



# System summary 2012/2013

for specialists in automation and control technology

# Welcome to VIPA



## This is VIPA

- Specialists in automation and control systems.
- Developer in some to the most advanced products in the PLC field.
- Developer of some of the world's fastest hard PLCs of their class.
- Developer of technologies that are now the industry standard.
- Global Player with branches in 60 countries.
- Extremely customer oriented and flexible.



Wolfgang Seel | CEO

VIPA has traditionally been amongst the most innovative suppliers of memory-programmable controllers (PLCs) in the market and is growing worldwide, with double-digit growth rates. Therefore, VIPA belongs to the still young, but also exceptionally successful companies in the Automation market.

**Our success is based on five pillars:**

- High rate of innovation and quick decision making
- Various unique features
- A convincing cost-performance ratio
- Commitment and competence of our employees
- Cooperation with powerful partners

**Our aspiration:**

- Constantly continue to improve existing technologies, but also to introduce new and innovative trends in the market.
- Continuous flexible adaptation of our products to current market needs and to further increase our market acceptance.
- Continue to develop our personnel resources in sales, development, quality assurance and service in accordance with our revenue growth.
- Enter into cooperation agreements with powerful partners and to increase our market share through joint market cultivation.

To meet this aspiration, we consider it as our aim, also in the future, to improve what is established, to question, revise or develop completely from new.

Furthermore we want to make available to our partners and customers also in the future through continuous innovation and smart system maintenance unique technological features with which together we can gain new and satisfied system users.

With our highly motivated employees, we're working hard on improving our quality, service and the satisfaction of our customers and partners. Convince yourself of the possibilities that our automation solutions and systems offer, and discover how with us you can sustainably increase your competitiveness.

Strengthened by above-average growth, we are determined to continue our successful path in the future.

We look forward to cooperating with you!

A handwritten signature in black ink, appearing to read 'W. Seel', written in a cursive style.

Wolfgang Seel  
CEO

# We speak your language ...



## SPEED7 ensures your lead

- an Open Source Technology,
- a flexible automation platform
- and one of the fastest STEP7 PLC processors in the world!

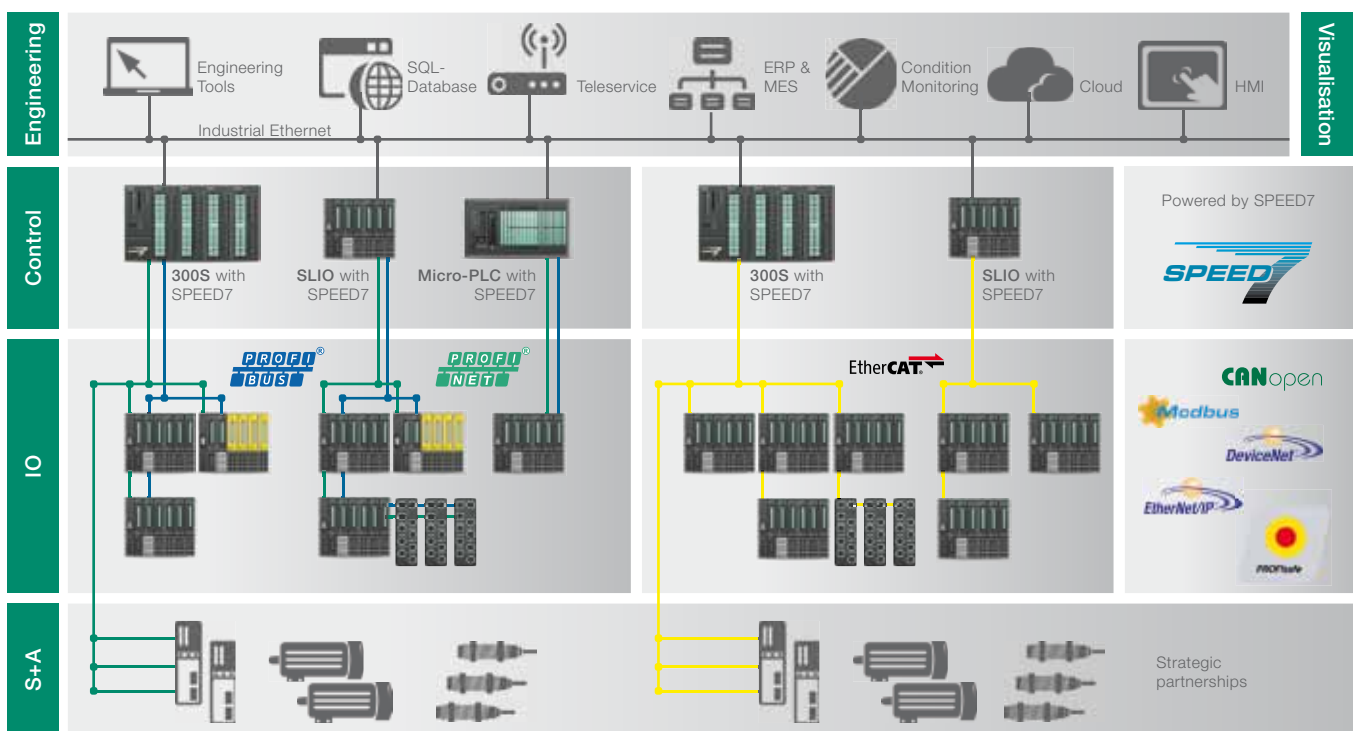
SPEED7 technology offers developers a modular building block, with which a high-performance automation system can be developed in the shortest time on an open STEP7 architecture.

- SPEED7 ensures maximum speed with all applications and, for example, the highest clock rates.
- SPEED7 upgrades also older systems to a modern standard.
- SPEED7 processes vast amounts of data in real time.





... and in future also that of almost all systems



# System solutions



## Professional benefits for professional applications

- **Consistent standardization**  
All systems are programmable with VIPA WinPLC7 programming tool and/or with STEP7 from Siemens.
- **Increase of productivity**  
Significant reduction in cycle times of user programs by SPEED7 technology with reduced power dissipation.
- **High efficiency**  
Above average basic features of the systems, integrated RJ45 Ethernet interface for PG/OP communication, optional integrated SPEED-Bus.
- **Absolute flexibility**  
Mixed operation for example with VIPA CPUs and Siemens assemblies possible.
- **Open communication possibilities**  
Supports internationally established communication standards like Ethernet, PROFIBUS, CANopen, EtherCAT, Modbus, EtherNet/IP, DeviceNet, Interbus, PROFINET and ASi.

**Automotive:**

An industry that needs solutions like on an assembly line. Ever increasing range of models, more and more complex technology, ever faster product cycles. Whoever wants to survive here, must be able to refine, expand, and accelerate his technology.

**Renewable energy:**

In principle every installation of a VIPA control system has its own energy policy - on starting up the efficiency increases right away, often the consumption of raw materials sinks and his conscience is eased.

**Building automation:**

Low energy is the goal, high performance is our way... Here our control systems are more intelligent than some specifications.

**Food & Beverage:**

Multi-purpose demands: Flash-freezing and autoclaving, vacuum packing and pressurized filling go on here. The whole thing under the toughest hygiene conditions and always under time pressure.

**Handling and storage technology:**

In order that the delivery rate never stands still, not only are tailor-made PLC systems designed at VIPA, but also precise, effective time schedules for their installation.

**Environment:**

Regardless of whether it's a question of renewable energy or water/sewage: The very strict requirements in terms of robustness, compact design and of energy consumption of the controllers can be excellently implemented with our automation technology.

