THREE-PHASE ELECTRONIC METER

3.E3L

The electronic residential meter E3L is an electricity meter for measuring of active energy in single or two-tariff designs for billing purposes meant for two or four wire networks.

TECHNICAL DATA

Rated values:

- Voltage, Un: 3x230/400 V (1x230 V)
- Current: 0.25 - 5(60 A)
- Frequency, fn: 50 Hz
- Frequency range: 45...65 Hz

Accuracy of active energy:
- class (A, B), according to EN 50470-3

Temperature range:
- Operating: -25...+55°C
- Limit: -40...+70°C
- Transport and storage: -40...+70°C

Mechanical and constructive characteristics:
- Dimensions: 204(226)x172x74 mm
- Display: LCD custom design 56x18 mm, according to Lastenheft EDL "Elektronische Haushaltszähler Funktionale Merkmale und Protokolle" Version 1.0
- Display control: optical button according to Lastenheft EDL "Elektronische Haushaltszähler Funktionale Merkmale und Protokolle" Version 1.0
- Tariff control: - terminals (Figure 3)
- Degree of protection: - housing IP-51
- Test device: - LED infrared (10000 imp/kWh)
- Data interfaces: - optical data interface on the frontside according to DIN EN 62056-21
  - RJ10 data interface in the terminal block

Operation:
• Active energy „+A" and 2 tariffs with 100mWh resolution.
• Display with two rows, according to figure 1.
1. the upper row displays the energy index: (6 integers,unit kWh, and OBIS codes)
2. the lower row is the INFO row

Optical button for display control

Symbols displayed:
- active energy flow sign +A with (positive) or -A with (negative).
- rotating disc (four lines are apparent on the LCD starting from left to right).
- markers of the voltage presence on each phase: L1, L2, L3.
- marker of the current tariff (underline the corresponding OBIS code on LCD).

- communication sign
- error detection („FF")

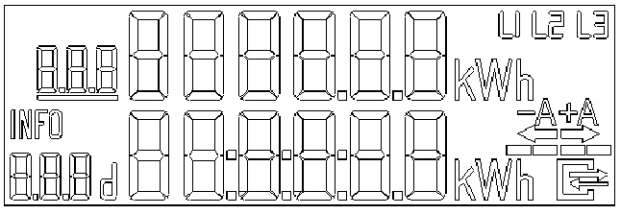

Figure 1

• Communication:
- through the optical interface transmits a telegram - SML v1.03 protocol, PUSH variant.
- through the RJ10 bidirectional interface - SML v1.03 protocol meter functions are according to Lastenheft EDL „Elektronische Haushaltszähler" Funktionale Merkmale und Protokolle Version 1.0

• EDL40 functionalities :
- system time which can be synchonized through SML command through the RJ10 interface
- signature, according to Lastenheft EDL „Elektronische Haushaltszähler" Funktionale Merkmale und Protokolle Version 1.0

OVERALL DRAWINGS

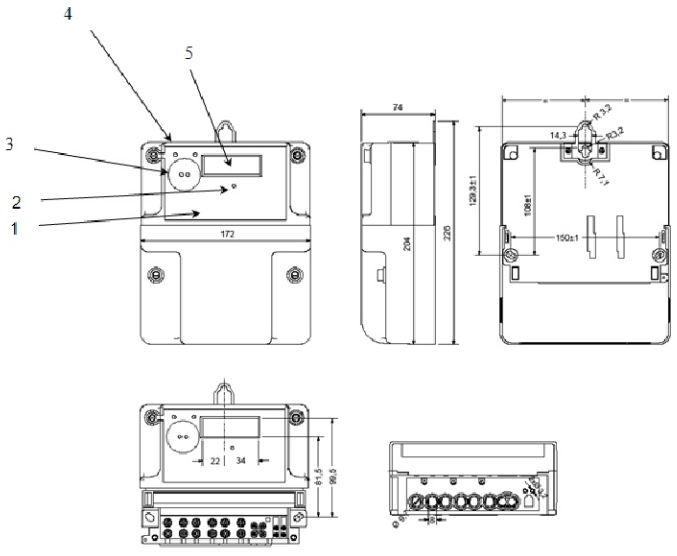

Figure 2

(1) - Printed label according to DIN EN 50470-1
(2) - Optical button for display command
(3) - Optical Interface according to EN 62056-21 specifications, mode D (unidirectional)
(4) - Test IR LED: meter constant imp/kWh
(5) - Custom design LCD according to Lastenheft EDL Version 1.0

CONNECTIONS DIAGRAM

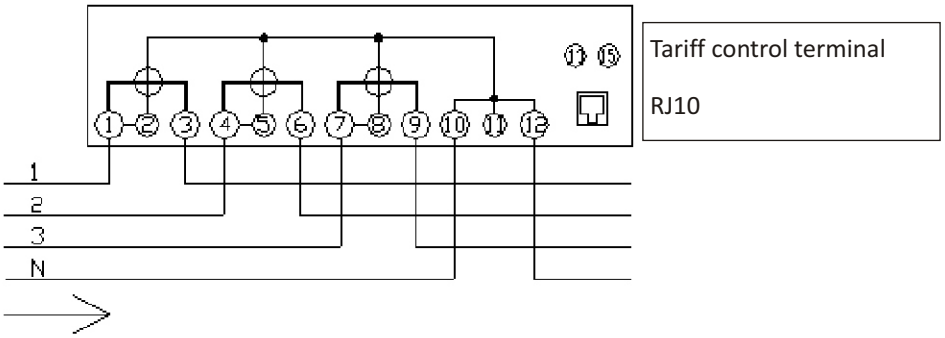

Figure 3