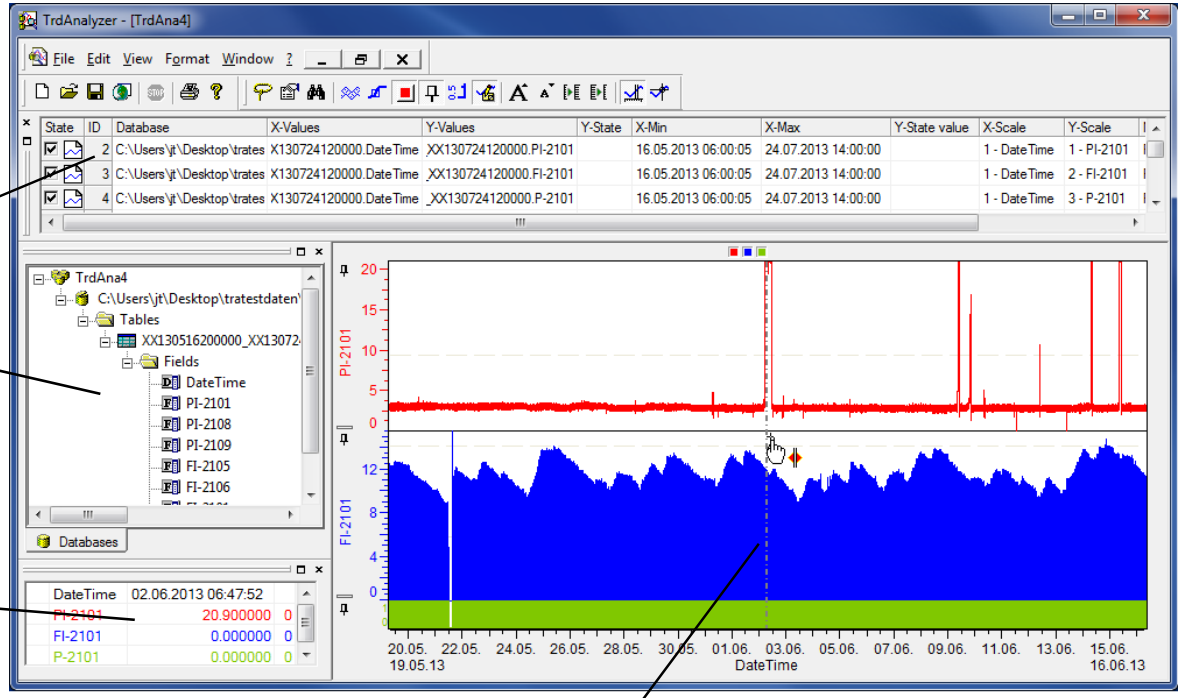
# Trend Analyzer

**Document, analyze, discuss large data curves from measured-value archives (text files, databases, WinCC flexible, zenon)**

*Trend Analyzer* shows the quality of production processes, and supports troubleshooting.

## Windows

- Several **trend displays** to which the other windows are assigned can be processed in parallel
- The trends of a display are combined in the **curve configuration** window, and the scales labeled
- **Database** window in which the archives are selected and can be simultaneously used as data sources for a trend display
- The **curve value table** lists the time stamp, measured value, status, and inscription for a particular curve
- The **ruler window** displays times and measured values for all curves at the ruler position
- a **cool bar** is provided for paging through a diagram




1,2 Million Data per Curve!

