THEMIS®LOG2.0
NBIOT/GPRS

Electronic index EI7 for diaphragm gas meters BK–G..ETe/BK–G..E

APPLICATIONS

Smart electronic index for Honeywell commercial and industrial diaphragm gas meters (BK-G..10 to G100)

BRIEF INFORMATION

The themis®log2.0 index provides features which go well beyond simple remote reading. The existing options (Time of Use and Block tariffs, load profiles, communica- tions interval control, data logging, electronic temperature compensation, etc.) can be combined in such a way as to suit the needs of individual customers. A secure, over the air firmware update guarantees that the technology is future-proof and can be updated to meet new requirements if necessary.

The themis®log2.0 is available with NBIoT/GPRS WAN communication. The GPRS-WAN communication is implemented as a "fallback" function, i.e. if a NBIoT network is not available an automatic dial-in into a GPRS network is possible. In this way, communication in different radio networks is guaranteed and network changes can be supported. This guarantees secure data exchange between the various communication partners. The method of secure authenticity and integrity of data and authorization of users is state of the art. Diaphragm gas meters BK-G..ETe / E.with the themis®log2.0 index meet the current market requirements.

An optional integrated electronic temperature conversion system allows the volume to be converted to a base temperature even for commercial & industrial supplies. The meter shows in this case the converted volume in the display and transfers it to the appropriate data collection system. This function is an optional available for the meter variant BK–G..ETe.

The index is interoperable and interchangeable and can be read and controlled using the Honeywell meter data collection system Connexo. If desired, Honeywell can therefore not only supply the gas meter but also the complete meter data collection system perfectly tailored to the themis®log2.0.

THE HONEYWELL SMART METER SOLUTION

themis® – the new generation of electronic indexes for residential, commercial and industrial diaphragm gas meters – is part of the Honeywell smart meter solutions package. From mechanical meters and smart index technologies to complete meter data collection and meter data management systems, Honeywell can supply everything required for an efficient, coordinated all-in-one smart metering solution.

MAIN FEATURES

- Integrated concept
  - Cost-efficient solution delivering a high level of reliability
- WAN communication
  - NBIoT/GSM-GPRS (DLMS/Cosem)
- With electronic temperature compensation (optional)
- Long battery life
  - Approx. 10 years depending on the requirement profile for NBIoT/GPRS, extension with 2nd battery to 20 years ex factory
  - Longer service lives thanks to reduced communication frequency
- Extended smart metering functions
  - Load profiles
  - Time of Use and Block tariffs
  - Event and alarm signalling
  - Time synchronization
- State-of-the-art data security and data protection (AES-128 symmetric keys)
- Supports secure, over the air firmware updates
- Battery can be replaced in the field without loss of data
- Easy operation and installation
  - Clearly legible back lighted matrix
  - Menu navigation using intuitive key control
  - Simple commissioning using pre-configured indexes

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TECHNICAL DATA

Display and entry
- Intuitive menu navigation using 3 keys
- Backlight LCD display

Languages
- English, other languages available on request

Local communication
- Optical, bidirectional IEC 62056-21 port (DLMS/COSEM)
- Low-frequency pulse output for extended applications: U_{max} = 12V DC, I_{max} = 100mA, Fmax = 4Hz, min. Impulsweite = 125ms.

Wide area network communication
- NBIoT & GSM-GPRS
- Protocol: **DLMS/COSEM**
- NBIoT supporting band 3, 8 & 20
- Supports SIM cards with 900/1800 MHz (roaming)

Temperature compensation
- Supports electronic temperature compensation (optional)

Scope of application
- Commercial &industrial gas meters (BK-G..10 to G100)
- Permitted gases: natural gas, town gas, propane, butane; gases of the first to third families pursuant to DIN EN 437:2003 (DVGW Code of Practice G260)

Degree of protection
- IP 65

Gas/ambient conditions
- Base temperature: 0 °C, 15 °C, 20 °C
- Gas temperature: -25°C to +55°C
- Ambient temperature: -25°C to +55°C
- Storage temperature: -25°C to +60°C

DATA LOGGING IN THE INDEX

- The integrated data logging function records the supplied gas volume in conjunction with the current time and the cor- responding tariff.

Storage capacity
- Half hourly consumption values: 9120 records
- Daily consumption values: 192 records
- Monthly consumption values: 13 records
- Metrological log: 500 records
- Event log: 300 records
- Parameter monitor log: 15 records
- Supports daily transfer of half hourly values
- Support snapshot intervalls consumption of 1month, 3 months, 6 months up to 13 records

Current approvals
- MID Class 1.5, EN 1359,
- ATEX Zone 0: ⟨Ex⟩ II 1G Ex ia IIB Ga
- RoHS, EMC, RED
- Environmental Classes: Electromagnetic E2, mechanical M1

Delivery
- Minimal installation work as the devices are pre- configured on delivery
- No programming unit or the like is required for installation depending on the pre-configuration settings
- Simple commissioning by "one-key" connection to the meter data collection system or alternatively via pre- configurable start date

DATA SECURITY AND DATA PROTECTION

- The themis®log2.0 provides secure state-of-the-art end-to- end data encryption.
- Supports symmetric encryption using AES-128 (GCM) to UNI-TS 11291.
- Role-based access rights based on individual symmetric keys.
- Future-safe using secure firmware update according to UNI-TS 11291.
- Notification to the data collection system if a tamper attempt is detected.
- Daily transmission of status reports with the ability to read event logs remotely.

APPROVAL COMPLETE GAS METER

- MID Class 1,5
- EN1359, RoHs, CE, EMC, RED
- Ambient temperatur: -25°C to +55°C
- ATEX Zone 0: ⟨Ex⟩ II3/1 G IIB T4

For more information
www.elster-instromet.com

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THE FUTURE IS WHAT WE MAKE IT

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