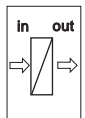
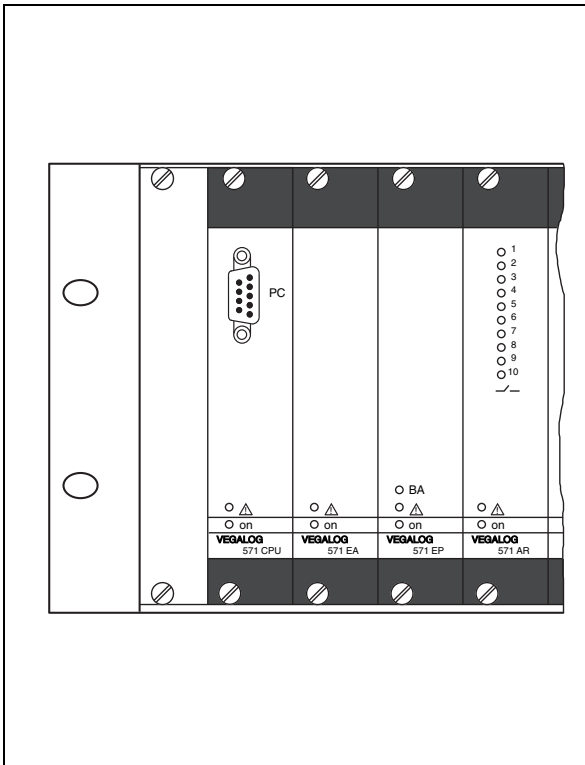


Operating Instructions

VEGALOG 571

CPU and carrier



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1 About this document

1.1 Function

This operating instructions manual has all the information you need for quick setup and safe operation. Please read this manual before you start setup.

1.2 Target group

This operating instructions manual is directed to trained, qualified personnel. The contents of this manual should be made available to these personnel and put into practice by them.

1.3 Symbolism used



Information, tip, note

This symbol indicates helpful additional information.



Caution: If this warning is ignored, faults or malfunctions can result.

Warning: If this warning is ignored, injury to persons and/or serious damage to the instrument can result.

Danger: If this warning is ignored, serious injury to persons and/or destruction of the instrument can result.



Ex applications

This symbol indicates special instructions for Ex applications.



List

The dot set in front indicates a list with no implied sequence.



Action

This arrow indicates a single action.



Sequence

Numbers set in front indicate successive steps in a procedure.

2 For your safety

2.1 Authorised personnel

All operations described in this operating instructions manual must be carried out only by trained specialist personnel authorised by the operator. For safety and warranty reasons, any internal work on the instruments must be carried out only by personnel authorised by the manufacturer.

2.2 Appropriate use

VEGALOG 571 is a modular processing system for a wide range of applications, e.g. for level, process pressure and differential pressure measurement.

2.3 Warning about misuse

Inappropriate or incorrect use of the instrument can give rise to application-specific hazards, e.g. vessel overfill or damage to system components through incorrect mounting or adjustment.

2.4 General safety instructions

VEGALOG 571 CPU is a high-tech instrument requiring the strict observance of standard regulations and guidelines. The user must take note of the safety instructions in this operating instructions manual, the country-specific installation standards (e.g. the VDE regulations in Germany) as well as all prevailing safety regulations and accident prevention rules.

2.5 CE conformity

The VEGALOG 571 CPU(Ex) module card is in CE conformity with EMVG (89/336/EWG) and LVD (73/23/EWG).

Conformity has been judged according to the following standards:

- EMC:
 - Emission EN 50081-2
 - Susceptibility EN 50082-1
- LVD: EN 61010

2.6 Environmental instructions

Protection of the environment is one of our most important duties. That is why we have introduced an environment management system with the goal of continuously improving company environmental protection. The environment management system is certified according to DIN EN ISO 14001.

Please help us fulfil this obligation by observing the environmental instructions in this manual:

- Chapter "*Storage and transport*"
- Chapter "*Disposal*"

3 Product description

3.1 Configuration

Scope of delivery

The scope of delivery encompasses:

- 19" module card VEGALOG 571 CPU
- 19" carrier with integrated bus board
- Female multipoint connectors with card guide, screws and coded pins (optional)
- Documentation
 - this operating instructions manual
 - Ex-specific "*Safety instructions*" (with Ex versions)
 - if necessary, further certificates

A VEGALOG 571 processing system consists of a CPU, one or several peripheral cards as well as a power supply unit which are inserted into the 19" carrier BGT LOG 571. CPU and peripheral card are designed as module cards in European size (DIN 41494) with 5 TE width (25.4 mm). The supply voltage of the cards with 24 V DC is provided e.g. via a power supply unit VEGASTAB 593. The carrier with a width of 84 TE and a height of 3 HE corresponds to the 19" standard format, however, has an integrated LOGBUS board for communication among the cards.

The maximum configuration of a VEGALOG consists of two carriers mounted above one another with one CPU, 31 peripheral cards and one power supply unit. With this configuration, up to 255 measurement loops can be set up.

3.2 Principle of operation

Area of application

VEGALOG 571 is a modular processing system for a wide range of applications, e.g. for level, process pressure and differential pressure measurement.

To suit the application and the individual requirements, VEGALOG 571 is put together using several module cards. A CPU card and different input/output cards are available which are inserted into a 19" carrier.

Physical principle

To suit these applications, VEGALOG 571 powers the connected sensors and processes their analogue/digital measuring signals or switching commands. The peripheral cards take over the power supply as well as the processing of the measuring signals. The processing is carried out in the CPU through a special software consisting of function

components (FB), input components (EB) and output components (AB). The input components receive the measuring signals, the output components make them available via the hardware outputs of the peripheral cards or the CPU. The communication among the individual cards is carried out via an own bus system (LOGBUS).

On the input side, 0/4 ... 20 mA current outputs or Profibus PA inputs are available. On the output side, there are relay or current outputs. In addition, digital output cards for Ethernet, Profibus, Modbus, Interbus and RS232/ASCII are available.

