



7.50 - ('con::lyte', 'pH[pH] value') 7.45 7.40 Data 7.35 • 7.30 -7.25

Time frame from 2018-01-24 11:02:14 to 2018-02-01 16:49:44

2018-01-25 00:00 2018-01-26 00:00 2018-01-27 00:00 2018-01-28 00:00 2018-01-29 00:00 2018-01-30 00:00 2018-01-31 00:00 2018-02-01 00:00 2018-02-02 00:00 Timestamp

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1 Introduction

This manual describes the features of visu::tool - Data Visualization tool by s::can Messtechnik GmbH.

2 Installation

visu::tool may be installed on your local file system using the installer file (option A, recommended) provided by your distribution partner, or, alternatively by copying the installation folder to your local file system (option B).

2.1 Option A: Using the Installer

Double-click the installer .exe file to run the installer. The Setup wizard will guide you through the installation process.

Setup - visu-tool —		×					
License Agreement Please read the following important information before continuing.	¢						
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.	3	_					
License Summary							
visu::tool - Copyright (c) 2018, s::can Messtechnik GmbH. All righ reserved.	nts 🗸	,					
○ I accept the agreement							
● I do not accept the agreement							
Next >	Car	ncel					

Figure 1: Read and accept the license agreement

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Setup - visu-tool	_		×
Select Destination Location Where should visu-tool be installed?			Ð
Setup will install visu-tool into the following folder.			
To continue, click Next. If you would like to select a different folder, o	dick Bro	owse.	
C:\Users\Public\visu-tool	Br	rowse	
At least 105,2 MB of free disk space is required.			
< Back Next	>	Ca	ncel

Figure 2: Select the installation folder or proceed with the default directory (recommended)

Setup	- visu-tool					_		×
Selec	t Additional T	asks						
Wh	iich additional ta	sks should be perfo	ormed?				(
Sel the	ect the addition n dick Next.	al tasks you would	like Setup to	perform v	vhile insta	alling visi	u-tool,	
Ad	ditional shortcut	s:						
	Create a <u>d</u> esk	top shortcut						
				< <u>B</u> ack	<u>N</u> ext	>	Can	cel

Figure 3: optionally create a desktop shortcut

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Setup - visu-tool	_		×
Ready to Install Setup is now ready to begin installing visu-tool on your computer.			
Click Install to continue with the installation, or click Back if you want change any settings.	to revie	N Or	
Destination location: C:\Users\Public\visu-tool		1	
<		>	,
< Back Inst	all	Ca	ncel

Figure 4: Hit "Install" to start the installation



Figure 5: Launch visu::tool to test your installation

2.2 Option B: Using the Distribution Folder

This option may be used if you do not have permissions to install program on your system.

						- 0	×
							~ 🕐
su_too	ol_docs > Dokumentation > dist_fo	older >			✓ Ö "dist_folder" d	lurchsuchen	P
^	Name	Änderungsdatum	Тур	Größe			
	visu-tool	19.04.2018 13:02 19.04.2018 13:02	Dateiordner WinRAR-ZIP-Archiv	41.184 KB			

Figure 6: unpack the compressed visu::tool archive and copy it to a folder somewhere on your system