**Packaging:**

The most important factor in this industry: Speed. Because many commodities are perishable, deliveries must arrive just in time and demand simply fluctuates.

**Water/Sewage:**

That a manufacturer of control engineering knows how a sewage plant works seems unusual. But this is typical VIPA. At VIPA no one turns his nose up when it comes to dealing with anaerobic digestion tanks, activated sludge and denitrification.



„If you don't know the destination, then you have no route.“ (Christian Morgenstern)

**100V** Control system for cost-sensitive and small applications



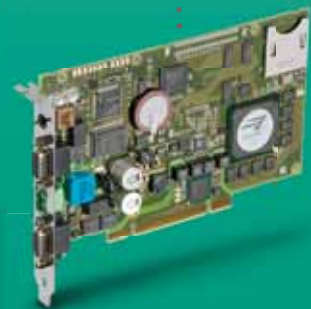
**200V** Modular control system for central and decentral applications



**300S** One of the fastest control systems programmable with STEP7



**500S** PC control system for complex tasks. And also one of the fastest control systems programmable with STEP7



1985

VIPA



Foundation of profichip GmbH

Foundation of VIPA GmbH by Wolfgang Seel



Move to the **new headquarter** of VIPA and Profichip in Herzogenaurach

**SLIO** One of the most efficient and most modern decentral I/O systems in the world

**Operating / monitoring devices**

From two-line displays to touch panels

**Accessories**

enhancing, linking, optimizing

**Software** for convenient programming and parameterization



2012



Winner of the innovation prize „Initiative Mittelstand 2007“ for the SPEED7 technology








Winner of the industry prize „Industrie Preis 2008“ for the SPEED7 technology

awarded with the **Jobstar** of European Metropolitan Region Nuremberg



Honoured as top innovator by **Top100**



<p><b>SLIO:</b> The System SLIO is a highly compact control system for decentralized applications.</p>	<p><b>12</b></p>	
<p><b>100V:</b> The System 100V is a Micro-PLC system from VIPA.</p>	<p><b>22</b></p>	
<p><b>200V:</b> The System 200V is a highly compact and modular control system for centralized and decentralized applications.</p>	<p><b>30</b></p>	
<p><b>300S:</b> With the SPEED7 technology, System 300S is one of the fastest control system in the world programmable with STEP7.</p>	<p><b>44</b></p>	
<p><b>500S:</b> With the SPEED7 technology, System 500S is one of the fastest control system in the world programmable with STEP7 specifically for usage in PC's.</p>	<p><b>56</b></p>	
<p><b>HMI:</b> With display sizes of 4,3" to 12,1", Windows CE operating system and visualization software, the Touch Panels provide universally desirable solutions.</p>	<p><b>62</b></p>	
<p><b>Software:</b> For comfortable programming und parameterization.</p>	<p><b>70</b></p>	
<p><b>Accessories:</b> VIP A offers a wide range of accessories like teleservice solutions, programming cable, download cable, or PROFIBUS-DP cable as well as PROFIBUS-DP connectors with diagnosis function.</p>	<p><b>74</b></p>	
<p><b>Appendix:</b> List of our worldwide distributors and branch offices as well as terms and conditions of sale and delivery.</p>	<p><b>80</b></p>	

At a glance

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SLIO

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# SLIO

the fine-granular I/O system

# System description SLIO

## Structure and Concept

SLIO stands for Slice I/O. The system is very compact and can be adapted piecemeal exactly to the requirements of the application.

The system is designed for decentralized automation tasks.

With the help of the power module (PM), color contrasted from the signal modules (SM) and functional modules (FM), these are supplied with power and separate potential groups can be defined as required. The terminal module (TM) combines clamp, seating for the electronic module (EM) and mechanical bus connector. The electronic modules are connected to the terminal module in a secure sliding mechanism. In the case of service, only the electronic module is replaced by simply pulling out of the terminal module – wiring and mounting remain on the 35 mm profile rail. The step-formed spring-type terminals on the terminal module enable a quick, clear and secure wiring. Through integrated status LEDs and the label strip on the front a channel-specific, unambiguous allocation, and readability of the channel conditions of the electronic module is ensured.

All interface modules (IM) for PROFIBUS-DP, CANopen, PROFINET, EtherCAT, DeviceNet and ModbusTCP support up to 64 electronic modules.

The space-saving assembly size allows use in any automation environment.

Assembly is very easy: First the terminal modules are connected, then the electronic modules are inserted into the slot designated for the terminal module until the connection between both module parts is established by an audible click.

SLIO is one of the most highly efficient decentral systems worldwide and is evolving daily.



### Performance and Application

SLIO is designed for large decentralized automation tasks in the manufacturing and process industries. SLIO expands key solutions and is integrated with the help of the device master files into existing fieldbus infrastructure. Through the new backplane bus concept the interface modules (fieldbus slave) in SLIO enable very short response times for signal processing.

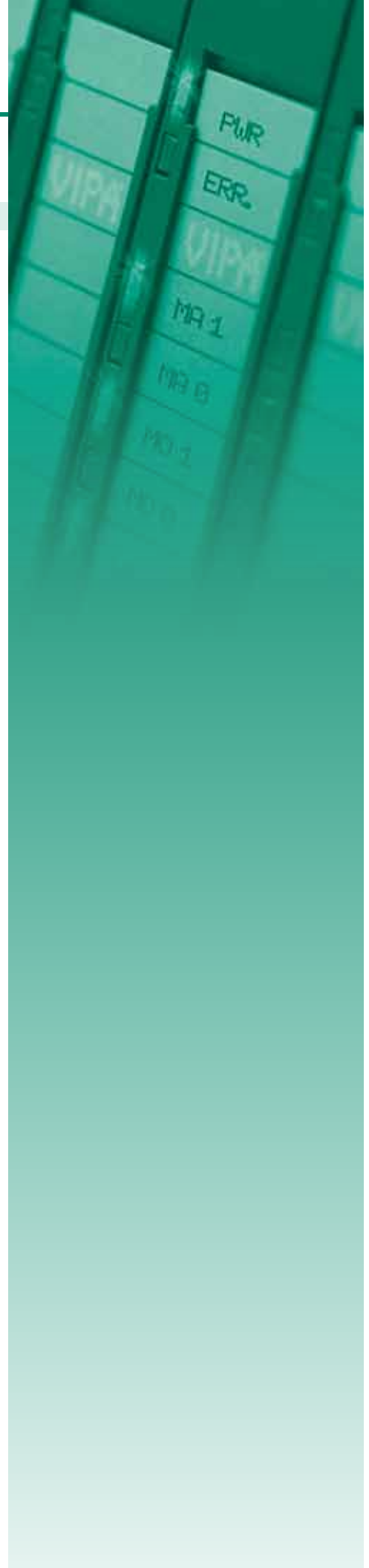
### Functions

A variety of signal modules are available for the connection of sensors and actuators for acquiring digital and analog signals to and from the process.

For positioning, path measurement, counting tasks and other functions further functional modules are continuously being developed.