## Data sources

- Any csv-formatted text files
- Databases (ACCESS, ODBC)
- text files exported from archives of WinCC flexible, ProTool (Siemens) and Zenon (Copa-data) control systems
- A wizard converts to the local format, and also imports several files with the same format
- Join of text files with same time interval to one data table

## Functions

- Free assignment of curve groups to scales
- Lasso zoom with undo step
- Direct zoom on the value and time scales
- Curve capturing function
- Curve comparison with freely shiftable curves
- Searching for measured value exactly or with tolerance band
- Curve computer with standard arithmetic and trigonometric functions, numeric and logic operators, integral, floating mean value

## Trend displays

- Up to 31 value scales: binary, linear, logarithmic, cyclically angular degree
- Interactive scale positioning next to or above each other
- 2 scales for test duration or absolute time for interactive comparison of curves
- Analog and binary value curves combined in the same display
- Striped display for curve groups
- x over y display with time characteristic (interactive phase diagram)
- Ruler for all scales and curves
- Equidistant auxiliary lines per scale for improved qualitative readability
- Overview bars for comparison of curve section and measuring interval
- Scale inscription with any font

Download free *Trend Analyzer* Release 3.1 test version with demo database and training videos from **www.icsgmbh.com**


ICS GmbH
Pforzheimer Str. 202C
D-76275 Ettlingen
Germany

Tel. +49(7243)7127 - 0
Fax +49(7243)7127 - 29
E-mail:sales@icsgmbh.de



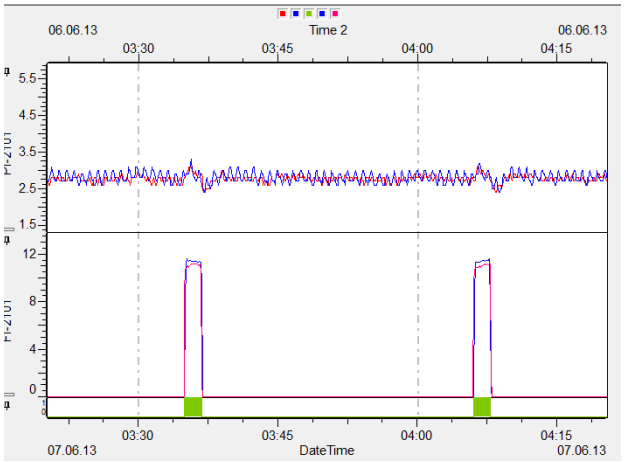


Release 8/2014

ICS Industrielle Computer Systeme GmbH
CEO: Joachim Tschampel
Registered office: 76275 Ettlingen
Registry court: District Court Mannheim HRB 362323

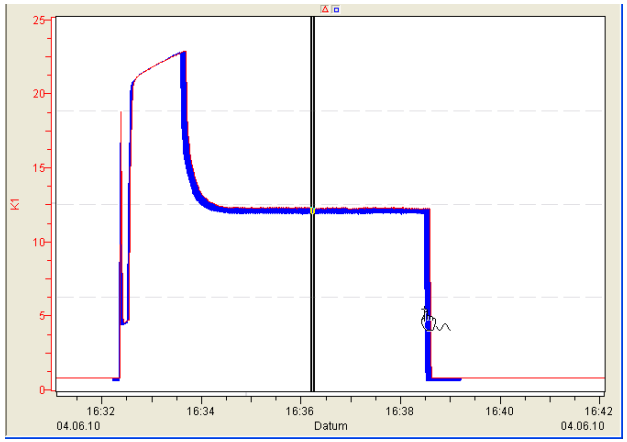
# *Trend Analyzer* application examples

## 1. Comparison of intervals



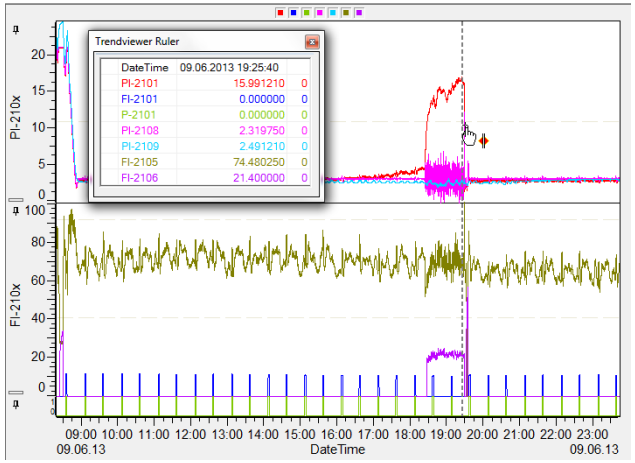

Pressure and frequency curves are compared using two time scales above and below the chart.