Power supply

Voltage is supplied by a 19" power supply unit type VEGASTAB. Detailed information on the voltage supply is available in the "Technical data" in the "Supplement".

3.3 Operation

The operation of VEGALOG 571 is carried out via a PC which can be connected via the RS232 interface of the CPU. As an alternative, connection via Ethernet and VEGACOM 558 is possible.

The adjustment software PACTware™ with the corresponding DTMs is installed under Windows™ and ensures easy configuration of measuring systems as well as parameter adjustment of connected VEGA sensors. For this purpose, PACTware™ provides a clear adjustment interface with menu structure, window technology and graphic support. In addition, online help is available which describes the available functions and parameter adjustment options. For earlier VEGALOG systems with CPU software 1.xx, the previous software VVO (VEGA Visual Operating) must be used for operation.

3.4 Storage and transport

Packaging

Your instrument was protected by packaging during transport. Its capacity to handle normal loads during transport is assured by a test according to DIN EN 24180.

The packaging of standard instruments consists of environment-friendly, recyclable cardboard. For special versions, PE foam or PE foil is also used. Dispose of the packaging material via specialised recycling companies.

Storage and transport temperature

- Storage and transport temperature see "Supplement - Technical data - Ambient conditions"

- Relative humidity 20 ... 85 %

4 Mounting

4.1 General instructions

The module cards of VEGALOG 571 can only be mounted into the 19" carrier BGT LOG 571. It is provided with a special bus board for data transmission between CPU and the individual peripheral cards (LOGBUS). The carrier is designed for mounting into a switching cabinet or 19" housing.

The plug position for the individual cards is individually selectable, the system saves the card positions when switching on.



Note:

The plug positions must not be changed after the parameter adjustment because measurement loops that have already been set up would otherwise have to be reconfigured.

4.2 Carrier

By means of the plug connectors on the bus board, a fixed pattern is created for the use of the modules. This ensures that each module card is plugged into the multipoint connector and also into its LOGBUS socket.

- Number of subunits (TE)
 - 84 TE, thereof one 4 TE blind cover on module 1
- Width of the module cards
 - 5 TE for CPU and peripheral cards
 - 10 TE for VEGASTAB 593
- Number of module cards in the BGT LOG 571
 - max. 16 pcs. (e.g. 1x VEGASTAB 693, 1x CPU and 13x peripheral cards)

A VEGALOG 571 in the maximum configuration consists of two completely equipped carriers which are connected to each other via a pluggable bus cable (see "Chapter *Electrical connection*"). Because the bus cable may not be lengthened, the two carriers must be mounted directly above one another.



Note:

In the following cases, it is recommended to mount a 19" ventilator to avoid a temperature increase in VEGALOG.

- If more than one carrier is placed above the other
- If air cannot circulate in the area of the carrier

- With increased ambient temperatures

4.3 Mount female multipoint connectors

The carrier BGT LOG 571 is supplied completely assembled. To mount the individual module cards, modules must be provided in the requested positions. A module consists of:

- a female multipoint connector according to DIN 41612, series F, 48-pole
- two fixing screws
- two coded pins
- two guide rails

The female multipoint connector is available with the following connections:

- Wire-Wrap standard connection 1.0x1.0 mm
- Plug connection 2.8x0.8 mm
- Termi-Point standard connection 1.6x0.8 mm
- Soldering connection
- Screw terminals 0.5 mm²

If the VEGALOG 571 is supplied completely with carrier and peripheral cards, the modules are completely mounted and voltage supply for the individual cards is already looped. In case of part or supplementary orders, the female multipoint connectors must be mounted in the requested position by means of the attached screws. Also the card guides must be plugged in the corresponding positions. To complete the setup, connect the 24 V supply voltage, the terminal assignment is stated in chapter "*Connecting to power supply*".



Tip:

Determine the position of the individual cards now and plug in the coded pins as described in chapter "*Coding*".

4.4 Coding

A mechanical coding system avoids later interchanging of the various module cards in the carrier.

The coding system consists of:

- two coded pins in the female multipoint connector
- two holes in the male multipoint connector of the respective component

The coded pins are attached to the module.

Equip the female multipoint connector with the two coded pins according to the "Coding chart" and "Position of the coded pins". The function coding points out that these are module cards of VEGALOG. The instrument coding is used to differentiate between the individual module cards.

The male multipoint connectors of the individual module cards point to the holes suiting the pin positions.

	Instrument coding	Function coding
CPU card	a1	c3
EP card	a3	c3 and c23 with Ex
AA card	a5	c3
AR card	a7	c3
AT card	a9	c3
EA card	a11	c3
VEGACOM 557	a27	c3, c11
VEGACOM 558	a29	c11
VEGASTAB 593	--	--

