**Explanations of message contents**

**1)** Start character "/" (forward oblique, code 2FH).

**2)** End character "!" (exclamation mark, code 21H).

**3)** Completion character (CR, carriage return, code 0DH; LF, line feed, code 0AH).

**4)** Acknowledge character (ACK, acknowledge, code 06H).

**5)** Frame start character (STX, start of text code 02H) indicating where the calculation of BCC

shall start from. This character is not required if there is no data set to follow.

**6)** End character in the block (ETX, end of text, code 03H).

**7)** End character in a partial block (EOT, end of text block, code 04H).

**8)** Block check character (BCC), if required, in accordance with the characters 5. and

6.Items 5. and 6. do not apply when the data block is transmitted without check characters.

**9)** Transmission request command "?" (question mark, code 3FH)

**10)** Manufacturer's identification comprising three upper case letters except as noted below:

If a tariff device transmits the third letter in lower case, the minimum reaction time *t*r for the

device is 20 ms instead of 200 ms. Even though a tariff device transmits an upper case

third letter, this does not preclude supporting a 20 ms reaction time.

These letters shall be registered with the administrator: The FLAG Association (see the

foreword).

**11)** Baud rate identification (for baud rate changeover)

The request message, the identification message and the acknowledgement/option select

message are transmitted at the initial rate of 300 Bd (except protocol mode D). The baud

rate of the data message depends on the baud rate determined by the protocol.

**a)** Protocol mode A (without baud rate changeover)

Any desired printable characters except "/", "!" and as long as they are not specified for

protocol mode B or protocol mode C.

**b)** Protocol mode B (with baud rate changeover, without acknowledgement/option select

message)

A - 600 Bd

B - 1 200 Bd

C - 2 400 Bd

D - 4 800 Bd

E - 9 600 Bd

F - 19 200 Bd

G, H, I - reserved for later extensions.

**c)** Protocol mode C and protocol mode E (with baud rate changeover, with

acknowledgement / option select message or other protocols)

0 - 300 Bd

1 - 600 Bd

2 - 1 200 Bd

3 - 2 400 Bd

4 - 4 800 Bd

5 - 9 600 Bd

6 - 19 200 Bd

7, 8, 9 - reserved for later extensions.

**d)** Protocol mode D (data transmission at 2 400 Bd)

Baud rate character is always 3.

**12)** Identification, manufacturer-specific, 16 printable characters maximum except for "/" and

"!". "\" is only allowed as an escape character, see 23) and 24).

**13)** Data block with the measured values (see syntax diagram for normal reading). All printable

characters may be used in the data block, as well as line feed and carriage return, except

for "/" and "!".

**14)** Repeat request character (NAK, negative acknowledge, code 15H).

**15)** Start-of-header character (SOH, start-of-header, code 01H).

**16)** Command message identifier

P - Password command

W - Write command

R - Read command

E - Execute command

B - Exit command (break)

Other characters are reserved for future use.

**17)** Command type identifier (signifies the variant of the command)

Values:

**a)** for password P command

0 - data is operand for secure algorithm

1 - data is operand for comparison with internally held password

2 - data is result of secure algorithm (manufacturer-specific)

3-9 - reserved for future use.

**b)** for write W command

0 - reserved for future use

1 - write ASCII-coded data

2 - formatted communication coding method write (optional, see Annex C)

3 - write ASCII-coded with partial block (optional)

4 - formatted communication coding method write (optional, see Annex C)

with partial block

5 - reserved for national use

6-9 - reserved for future use.

**c)** for read R command

0 - reserved for future use

1 - read ASCII-coded data

2 - formatted communication coding method read (optional, see Annex C)

3 - read ASCII-coded with partial block (optional)

4 - formatted communication coding method read (optional, see Annex C)

with partial block

**18)** Sequence delimiter (backslash code 5CH), optional field. This character is always followed

by a one character field .This field is part of the maximum 16 character wide

identification field.

**19)** Enhanced baud rate and mode identification character (optional field). This field is part of

the 16 character wide identification field . W must be registered with the administrator.

OBİS CODE

T > 1.8.0 31 2E 38 2E 30

T1> 1.8.1 31 2E 38 2E 31

T2> 1.8.2 31 2E 38 2E 32

T3> 1.8.3 31 2E 38 2E 33

T4> 1.8.4 31 2E 38 2E 34

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