

Remote Data Transmission

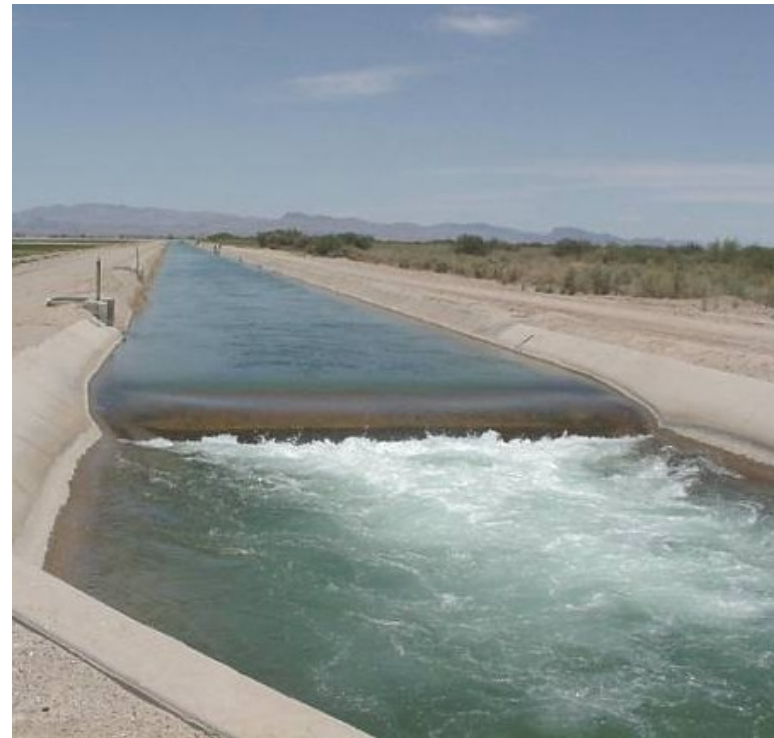
A landscape photograph of a golf course. In the foreground, there is a gravelly area with sparse grass. In the middle ground, a green fairway leads to a small blue building with a white roof, situated near a pond. The pond reflects the building and the surrounding trees. In the background, a dense line of evergreen trees stretches across the horizon under a cloudy sky.

GSM-2

GSM-2 Main Applications

Level and over flooding measurements in:

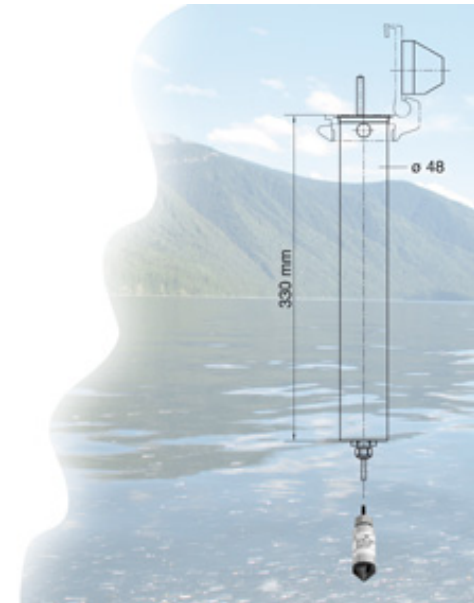
- Groundwater
- Wells and Tanks
- Drilling Holes
- Lakes and Rivers
- Water Supply
- Wastewater



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GSM-2 Overview

Integrating a GSM unit, GSM-2 sends the logged data via e-mail (Internet connection over GPRS) or SMS. This data transfer works both ways, from and to the GSM-2 module, allowing remote data read-out and configuration.