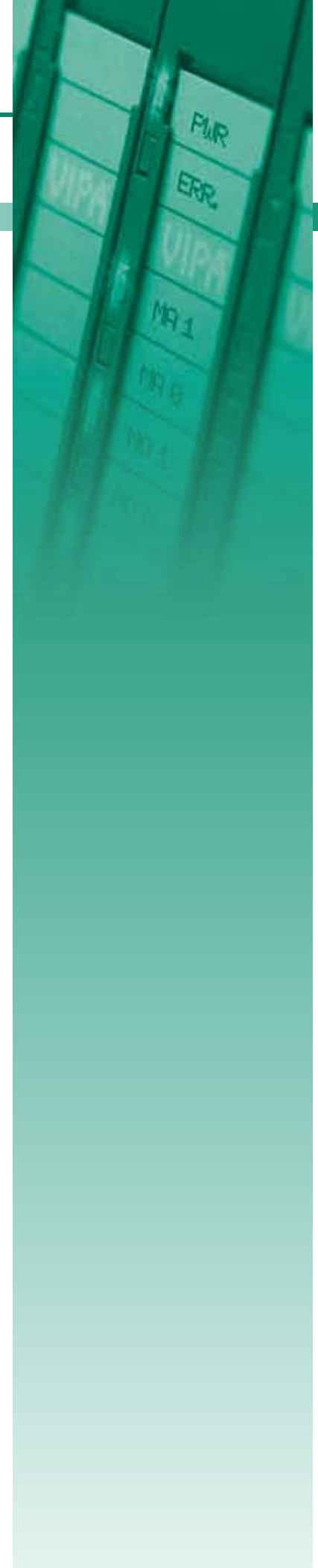
### Communication

SLIO includes interface modules (fieldbus slave modules) with different fieldbus protocols by which the system, manufacturer-independent, can be integrated into most automation concepts.



# SLIO

Order no.	Name/Description
<b>Clamp modules</b>	
001-1BA00	<b>CM 001 - Potential distributor module</b> ‣ 8xDC 24 V clamps
001-1BA10	<b>CM 001 - Potential distributor module</b> ‣ 8xDC 0 V clamps
001-1BA20	<b>CM 001 - Potential distributor module</b> ‣ 4xDC 24 V, 4xDC 0 V clamps
<b>Power modules</b>	
007-1AB00	<b>PM 007 - Power module</b> ‣ Power supply DC 24 V, 10 A ‣ Reverse polarity protection ‣ Overvoltage protection
007-1AB10	<b>PM 007 - Power module</b> ‣ Power supply DC 24 V, 4 A ‣ Power supply DC 24 V for bus supply 5 V, 2 A ‣ Reverse polarity protection ‣ Overvoltage protection
<b>Digital input modules</b>	
021-1BB00	<b>SM 021 - Digital input</b> ‣ 2 inputs
021-1BB10	<b>SM 021 - Digital input</b> ‣ 2 fast inputs ‣ Input filter time delay parameterizable 2 µs...4 ms
021-1BB50	<b>SM 021 - Digital input</b> ‣ 2 inputs ‣ Active low input
021-1BB70	<b>SM 021 - Digital input</b> ‣ 2 inputs ‣ Time stamp
021-1BD00	<b>SM 021 - Digital input</b> ‣ 4 inputs
021-1BD10	<b>SM 021 - Digital input</b> ‣ 4 fast inputs ‣ Input filter time delay parameterizable 2 µs...4 ms
021-1BD40	<b>SM 021 - Digital input</b> ‣ 4 inputs ‣ Connect 2/3-wire
021-1BD50	<b>SM 021 - Digital input</b> ‣ 4 inputs ‣ Active low input
021-1BD70	<b>SM 021 - Digital input</b> ‣ 4 inputs ‣ Time stamp
021-1BF00	<b>SM 021 - Digital input</b> ‣ 8 inputs
021-1BF50	<b>SM 021 - Digital input</b> ‣ 8 inputs ‣ Active low input
021-1SD00	<b>SM 021 - Digital input</b> ‣ 4 inputs ‣ Safety
<b>Digital output modules</b>	
022-1BB00	<b>SM 022 - Digital output</b> ‣ 2 outputs ‣ Output current 0.5 A
022-1BB20	<b>SM 022 - Digital output</b> ‣ 2 outputs ‣ Output current 2 A
022-1BB50	<b>SM 022 - Digital output</b> ‣ 2 Low-Side outputs ‣ Output current 0.5 A
022-1BB70	<b>SM 022 - Digital output</b> ‣ 2 outputs ‣ Time stamp ‣ Output current 0.5 A
022-1BB90	<b>SM 022 - Digital output</b> ‣ 2 outputs ‣ PWM



## SLIO

Order no.	Name/Description
022-1BD00	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 4 outputs</li> <li>‣ Output current 0.5 A</li> </ul>
022-1BD20	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 4 outputs</li> <li>‣ Output current 2 A</li> </ul>
022-1BD50	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 4 Low-Side outputs</li> <li>‣ Output current 0.5 A</li> </ul>
022-1BD70	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 4 outputs</li> <li>‣ Time stamp</li> <li>‣ Output current 0.5 A</li> </ul>
022-1BF00	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 8 outputs</li> <li>‣ Output current 0.5 A</li> </ul>
022-1BF50	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 8 Low-Side outputs</li> <li>‣ Output current 0.5 A</li> </ul>
022-1HB10	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 2 relay outputs</li> <li>‣ DC 30 V/ AC 230 V</li> <li>‣ Output current 3 A</li> </ul>
022-1SD00	<b>SM 022 - Digital output</b> <ul style="list-style-type: none"> <li>‣ 4 outputs</li> <li>‣ Safety</li> <li>‣ Output current 0.5 A</li> </ul>
Analog input modules	
031-1BB10	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 12Bit</li> <li>‣ Current 4...20 mA</li> <li>‣ 2 wire</li> </ul>
031-1BB30	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 12Bit</li> <li>‣ Voltage 0...10 V</li> </ul>
031-1BB40	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 12Bit</li> <li>‣ Current 0(4)...20 mA</li> </ul>
031-1BB60	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 12Bit</li> <li>‣ Current 4...20 mA</li> <li>‣ 2 wire</li> </ul>
031-1BB70	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 12Bit</li> <li>‣ Voltage -10 V...+10 V</li> </ul>
031-1BB90	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 16Bit</li> <li>‣ Thermocouple</li> <li>‣ Voltage -80mV...+80mV</li> </ul>
031-1BD30	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 4 inputs 12Bit</li> <li>‣ Voltage 0...10 V</li> </ul>
031-1BD40	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 4 inputs 12Bit</li> <li>‣ Current 0(4)...20 mA</li> </ul>
031-1BD70	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 4 inputs 12Bit</li> <li>‣ Voltage -10 V...+10 V</li> </ul>
031-1BD80	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 4 inputs 16Bit</li> <li>‣ 0 .. 3000 ohm resistance</li> <li>‣ Resistance measurment with 2, 3, and 4-wires</li> </ul>
031-1CB30	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 16Bit</li> <li>‣ Voltage 0...10 V</li> </ul>
031-1CB40	<b>SM 031 - Analog input</b> <ul style="list-style-type: none"> <li>‣ 2 inputs 16Bit</li> <li>‣ Current 0(4)...20 mA</li> </ul>



