

MEASURING SYSTEMS
AND DATA LOGGERS



SEDRIX

SMART DATA CENTER

HOME OF YOUR DATA

WITH **SEDRIX** YOU CAN MONITOR AND EVALUATE MEASUREMENT DATA FROM ANYWHERE AND AT ANY TIME – SO THAT YOU CAN DO MORE IN LESS TIME.

With Sedrix you can merge measurement data from all your measuring systems, data loggers and IOT data sources. You can also analyze the data without installing manufacturer-dependent analysis software.

MEASURING SYSTEMS AND DATA LOGGERS IN DETAIL

Import

„ Different manufacturers, different devices, different formats, different transfer methods – one platform “

We support measuring systems and data loggers from Glötzl, Campbell Scientific, Solexperts and other manufacturers. Transfer your data the classic way via FTP or use a web API or import from a MQTT server. Thanks to the flexible architecture we can easily add further formats in accordance with specific requirements for complex communication scenarios. Contact us, and we'll find a solution!

Import dialog

Monitoring

It is possible to easily monitor all devices, including a clear display of whether all devices are sending data.

Service technicians can be automatically alerted when a device fails, via email, SMS or telephone call.

📍 Test 1	NOT MONITORED
📍 Test #1	OFFLINE
📍 Test Alarm (10/10)	ONLINE

Connection status of measurement devices in the overview



Alert limits in the measured value view

Alerting

Using sophisticated analysis methods, Sedrix is able to verify and monitor measured values according to previously defined threshold limit violations.

If an alert condition occurs in a channel, alerts are triggered. These can be seen at a glance in the overviews and are highlighted in the visualization: measuring points and folders are colored according to the severity of the alert.

Three alert levels are available, which can be freely named and defined.

TYPE	START	END	SOURCE	RELEASE	NOTIFICATIONS			CONFIRMATION	
					ON START	ON END	ON ESCALATION	CONFIRMED	DATE
Main Alert	28/07/2021 08:45:00	28/07/2021 09:00:00	Delta 01.01.2021	🔔	🔔	🔔	🔔	🔔	-
Main Alert	28/06/2021 07:30:00	27/07/2021 15:15:00	Delta 01.01.2021	✅	✅	🔔	🔔	✅	27/07/2021 15:45:59
Main Alert	23/06/2021 18:30:00	28/06/2021 06:00:00	Delta 01.01.2021	✅	✅	🔔	🔔	✅	27/07/2021 12:18:44
Main Alert	23/06/2021 12:15:00	23/06/2021 18:15:00	Delta 01.01.2021	✅	✅	🔔	🔔	✅	27/07/2021 15:50:00
Main Alert	23/06/2021 11:45:00	23/06/2021 12:00:00	Delta 01.01.2021	🔔	🔔	🔔	🔔	🔔	-
Main Alert	23/06/2021 02:15:00	23/06/2021 09:15:00	Delta 01.01.2021	🔔	🔔	🔔	🔔	🔔	-

Overview of triggered alerts

User groups can be informed when an alert begins or ends, whether via email, SMS or telephone call.

Complex alerting scenarios are also possible:

- Service technicians can clear and validate alerts before others are notified.
- Previously set users can confirm alerts, including a log entry to state who confirmed the alert.
- Escalation notifications when an alert is not confirmed within a set time period.

Evaluation: Pre-processing of measured data

- Invalid measurement data can be hidden and marked as such
- Special features support the replacement of a sensor in the case of malfunction:
 - Malfunction can be logged
 - Central adjustment of the offset or other channel parameters, so that following calculations do not require alteration due to the sensor being switched
- Conversion and filter options for input data (moving average, variance filter...).

The screenshot shows the configuration for an 'Inclinometer chain - Deformation'. It is divided into three columns:

- INPUT CHANNELS:** A table with 8 rows, each for an 'Inclination Probe' (1-8). The first probe is set to 'AR_N1', while others are set to '-'. Each has a dropdown arrow.
- DEFORMATION:** A central configuration area.
 - NAME:** 'Inclinometer chain - Deformation'
 - RESOLVE POSITION AXIS BY:** 'Z'
 - REFERENCE POINT COORDINATE VALUE:** '0' with a unit 'm'.
 - REFERENCE SYSTEM:** 'Foot point fixed'
 - Invert sign:** An unchecked checkbox.
- OUTPUT CHANNELS:** A list of 8 'Deformation Probe' entries (1-8).

Configuration of a function block for an inclinometer chain

The 'CUSTOM FORMULA' dialog box contains the following fields:

- NAME:** 'Custom formula'
- FORMULA:** An empty text area.
- CALCULATION RESULT UNIT:** Two dropdown menus, the first set to 'Distance' and the second to 'm'.
- CONSTANT C1:** '0'
- CONSTANT C2:** '0'

 A blue informational box above the formula field explains the prefixes: 'm' for measured values, 'delta' for differences, and 'c' for constants.

