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JUMO SVS3000

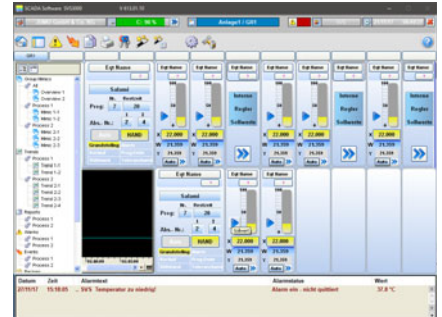# Plant Visualization Software in the Network

Brief description

The JUMO SVS3000 plant visualization software can be used to create a customer-specific application for visualization, alarm initiation, and documentation of process data quickly and economically. For this purpose, predefined functions and visualization objects are available for selected JUMO devices, and they can be put together according to your individual requirements.

The devices required for logging the measurement data can be connected to one or more PCs which are interconnected via a network.
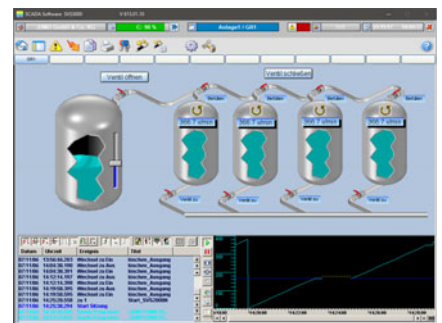
As a special function, an easy-to-use batch reporting function, structured according to processes, has already been integrated.

The PcVue software can be used to upgrade the standard functions. Different communication drivers are available for this purpose.

The network can be expanded to include additional PCs at any time.

SVS3000 grouped mimic

SVS3000 application mimic

Hardware requirements

(Recommended minimum configuration)

- 1.0 GHz (x86) or 1.4 GHz (x64) processor
- 2 GB main memory; SQL Server, RDS (Remote Desktop Service) > 2 GB
- 2 GB free hard disk space
- Super VGA graphics card (1024 × 768, 1280 × 1024, or 1920 × 1280 pixels)
- Free slots for optional interface cards
- Ethernet interface for device communication via Modbus-TCP
- Free USB interface for software hardlock

Software requirements

- Windows 7 (SP1) - Professional, Enterprise, Ultimate[1]
- Windows 8/8.1 - Professional, Enterprise[1]
- Windows 10 - Professional, Enterprise[1]
- Windows Server 2008 (SP2) - Web, Standard, Enterprise, Datacenter[1]
- Windows Server 2008 R2 (SP1) - Web, Standard, Enterprise, Datacenter[1]
- Windows Server 2012 - Foundation, Essentials, Standard, Datacenter
- Windows Server 2012 R2 - Foundation, Essentials, Standard, Datacenter
- PC network with TCP/IP or NetBEUI protocol in network operation
- Internet Explorer Version 9 or higher

Customer benefits

- Grouped mimic creation with predefined graphic objects
- Plant operation via grouped mimics
- Search function for date/time, plants, and user-definable batch criteria
- Automatic printout and data export in ASCII files (CSV format)
- Recipe function (simple changeover of combined plant parameters)
- Functional enhancements via PcVue (software development tool)
- Six national languages: German, English, French, Spanish, Dutch, Russian

Special features

- Process visualization with network function
- Real time operation
- Batch related and continuous logging
- Process screens, grouped mimics, and trends
- Alarm/event lists
- Management of up to 50 plants per PC
- Visualization of up to 100 plants per network

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[1] JUMO SVS3000 is compatible with both the 32-bit and 64-bit versions of the Windows operating system.

Functions

Visualization

General grouped mimics

General grouped mimics can create an overview of complex entire plants. Here, device functions and trends can be visualized independently of plants, for example, to be able to monitor and operate important processes of different plants at a glance.

Depending on the resolution, the screen is divided into 24 (1024x768), 45 (1280x1024), or up to 66 (1920x1080) zones of equal size for arranging the grouped mimics.

Up to two zones are needed for the device functions, and four zones for the trends. The objects can be placed anywhere on the screen. These grouped mimics access the entire plant data, so that functions from all the defined plants can be shown.