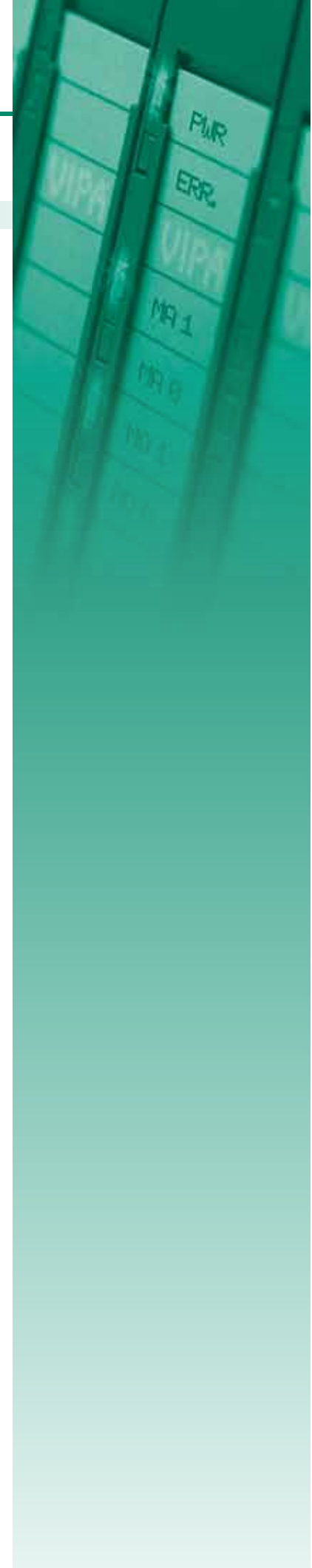
# SLIO

Order no.	Name/Description
031-1CB70	<b>SM 031 - Analog input</b> ▶ 2 inputs 16Bit ▶ Voltage -10 V...+10 V
031-1CD30	<b>SM 031 - Analog input</b> ▶ 4 inputs 16Bit ▶ Voltage 0...10 V
031-1CD40	<b>SM 031 - Analog input</b> ▶ 4 inputs 16Bit ▶ Current 0(4)...20 mA
031-1CD70	<b>SM 031 - Analog input</b> ▶ 4 inputs 16Bit ▶ Voltage -10 V...+10 V
031-1LB90	<b>SM 031 - Analog input</b> ▶ 2 inputs 16Bit ▶ Thermocouple ▶ Voltage -80mV...+80mV
031-1LD80	<b>SM 031 - Analog input</b> ▶ 4 inputs 16Bit ▶ 0 .. 3000 ohm resistance ▶ Resistance measurement with 2, 3, and 4-wires
Analog output modules	
032-1BB30	<b>SM 032 - Analog output</b> ▶ 2 outputs 12Bit ▶ Voltage 0...10 V
032-1BB40	<b>SM 032 - Analog output</b> ▶ 2 outputs 12Bit ▶ Current 0(4)...20 mA
032-1BB70	<b>SM 032 - Analog output</b> ▶ 2 outputs 12Bit ▶ Voltage -10 V...+10 V
032-1BD30	<b>SM 032 - Analog output</b> ▶ 4 outputs 12Bit ▶ Voltage 0...10 V
032-1BD40	<b>SM 032 - Analog output</b> ▶ 4 outputs 12Bit ▶ Current 0(4)...20mA
032-1BD70	<b>SM 032 - Analog output</b> ▶ 4 outputs 12Bit ▶ Voltage -10 V...+10 V
032-1CB30	<b>SM 032 - Analog output</b> ▶ 2 outputs 16Bit ▶ Voltage 0...10 V
032-1CB70	<b>SM 032 - Analog output</b> ▶ 2 outputs 16Bit ▶ Voltage -10 V...+10 V
032-1CD30	<b>SM 032 - Analog output</b> ▶ 4 outputs 16Bit ▶ Voltage 0...10 V
032-1CD70	<b>SM 032 - Analog output</b> ▶ 4 outputs 16Bit ▶ Voltage -10 V...+10 V
RS232/422/485 and other CPs	
040-1BA00	<b>CP 040 - Communication processor</b> ▶ RS232 interface
040-1CA00	<b>CP 040 - Communication processor</b> ▶ RS422/485 interface
Counter modules	
050-1BA00	<b>FM 050 - Counter module</b> ▶ 1 Counter 32 Bit (AB) ▶ DC 24 V
050-1BA10	<b>FM 050 - Counter module</b> ▶ 1 Counter 32 Bit (AB) ▶ DC 5 V
050-1BB00	<b>FM 050 - Counter module</b> ▶ 2 Counter 32 Bit (AB) ▶ DC 24 V
050-1BB30	<b>FM 050 - Counter module</b> ▶ 2 Counter 32 Bit (AB) ▶ DC 24 V



