

DIN EN 13757-3:2025-10 (E)

Communication systems for meters - Part 3: Application protocols

| Contents | | Page |
|-------------------------|---|-------------|
| European foreword | | 5 |
| Introduction | | 7 |
| 1 | Scope | 9 |
| 2 | Normative references | 9 |
| 3 | Terms and definitions | 9 |
| 4 | Abbreviations and symbols | 10 |
| 4.1 | Abbreviations | 10 |
| 4.2 | Symbols | 11 |
| 5 | Selection of an application protocol | 11 |
| 6 | M-Bus protocol | 12 |
| 6.1 | General | 12 |
| 6.2 | M-Bus data record | 12 |
| 6.3 | Data Information Block (DIB) | 12 |
| 6.3.1 | General | 12 |
| 6.3.2 | Data Information Field (DIF) | 13 |
| 6.3.3 | Data field | 13 |
| 6.3.4 | Function Field | 14 |
| 6.3.5 | Storage number | 15 |
| 6.3.6 | Extension bit (E) | 15 |
| 6.3.7 | Data Information Field Extension (DIFE) | 15 |
| 6.3.8 | Tariff information | 15 |
| 6.3.9 | Subunit information | 16 |
| 6.4 | Value Information Block (VIB) | 16 |
| 6.4.1 | General | 16 |
| 6.4.2 | Primary VIFs (main table) | 17 |
| 6.4.3 | VIF-codes for special purposes | 18 |
| 6.4.4 | VIFE-code extension tables | 19 |
| 6.4.5 | Alternate VIFE-code extension table (following VIF = FBh for primary VIF) | 25 |
| 6.4.6 | Combinable (orthogonal) VIFE-Code extension table | 26 |
| 6.4.7 | Generalized object layer | 30 |
| 6.4.8 | Record errors | 31 |
| 6.5 | Sensor specific information | 32 |
| 6.5.1 | General | 32 |
| 6.5.2 | Sub device type for Sensors | 32 |
| 6.5.3 | Status bits of specific sensors | 34 |
| 6.5.4 | Type or class of approval | 38 |
| 6.6 | Manufacturer specific unstructured data block | 38 |
| 7 | Application reset and application select | 39 |
| 7.1 | Application reset | 39 |
| 7.2 | Application select with subcode | 39 |
| 7.3 | Overview about CI-fields for application reset and application select | 42 |
| 7.4 | Rules for application selection | 42 |
| 7.4.1 | Reset of current slave response | 42 |
| 7.4.2 | Erroneous application select | 43 |

| | | |
|---|--|----|
| 7.5 | Rules for block selection | 43 |
| 7.6 | Selected application block in M-Bus application protocol | 43 |
| 8 | Clock synchronization | 43 |
| 9 | Report of alarm status (slave to master) | 44 |
| 10 | Report of application error | 44 |
| 10.1 | General | 44 |
| 10.2 | Status field | 44 |
| 10.3 | General application layer errors | 44 |
| 11 | Switching baud rate for M-Bus link layer according to EN 13757-2 | 46 |
| 12 | Synchronize action | 46 |
| 13 | Manufacturer specific protocols | 46 |
| 14 | Other application protocols | 46 |
| 15 | Image Transfer | 47 |
| Annex A (normative) Coding of data records | | 48 |
| Annex B (normative) Interpretation of hex-codes Ah-Fh in BCD-data fields | | 56 |
| B.1 | General description standard reference | 56 |
| B.2 | Definition | 56 |
| Annex C (normative) VIF coding for special units | | 57 |
| C.1 | Non-metric units | 57 |
| C.2 | Plain text units | 57 |
| C.3 | Remote enablement/disablement of valve/breaker | 58 |
| Annex D (informative) Alarm protocol | | 59 |
| D.1 | M-Bus according to EN 13757-2 | 59 |
| D.2 | Wireless M-Bus according to EN 13757-4 | 59 |
| Annex E (informative) Special sequences for M-Bus devices | | 60 |
| E.1 | VIF/VIFE/VIFE = FDh 97h 1Dh (error flag) | 60 |
| E.2 | VIF/VIFE/VIFE = FDh 9Fh 1Dh for passing remote control on a node | 62 |
| E.3 | Clock synchronization | 63 |
| Annex F (normative) Transmission of profiles | | 66 |
| F.1 | The standard load profile | 66 |
| F.2 | The M-Bus compact profile | 67 |
| Annex G (normative) Compact M-Bus frame | | 72 |
| G.1 | General | 72 |
| G.2 | CI-fields of the Full and the Compact M-Bus frame | 72 |
| G.3 | Calculation of the Full-Frame-CRC | 74 |
| G.4 | Calculation of the Format Signature | 74 |
| G.5 | Frame examples | 75 |
| Annex H (normative) Translating M-Bus type record descriptors to OBIS-type record descriptors ... | | 77 |
| H.1 | General | 77 |

| | | |
|---|--|-----|
| H.2 | Translation of predefined data record types | 77 |
| H.3 | Online addition of an entry for the M-Bus to OBIS conversion table | 95 |
| Annex I (normative) Image Transfer | | 96 |
| I.1 | Image Transfer phases | 96 |
| I.2 | Commands for Image Transfer | 99 |
| I.3 | Overview Image Transfer | 116 |
| Annex J (informative) Example for electrical phase angles | | 118 |
| J.1 | Phase angle between UL1 and UL2, UL3 | 118 |
| J.2 | Phase angle between UL1 and IL1 | 118 |
| Bibliography | | 120 |