Application mimics

Application mimics are special application images. An application mimic that is used is listed in the software explorer. During use, it is shown when called up using the software explorer. Animations should be created using the development environment.

Event lists

All alarms (limit value exceeded for analog and binary functions), acknowledgements, commands, log-ons and log-offs, program starts, and maskings are entered in plant-specific event lists in chronological order.

Alarm lists

Alarm lists (overall or plant-specific) are used to enter occasions when the limit value has been exceeded for analog variables and binary alarm functions.

An alarm list only shows the most recent change of status for the defined alarms, along with the date and a time stamp. This allows the respective plant status to be displayed quickly and clearly.

Recipes

The use of recipes makes it very easy to change over a plant to a different product. A recipe consists of a summary of different variables, such as setpoint values for a plant. For each plant, a maximum of 300 recipes with up to 200 different variables can be defined.

Math functions

64 different formulae can be calculated. The relevant formula can be created using different operators (basic calculation functions, logic functions, trigonometric functions, and logarithms).

Calendar functions (timetable)

Eight user schedules and a report schedule are provided for each plant.

Each day of the week can be divided into several time segments, for example to start or switch off a report function.

The exception table is used to define behavior on special days such as holidays.

Logging

Reports are records and give an overview of past processes.

Each PC (each station) can manage up to 50 plants. A logging function is available for each plant. Reports from up to 100 plants can be called up using a network.

Report types

- Batch processes
- Continuous processes such as shift, daily, weekly, or monthly reports

Report data

- Analog and binary signals (trend diagram)
- Events
- Batch criteria such as program name, batch no., etc.
- Customer-specific text and the definition of a form, e.g. for recurring comments
- Up to eight different products can be logged in a standard report, additional products upon request
- Report data logging can be started and stopped via the time, via the input mask on the screen, or via device variables

Operate reports

Search functions

- Date, time
- Plant
- Three editable batch criteria such as program name, batch no., etc.

Data export

- Data export in ASCII format, e.g. for further processing in spreadsheet programs
- Selection options for the data to be exported
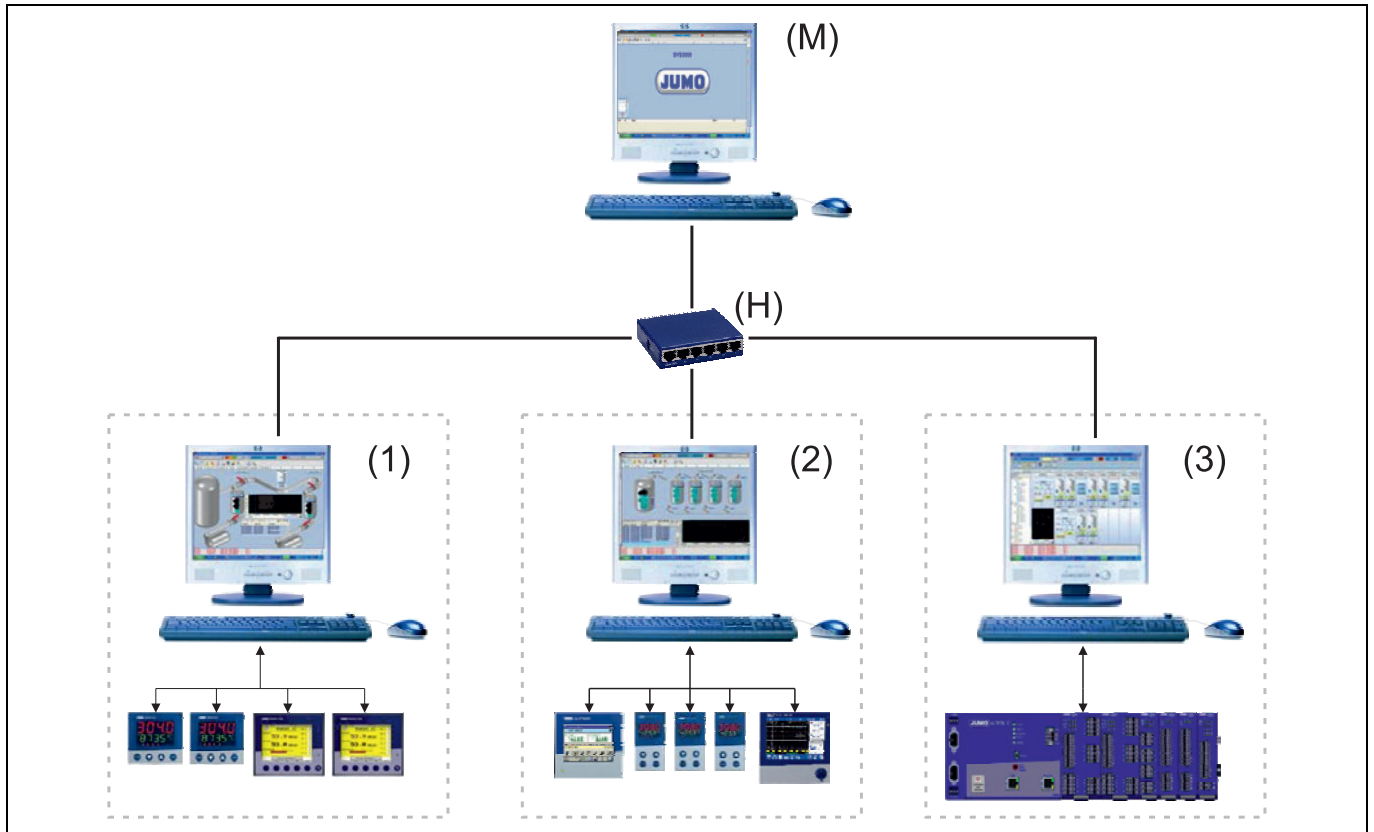- Automatic or manual data export is configurable