Function block for your own formula

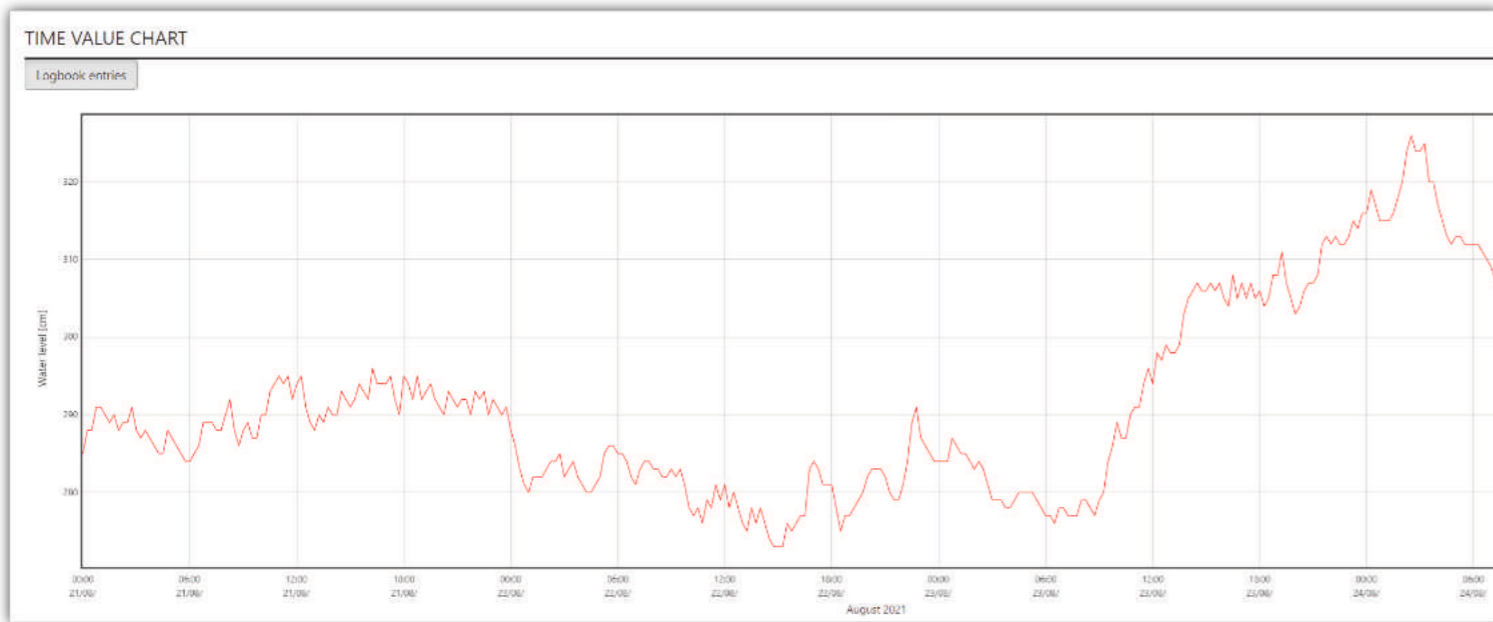
Evaluation: Function blocks

- Complex, recurring calculations and evaluations are automatized by using function blocks. Only the channels need to be assigned.
- Simple block to calculate the difference to a reference measurement
- Blocks to analyze inclinometer chains (differential deformation, deformation, borehole trajectory)
- Blocks to analyze water level gauges
- Blocks to monitor tracks using inclinometer sensors (calculation of twist and camber)
- User-definable function blocks in which complex formulas can be defined
- Offset the measuring channels of any number of data sources, even with varying time stamps and measuring rate

The selection menu is displayed over a '+ ADD' button. The menu items are:

- Delta reference measurement
- Super-elevation
- Track twist
- Inclinometer chain - Differential deformations
- Inclinometer chain - Deformation
- Inclinometer chain - Borehole trajectory
- Glöttzl SINC chain link (Vertical)
- Custom formula
- Liquid levelling system
- Relative Peak Vector Sum (SN 640 312a)

Function blocks selection menu



Analysis of measured data in a time/value diagram

Evaluation: Display

- Varied display possibilities for measured data in diagrams, tables and vector graphics
- Several views can be defined for one measuring point, in which you can freely define which diagrams and tables should be displayed (e.g. one edited view for the client and one view with more details for the technician). You can switch between views at any time.
- Time/value diagrams and tables, which are user-definable
- Location/value diagrams and tables
- Vector graphics in which any two channels define a vector arrow that can be freely placed on an image

Time	W Water Level [cm]	AT Air Temperature [C]	WT Water Temperature [C]
31/05/2019 13:45:00	500.0	19.2	13.1
31/05/2019 13:30:00	501.0	18.9	13.1
31/05/2019 13:15:00	501.0	18.6	13.1
31/05/2019 13:00:00	501.0	18.3	13.1
31/05/2019 12:45:00	501.0	17.9	13.1

Display of measured data in a table

Reports

Applied evaluations can be used as the basis for the creation of reports, or specially configured reports can be used for this purpose.

Reports in Word can be created manually at any time or automatically generated at set intervals, such as according to a schedule. An example of this would be a report being automatically created on the first day of each month, including data from the previous month, and being sent by email.

Reports are generated as Word files; each template can be adapted to fit your own corporate design as needed.

The 'Create report' dialog box contains the following fields and buttons:

- START:** 26/04/2022 13:12:26
- END:** 26/04/2022 14:12:26
- FILE NAME:** Data Logger Report April
- Buttons:** CREATE REPORT, CANCEL

Report generation menu

Export

Along with the option to export the data in diagrams and tables (CSV format), an automatic export can be set up. This means that the data can be exported in the usual formats in a time-controlled manner and e.g. uploaded to an FTP server.

Customization

Thanks to a flexible and expandable architecture, we are able to easily realize special requests and integrate them seamlessly into Sedrix. An active team of developers look forward to hearing your problems and finding a custom-made solution.

Sedrix is developed by

remolution

SOFTWARE GMBH

Since its founding in 1992 Remolution Software GmbH develops high-quality software for the management, analysis and display of geotechnical measurement data.

After development began in 2015, Sedrix benefits from these more than 25 years of experience in the fields of software development and construction technology.

We look forward to hearing from you!



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