NSAI
Standards

Irish Standard
I.S. EN 15969-1:2017

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 15969-1:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN 15969-1:2017	2017-12-13

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2017-12-31	35.240.60
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 15969-1:2017 is the adopted Irish version of the European Document EN 15969-1:2017, 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

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15969-1

December 2017

ICS 35.240.60

Supersedes EN 15969-1:2015

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 15 October 2017.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword

This document (EN 15969-1:2017) 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 June 2018, and conflicting national standards shall be withdrawn at the latest by June 2018.

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 15969-1:2015.

With regard to EN 15969-1:2015, the following fundamental changes are given:

— fields for air craft refilling added.

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 European Standard 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*;

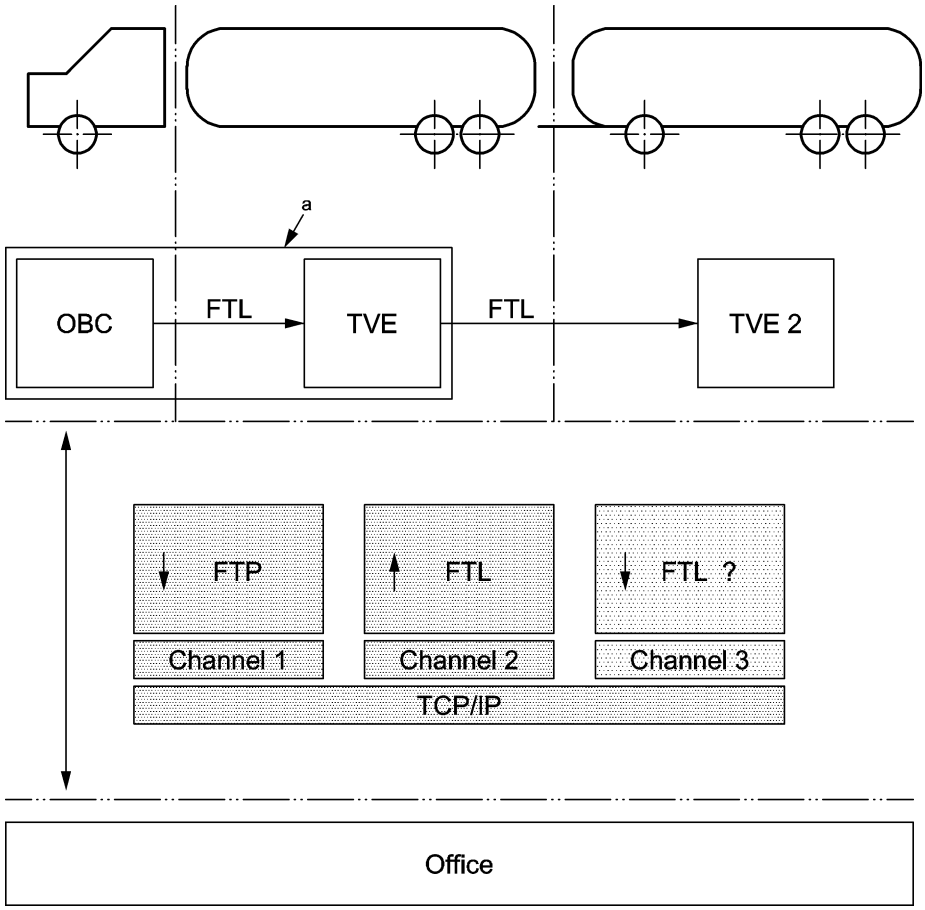
— EN 15969-2, *Tanks for transport of dangerous goods — Digital interface for the data transfer between tank vehicle and with stationary facilities — Part 2: Commercial and logistic data*.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia,

France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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 European Standard specifies data protocols and data format for the interfaces between electronic equipment (TVE), on-board computer (OBC) of the tank vehicle and stationary equipment for all interconnecting communication paths.

This European Standard 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 may be used for other application e.g. between stationary tank equipment and offices.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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+A1:2014, *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*

EN 15969-2:2017, *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*

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

ISO/IEC 10646:2014, *Information technology — Universal Coded Character Set (UCS)*

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

3 Terms and definitions, abbreviations and conventions

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

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)