INTERNATIONAL STANDARD

ISO 11783-6

Fourth edition
2018-06

Tractors and machinery for agriculture and forestry — Serial control and communications data network —

Part 6: Virtual terminal

Tracteurs et matériels agricoles et forestiers — Réseaux de commande et de communication de données en série —

Partie 6: Terminal virtuel

Reference number
ISO 11783-6:2018(E)

COPYRIGHT PROTECTED DOCUMENT

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

Published in Switzerland

Contents

Page

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 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 19, *Agricultural electronics*.

This fourth edition cancels and replaces the third edition (ISO 11783-6:2014) which has been technically revised. New requirements in this fourth edition are specified as VT version 6. Changes include clarifications to existing VT object and command behaviour, including additional capabilities. One Working Set in collaboration with another Working Set can transfer control of the active mask to the other with the Select Active Working Set command. Additional objects include a Colour Palette object, a Graphic Data object, a Scaled Graphic object, and a Working Set Special Controls object.

A list of all the parts in the ISO 11783 series can be found on the ISO website.

Introduction

ISO 11783-1 to ISO 11783-14 specify a communications system for agricultural equipment based on the ISO 11898[5] protocol. SAE J1939[1] documents, on which parts of ISO 11783 are based, were developed jointly for use in truck and bus applications and for construction and agriculture applications. Joint documents were completed to allow electronic units that meet the truck and bus SAE J1939 specifications to be used by agricultural and forestry equipment with minimal changes. The specifications for virtual terminals given in this part of ISO 11783 are based on DIN 9684-4[2]. General information on ISO 11783 is to be found in ISO 11783-1.

The purpose of ISO 11783 is to provide an open, interconnected system for on-board electronic systems. It is intended to enable electronic control units (ECUs) to communicate with each other, providing a standardized system.

All phrases in this document that refer explicitly to a software term for an object or a command have the first letter of each object or command word capitalized (e.g. Output Linear Bar Graph object, Change Numeric Value command). This aides in the recognition of these terms as a specific item which has a specific definition in this document.

Tractors and machinery for agriculture and forestry — Serial control and communications data network —

Part 6: Virtual terminal

1 Scope

ISO 11783 as a whole specifies a serial data network for control and communications on forestry or agricultural tractors, mounted, semi-mounted, towed or self propelled implements. Its purpose is to standardize the method and format of transfer of data between sensor, actuators, control elements, information storage and display units whether mounted or part of the tractor, or any implements.

This document describes a universal virtual terminal that can be used by both tractors and implements.

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 11783-3, *Tractors and machinery for agriculture and forestry — Serial control and communications data network — Part 3: Data link layer*

ISO 11783-5, *Tractors and machinery for agriculture and forestry — Serial control and communications data network — Part 5: Network management*

ISO 11783-7, *Tractors and machinery for agriculture and forestry — Serial control and communications data network — Part 7: Implement messages application layer*

ISO 15077, *Tractors and self-propelled machinery for agriculture — Operator controls — Actuating forces, displacement, location and method of operation*

3 Terms and definitions

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

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

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

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

3.1
auxiliary input unit
autonomous control function (CF) providing Auxiliary Controls for common use that can also be physically located within an electronic control unit (ECU), or on the virtual terminal (VT)

3.2
object pool
collection of objects that completely define the operator interface for an implement or a single Working Set

Note 1 to entry: The complete VT definition will be made up of one or more object pools — one for each Working Set.