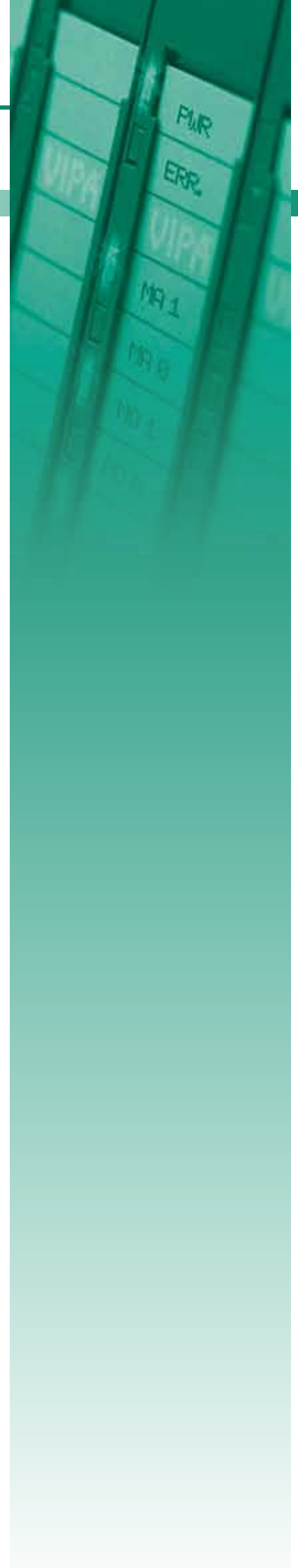
## SLIO

Order no.	Name/Description
<b>SSI modules</b>	
050-1BS00	<b>FM 050S - SSI module</b> ▶ SSI - Encoder ▶ Master or slave mode ▶ Encoder frequency 125 kHz...2 MHz ▶ µs time stamp for encoder value
<b>Fieldbus slave modules without I/Os</b>	
053-1CA00	<b>IM 053CAN - CANopen slave</b> ▶ CANopen slave ▶ 16 Rx and 16 Tx PDOs ▶ 2 SDOs ▶ PDO linking ▶ PDO mapping: fix
053-1DN00	<b>IM 053DN - DeviceNet slave</b> ▶ DeviceNet slave ▶ Group 2 only device ▶ Poll only device ▶ Baud rate: 125, 250 and 500kbit/s ▶ max. 64 peripheral modules
053-1DP00	<b>IM 053DP - PROFIBUS-DP slave</b> ▶ PROFIBUS-DP slave (DP-V0, DP-V1) ▶ For max. 64 peripheral modules ▶ 244 Byte input and 244 Byte output data
053-1EC00	<b>IM 053EC - EtherCAT slave</b> ▶ EtherCAT slave ▶ 64 peripheral modules ▶ RJ45 jack 100BaseTX
053-1MT00	<b>IM 053MT - Modbus/TCP slave</b> ▶ Modbus/TCP slave ▶ I/O configuration via fieldbus ▶ Adjustable I/O cycle (0.5...4 ms)
053-1PN00	<b>IM 053PN - PROFINET-IO slave</b> ▶ PROFINET-IO slave ▶ Transfer rate 100Mbit/s ▶ max. 64 peripheral modules
<b>SLIO starterKIT</b>	
800-1DK10	<b>SLIO Starter-Kit 1- IM053DP</b> ▶ consisting of: 1 x IM 053DP - PROFIBUS-DP slave, 1x CM 001 Clamps module (4xDC 24V, 4xDC 0V Clamps), 1 x SM 021 Digital Input (DI 8xDC 24V), 1 x SM 021 Digital Input (DI 4xDC 24V), 1x SM 022 Digital Output (DO 4xDC 24V, 0,5A), 1x SM 031 Analog Input (AI 2x12Bit, U), 1x SM 032 Analog Output (AO 2x12Bit, U), 1x PROFIBUS cable ready for connecting including 2x PB connector (972-0DP01 + 972-0DP10), 1x profil rail, 1x SLIO USB stick (with GSD files, Manual, Catalog (german/english), example programs), 1x transport case
<b>35 mm profile rail</b>	
290-1AF00	<b>35 mm profile rail</b> ▶ length 2000 mm
290-1AF30	<b>35 mm profile rail</b> ▶ length 530 mm
<b>Miscellaneous</b>	
000-0AA00	<b>SLIO bus cover</b> ▶ -
000-0AB00	<b>SLIO shield bus carrier</b> ▶ 10 pieces
<b>Manuals and operating instructions</b>	
HB300D	<b>Manual System SLIO - German</b> ▶ Manual System SLIO - Compendium, German HB300D_CP, HB300D_SM, HB300D_IM, HB300D_FM, HB300D_PS-CM
HB300E	<b>Manual System SLIO - English</b> ▶ Manual System SLIO - Compendium, English HB300E_CP, HB300E_SM, HB300E_IM, HB300E_FM, HB300E_PS-CM
HB300D_CP	<b>Manual System SLIO - German</b> ▶ CP - Communication processor
HB300E_CP	<b>Manual System SLIO - English</b> ▶ CP - Communication processor



# SLIO

Order no.	Name/Description
HB300D_IM	<b>Manual System SLIO - German</b> ‣ IM - Interface modules
HB300E_IM	<b>Manual System SLIO - English</b> ‣ IM - Interface modules
HB300D_FM	<b>Manual System SLIO - German</b> ‣ FM - Function modules
HB300E_FM	<b>Manual System SLIO - English</b> ‣ FM - Function modules
HB300D_SM-AIO	<b>Manual System SLIO - German</b> ‣ SM - Signal modules
HB300E_SM-AIO	<b>Manual System SLIO - English</b> ‣ SM - Signal modules
HB300D_SM-DIO	<b>Manual System SLIO - German</b> ‣ SM - Signal modules
HB300E_SM-DIO	<b>Manual System SLIO - English</b> ‣ SM - Signal modules
HB300D_PS-CM	<b>Manual System SLIO - German</b> ‣ PS-CM - Power modules / Clamp modules
HB300E_PS-CM	<b>Manual System SLIO - English</b> ‣ PS-CM - Power modules / Clamps modules





At a glance

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100V

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100V  
the compact control system

# System description 100V

## Structure and Function

100V is a very compact control system.

The system is designed for centralized and decentralized automation tasks.

The compact CPUs unify interfaces for communication and digital I/O peripherals in a casing.

By the use of up to four expansion modules the CPUs can be extended by up to 160 analog and digital I/O points.

With its space-saving assembly size it fits into almost any automation environment.

100V is immediately usable central and decentral without further components. The installation of the system and the enlargement of the periphery is extremely simple. The CPU is clipped onto a standard 35 mm profile rail. If the CPU needs to be expanded bus connectors are used for communication between the CPU and expansion modules on the profile rail in advance, after that the CPU and the 100V/200V expansion modules are snapped on - finished.

The scope of supply includes front connectors, labeling strips and, in 100V expansion modules, also bus connectors.



## Performance and Application

100V is designed for centralized and decentralized automation tasks in the manufacturing and process industries for the lower performance range.

## Programming

100V is programmed with VIPA WinPLC7 or with Siemens STEP7 in LAD, FBD and STL.

## Memory

The CPUs in the 100V have the work and load memory already integrated. Depending on the CPU version, users can choose from 8 kByte to 32 kByte work memory. In addition, MMC cards for storing program and data are supported.

## Functions

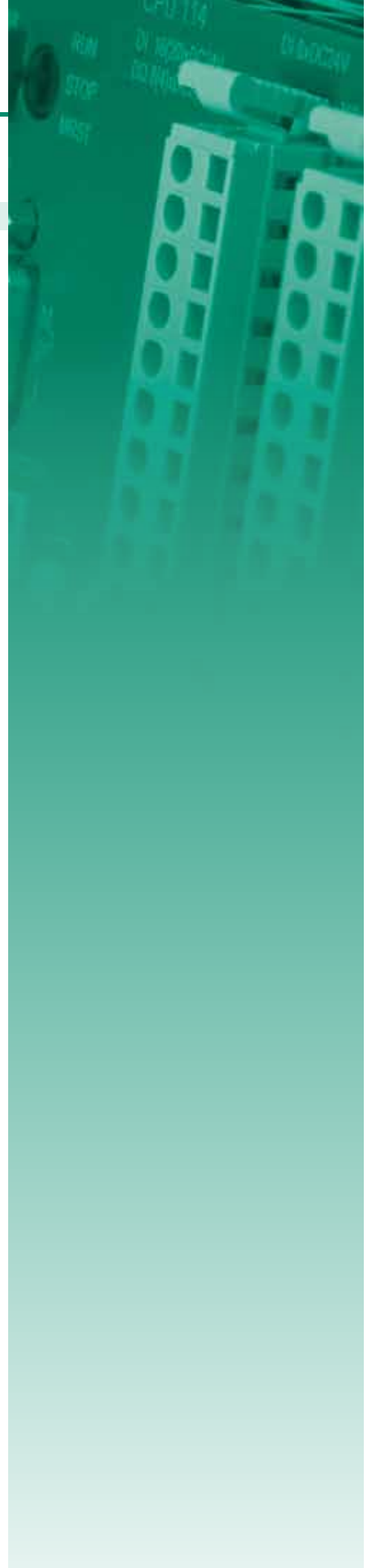
For the connection of sensors and actuators a variety of signaling modules in 100V, and 200V for acquiring digital and analog signals in and out of the process is available. Most of the signal modules from 200V are bus and functionally compatible to 100V.

Depending on the CPU, variant counter inputs and PWM outputs are integrated. Due to the counter inputs, complex and fast counting tasks in the manufacturing and process industries will be economically realized. The adjustable PWM outputs via potentiometer allow, for example, CCFLs to be "dimmed" or the speed of appropriate electric motors and fans to be regulated via impulses.

## Communication

For the connection of serial devices, e.g. scanner or printer, and for the integration of systems from other manufacturers, different CPU variants are available with integrated interfaces. 100V provides fieldbus slave modules for PROFIBUS-DP and CANopen, with which the system also serves as manufacturer-independent, central, but also as subordinate decentralized fieldbus slave unit.

The fieldbus slave modules are integrated via the device master files into existing fieldbus infrastructure.