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GSM-2 Features / Advantages

- Battery Powered
- Waterproof
- Suitable for 2" Tubes
- GSM Quad Band
- GPRS (Data Transfer via E-mail)
- Built-in Atmospheric Pressure Sensor
- Up to 15 Measuring Channels



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GSM-2 Features / Advantages

- Integrated Battery Housing and Antenna
- Different Interfaces for Sensors:
 - RS485 KELLER-BUS
 - Voltage Input (Compatible with Other Sensors)
 - SDI-12
- Interface for Diagnostic and Configuration



GSM-2 Benefits

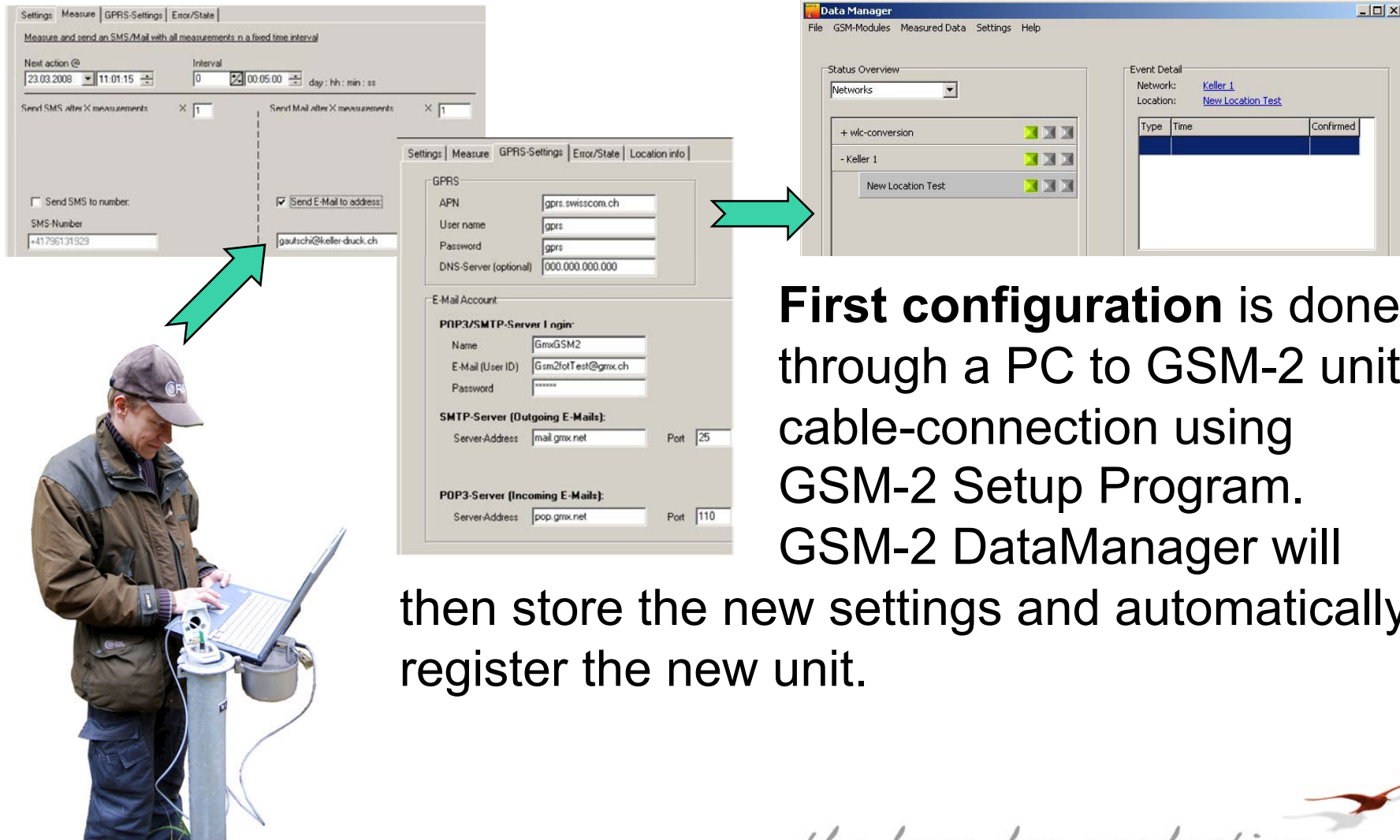


- GSM-Module and Data Logger in One Device
- Connectionless Communication
- Remote Configuration
- Easy Installation (Within One Minute)
- Low Price
- Cost Saving Data Transfer (E-mail)
- Battery Lasts for Years
(I.e. 1 Measurement per Hour + 1 Transmission per Day > 10 Years)
- Free of Charge Software