## 2. Setpoint/actual-value comparison



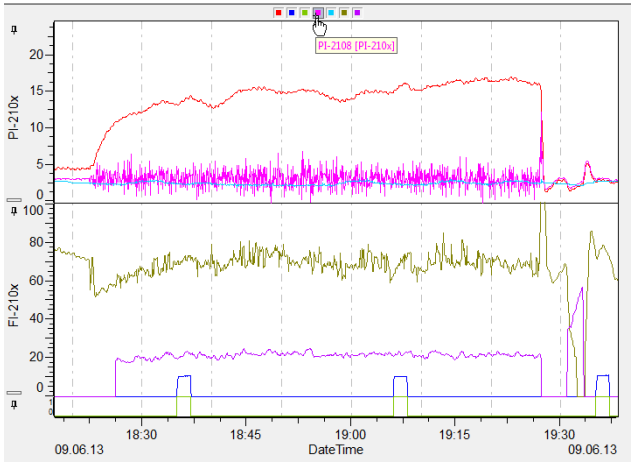

The section of an actual-value curve (red) is compared with a setpoint curve (blue). The small deviation is emphasized by flooding.

## 3. Data analysis 1



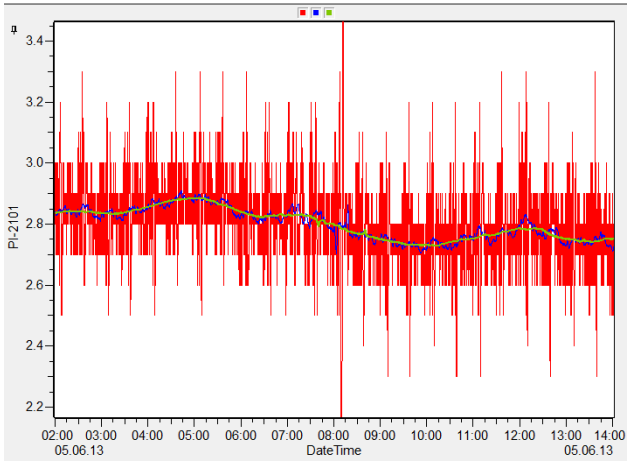

Measured values of all curves in a chart are shown using the x-scale ruler.

## 4. Data analysis 2



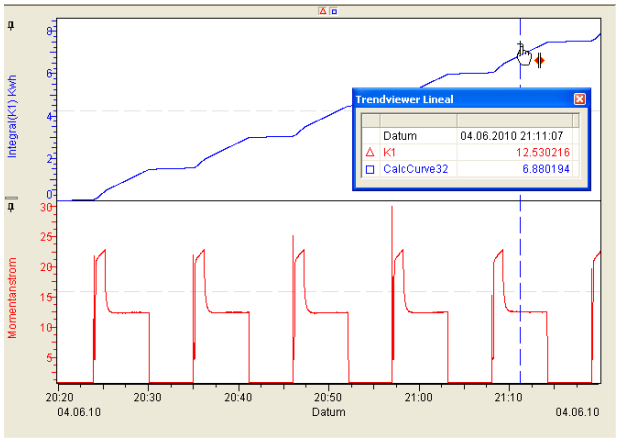

A detail of the above chart is enlarged seemless using the zoom function on the time scale.

## 5. Floating mean value




Actual-value curve (red), mean daily curve (blue) and mean weekly curve (green) combined in one diagram.

## 6. Integral




The integral (blue with logarithmic scale) is generated for one hour above the actual-value curve. The integral curve is read using the ruler.