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Anwei Ve	ndungstools visu-tool rwalten					- 0	× ~ (3)
su_to	ol_docs > Dokumentation >	dist_folder > visu-tool			ٽ ~	"visu-tool" durchsuchen	Q
^	Name	Änderungsdatum	Тур	Größe			^
	python36.dll	18.04.2018 11:20	Anwendungserwe	3.219 KB			
	pythoncom36.dll	18.04.2018 11:20	Anwendungserwe	397 KB			
	pywintypes36.dll	18.04.2018 11:20	Anwendungserwe	110 KB			
	Qt5Core.dll	18.04.2018 11:20	Anwendungserwe	4.729 KB			
	Qt5Gui.dll	18.04.2018 11:20	Anwendungserwe	5.031 KB			
	Qt5PrintSupport.dll	17.04.2018 09:43	Anwendungserwe	263 KB			
	Qt5Svg.dll	18.04.2018 11:20	Anwendungserwe	259 KB			
	Qt5Widgets.dll	18.04.2018 11:20	Anwendungserwe	4.305 KB			
	邊 select	18.04.2018 11:20	Python Extension	16 KB			
	🛃 sip	17.04.2018 09:43	Python Extension	84 KB			
	🗟 sqlite3.dll	18.04.2018 11:20	Anwendungserwe	853 KB			
	🛃 tornado.speedups	17.04.2018 10:49	Python Extension	10 KB			
	🛃 unicodedata	18.04.2018 11:20	Python Extension	868 KB			
	unins000	19.04.2018 11:08	DAT-Datei	77 KB			
	unins000	19.04.2018 11:08	Anwendung	705 KB			
	VCRUNTIME140.dll	18.04.2018 11:20	Anwendungserwe	82 KB			
	visu-tool	18.04.2018 11:34	Anwendung	6.831 KB			- 1
	visu-tool.exe.manifest	Festelleletures 02.05 2019 17:49	MANIFEST-Datei	2 KB			
	📄 win32api	Größe: 6,66 MB 11:20	Python Extension	101 KB			
	win32com.shell.shell	18.04.2018 11:20	Python Extension	364 KB			

Figure 7: open the visu-tool folder and run visu-tool.exe to start the application

3 Load data

visu::tool always loads data from one folder specified by the user. The folder may be loaded into visu::tool via drag-and-drop or via the open directory dialogue.

3.1 Load data: drag-and-drop



Figure 8: Hit your left-mouse button on a folder that contains con::lyte data and drag the folder into the visu::tool main window

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3.2 Load data: open directory dialogue

🖬 visu::tool — 🗆 🗙	- 🗆 X
File	~
Open directory Ctrl+O Status values Recent Save Save	XT (E:) > visu_tool_docs > Dokumentation > data Image: Constraint of the second seco
Exit Ctrl+Q	con-lyte_data 23.04.2018 17:00 Dateiordner
	Figure 9: Select "File" from the main menu in visu::tool. In the file menu select "open directory" and navigate to your folder. Select the folder and confirm your selection.

3.3 Load data: open recent directory

For loading data into visu::tool, one may also select from a list of previously selected directories for convenience. To do so, select "Recent" from the main directory and select from among a folder path given in the list.



Figure 10: Load data from a previously selected folder



4 Data structure

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<u>F</u> ile				
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Dataseries				
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Once the data is loaded, you will see a tree view like this one:

Figure 11: Loaded timeseries tree representation

Every item in the tree represents a timeseries object that can be selected and plotted. All timeseries are grouped in categories where every category represents the sensor of origin.

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5 Plot Timeseries

Finally, it is time to plot our data. You are free to select as many timeseries as you like for plotting. To select a timeseries left-click it with your mouse. To deselect it, left-click it once again.

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Show:	🗌 Status	s values		
Dataseries				
con::lyte C0 mode C0 output C1 mode C1 output C1 node C1 output D1 [[pulses] value FCIATi [mg/l] value PH[] value FIOW FIOW - Clean value [m3 Flow - Neasured value Fow - Neasured value Fow - Neasured Fow - Neasured Fow - Neasured Fow - Clean value TSS - Result PH PH - Clean value [units] PH - Measured value [units] Testing	3/h] [m3/h] ed value [' ;] units]	°C]		
Plot Timeseries	Plot	Timeserie	es Subplot	t

Figure 12: Loaded data with 4 selected timeseries

5.1 Plot Timeseries

Once you have selected the timeseries of interest, hit "Plot Timeseries" at the bottom left of the main window to create the graph.



Figure 13: Four timeseries plotted in one graph window

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5.2 Plot Timeseries Subplot

You may also decide to plot all selected timeseries in separate graphs. To do so, hit "Plot Timeseries Subplot" at the bottom right of the main window.



Figure 14: Four timeseries in separate graphs

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6 Graph navigation tools

To drill into your timeseries data, there exist a number of tools in the top left of every plot window.



