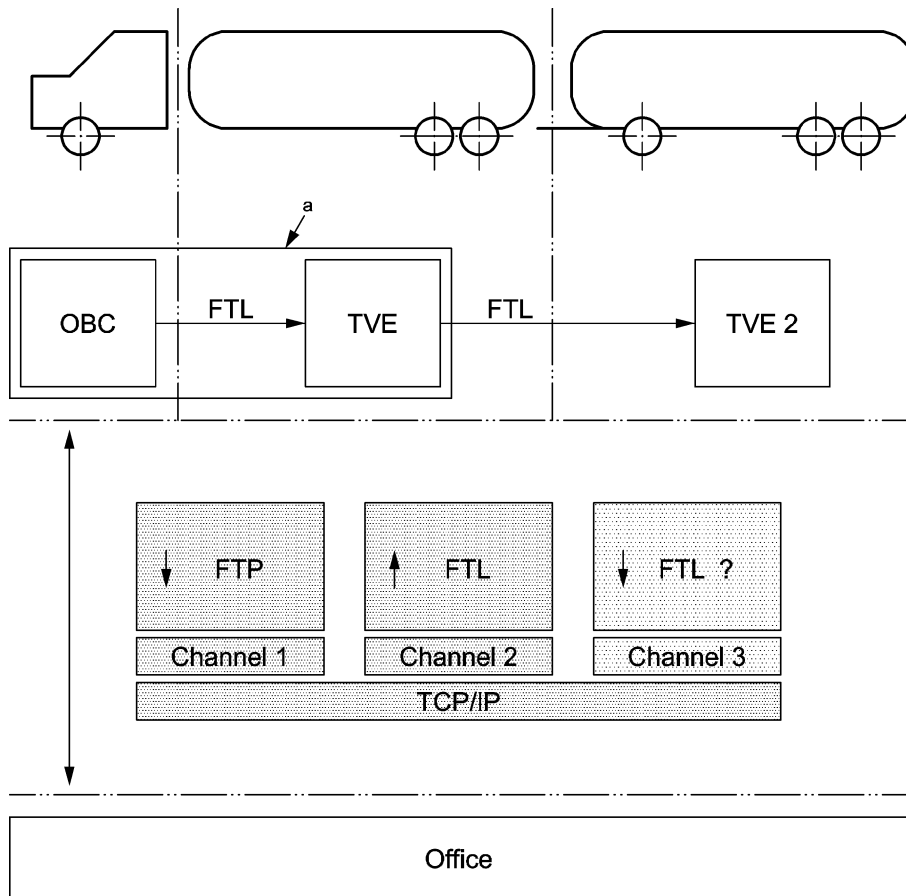
Key

→   direction of communication (client → server)

a   may be either two independent units or one single unit which incorporates both functions OBC and TVE

Figure 1

1 Scope

This document specifies data protocols and data format for the communication between electronic equipment (TVE), on-board computer (OBC) of the tank vehicle and stationary equipment.

This document specifies the basic protocol FTL used in the communication (basic protocol layer), the format and structure of FTL-data to be transmitted (data protocol layer) and describes the content of the FTL-data.

This data protocol can be used for other application e.g. between stationary tank equipment and offices.

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.

DIN 51757:2011, *Testing of mineral oils and related materials — Determination of density*

EN 13616-2, *Overfill prevention devices for static tanks for liquid fuels — Part 2: Overfill prevention devices without a closure device*

EN 13922, *Tanks for transport of dangerous goods — Service equipment for tanks — Overfill prevention systems for liquid fuels*

EN 14116:2012+A2:2018, *Tanks for transport of dangerous goods — Digital interface for product recognition devices for liquid fuels*

EN 15208:2014, *Tanks for transport of dangerous goods — Sealed parcel delivery systems — Working principles and interface specifications*

ISO 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

3 Terms and definitions, abbreviations and conventions

For the purposes of this document, the following terms and definitions, abbreviations and conventions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/

- ISO Online browsing platform: available at https://www.iso.org/obp

3.1 Terms and definitions

3.1.1
downgrade
intentional loading and discharge of a higher grade product (substance) into a lower grade product of the same group

3.1.2
answer time
time between last frame character transmitted from OBC (client) and first character frame received from TVE (server)

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