Data printout

- Report data in the form of a trend or list
- Event list
- Comment text (can be edited freely)
- Batch data
- Calculation of the minimum, maximum, and average value
- Automatic or manual data printout is configurable

Network structure

Rough structure of a PC network

(M)	Master	(H)	Hub/switch
(1)	Department 1	(2)	Department 2
(3)	Department 3		

Configuration

The entire network configuration is created on one PC and subsequently copied to all the other PCs in the network.

Parameter level

The parameter level is created individually on each PC, and thus determines the appearance of the user interface.

Plant definition

A plant can be formed of devices that are connected to different PCs.

Data archive

A data archive is created for each plant (reports and recorded data). You can select on which PC an archive is to be kept.

Plant access

Data release at SVS stations (clients) is a higher-level release for stations that are permitted to access the recorded data.

Hardlock

The software hardlock provided must be connected to the USB interface of the PC so that the program can run properly.
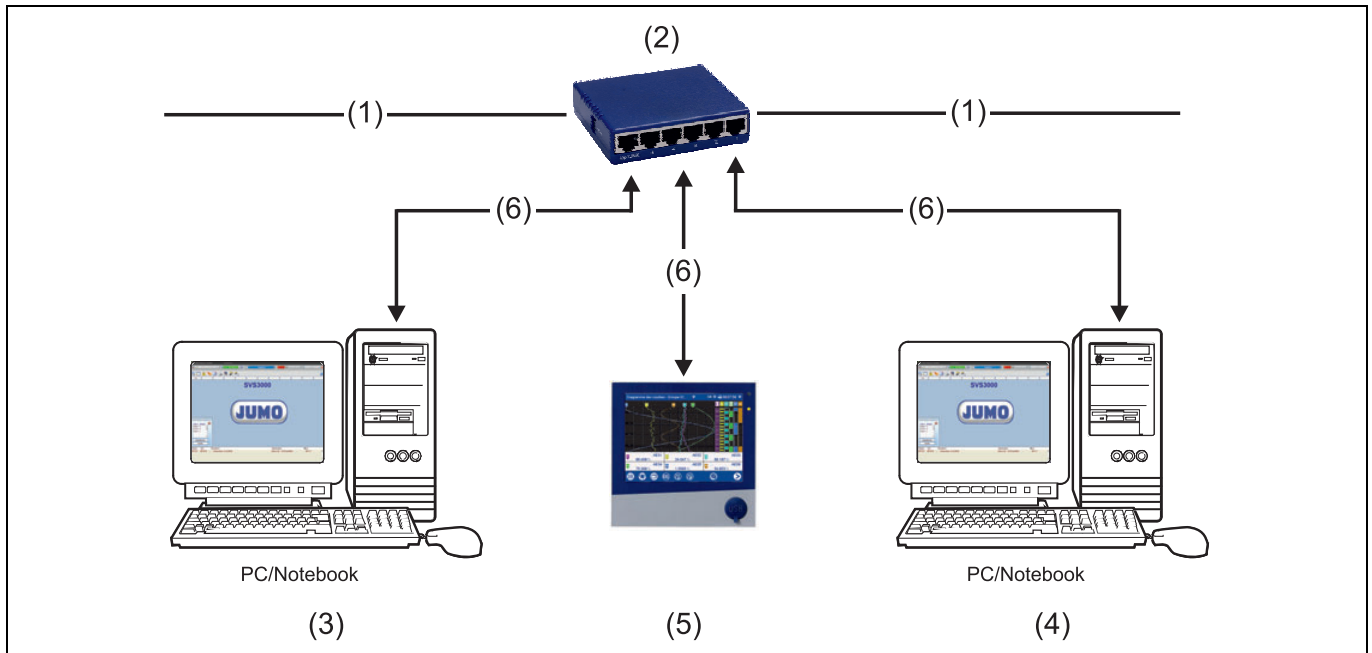
Interfaces

