

Application Note:
(Precise Water Metering with Battery Powered Electromagnetic Flow meter)
(SITRANS F M MAG8000/GSM -GPRS)
Project Completion Date: 20 August 2015

KWSB-Karachi Water & Sewerage Board is a service based consumer oriented organization responsible for the production, transmission and distribution of potable water throughout Karachi, a managing sewerage system within the city to ensure hygienic environment, development of schemes to cover shortfalls in services and collection of revenues for sustained economic viability.

Requirement.

The Customer was looking for an accurate battery powered IP68 unit that would require minimal maintenance. The task was to put up a solution which could provide higher accuracy without maintenance and power connection. The Customer s' focus was on a battery powered solution.

Solution for Water Management

Electromagnetic water meters have been preferred for years by engineers in the water industry for their reliability and long term stability. Khan Brothers Proposed installation of Siemens' MAG8000 water meter to ensure proper metering and for theft detection of water lines throughout the city. Low cost of Mag8000 helped in convincing the client, whereas an overall IP68 enclosure was an additional advantage over our competitor.



Mag8000 flow meter

The MAG8000 meter is an accurate, cost effective solution that has a short payback period. The revenue increase alone will rapidly pay for the new installation. The wireless communication module logs all flow measurement data from the MAG 8000 and transmits it to a designated recipient via email or SMS at customizable intervals throughout the day.

Pos. Description

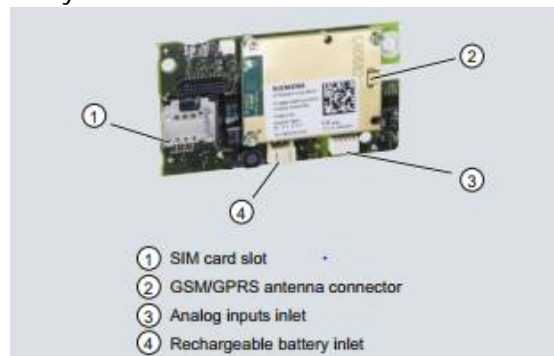
1. Mag 8000 with GSM/GPRS module
2. Mobile Network
3. Internet Services
4. Email with an attached .CSV file
5. OPC server Solution
6. SMS with TOT1 data

The result: optimized flow performance and maximized productivity.

GSM/GPRS communication module

The package of information retrieved via the CSV file includes:

- Time stamps
- Flow rate
- Tot 1
- Tot 2
- Tot 3
- Analog 1 (mA)
- Analog 2 (V)
- Battery lifetime
- Alarm list (as decimal format)



Benefits of usingMAG8000/GSM -GPRS

Build-in GSM/GPRS Wireless Communication Module opens up for receiving logs flow measurement data via email, SMS and to OPC server – keeps the operator up-to-date regardless of location and makes it possible to change settings without visiting the site.

- **Accuracy:** The SITRANS MAG8000 provides excellent performance and accuracy (0.2% or 0.4%, depending on need)
- **Reliability: 4 year battery life** provides consistent monitoring
- **Ease of use:** Remote mounting enables freedom for installation, making maintenance easier and safer.
- **Cost savings:** we can help you choose the exact solution you require for your installation
- **Operational Efficiency:** the MAG8000 includes a built-in wireless automated meter reading/advanced metering infrastructure (AMR/AMI) solution designed for use in Water Fixed Networks. Usage data from any site can be directly accessed via the Internet using a standard browser and secure password protection.
- IP68 / NEMA 6P, compact and remote with connectors and factory-mounted cable
- **Bi-directional measurement** - only one meter required for measurement in both directions
- **Enhanced communications functionality yields added benefits**
- **Measurable outcomes and real savings**
- **Intelligent features enhance ROI**
- **Zero maintenance – no moving parts Benefits**

Installation & Commissioning.

A successful commissioning was executed by Khan Brothers for Mag8000 flow meter with GPRS supported system on a 12 inch line of **PQA Port Qasim Authority**. The System delivers timely SMS messages and web based data and is working fine till Date.



Applications.

The battery operated MAG8000 flow meters provide flexibility in installation virtually anywhere without sacrificing performance and are specially engineered for any water distribution networks, remote water metering irrigation applications and standalone water applications.

Comments of KWSB.



TARIQ LATEEF
Superintending Engineer KWSB

Performance of MAG 8000 with GSM/GPRS System is very good.

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Detailed Discussion
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