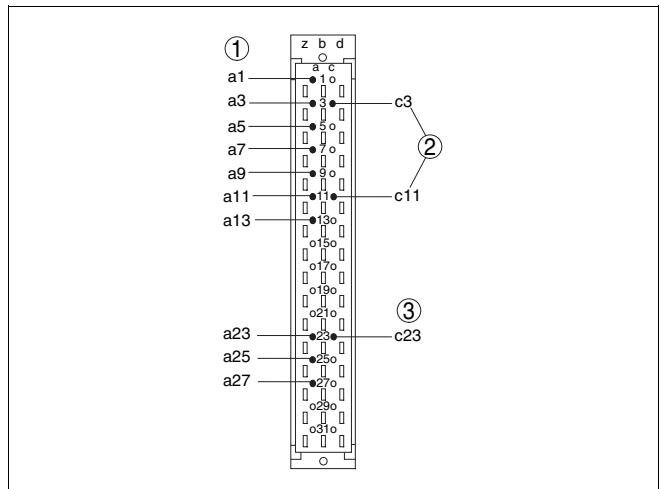


Fig. 1: Positioning of the coded pins on the male multipoint connector

- 1 Instrument coding
- 2 Function coding
- 3 Ex coding

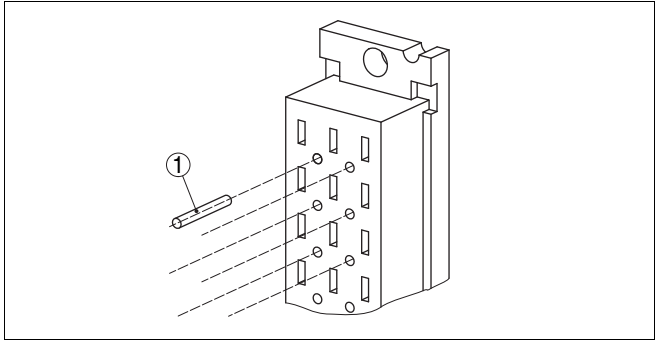


Fig. 2: Detail coded pin mounting
1 Coded pin

5 Connecting to power supply

5.1 General connection instructions

Note safety instructions

Always observe the following safety instructions:

- Connect only in the complete absence of line voltage
- If overvoltage surges are expected, overvoltage arresters should be installed

Take note of safety instructions for Ex applications



In hazardous areas you should take note of the appropriate regulations, conformity and type approval certificates of the sensors and power supply units.

Select power supply

The VEGALOG cards must be powered with extra low voltage (24 V DC) to keep protection class II. Detailed information on voltage supply is available in the "Technical data" in the "Supplement". When using a VEGASTAB 593, a reliable separation from the mains circuits is ensured according to DIN VDE 0106, part 101.

If voltage supply is not taken over by VEGASTAB, the supply cable must be looped via the supplied NF filter (type: Schaffner FN660-10/06). The supply cable after the filter must be wired with a considerable distance to the signal cables to avoid couplings.



Note:

Sum the power consumptions of the individual cards and sensor and select a power supply unit with sufficient power reserve.

Selecting the connection cable

Power supply is connected with standard cable acc. to the national installation standards.

To connect 4 ... 20 mA instruments, standard two-wire cable without screen can be used. If electromagnetic interference is expected which is above the test values of EN 61326 for industrial areas, screened cable should be used.

When connecting Profibus PA sensors, screened cable according to Profibus specification must be used.

Please make sure that your installation is carried out according to the Profibus specification. In particular, make sure that the termination of the bus is done with appropriate terminating resistors.

Cable screening and grounding

Connect the cable screen on both ends to ground potential. In the sensor, the screen must be connected directly to the internal ground terminal. The ground terminal outside on the sensor housing must be connected to the potential equalisation (low impedance).

If potential equalisation currents are expected, the screen connection on the side of VEGALOG 571 CPU must be made via a ceramic capacitor (e.g. 1 nF, 1500 V). The low frequency potential equalisation currents are thus suppressed, but the protective effect against high frequency interference signals remains.

Select connection cable for Ex applications

Take note of the corresponding installation regulations for Ex applications. In particular, make sure that no potential equalisation currents flow over the cable screen. In case of grounding on both sides this can be achieved by the use of a capacitor or a separate potential equalisation.

The total capacitance of the cable and of all capacitors must not exceed 10 nF in Ex applications.

5.2 Additional instructions for Ex applications

Applications in the area according to the CENELEC Ex protective regulations and ElexV (Germany) zone 0 require the use of approved sensors.

For these applications, not the respective legal documents (test certificates, test notes and conformity certificates). These belong to the scope of delivery of the respective instrument.

These sensors must only be powered via an intrinsically safe circuit. With the EA card, the sensors must be connected via a safety barrier. The EP card is available in Ex version, no separate separating facility necessary.

Also note the legal documents of these instruments.

Mounting instructions

To mount, note the following:

- VEGALOG 571 as well as the used separating facilities must be only used outside the Ex area.
- A separating wall must be provided between the connection parts of intrinsically safe and non-intrinsically safe circuits so that there is a min. distance of 50 mm
- Only one sensor must be connected to each safety barrier

5.3 Wiring plan

BGT/NF filter

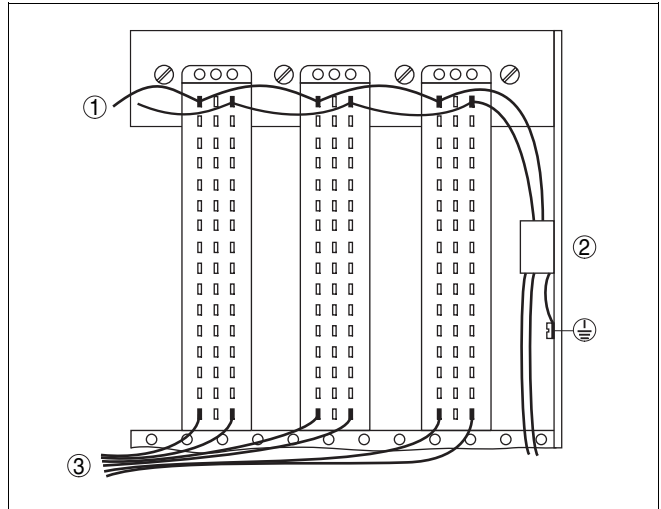


Fig. 3: Connection with NF filter

- 1 Supply cables
- 2 NF filter
- 3 Signal cables

CPU card

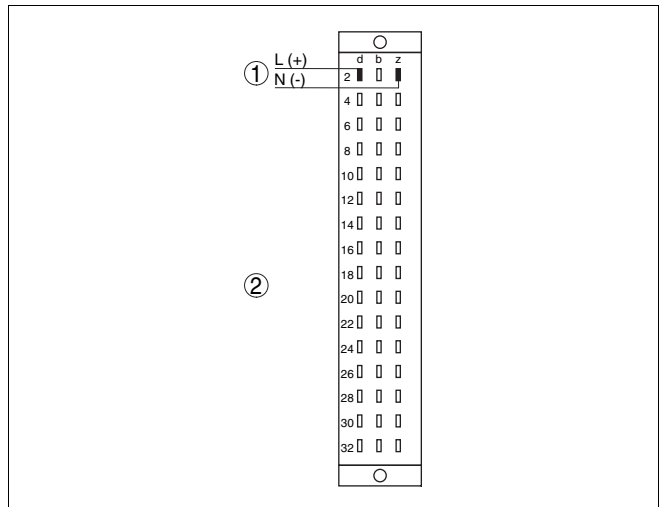


Fig. 4: Terminal assignment VEGALOG 571 CPU

- 1 Supply voltage
- 2 The contacts (d/b/z 4 to d/b/z 32) are free

Coupling of the carriers

If the number of the available modules of a carrier (BGT) is not sufficient, the VEGALOG 571 can be also completed with a second BGT.

