

E DIN EN ISO 12813:2014-02 (E)

Electronic fee collection - Compliance check communication for autonomous systems (ISO/DIS 12813:2013); English version prEN ISO 12813:2013

| Contents | | Page |
|---------------------|--|-------------|
| Foreword | | v |
| Introduction | | vi |
| 1 | Scope | 1 |
| 2 | Normative references | 2 |
| 3 | Terms and definitions | 3 |
| 4 | Abbreviated terms | 4 |
| 5 | Application interface architecture | 5 |
| 5.1 | General | 5 |
| 5.2 | Services provided | 5 |
| 5.3 | Attributes | 5 |
| 5.4 | Toll context | 6 |
| 5.5 | Use of lower layers | 6 |
| 5.5.1 | Supported DSRC communication stacks | 6 |
| 5.5.2 | Use of the CEN-DSRC stack | 6 |
| 6 | Functions | 7 |
| 6.1 | Functions in detail | 7 |
| 6.1.1 | General | 7 |
| 6.1.2 | Initialise communication | 7 |
| 6.1.3 | Data retrieval | 7 |
| 6.1.4 | Authenticated data retrieval | 7 |
| 6.1.5 | Driver notification | 8 |
| 6.1.6 | Terminate communication | 8 |
| 6.1.7 | Test communication | 8 |
| 6.2 | Security | 8 |
| 6.2.1 | General | 8 |
| 6.2.2 | Authentication/non-repudiation | 8 |
| 6.2.3 | Access credentials | 9 |
| 7 | Attributes | 9 |
| 7.1 | General | 9 |
| 7.2 | Data regarding identification | 10 |
| 7.3 | Data regarding status | 11 |
| 7.4 | Data regarding vehicle | 12 |
| 8 | Transaction model | 13 |
| 8.1 | General | 13 |
| 8.2 | Initialisation phase | 14 |
| 8.2.1 | Initialisation request | 14 |
| 8.2.2 | CCC application-specific contents of BST | 14 |
| 8.2.3 | CCC application-specific contents of VST | 14 |
| 8.3 | Transaction phase | 14 |
| Annex A (normative) | CCC data type specifications | 15 |

| | |
|--|-----------|
| Annex B (normative) PICS proforma for the attributes | 19 |
| B.1 General | 19 |
| B.2 Purpose and structure | 19 |
| B.3 Instruction for completing PICS proforma | 19 |
| B.3.1 Definition of support | 19 |
| B.3.2 Status column | 19 |
| B.3.3 Support column | 20 |
| E DIN EN ISO 12813:2014-02 ² (QWZXUI ² ISO/DIS 12813 B.3.4 Item reference numbers | 20 |
| B.4 PICS proforma for OBE | 21 |
| B.4.1 Identification of the implementation | 21 |
| B.4.2 Global statement of conformance | 22 |
| B.4.3 PICS proforma tables | 22 |
| B.5 PICS proforma for RSE | 24 |
| B.5.1 Identification of the implementation | 24 |
| B.5.2 Global statement of conformance | 25 |
| B.5.3 PICS proforma tables | 25 |
| Annex C (informative) Using the UNI DSRC communication stack for CCC applications | 28 |
| C.1 General | 28 |
| C.2 UNI DSRC requirements | 28 |
| C.3 Function correspondences | 28 |
| C.4 Data storage and retrieval | 29 |
| C.4.1 Data storage | 29 |
| C.4.2 Data retrieval | 31 |
| C.5 CCC transaction example | 31 |
| C.5.1 General | 31 |
| C.5.2 Initialisation phase | 32 |
| C.5.3 Data retrieval phase | 32 |
| Annex D (informative) Using the IR DSRC communication stack (CALM IR) for CCC applications | 35 |
| D.1 General | 35 |
| D.2 DSRC requirements | 35 |
| D.3 Functions | 35 |
| D.4 Data requirements | 35 |
| D.5 Security requirements | 35 |
| D.6 Transaction requirements | 35 |
| Annex E (informative) Using the ARIB DSRC communication stack for CCC applications | 36 |
| E.1 General | 36 |
| E.2 DSRC requirements | 36 |
| E.3 CCC functions | 36 |
| E.4 Data requirements | 36 |
| E.5 Security requirements | 36 |
| E.6 Transaction requirements | 36 |
| E.6.1 General | 36 |
| E.6.2 Initialisation Phase | 36 |
| E.6.3 Transaction phase | 37 |
| Annex F (informative) Example CCC transaction | 38 |
| Annex G (informative) Security considerations | 40 |
| G.1 General | 40 |
| G.2 Security requirements | 40 |
| G.3 Security concept based on symmetric cryptography | 42 |
| G.3.1 Data integrity and origin authentication | 42 |

| | | |
|--|---|-----------|
| G.3.2 | Non-repudiation | 43 |
| G.3.3 | Data access protection | 43 |
| G.3.4 | Example usage of symmetric security measures during CCC | 44 |
| Annex H (informative) Use of this standard for the EETS | | 45 |
| H.1 | General | 45 |
| H.2 | Overall relationship between European standardisation and the EETS | 45 |
| H.3 | European standardisation work supporting the EETS | 45 |
| H.4 | Correspondence between this standard and the EETS | 46 |
| Bibliography | | 47 |