The process variables of the JUMO devices are called up (e.g. setpoint, actual, and limit values) or specified (e.g. setpoint and limit values) via interfaces. On JUMO devices, the variables are combined and visualized for specific devices and specific functions, and can be selected from a list.

Ethernet

JUMO devices can be integrated into a company network via the Ethernet interface.

(1)	Company network	(2)	Hub/switch
(3)	Master	(4)	Department
(5)	Device	(6)	RJ45 patch/crossover line

Interface converter from RS232 to RS422 or RS485 level

An interface converter and an auxiliary power supply unit (e.g. I 7520A/ISA) are used to convert the RS232 interface to RS422 or RS485 level.

Interface cards (Universal PCI)

Designation	Description
CP-132UL/UL-I	2 × RS422/485 (RS232)
CP-112UL/UL-I	2 × RS232/422/485 (RS232)

Interface cards (PCI Express)

Designation	Description
CP-132EL/EL-I	2 × RS422/485
CP-114EL/EL-I	4 × RS232/422/485 (RS232)

Device drivers

Type	Description	Bus protocol	Product group no.
AQUIS touch P	Modular multichannel measuring device for liquid analysis with integrated controller and paperless recorder	Modbus-RTU, Modbus-TCP[a]	202580
AQUIS touch S			202581
IMAGO F3000	Process control for the meat processing industry	Modbus-RTU	700101
eTRON M100	Electronic cooling controller	Modbus-RTU	701061
	Electronic 2-channel microstat	Modbus-RTU	701066
diraVIEW 104/108/116/132	Digital indicator	Modbus-RTU	701510 to 701514
di308	Digital indicator	Modbus-RTU	701550
Quantrol	Compact controller	Modbus-RTU	702030
cTRON	Compact controller	Modbus-RTU	702070
diraTRON 104/108/116/132	Compact controller	Modbus-RTU	702110 to 702114
dTRON 304, 308, 316	Compact controller with program function	Modbus-RTU	703041 to 703044
DICON touch	Two-channel process and program controller with paperless recorder and touchscreen	Modbus-RTU, Modbus-TCP[a]	703571
IMAGO 500	Multichannel process and program controller	Modbus-RTU	703590
mTRON T	JUMO mTRON T measuring, control, and automation system	Modbus-RTU, Modbus-TCP	7050XX
LOGOSCREEN 600	Paperless recorder with touchscreen	Modbus-RTU, Modbus-TCP[a]	706520
LOGOSCREEN nt	Paperless recorder	Modbus-RTU, Modbus-TCP	706581
LOGOSCREEN fd	Paperless recorder – secure data management and FDA compliant measured data recording	Modbus-RTU, Modbus-TCP	706585
Wtrans receiver	Universal receiver for JUMO wireless measuring probes	Modbus-RTU	902931