The carriers are placed one above another and connected via the supplied ribbon cable. On the rear of the bus board there is an appropriate plug connection.

For the configuration with two carriers you have to set the following two switch positions according to below description.

- Hook switch for the termination resistor
- Slide switch

Switch position, one BGT

Hook switch - closed

Slide switch - position M

Switch position, two BGT

- BGT 1
 - Hook switch - closed
 - Slide switch - position M
- BGT 2
 - Hook switch - open
 - Slide switch - position S

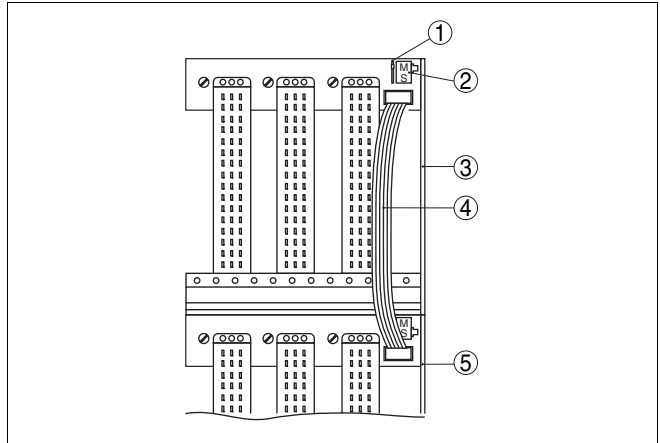


Fig. 5: Coupling of two carriers

- 1 Hook switch
- 2 Slide switch
- 3 BGT 1 (modules 1 ... 16)
- 4 Bus cable
- 5 BGT 2 (modules 17 ... 32)

6 Set up

6.1 Indicating and adjustment elements

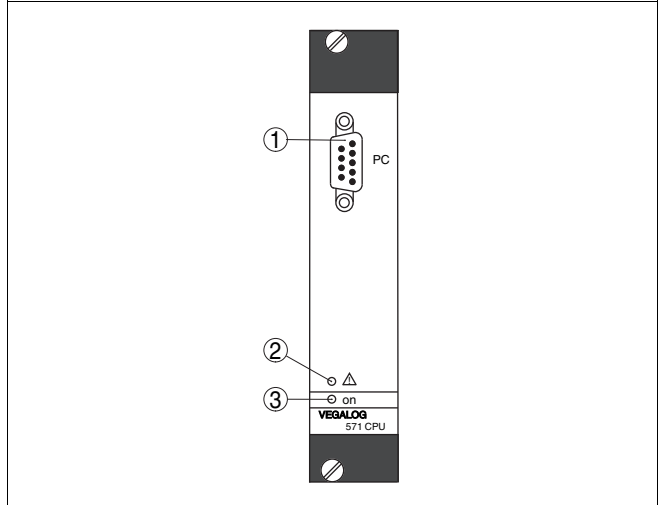


Fig. 6: Indicating and adjustment elements VEGALOG 571 CPU

- 1 RS232 interface
- 2 LED for fault signal
- 3 LED for operating voltage

Description of the status LEDs

- LED fault signal [1]
 - flashes in case of communication problems on the LOGBUS
 - lights during initialisation and during the self-test
 - lights permanently during a hardware error
- LED operating voltage [2]
 - lights when voltage supply is on

The module cards of the VEGALOG system have no own adjustment elements. All adjustment measures are carried out through the PC via the adjustment software PACTware™.

6.2 Module card types

The modular system of VEGALOG 571 consists of different, special module card types:

- CPU card

- Input cards
- Output cards
- Communication cards for standard bus systems
- Power supply cards for supply of the individual module cards

CPU card

The processor card is the centre of VEGALOG. It has the following functions:

- Communication handling among the individual cards
- Creating and administrating of individual measurement loops
- Calculating tasks such as adjustment, scaling, linearisation, differential generation etc.
- Coupling to the PC via RS232 interface

The CPU is further used for detection of levels or for monitoring the switching on and switching off times.

The CPU read cyclically measured values from the peripheral cards (e.g. with 30 measurement loop in the 300 ms cycle). These are compared with the programmed data, standardised and processed. The programmed data (configuration data, adjustment parameters etc.) are available in the EEPROM where they remain even in case of voltage loss. In the memory of the CPU, a process picture is created which is outputted to the peripheral cards via LOGBUS.

For backup, the programmed data can be read out any time via the RS232 interface and can then be saved on the PC.

Input cards

EA card

Up to ten 0/4 ... 20 mA instruments can be connected to the EA card (Eingang Analog, i.e. input analogue), e.g.:

- Capacitive probes
- Hydrostatic pressure transmitters
- Vibrating level switches
- Conductive probes
- Process and differential pressure transmitters
- Switching contacts (level signaller)

The inputs can be connected actively (sensor is powered by the EA card) or passively (sensor delivers current).

Within an EA card, mixed connection of active/passive inputs is permitted.

EP card

The EP card (**E**ingang **P**rofibus **PA**, i.e. input PROFIBUS PA) is used as input card for Profibus PA sensors of VEGA or other manufacturers. Up to max. 15 Profibus PA sensors (max. 10 with Ex version) can be connected.

The EP (Ex) card recognises VEGA sensors on their serial number and assigns automatically a bus address. For instruments of other manufacturers, the Profibus address must be assigned separately for each instrument.

