ISO 11783-3:2026-03 (E)

Tractors and machinery for agriculture and forestry - Serial control and communications data network - Part 3: Application layer, transport layer and network layer

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Abbreviated terms **3**

5 Technical requirements **3**

5.1 Mapping of messages to CAN data frames 3

5.1.1 General requirements and recommendations 3

5.1.2 Mapping of ISO 11783 messages to CAN data frames in CEFF 4

5.1.3 Parameter group numbers (PGN) 6

5.1.4 ISO 11783 support of ISO 11898-1 data frames in CBFF 7

5.2 Protocol data unit (PDU) 7

5.2.1 General 7

5.2.2 Priority (P) 8

5.2.3 Extended data page (EDP) 8

5.2.4 Data page (DP) 8

5.2.5 PDU format (PF) 9

5.2.6 PDU specific (PS) 9

5.2.7 Source address (SA) 9

5.2.8 PG data field 9

5.3 Protocol data unit (PDU) formats 10

5.3.1 General 10

5.3.2 PDU1 format 10

5.3.3 PDU2 format 11

5.4 Message types 12

5.4.1 General 12

5.4.2 PG command 13

5.4.3 Request 13

5.4.4 Broadcast/response 17

5.4.5 Acknowledgement 17

5.4.6 Group functions 19

5.4.7 Transfer 21

5.5 Message priority 22

5.6 Bus access 22

5.7 Contention-based arbitration 22

5.8 Error detection 23

5.9 Transport protocol functions 23

5.9.1 General 23

5.9.2 “Packetization” and reassembly 23

5.9.3 Transport protocol — connection management 24

5.9.4 Transport protocol — connection management messages (TP.CM) 26

5.9.5 Transport protocol — data transfer messages (TP.DT) 30

5.9.6 Transport protocol connection constraints 31

5.10 Extended transport protocol functions 32

5.10.1 Overview 32

5.10.2 General 32

5.10.3 Message size 32
5.10.4 Extended transport protocol — connection management 32
5.10.5 Extended transport protocol — connection management messages (ETP.CM) 34
5.10.6 Extended transport protocol — data transfer messages (ETP.DT) 37
5.10.7 Extended transport protocol — connection constraints 38
5.11 PDU processing requirements 38
5.12 Miscellaneous provisions 38
5.12.1 Request scheduling 38
5.12.2 Controller response time and timeout defaults 38
5.12.3 Required responses 39
5.12.4 Transmission of PGs to specific or global destinations 39
5.12.5 CTS number of packet recommendation 40

Annex A (normative) **Assignment process for SA, PG and PGN** **41**

Annex B (informative) **Network bandwidth utilization** **44**

Annex C (informative) **Transport protocol transfer sequences — Examples of connection mode data transfer** **45**

Annex D (informative) **Communication mode examples** **53**

Bibliography **55**