# 100V

Order no.	Name/Description
CPUs STEP7 programmable	
112-4BH02	<b>CPU 112 - Micro PLC</b> ▶ 8 (12) inputs ▶ 8 (4) outputs ▶ 8 kB work memory, 16 kB load memory
114-6BJ02	<b>CPU 114 - Micro PLC</b> ▶ 16 (20) inputs ▶ 8 (4) outputs ▶ 16 kB work memory, 24 kB load memory
114-6BJ03	<b>CPU 114 - Micro PLC</b> ▶ 16 (20) inputs ▶ 8 (4) outputs ▶ 24 kB work memory, 32 kB load memory
114-6BJ04	<b>CPU 114 - Micro PLC</b> ▶ 16 (20) inputs ▶ 8 (4) outputs ▶ 32 kB work memory, 40 kB load memory
114-6BJ52	<b>CPU 114R - Micro PLC</b> ▶ 16 inputs ▶ 8 relay outputs ▶ AC 230 V/ DC 30 V ▶ 16 kB work memory, 24 kB load memory
114-6BJ53	<b>CPU 114R - Micro PLC</b> ▶ 16 inputs ▶ 8 relay outputs ▶ AC 230 V/ DC 30 V ▶ 24 kB work memory, 32 kB load memory
114-6BJ54	<b>CPU 114R - Micro PLC</b> ▶ 16 inputs ▶ 8 relay outputs ▶ AC 230 V/ DC 30 V ▶ 32 kB work memory, 40 kB load memory
115-6BL02	<b>CPU 115 - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 16 kB work memory, 24 kB load memory
115-6BL03	<b>CPU 115 - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 24 kB work memory, 32 kB load memory
115-6BL04	<b>CPU 115 - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 32 kB work memory, 40 kB load memory
CPUs STEP7 programmable, PtP	
115-6BL12	<b>CPU 115SER - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 16 kB work memory, 24 kB load memory ▶ RS232 interface
115-6BL13	<b>CPU 115SER - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 24 kB work memory, 32 kB load memory ▶ RS232 interface
115-6BL14	<b>CPU 115SER - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 32 kB work memory, 40 kB load memory ▶ RS232 interface
115-6BL32	<b>CPU 115SER - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 16 kB work memory, 24 kB load memory ▶ RS485 interface
115-6BL33	<b>CPU 115SER - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 24 kB work memory, 32 kB load memory ▶ RS485 interface
115-6BL34	<b>CPU 115SER - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 32 kB work memory, 40 kB load memory ▶ RS485 interface



## 100V

Order no.	Name/Description
CPUs STEP7 programmable, DP slave	
115-6BL22	<b>CPU 115DP - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 16 kB work memory, 24 kB load memory ▶ PROFIBUS-DP slave interface
115-6BL23	<b>CPU 115DP - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 24 kB work memory, 32 kB load memory ▶ PROFIBUS-DP slave interface
115-6BL24	<b>CPU 115DP - Micro PLC</b> ▶ 16 (20) inputs ▶ 16 (12) outputs ▶ 32 kB work memory, 40 kB load memory ▶ PROFIBUS-DP slave interface
Clamp modules	
101-4FH50	<b>CM 101 - Clamp modules</b> ▶ 8x11 clamps ▶ passive
Digital in/output modules	
123-4EH01	<b>EM 123 - Expansion module, digital</b> ▶ 8 inputs/ 8 outputs ▶ DC 24 V
123-4EJ01	<b>EM 123 - Expansion module, digital</b> ▶ 16 inputs/ 8 outputs ▶ DC 24 V
123-4EJ11	<b>EM 123 - Expansion module, digital</b> ▶ 16 inputs ▶ 8 relay outputs
123-4EJ20	<b>EM 123 - Expansion module, digital</b> ▶ 16 inputs ▶ AC 60...230 V ▶ 8 relay outputs
123-4EL01	<b>EM 123 - Expansion module, digital</b> ▶ 16 inputs/ 16 outputs ▶ Isolated
Analog in/output modules	
134-4EE00	<b>EM 134 - Expansion module, analog</b> ▶ 3 inputs U/I ▶ 1 input Pt, Ni, R ▶ 2 outputs U/I ▶ Configurable
Fieldbus slave modules with I/Os, DI	
151-4PH00	<b>SM 151 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 16 inputs
151-6PH00	<b>SM 151 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 16 inputs ▶ 4x11 clamps
151-6PL00	<b>SM 151 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 32 inputs
Fieldbus slave modules with I/Os, DO	
152-4PH00	<b>SM 152 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 16 outputs
152-6PH00	<b>SM 152 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 16 outputs ▶ 4x11 clamps
152-6PH50	<b>SM 152 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 16 relay outputs
152-6PL00	<b>SM 152 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 32 outputs

# 100V

Order no.	Name/Description
Fieldbus slave modules with I/Os, DIO	
153-4CF00	<b>SM 153 - CANopen slave, digital</b> ▶ CAN slave ▶ 8 channels as inputs or outputs ▶ 2x11 clamps
153-4CH00	<b>SM 153 - CANopen slave, digital</b> ▶ CAN slave ▶ 8 (12) inputs ▶ 4 (8) outputs
153-4PF00	<b>SM 153 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 8 channels as inputs or outputs ▶ 2x11 clamps
153-4PH00	<b>SM 153 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 8 inputs ▶ 8 outputs
153-6CH00	<b>SM 153 - CANopen slave, digital</b> ▶ CAN slave ▶ 8 (12) inputs ▶ 4 (8) outputs ▶ 4x11 clamps
153-6CL10	<b>SM 153 - CANopen slave, digital</b> ▶ CAN slave ▶ 24 inputs ▶ 8 outputs
153-6PH00	<b>SM 153 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 8 inputs ▶ 8 outputs ▶ 4x11 clamps
153-6PL00	<b>SM 153 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 16 inputs ▶ 16 outputs
153-6PL10	<b>SM 153 - PROFIBUS-DP slave, digital</b> ▶ PROFIBUS-DP slave ▶ 24 inputs ▶ 8 outputs
Bus connectors	
290-0AA10	<b>Bus connector</b> ▶ 1-tier
35 mm profile rail	
290-1AF00	<b>35 mm profile rail</b> ▶ length 2000 mm
290-1AF30	<b>35 mm profile rail</b> ▶ length 530 mm
Front connector	
292-1AF00	<b>Front connector</b> ▶ 10 pin with cage clamps (included in the scope of delivery of signal modules)
MMC memory	
953-0KX10	<b>MMC - MultiMediaCard</b> ▶ Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)



## 100V

Order no.	Name/Description
Manuals and operating instructions	
HB100D	<b>Manual System 100V - Compendium, German</b> ‣ HB100D_CM, HB100D_EM, HB100D_SM-PB, HB100D_SM-CAN
HB100D_CM	<b>Manual System 100V - German</b> ‣ CM - Clamps modules
HB100D_CPU	<b>Manual System 100V - German</b> ‣ CPU 11x, incl. operations list
HB100D_EM	<b>Manual System 100V - German</b> ‣ EM - Expansion modules
HB100D_SM-CAN	<b>Manual System 100V - German</b> ‣ SM-CAN - Block I/O CAN
HB100D_SM-PB	<b>Manual System 100V - German</b> ‣ SM-PB - Block I/O PROFIBUS
HB100E	<b>Manual System 100V - Compendium, English</b> ‣ HB100E_CM, HB100E_EM, HB100E_SM-PB, HB100E_SM-CAN
HB100E_CM	<b>Manual System 100V - English</b> ‣ CM - Clamps modules
HB100E_CPU	<b>Manual System 100V - English</b> ‣ CPU 11x, incl. operations list
HB100E_EM	<b>Manual System 100V - English</b> ‣ EM - Expansion modules
HB100E_SM-CAN	<b>Manual System 100V - English</b> ‣ SM-CAN - Block I/O CAN
HB100E_SM-PB	<b>Manual System 100V - English</b> ‣ SM-PB - Block I/O PROFIBUS



At a glance

System description 200V  
200V

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200V

the modular control system

# System description 200V

## Structure and Concept

200V is a highly compact and modular expandable system.