The power supply of the sensors, the transmission of the sensor measuring signals as well as the parameter adjustment commands are carried out via the same bus cable.

Output cards**AA card**

The AA card (**A**usgang **A**nalog, i.e. output analogue) provides the processing results via up to ten analogue currents in the range of 0 ... 20 mA. The scaling as well as the definition as rising or falling characteristics is carried out via the PC with PACTware™.

Indicating instruments, recorders, controllers or PLC systems are connected to these outputs.

AR card

The AR card (**A**usgang **R**elais, i.e. output relay) provides ten relay outputs with floating contacts. Connected are, for example:

- Acoustic or optical signalling systems
- Magnet valves
- Contactors for pump control, etc.

The AR card is used to output switching, single or sum fault messages. The switching status of each relay is indicated via a two-colour LED in the front plate. This LED lights depending on the parameter adjustment of the relay (limit contact yellow or fail safe relay red). Each fail safe relay can be individually assigned to one or several measurement loops. The definition of the relay function, the switching points as well as the LED colour is carried out via the PC with PACTware™.

AT card

The AT card (**A**usgang **T**ransistor, i.e. output transistor) provides ten floating outputs via NPN transistors. Binary input cards of PLC systems are connected.

The application possibilities and the signalling of the switching condition correspond to those of the AR card.

Communication cards

VEGACOM 558

The communication card VEGACOM 558 is an interface converter for Ethernet connection via TCP/IP. Hence the parameter adjustment of VEGALOG as well as reading out of measured values from any network PC is possible. It can be used as webserver and provides the measured values as HTML pages to all network participants. E-mails can be sent also with the actual measured values or event messages.

VEGACOM 558 can be also used for connection to Visual VEGA. Here all measured values and trend curves can be enquired via Ethernet and displayed on any PC.

VEGACOM 557

The VEGACOM 557 communication card is an interface converter (Gateway) for conversion of VEGA-specific data formats into standard protocols. It is used for connection of the VEGALOG system to a PLC or a PLC system. The communication card is available for the following protocols:

- Siemens S5 (3964R procedure)
- Modbus (RTU and ASCII)
- Interbus S
- Profibus FMS
- Profibus DP
- VEGA-ASCII

The communication card can also be used to provide data of VEGALOG via RS232 to the visualisation software Visual VEGA. For this case, the communication card is also available without interface function.

Adapter print

With the adapter card VEGACOM 557 AP, data of standard protocols (Profibus, Interbus etc.) which are normally only available on the rear of the carrier, are led to the front plate.

Power supply card

VEGASTAB 593

The 19" power supply unit powers all cards of VEGALOG with 24 V DC. The sensors are also powered via the active inputs of the input cards. The versions VEGASTAB 593-60 (24 V, 45 W) and VEGASTAB 593 (24 V, 120 W) are available.

6.3 Setup requirements

The adjustment software PACTware™ with the corresponding DTMs is installed under Windows™ installed and enables easy configuration of measuring systems as well as parameter adjustment of connected VEGA sensors. For this purpose,

PACTware™ offers a clear adjustment surface with menu structure, window technology and graphic support as well as an online help. For older VEGALOG systems with CPU software 1.xx the previous software VVO (VEGA Visual Operating) must be used.

All currently available VEGA DTMs are provided in a DTM Collection with the current PACTware™ version on CD. This CD is available from an authorised VEGA agency for a token fee. The basic version of this DTM Collection includes PACTware™. PACTware™ is also available as a free-of-charge download from the Internet. The professional version also includes saving and printing of project documentation. A DTM licence for the respective instrument family can be purchased via the responsible VEGA agency.

**Tip:**

You find further information in the operating instructions manual "*DTD-Collection/PACTware™*" as well as in the online help.

Connect the PC via an RS232 cable (interlink modem) to the PC interface of the CPU card in the front. If your VEGALOG has also a VEGACOM 557/558 you can connect the PC also to its RS232 interface. As an alternative the connection via Ethernet and VEGACOM 558 is also possible. This has the advantage that the adjustment can be carried out on any PC within the network.

6.4 Start PACTware™

Start PACTware™ via the Windows start menu. For the first log in, select the user "*Administrator*" and enter the password "*manager*". Please enter uppercase/lowercase letters correctly. This password can be modified under the PACTware™ menu item "*Extras - User management*". Here, you can assign a password for the users with limited rights.

**Information:**

To ensure that all instrument functions are supported, you should always use the latest DTM Collection. Furthermore all not described functions are included in older firmware versions. For many instruments, the latest instrument software can be downloaded from our homepage. The transmission of the instrument software is carried out via PACTware™ and an individual interface. A description of the update sequence is also available in the Internet.

6.5 Creating a project

Starting point for the adjustment of all types of field devices is the partial or complete mapping of the instrument network in a PACTware™ project. For this purpose, PACTware™ provides an area, the instrument catalogue, in which all installed DTMs are displayed. Typically the DTMs have the same name as the instruments that are adjusted by them. In addition, PACTware™ provides a second area, the project window, in which the instrument network is mapped.

Generate a project automatically

The easiest and quickest way to generate an instrument network in the project window of PACTware™ is via the VEGA projectassistant. It is available as manufacturer-specific extension module in all VEGA DTM Installation package and extends hence automatically the functions of PACTware™ 3.0. The automatic generation of projects by means of the VEGA projectassistant, however, is only possible for instrument networks in which only VEGA instruments are used.

You open the VEGA project assistant from the PACTware™ menu board under "*Project - VEGA project assistant*". The window "*VEGA project assistant*" opens and you just have to select the requested interface for automatic generation of the project. Further information on the VEGA project assistant is available in the corresponding online help. The online help can be opened directly in the window "*VEGA projekt assistant*".

