

# SIGFOX SMART CONVERTOR FOR GAS METERS



Smart Gas is a pulse reading device used for Automatic Meter Reading (AMR), connecting any mechanical LPG or Natural Gas meter with pulse output to the internet. The meter totalizer reading, along with other diagnostic data is sent daily over a low power network to a cloud server. This enables the utility management company or municipality to receive gas meter readings on a daily basis using a web application, without the need to visit each and every meter.

The device is equipped with a low power long range radio for seamless integration to the Sigfox low power fixed network covering 90% of the South African population. Sigfox is present today in almost every municipality in the country. The network eliminates the need to create your own network infrastructure by installing expensive, high maintenance Data Concentrators and Gateways, in order to remotely read your gas meters.

A Tamper evident Seal acts as a visual indication of a tamper attempt. Leak Detection is achieved by recording the hourly consumption over a 24 hour period. Assuming there is no leak, there should be at least 1 hour without any consumption. If consumption above a pre-defined threshold is measured for every hour within a 24 hour period, it is assumed that a leak may be present. A leak notification, as well as the measured size of the leak in  $m^3$ /hour is uploaded together with the meter reading for the day. A factory set "Gas Factor", allows the pulse input to be synchronized with the output pulse ratio of the gas meter, from as low as  $0.01m^3$ /pulse.



Roll-over is a configurable setting that defines the maximum totalizer reading before the meter roll over to zero, for different sized Bulk Gas Meters, for example  $9999m^3$ ,  $999999m^3$  or  $9999999m^3$ . Excessive flow can also be detected.

Excessive Use is triggered for a pre-defined number of days consumption is higher than the measured daily average. This event is included in the normal daily or hourly uplink.

Multi-Sensor options: Different gas meter manufacturers use different technologies to measure gas. Output device is compatible with any reed switch or open-collect sensor and does not required an additional external power sources.



## Specifications

- Sigfox Network Radio Frequency: 868MHz
- Battery Life: Up to 10 years, with replaceable sealed battery pack.
- Battery Type: 2.7Ah Lithium Thionyl Chloride (Li-SOCl<sub>2</sub>)
- Antenna Type: Internal built-in
- Configuration: Bi-directional Infra-Red Port
- Totalizer resolution down to  $0.001 m^3$  to 3 decimals
- Totalizer Maximum  $9999999.9 m^3$  to 1 decimal
- IP68 (submersion in water, 1 metre for 2 hours) - WATERPROOF
- Operating Temperature -10 to 55 °C
- Measurement unit: Cubic Meters ( $m^3$ )
- Dimensions: 113mm(L) X 33mm(H) x 41mm(W)

## Sigfox Data is received from each device

- Electronic Totalizer reading in  $m^3$
- Uplink Profile – Daily or Hourly (pre-set)
- Leak indication, with leak size in  $m^3$ /hr
- Excessive Use/Leak detection (not a safety feature)
- Current & Last month consumption to date in  $m^3$
- Error code, if present.
- Battery status
- Date & Time Stamp

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