The system is designed for centralized and decentralized automation tasks.

With a central extension of a maximum of 32 modules directly to the CPU and up to 126 fieldbus slave modules with a further maximum of 32 modules per fieldbus slave module, 200V is highly flexible. The module size allows use in almost any automation environment.

The assembly is extremely simple. The bus connector for communication between the modules and the CPU can be easily inserted into a 35 mm standard rail, and then 200V modules are snapped on – finished.

Included with the supply of the signal and function modules are front connectors and labeling strips.



## Performance and Application

200V is designed for centralized and decentralized automation tasks in the manufacturing and process industry up to medium power range.

## Programming

200V is programmed with VIPA WinPLC7 or with Siemens STEP7 in LAD, FBD and STL.

## Memory

The CPUs in 200V have the work and load memory already integrated. Depending on the CPU version, users can choose from 48 kByte to 128 kByte work memory. In addition, MMC cards for storing program and data are supported.

## Functions

For the connection of sensors and actuators, a variety of signaling modules are available for acquiring digital and analog signals in and out of the process.

For positioning tasks and path measurement various SSI, servo and stepper modules can be chosen.

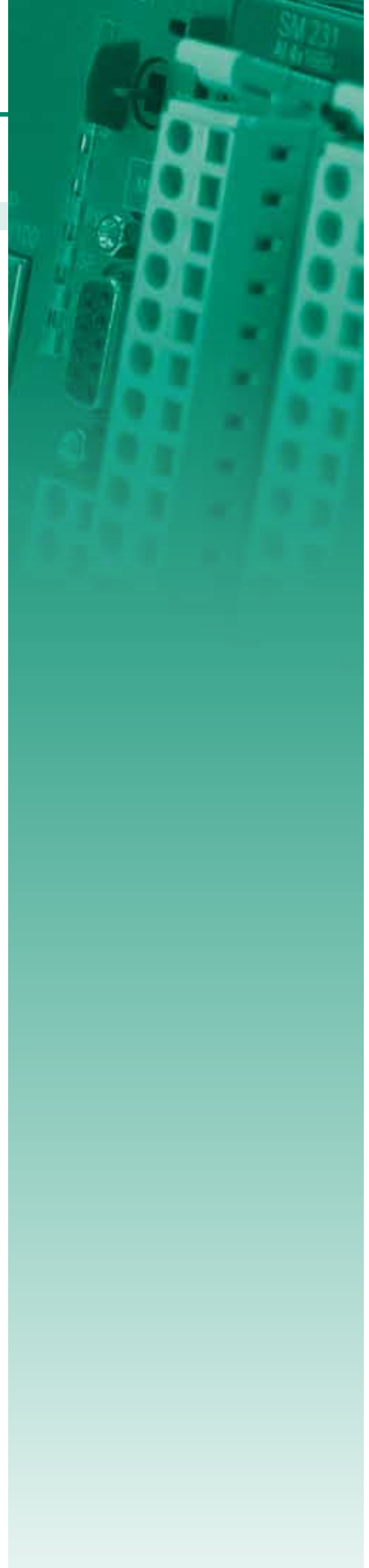
The counter modules in 200V also support complex and fast counting tasks in the manufacturing and process industry to calculate the comparative features and the connection of sensors, such as photoelectric barriers.

## Communication

For the connection of serial devices, e.g. scanner or printer, and for the integration of systems from other manufacturers, the system offers a full complement of serial communication processors.

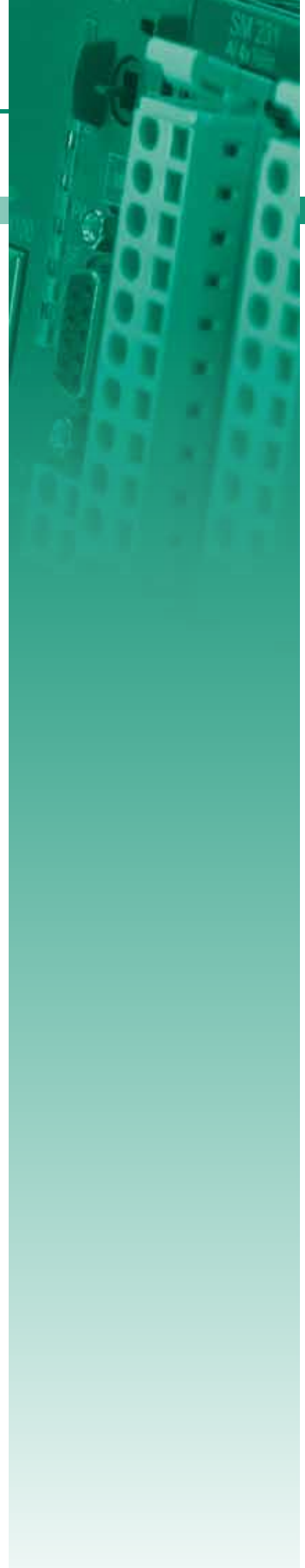
Ethernet communication processors incorporates 200V horizontally and vertically into the existing network structures, and thus make all relevant data connected to the MES and ERP systems available.

200V possesses fieldbus master and slave modules with various fieldbus protocols and can therefore function, manufacturer-independent, as master control as well as subordinate fieldbus slave unit.



# 200V

Order no.	Name/Description
CPUs STEP7 programmable, standard	
214-1BA03	<b>CPU 214 - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul>
214-1BC03	<b>CPU 214 - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ 48 kB work memory</li> <li>‣ 80 kB load memory</li> </ul>
215-1BA03	<b>CPU 215 - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>
CPUs STEP7 programmable, NET-CPUs	
214-2BE03	<b>CPU 214PG - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Twisted pair Ethernet via RJ45</li> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul> Coming soon
214-2BT13	<b>CPU 214NET - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Ethernet CP 243</li> <li>‣ Twisted pair Ethernet via RJ45</li> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul>
215-2BE03	<b>CPU 215PG - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Twisted pair Ethernet via RJ45</li> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>
215-2BT13	<b>CPU 215NET - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Ethernet CP 243</li> <li>‣ Twisted pair Ethernet via RJ45</li> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>
CPUs STEP7 programmable, PtP	
214-2BS03	<b>CPU 214SER - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Serial communication via 2x RS232</li> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul>
214-2BS13	<b>CPU 214SER - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Serial communication via RS232</li> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul>
214-2BS33	<b>CPU 214SER - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Serial communication via RS485</li> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul>
215-2BS03	<b>CPU 215SER - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Serial communication via 2x RS232</li> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>
215-2BS13	<b>CPU 215SER - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Serial communication via RS232</li> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>
215-2BS33	<b>CPU 215SER - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ Serial communication via RS485</li> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>
CPUs STEP7 programmable, DP master	
214-2BM03	<b>CPU 214DPM - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ PROFIBUS-DP master</li> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul>
215-2BM03	<b>CPU 215DPM - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ PROFIBUS-DP master</li> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>
CPUs STEP7 programmable, DP slave	
214-2BP03	<b>CPU 214DP - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ PROFIBUS-DP slave</li> <li>‣ 96 kB work memory</li> <li>‣ 144 kB load memory</li> </ul>
215-2BP03	<b>CPU 215DP - PLC CPU</b> <ul style="list-style-type: none"> <li>‣ PROFIBUS-DP slave</li> <li>‣ 128 kB work memory</li> <li>‣ 192 kB load memory</li> </ul>