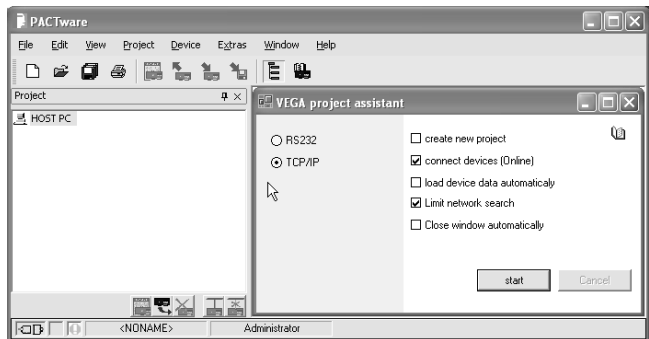


Fig. 7: Project assistant

Generate a project manually

To create a project in the project window, paste in the DTMs from the instrument catalogue - one DTM for each actually used instrument. The entry HOST-PC is the starting point for pasting in the DTMs. The requested DTM can be brought over

from the instrument catalogue to the project window with a double click or Drag and Drop. If the project window or the instrument catalogue are not visible, they can be activated in the menu bar under " *View* ".

6.6 Example projects

Project creation VEGALOG and Profibus PA sensor

Connection via VEGACOM 558/Ethernet

The following example shows a typical VEGALOG project with EP card and Profibus sensors. We recommend using the "*VEGA project assistant*", this considerably facilitates the project creation and errors during the address assignment of the VEGALOG module cards and the sensors are avoided. All existing cards are found automatically and are added to the project. Also all connected Profibus sensors are automatically taken over into the project.

In case the planning is nevertheless carried out manually, e.g. when creating an offline project, the following DTM's must be added to the project tree:

- 1 First of all a driver must be selected by which the communication via the PC can be carried out. Select the "*VEGA Ethernet*" DTM from the instrument catalogue. With this driver, the connection to VEGACOM 558 in the VEGALOG 571 processing system is established.

When the "*VEGA Ethernet*" DTM in the project tree is selected, you can later adjust the IP address for the VEGACOM 558 module card in the PACTware™ menu under "*Device data - Add'l functions - Change DTM addresses*". The implementation of this setting is only possible if a suitable DTM (e.g. VEGACOM 558) has already been added to the project tree.

- 2 Finally the DTM "*VEGALOG 571*" must be added. This DTM represents the VEGALOG 571 processing system. In this DTM, measurement loops are created and processed later on.

When the "*VEGALOG 571*" DTM in the project tree is selected, you can later adjust the card addresses for the VEGALOG module cards in the PACTware™ menu under "*Device data - Add'l functions - Change DTM addresses*". The implementation of this setting is only possible if a corresponding DTM (e.g. VEGACOM 558) has already been added to the project tree.

- 3 Then the DTM for the individual VEGALOG module cards must be added to the project tree. These are in this example: VEGALOG CPU, VEGACOM 558, VEGALOG 571EP.
- 4 The two DTM types "VEGALOG 571 EP" and "VEGALOG 571 EV" are VEGALOG module cards for connection of digitally communicating VEGA sensors. This means, corresponding sensor DTM can be added to these cards. Select the suitable sensor DTM from the device catalogue and transfer it to the project window.

If the sensor is already connected, it is possible to search for it with PACTware™. In this case, the VEGALOG 571 DTM must be in online mode (right mouse key - "Connect"). Then the automatic search function can be started via the right mouse key - "Add/ functions - Instrument search".

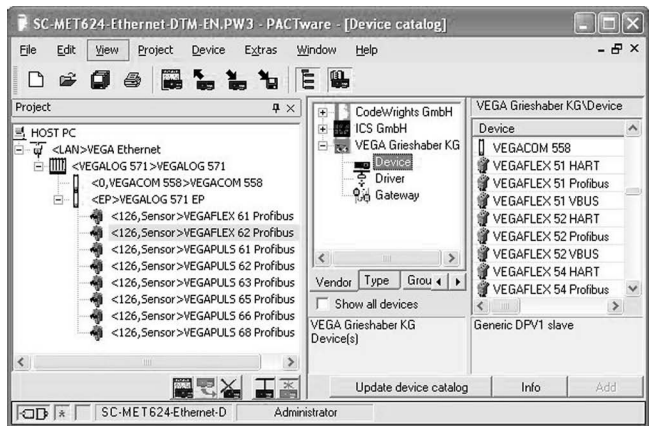


Fig. 8: Project VEGALOG 571 with Profibus PA sensors

6.7 Parameter adjustment

After the project was created, the parameter adjustment of the instrument can be started. This is done via double click to the requested DTM in the project window or via the right mouse key by selecting "Parameter".

In the following procedure, a difference is made between offline and online mode.

Offline mode

The project can be prepared, created and stored in offline mode without instruments being connected. Later these data can be transferred in online mode to the instruments now being ready for operation. Keep in mind that saving of these data on the hard drive is only possible in the Professional version with costs.

Online mode

In online mode, the instruments on which the parameter adjustment is to be carried out must be connected and ready for operation. By selecting the appropriate DTM with the right mouse key and the command "Connect", the online mode is set up for operation. After double clicking, connection is initiated which simultaneously checks the communication, the sensor type and additional parameters. If necessary, all parameters will be transferred automatically. Via the DTM menu item "Device data - Read data from device", all parameters of the sensor can be loaded anytime. All settings which are carried out now must be transferred afterwards to the instrument. This can be done via the DTM menu item "Device data - Write data to device".

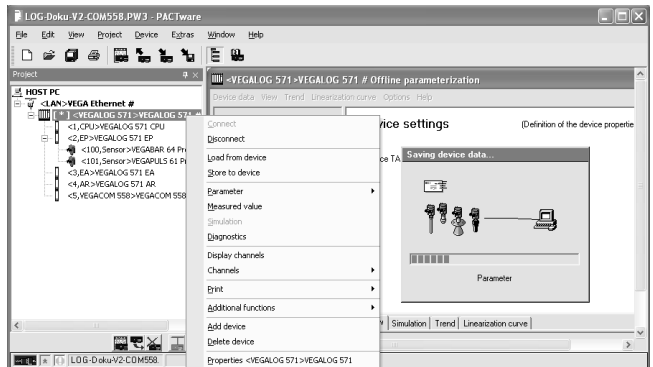


Fig. 9: DTM connection to VEGALOG 571

Create measurement loops

The most important thing is to create the requested measurement loops. For this purpose, a comfortable assistant is available which is asking for the necessary settings. Select the DTM menu item "Measurement loops" and push the button "Create new measurement loop". The following applications are available:

- Level measurement
- Process pressure measurement

- Connection 0/4 ... 20 mA instrument
- Arithmetik
- Temperature measurement
- Universal

Depending on the selected application, a suitable sensor or the measuring principle and probable options will be required. The designation of the measurement loop with an individual name is made at the end of the assistant setup.