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GSM-2 Configuration



Settings | Measure | GPRS-Settings | Error/State

Measure and send an SMS/Mail with all measurements in a fixed time interval

Next action @ 23.03.2008 11:01:15 Interval 0 00:05:00 day: hh: min: ss

Send SMS after X measurements X 1 Send Mail after X measurements X 1

Send SMS to number: +41796131529

Send E-Mail to address: gautsch@keller-druck.ch

Settings | Measure | GPRS-Settings | Error/State | Location info

GPRS

APN: gprs.swisscom.ch
User name: gprs
Password: gprs
DNS-Server (optional): 000.000.000.000

E-Mail Account

POP3/SMTP-Server Login:
Name: GmxGSM2
E-Mail (User ID): Gsm2rotTest@gmx.ch
Password: *****

SMTP-Server (Outgoing E-Mails):
Server-Address: mail.gmx.net Port: 25

POP3-Server (Incoming E-Mails):
Server-Address: pop.gmx.net Port: 110

Data Manager

File GSM-Modules Measured Data Settings Help

Status Overview

Networks

- + wlc-conversion
- Keller 1
- New Location Test

Event Detail

Network: Keller_1
Location: New Location Test

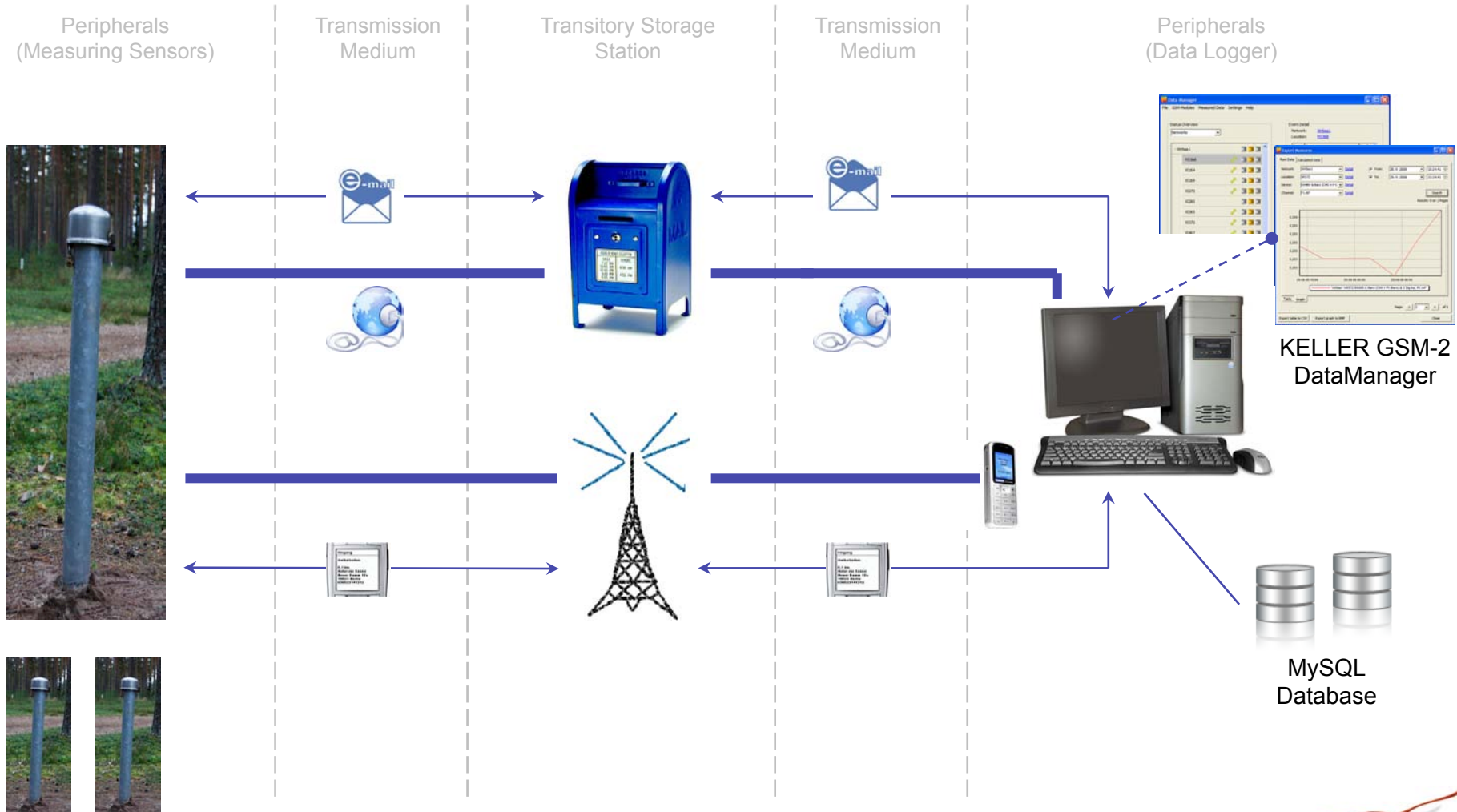
Type	Time	Confirmed

First configuration is done through a PC to GSM-2 unit cable-connection using GSM-2 Setup Program. GSM-2 DataManager will then store the new settings and automatically register the new unit.

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GSM-2 Communication



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GSM-2 DataManager

Working as a central monitoring, controlling and organizing unit, this **PC Software** collects GSM-2 modules' transmitted measurements (via E-mail or SMS) and stores them in a MySQL database.