Figure 15: Tools available in every plot window

Home: The house icon restores the original view that is shown when the graph is first loaded

Un-do: The left arrow restores the previous view of the graph

Re-do: The right arrow restores the view from before the undo operation

Move: The move-cross lets you move the graph axes with your left mouse button pressed

Zoom: The magnifying glass lets you zoom with your left mouse button

Config: The configurations icon lets you configure the boundaries of the graph inside the window

Edit: The edit axis icon enables axis labelling and configuration, and marker size and colour adaptation

Save: The save icon lets you export the graph to an image file

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7 Write timeseries data to Excel file

Select File from the main menu and select Save. You can either store all timeseries selected, or write all timeseries loaded to an Excel file.

visu::tool: E:/vis	su_tool_docs	s/Dok	_		×
<u>F</u> ile					
<u>O</u> pen directory Recent	Ctrl+O ▶	Statu:	s values		
Save	•	Selecte	ed as Exc	el	H.
<u>E</u> xit	Ctrl+Q	All as E	xcel	Ctrl+S	
C1 mode C1 output D1 1[pulses FCIATi [m pH[] value Flow - Clei Flow - Clei Flow - Mei B0D - Ress C0D - Ress TSS - Resu (1 15250003 PH PH - Clear PH - Meas testing	:] value g/l] value an value [m] asured value ult ult lt value [unit ured value [3/h] = [m3/h] s] units]			
Plot Timese	ries	Plot	Timeseri	es Subplo	t

Figure 16: Save timeseries data to Excel

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D)atei St	art Einfi	ügen Seitenla	ayout Formeln	Daten Überpri	ifen Ansic	ht Q Was	möchten Sie tun?				A 1	reigeben
A	3	• E	$\times \checkmark f_x$	01.12.2017 22:0	00:00								٣
		A	В	(с	D	E	F			G		F 🔺
1			Free Formula	i 152	50003	Free F	ormula	FLOW			PH		
2	Date	eTime	COD - Result	Temperature - M	easured value [°C]	TSS - Result	BOD - Result	Flow - Measured v	alue [m3/h]	PH - Mea	sured va	lue [units]	
3	2017-12-	01 22:00:00	50.84		28.6	9.43	6.57		22.18			7.91	
4	2017-12-	01 22:15:00	50.62		28.4	9.38	6.57		20.27			7.92	
5	2017-12-	01 22:30:00	50.62		28.4	9.38	6.58		22.56			7.93	
6	2017-12-	01 22:45:00	50.51		28.4	9.36	6.59		22.18			7.94	
7	2017-12-	01 23:00:00	50.4		28.3	9.34	6.59		21.6			7.94	
8	2017-12-	01 23:15:00	50.28		28.2	9.32	6.59		20.84			7.94	
9	2017-12-	01 23:30:00	50.28		28.2	9.32	6.59		21.6			7.94	
10	2017-12-	01 23:45:00	50.17		28.2	9.3	6.59		21.6			7.94	
11	2017-12-	02 00:00:00	50.06		28.1	9.28	6.58		20.46			7.93	
12	2017-12-	02 00:15:00	49.95		28.1	9.26	6.58		22.18			7.92	
13	2017-12-	02 00:30:00	49.84		28	9.24	6.58		21.6			7.92	
14	2017-12-	02 00:45:00	49.84		28	9.24	6.57		24.46			7.92	
15	2017-12-	02 01:00:00	49.62		27.9	9.2	6.56		26.94			7.91	
16	2017-12-	02 01:15:00	49.62		27.9	9.2	6.56		31.54			7.91	
17	2017-12-	02 01:30:00	49.51		27.8	9.18	6.56		36.31			7.91	
18	2017-12-	02 01:45:00	49.4		27.8	9.16	6.57		37.26			7.91	
	F	Data	(\div)					: 4					Þ
Be	reit									- 12		+	100%

Figure 17: Timeseries Excel output file example

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8 Further hints

Copy ["CTRL"+"C"] in a plot window and paste ["CTRL"+"V"] in a word file to quickly get a graph into a word report.

Every Plot opens in a separate window and it is possible to open multiple plot windows at the same time.

Since visu::tool smartly concatenates all timeseries in a folder if they share the parameter name and the sensor name, the tool may also be used to concatenate con::lyte timeseries that are stored in different files.

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visu::tool User Manual



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