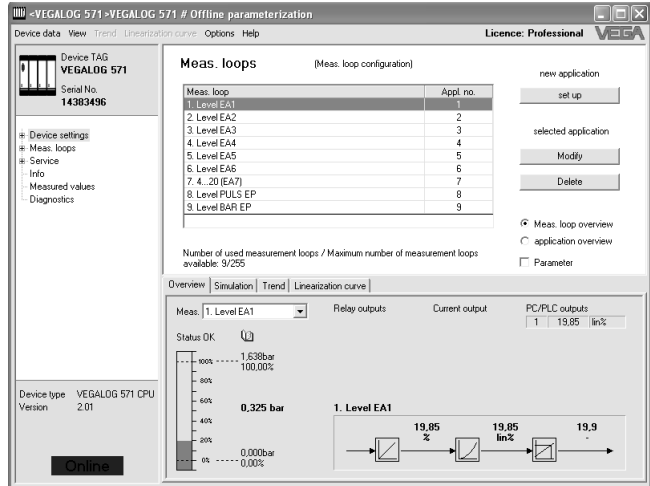


Fig. 10: Creating/modifying measurement loop

After creating the measurement loop you can carry out the adjustment, select a linearization or assign and configure relay/current outputs.

Sensor parameter adjustment

When using the EP card, the project includes also all connected PA sensors. Via the same cable connection you have also access to these sensors to show e.g. the echo curve or carry out a false echo memory. With analogue 4 ... 20 mA instruments, however, this direct access is not possible. In this case, each sensor must be connected individually, e.g. via a VEGACONNECT.

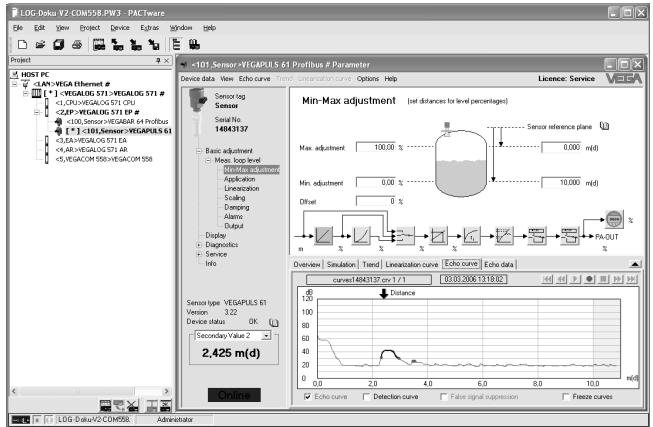


Fig. 11: DTM view, VEGAPULS 61 PA



Information:

Detailed explanations to the parameter adjustment and project creation are available in the online help of PACTware™ and the DTMs. Also consult the operating instructions manual of the corresponding instrument for setup and correct parameter adjustment.

7 Maintenance and fault rectification

7.1 Maintenance

When used as directed in normal operation, the module card VEGALOG 571 CPU is completely maintenance-free.

7.2 Fault rectification

Causes of malfunction

VEGALOG 571 CPU offers maximum reliability. Nevertheless faults can occur during operation. These may be caused by the following, e.g.:

- Measured value of the sensor not correct
- Voltage supply
- Interference on the cables

Fault rectification

The first measures to be taken are checking the input/output signal as well as processing failure messages. The diagnostic information are updated cyclically in a 5 sec. pattern.

PACTware™ with the suitable DTM offers comprehensive diagnostics options. The integrated online help offers you additional information. In many cases, these causes can be thus determined and faults can be rectified.

24 hour service hotline

If these measures are not successful, you can call the VEGA service hotline in urgent cases under the phone no. **+49 1805 858550**.

The hotline is available to you 7 days a week round-the-clock. Since we offer this service world-wide, the support is only available in the English language. The service is free of charge, only the standard telephone costs will be charged.

Fault messages via LED status indication

The operating condition of the CPU and peripheral cards is displayed via the status LEDs in the front plate.

- LED failure message (red)
 - flashes in case of communication problems on the LOGBUS
 - lights during initialisation and during the self-test
 - lights permanently during a hardware error
- LED operating voltage (green)
 - lights when voltage supply is on

7.3 Instrument repair

If a repair is necessary, please proceed as follows:

You can download a return form (23 KB) from our homepage www.vega.com under: "*Downloads - Forms and Certificates - Repair form*".

By doing this you help us carry out the repair quickly and without having to call back for needed information.

- Print and fill out one form per instrument
- Clean the instrument and pack it damage-proof
- Attach the completed form and possibly also a safety data sheet to the instrument
- Please request the address for the return shipment from the VEGA agency serving you.

8 Dismounting

8.1 Dismounting procedure

**Warning:**

Before dismounting, be aware of dangerous process conditions such as e.g. pressure in the vessel, high temperatures, corrosive or toxic products etc.

Take note of chapters "*Mounting*" and "*Connecting to power supply*" and carry out the listed steps in reverse order.

8.2 Disposal

The instrument consists of materials which can be recycled by specialised recycling companies. We use recyclable materials and have designed the electronic modules to be easily separable.

WEEE directive 2002/96/EG

This instrument is not subject to the WEEE directive 2002/96/EG and the respective national laws (in Germany, e.g. ElektroG). Pass the instrument directly on to a specialised recycling company and do not use the municipal collecting points. These may be used only for privately used products according to the WEEE directive.

