GAS METERS WITH AN ELECTRONIC INDEX
GN G2.5 …G6 E GNM G2.5… G6 E

FIELD OF USE

Diaphragm gas meters, designed for the measurement of natural gas and LPG volume, at maximum operating pressures of 0.5 bar and maximal flow of $10\,m^3/h$.

COMPLIANCE

The meters are in accordance to EN 1359 and The Directive 2004/22/EC for measuring instruments (MID).

CONSTRUCTION

The meters are built in boxes made of moulded steel sheet which give them strength, external protection, resistance to external or internal corrosion and resistance to high temperatures. The transmission of the movement from inside the box to the outside can be magnetic (GNx) or mechanical (GNMx).

The electronic index that is a part of the gas meters is powered by a battery. The box of the electronic index has two compartments. In the upper compartment there is the metrological module. This compartment allows the metrological sealing.
The lower compartment contains the battery and the M-bus communication interface. This compartment can be sealed.

MAIN FEATURES OF THE ELECTRONIC INDEX

Constructive features

- custom design LCD display, with nine digits;
- powered by a lithium battery, average lifespan of at least 14 years;
- equipped with an optical port, features in accordance with EN62056-21;
- M-bus communication interface through wires or radio;
- digital temperature sensor;
- degree of protection of the box: IP54;
- storage temperature [°C]:   -25...+60.

The display

The volume can be displayed with 3 or 4 decimal digits expressed in m^3.
- Furthermore, the consumption values can be displayed by pushing the button, as follows:
- daily consumptions of the last   24 hours
- weekly consumptions of the last   7x24 hours
- monthly consumptions of the last   30x24 hours

The display of the historical data is signalled by the movement of a marker next to the markings on the scale label, i.e. 1T for 24 hours, 7T for 7x24 hours or 30T for 30x24 hours.
Each sum is displayed for approximately 5 seconds.
After 15 seconds it goes back to displaying the volume.

- Through configuration/programming other dimensions can also be displayed by the LCD, as follows:
- the measured gas volume;
- the measured temperature;
- the cyclic volume of the gas meter;
- the instantaneous flow, corresponding to the measured gas volume;
- the time;
- the date;
- the display test;
- the events/errors

Logs

- The electronic index is equipped with a non-volatile memory. This memory archives:
- autosaves of the daily meter value of the last 120 days;
- autosaves of the monthly meter value of the last 36 months;
- autosaves of the annual meter value of the last 16 years;
- a log of the last 200 events, with the date of occurrence and end date;
- values of the hourly consumptions of the last 365 days;
- configuration data.

Errors/events

- interruption/ lack of communication with the temperature sensor;
- opening of upper lid;
- opening of lower lid;
- exceeding of the maximum flow value;
- battery voltage under 3.05V;
- measured temperature under -25°C;
- measured temperature over 55°C;
- Gray - code error.

Communication interfaces

The electronic index includes a serial interface via an optical port.   The optical port has physical and optical dimensions in accordance with EN 62056-21. The protocol used by the application complies with EN 13757-3.
The communication speed is of 4800 bauds, 8bits of data, even parity. The optical port is designed for the configuration and the metrological verification or data reading.

![aem logo]

The electronic index can be built with a second serial interface designed for the transmission of data. The interface can be connected in association with an M-bus module with wires, in accordance with EN 13757-2; EN 13757-3 or M-bus radio EN13757-3 EN 13757-4 (Mode T2) and with the OMS 2.0 specifications.

WEIGHT AND LAYOUT DIMENSIONS
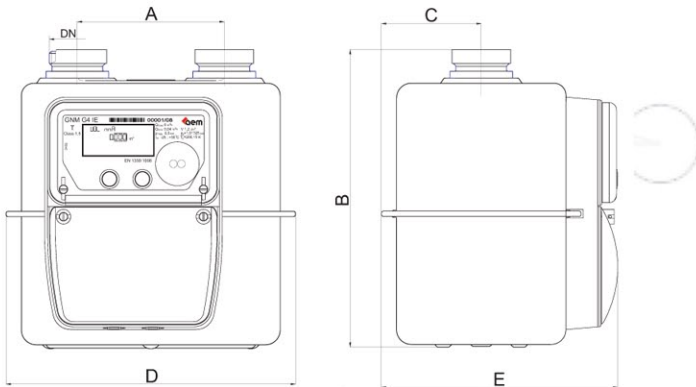
Size	A	B	C	D	E	DN
G2.5	160	228	75	243	177	G1" (ISO 228)
G2.5 reduced dimensions	110	220	70	200	172	G1 ¼" (ISO 228) 20, MFIT001
G4	110	223	75	217	177	G1 ¼" (ISO 228)
G4 reduced dimensions	110	220	70	200	172	G1 ¼" (ISO 228) 20, MFIT001
G4T	250	278	74	330	176	G1 ¼" (ISO 228)
G4T	single pipe	262	75	243	177	G2" (ISO 228)
G6	250	284	85	344	196	G1 ¼" (ISO 228)

EDL 21 FUNCTIONALITY

The electronic index of AEM supports the EDL 21 functionality according to the DVGW and FNN Lastenheft.
- This particularly includes:
- interruption/ lack of communication with the temperature sensor;
- opening of upper lid;
- opening of lower lid;
- exceeding of the maximum flow value;
- battery voltage under 3.05V.

OPTIONAL FEATURES
- Logo and personalized barcode

STANDARDS AND TECHNICAL NORMS
EN 1359:1998/A1:2006, EN 62056-21 EN 13757-2; EN 13757-3; EN 13757-4 OMS