



### From BASIC

- Active & Reactive energy measurement
- Up to 2 tariffs by external tariff switching
- Remote meter reading via PLC
- Stable communication via medium and low voltage lines
- No new wires

### To FULL

- Active & Reactive energy measurement
- Up to 4 tariffs, programmable TOU tables
- Remote meter reading via PLC
- Stable communication via medium and low voltage lines
- No new wires
- External meter [e. g. water, heat] reading via radio interface
- Load profile metering
- Remote user disconnection controlled via PLC
- Token less pre-payment
- Data security

# GAMA DLC-200

for residential, commercial and industrial metering

## Functionality

- Active and reactive energy measurement in both directions
- External tariff switching or flexible TOU metering
- Data storage in non-volatile memory
- Remote user disconnection
- Contractual power levels [load management]
- Token less pre-payment
- External meter reading [e. g. water, heat]
- LCD mode: auto scroll & manual by push button
- Self-diagnostics
- Data security
- Tamper detect

## Data Storage

The GAMA DLC-200 meter has non-volatile memory which allows to store metering data without the influence of power outages. Capacity of stored data:

● Billing read history	≥ 24 billing periods
● Schedule read history	≥ 24 reads
● [Optional] load profile	4 channels x 60 days @ 15 minutes
● Event logbook	> 2000 time-stamped events

## TOU Metering

The GAMA DLC-200 meter can be single-tariff, two-tariff [external tariff switching] or multi-tariff. The multi-tariff modification has an internal real-time clock with Li-ion backup and complex tariff structure [Time-Of-Use]:

- 4 tariffs for each energy direction
- 12 seasons and 24 week tables
- 48 day tables, 16 transitions per day
- Table of 48 special days
- Active and passive tariff structures

## Self-diagnostics

- Watchdog
- Measurement transducer functionality test
- Measurement data validation
- Test on RAM and FLASH memory
- Detection of difference between tariff and continuous registers
- Recognition of malfunction of internal clock
- Test failure alarm with error code

## Data Security

- Encryption [internal Smart Card]
- Determining of information integrity
- Authentication and authorization