Correct disposal avoids negative effects to persons and environment and ensures recycling of useful raw materials.

Materials: see "*Technical data*"

If you cannot dispose of the instrument properly, please contact us about disposal methods or return.

9 Supplement

9.1 Technical data

General data carrier BGT

Series	19" carrier for mounting in switching cabinet or housing
Dimensions	W = 482.6 mm (19 in), H = 132.5 mm (5.22 in), D = 254 mm (10 in)
Weight	approx. 1650 g (3.53 lbs)
Material	Aluminium anodized

General data

Series	19" module card for BGT LOG 571
Dimensions	W = 25.4 mm (1 in), H = 128.4 mm (5.06 in), D = 166 mm (6.54 in)
Weight	approx. 400 g (0.882 lbs)

Voltage supply

Supply voltage	$U_{\text{nom}} = 24 \text{ V DC (18 ... 36 V)}$
Power consumption	
– CPU card	max. 6 W
– EA card	max. 11 W
– EP card	max. 8 W
– AA card	max. 9 W
– AD card	max. 10 W
– AR card	max. 6 W
– AT card	max. 6 W
– VEGACOM 557	max. 6 W
– VEGACOM 558	max. 4 W
Fuse protection	Pigtail fuse 1 A slow-blow

Electrical connection

Module card	Multipoint connector according to DIN 41612, series F, 48-pole (d, b, z) with coding hole
Module in the carrier BGT LOG 571	Suitable female multipoint connector according to DIN 41612 with connection via standard connection technologies

RS232 interface

Quantity	1x on front plate
Data transmission	9600 baud, 8 data bits, 1 stop bit, no parity
Plug connection	9-pole D-SUB plug

Displays

LED displays	
– Status indication operating voltage	1x LED green
– Status indication fault signal	1x LED red

Ambient conditions

Ambient temperature	-20 ... +60 °C (-4 ... +140 °F)
Storage and transport temperature	-20 ... +80 °C (-4 ... +176 °F)

Electrical protective measures

Protection mounted in BGT LOG 571	
– front side completely equipped or covers	IP 40
– Upper and lower side	IP 20
– Wiring side	IP 00
Protection class	I (in carrier BGT LOG 571)
Overvoltage category	II

Electrical separating measures

Reliable separation according to VDE 0106 part 1 between voltage supply, LOGBUS connection and RS232 interface

– Reference voltage	250 V
– Insulation resistance	2.3 kV

9.2 Dimensions

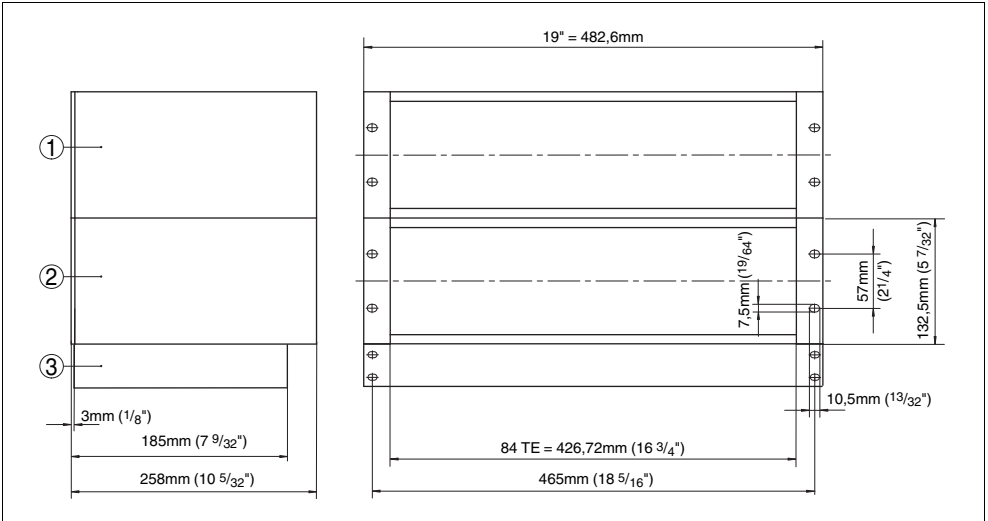


Fig. 12: Dimensions 19" carrier BGT LOG 571

- 1 Carrier 1
- 2 Carrier 2
- 3 19" ventilator (optional)

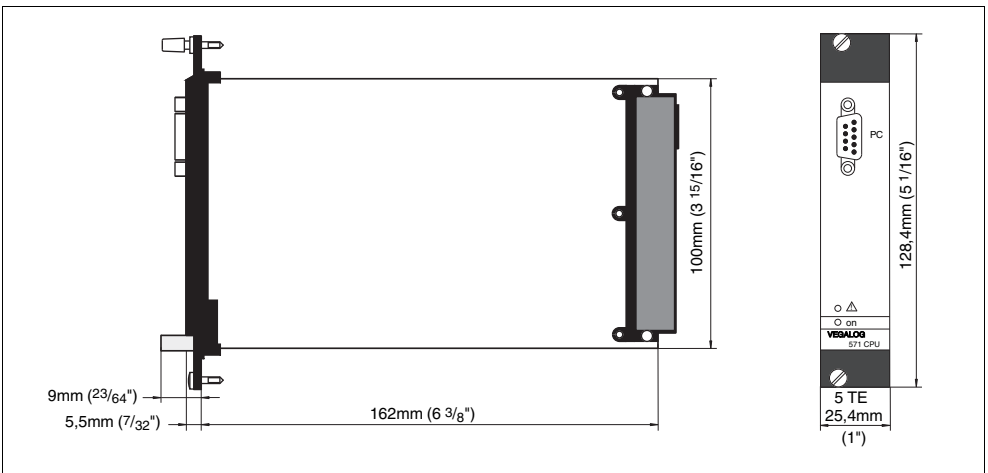


Fig. 13: Dimensions VEGALOG 571 CPU



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All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.

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