[a] Optional

Device drivers for connecting JUMO devices which are no longer available

Type	Description	Bus protocol	Product group no.
dTRANS pH 01	Transmitter/controller for pH value	Modbus-RTU	202530
dTRANS Rd 01	Transmitter/controller for redox potential	Modbus-RTU	202535
dTRANS Lf 01	Transmitter/controller for conductivity	Modbus-RTU	202540
dTRANS Rw 01	Transmitter/controller for ultra-pure water	Modbus-RTU	202545
dTRANS Az 01	Indicator/controller for electrochemical measurands	Modbus-RTU	202550
LPF-100/200	Three-channel program controller	Modbus-RTU via communication module	700105
LKR-96	Controller for cooking kettles, cooking chambers, and baking installations		700201
PRF-100 and PR-100	Process control system for meat processing	Modbus-RTU	700401/700501
dTRON 16.1	Process controller	Modbus-RTU	703011
dTRON 04.1/08.1	Process controller	Modbus-RTU	703030
DICON SM	Compact controller	Modbus-RTU	703540
DICON 1000/1001	Process controller/program controller	Modbus-RTU	703560/703565
DICON 400/500	Universal process controller	Modbus-RTU	703570
DICON 401/501	Program controller/program generator	Modbus-RTU	703580
mTRON	JUMO mTRON measuring, control, and automation system	Modbus-RTU via communication module	7040XX
LOGOLINE 500	Line recorder with text printing	Modbus-RTU	706001
LOGOPRINT 500	Printing recorder with text printing and LED dot matrix display	Modbus-RTU	706030
LOGOSCREEN 500 cf	Paperless recorder	Modbus-RTU	706510
LOGOSCREEN 500	Paperless recorder	Modbus-RTU	706500
LOGOSCREEN	Paperless recorder	Modbus-RTU	706550
LOGOSCREEN cf	Paperless recorder with CompactFlash® memory card	Modbus-RTU	706570

Training courses

NOTE

Training courses and seminars on the JUMO SVS3000 plant visualization software are held regularly in our training center.

For an up-to-date list of training courses, see: ⇨ campus.jumo.de

Scope of delivery

Designation	Part no.
Installation DVD with an operating manual	
Software license agreement	
USB software hardlock – variable prices due to the following expansion stages:	
SVS3000 Micro 75 variables USB	00486702
SVS3000 Junior 250 variables USB	00486703
SVS3000 Mini 1000 variables USB	00486705
SVS3000 Senior 5000 variables USB	00486707

Accessories

NOTE

When ordering an interface card, please specify the port (Universal PCI or PCI Express) that you would like.

Further accessories available upon request.

Designation	Part no.
Interface converter I 7520 A/ISA	00376969
Plug-in power supply unit 600 mA	00365933
Interface card CP-132UL/UL-I – 2 x RS422/485	00397804
Interface card CP-112UL/UL-I – 2 x RS232/422/485	00548077
Interface card CP-132EL/EL-I – 2 x RS422/485	00637246
Interface card CP-114EL/EL-I – 4 x RS232/422/485	00713618
Barcode scanner Gryphon GD4130 with RS232 cable and power supply unit kit	00407798
WinWedge barcode scanner software	00411395
Com-Server Highspeed 10/100 BaseT type 58665 – RS232/422/485 to Ethernet Adapter	00412962
ASEM PANEL PC HMI2200 15.0" - 1024x768	00705745
USB server type 53642 – 2x USB 1x network	00713621

Trademark information

- Windows® is a registered trademark of Microsoft Corp., Redmond, VA 98052-6399, US.

- WindowsServer® is a registered trademark of Microsoft Corp., Redmond, VA 98052-6399, US.

- Internet Explorer® is a registered trademark of Microsoft Corp., Redmond, VA 98052-6399, US.

- SQL Server® is a registered trademark of Microsoft Corp., Redmond, VA 98052-6399, US.

- PcVue® is a registered trademark of Arc Informatique, 92310 Sevres, FR

- WinWedge® is a registered trademark of Tal Technologies Inc., Philadephia, PA 19130, US.