

ISO 17987-3:2025-07 (E)

Road vehicles - Local Interconnect Network (LIN) - Part 3: Protocol specification

Contents

Page

- Foreword..... v
- Introduction vi
- 1 Scope..... 1**
- 2 Normative references..... 1**
- 3 Terms, definitions, symbols and abbreviated terms..... 1**
 - 3.1 Terms and definitions..... 1
 - 3.2 Symbols..... 4
 - 3.3 Abbreviated terms..... 4
- 4 Node concept..... 5**
 - 4.1 General..... 5
 - 4.2 Concept of operation..... 6
 - 4.2.1 Commander and responder..... 6
 - 4.2.2 Frames..... 6
 - 4.2.3 Data transport..... 7
- 5 Protocol requirements..... 7**
 - 5.1 Signal..... 7
 - 5.1.1 Management..... 7
 - 5.1.2 Types..... 7
 - 5.1.3 Consistency..... 7
 - 5.1.4 Packing..... 7
 - 5.1.5 Reception and transmission..... 8
 - 5.2 Frame..... 9
 - 5.2.1 Transfer..... 9
 - 5.2.2 Structure..... 9
 - 5.2.3 Frame length..... 13
 - 5.2.4 Frame types..... 14
 - 5.3 Schedule tables..... 19
 - 5.3.1 General..... 19
 - 5.3.2 Time definitions..... 19
 - 5.3.3 Frame slot..... 19
 - 5.3.4 Schedule table handling..... 20
 - 5.4 Task behaviour model..... 20
 - 5.4.1 General..... 20
 - 5.4.2 Commander task state machine..... 20
 - 5.4.3 Responder task state machine..... 20
 - 5.5 Status management..... 23
 - 5.5.1 General..... 23
 - 5.5.2 Concept..... 23
 - 5.5.3 Event-triggered frames..... 23
 - 5.5.4 Reporting to the cluster..... 23
- 6 Node configuration and identification..... 24**
 - 6.1 General..... 24
 - 6.2 LIN product identification..... 24
 - 6.2.1 Supplier ID, function ID and variant ID..... 24
 - 6.2.2 Serial number..... 24
 - 6.2.3 Wildcards..... 25
 - 6.3 Responder node model..... 25
 - 6.3.1 Memory model..... 25
 - 6.3.2 Responder node configuration variants..... 25

6.3.3	Initial node address	26
6.3.4	PDU structure	27
6.3.5	Node configuration handling	29
6.3.6	Node configuration services	30
Annex A	(normative) Definition of properties, frame identifiers and various examples	35
Annex B	(informative) LIN history and version compatibility	39
Annex C	(normative) LIN auto addressing procedures	43
Annex D	(normative) LIN AA Procedure C	45
Annex E	(normative) LIN AA Procedure D	53
Annex F	(normative) LIN AA Procedure E	59
Bibliography	74