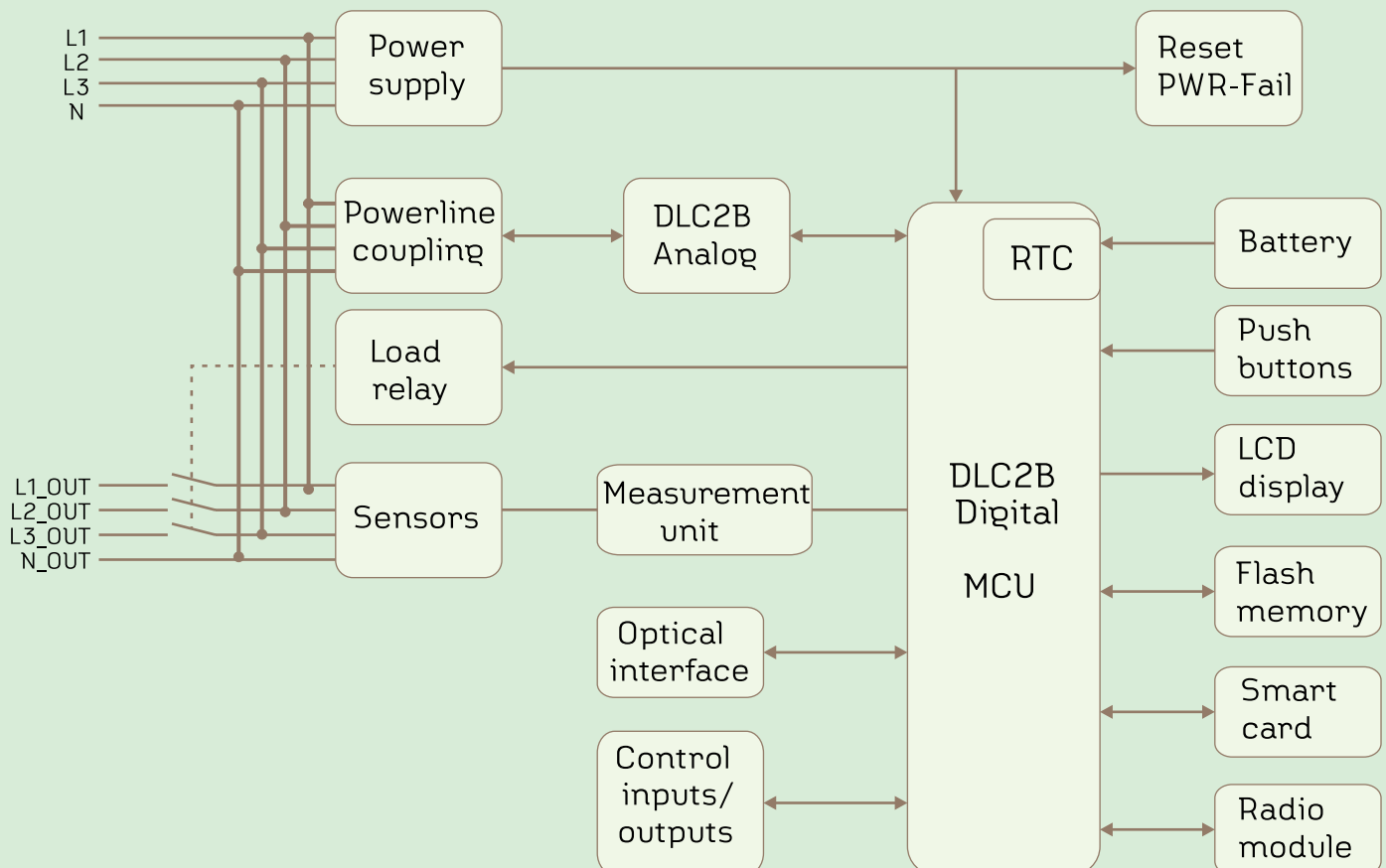


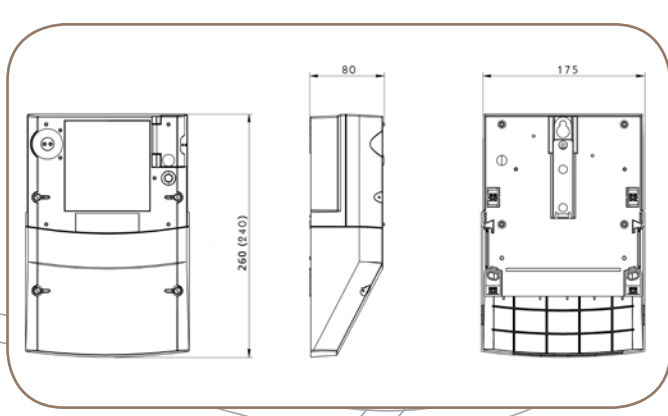
## Tamper detect

- Detection of main cover removal
- Detection of terminal cover removal
- Detection of strong external magnetic fields
- Tamper detect alarm
- Log of tamper events in logbook
- Counter of tamper events:
- Total operation time counter

## Components

- DLC-2B-Chipset [developed by iAd GmbH]:
- Flash 512k x 8;
- 1-Metering IC;
- Dedicated LCD;
- [Optional] internal relay for remote disconnect;
- [Optional] Smart Card;
- [Optional] radio module;
- Powerline coupling with amplifier





## Technical characteristics

### DLC- Communication

- Frequency Range 9 - 490 kHz
- Bandwidth 4 – 400 kHz
- Data Rate 9.6 – 576 kbps [288 kbps CENELEC]
- Max. Distance 500 m – 15 km
- MV Coupling capacitive or inductive

### Energy Measurement

- 3-phase 3x230V/50Hz + 15%/-20%
- Current sensors up to 100A

### Accuracy Class

- Active energy class 1.0
- Reactive energy class 2.0

### Temperature Range

- Operating -40°C to +60°C

### RTC

- Daily synchronization with master system
- Power backup by Li-ion battery

### Housing

- Material UV stabilized polycarbonate
- Dimensions, mm 240x176x80
- Weight 1.5 kg
- Degree of protection IP54
- Insulation protective class II

### Interfaces

- 1 x PLC via power supply
- 1 x optical interface [IEC 62056-21]
- 1 x optical [LED] calibration interface
- [Optional] 1 x radio module



ELGAMA-ELEKTRONIKA  
 Visorių st. 2. 08300 Vilnius, Lithuania  
 Phone: +370 5 2375009. Fax +370 5 2375020  
 E-mail: marketing@elgama.lt,  
 www.elgama.eu