The screenshot displays the 'Data Manager' application window. On the left, a 'Status Overview' panel lists measuring stations: PO368, VI164, VI169, VI272, VI285, VI365, VI372, VI467, VI471, and VI471A. Each station has a status indicator (green, yellow, or red) and control icons. A red circle highlights the status indicators for station VI285. A callout box points to this area with the text 'Data Transfer Monitoring (Status): Red, Yellow, Green'. Below the list, it shows 'Next Message-Check: running' and '29.9.2008 15:24:22'. On the right, the 'Event Detail' panel shows network information (Virtaa1, VI285) and a table of events:

Type	Time	Confirmed
Ok	29.9.2008 8:25:56	
Ok	29.9.2008 8:25:50	
Ok	29.9.2008 8:25:42	
Ok	26.9.2008 12:56:57	
Ok	26.9.2008 12:56:57	
Ok	26.9.2008 12:56:57	

Below the table, a 'Message' field contains: 'New Data from Mail: M/b=+0.6241549+1.6410923+6.3349609+1.0169375+12.149998/c=+0+0'. A 'Delete All Events' button is at the bottom right. In the background, another window shows a line graph of data over time.

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DataManager Key Functions

- Multilingual Graphical User Interface
- Monitoring of Measuring Locations
- Data Chart Preview
- Automatic Registering of New Measuring Locations
- Message Forwarding via E-mail and SMS (Alerts, ...)
- Remote Configuration of GSM-2 Modules' Parameters (I.e. Measuring Interval, Transfer Interval, ...)
- Automatic Update of New Software Versions
- Data Export (Excel -CSV Format-, XML, ...)
- Data Export Scheduler



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KELLER's Conclusion?

In the past ...



... Today



- ↳ Data Logging in Your PC.
- ↳ Working Monitoring at All Times

... No more wet dirty shoes!

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