## 200V

Order no.	Name/Description
CPUs STEP7 programmable, CAN master	
214-2CM03	<b>CPU 214CAN - PLC CPU</b> ▶ CANopen master ▶ 96 kB work memory ▶ 144 kB load memory
215-2CM03	<b>CPU 215CAN - PLC CPU</b> ▶ CANopen master ▶ 128 kB work memory ▶ 192 kB load memory
Clamp modules	
201-1AA00	<b>CM 201 - Double clamps module</b> ▶ Dual terminals ▶ 2x11 clamps, gray/gray ▶ Passive
201-1AA10	<b>CM 201 - Double clamps module</b> ▶ Dual terminals ▶ 2x11 clamps, green-yellow/gray ▶ Passive
201-1AA20	<b>CM 201 - Double clamps module</b> ▶ Dual terminals ▶ 2x11 clamps, red/blue ▶ Passive
201-1AA40	<b>CM 201 - 4-tier clamps module</b> ▶ Quad terminals ▶ 2x5 clamps gray/gray ▶ 2x6 clamps red/blue ▶ Passive
Power supply	
207-1BA00	<b>PS 207 - Power supply</b> ▶ AC 100...240 V w/o manual intervention ▶ Output voltage DC 24 V
207-2BA20	<b>PS 207 - Power supply</b> ▶ AC 100...240 V w/o manual intervention ▶ Output voltage DC 24 V ▶ Terminal module with 2x11 clamps
Digital input modules	
221-1BF00	<b>SM 221 - Digital input</b> ▶ 8 inputs
221-1BF10	<b>SM 221 - Digital input</b> ▶ 8 inputs, ▶ Delay time 0.2 ms
221-1BF21	<b>SM 221 - Digital input</b> ▶ 8 alarm inputs ▶ Delay time 0.2 ms
221-1BF30	<b>SM 221 - Digital input ECO</b> ▶ 8 inputs
221-1BF50	<b>SM 221 - Digital input</b> ▶ 8 inputs ▶ Active low input
221-1BH00	<b>SM 221 - Digital input</b> ▶ 16 inputs ▶ LED status display on the conversion module UB4x
221-1BH10	<b>SM 221 - Digital input</b> ▶ 16 inputs
221-1BH30	<b>SM 221 - Digital input ECO</b> ▶ 16 inputs
221-1BH50	<b>SM 221 - Digital input</b> ▶ 16 inputs ▶ Active low input ▶ LED status display on conversion module UB4x
221-1BH51	<b>SM 221 - Digital input</b> ▶ 16 inputs ▶ Active low input
221-1FD00	<b>SM 221 - Digital input</b> ▶ 4 inputs ▶ AC/DC 90...230 V ▶ Isolation per channel
221-1FF20	<b>SM 221 - Digital input</b> ▶ 8 inputs ▶ AC/DC 60...230 V

# 200V

Order no.	Name/Description
221-1FF30	<b>SM 221 - Digital input</b> ▶ 8 inputs ▶ AC/DC 24...48 V
221-1FF40	<b>SM 221 - Digital input</b> ▶ 8 inputs ▶ AC 230 V ▶ Hysteresis
221-1FF50	<b>SM 221 - Digital input</b> ▶ 8 inputs ▶ AC 180...265 V
221-2BL10	<b>SM 221 - Digital input</b> ▶ 32 inputs
KSD221-1BH00	<b>SM 221 Set - Digital input</b> ▶ 16 inputs ▶ LED status display on conversion module UB48D
KS221-1BH00	<b>SM 221 Set - Digital input</b> ▶ 16 inputs ▶ LED status display on conversion module UB48
Digital input with counter	
221-1BH20	<b>SM 221 - Digital input</b> ▶ 16 inputs ▶ 2 inputs are configurable as counter ▶ LED status display
Digital output modules	
222-1BF00	<b>SM 222 - Digital output</b> ▶ 8 outputs ▶ Output current 1 A
222-1BF10	<b>SM 222 - Digital output</b> ▶ 8 outputs ▶ Output current 2 A
222-1BF20	<b>SM 222 - Digital output</b> ▶ 8 outputs ▶ Isolation in 4 groups per 2 outputs ▶ Output current 2 A
222-1BF30	<b>SM 222 - Digital output ECO</b> ▶ 8 outputs ▶ Output current 0.5 A
222-1BF50	<b>SM 222 - Digital output</b> ▶ 8 Low-Side outputs ▶ Output current 0.5 A
222-1BH00	<b>SM 222 - Digital output</b> ▶ 16 outputs ▶ Output current 0.5 A ▶ LED status display on conversion module UB4x
222-1BH10	<b>SM 222 - Digital output</b> ▶ 16 outputs ▶ Output current 1 A
222-1BH20	<b>SM 222 - Digital output</b> ▶ 16 outputs ▶ Output current 2 A
222-1BH30	<b>SM 222 - Digital output ECO</b> ▶ 16 outputs ▶ Output current 0.5 A
222-1BH50	<b>SM 222 - Digital output</b> ▶ 16 Low-Side outputs ▶ Output current 0.5 A
222-1BH51	<b>SM 222 - Digital output</b> ▶ 16 Low-Side outputs ▶ Output current 0.5 A
222-1DB00	<b>SM 222 - Digital output</b> ▶ 2 outputs ▶ AC 100...240 V ▶ Output current 2 A ▶ Software dimmer for resistive, inductive or capacitive load ▶ Frequency range 47...63 Hz
222-1FD10	<b>SM 222 - Digital output</b> ▶ 8 isolated solid-state outputs ▶ AC 230 V/ DC 400 V ▶ Output current 0.5 A

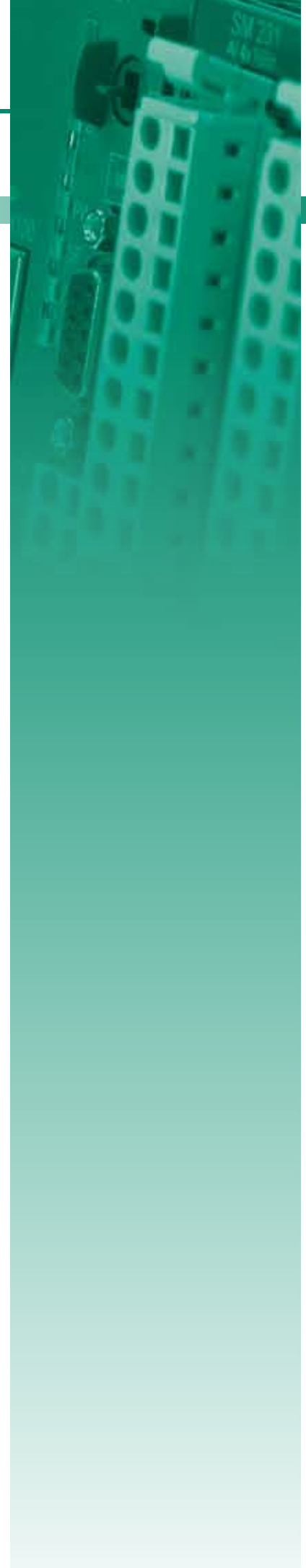


## 200V

Order no.	Name/Description
222-1FF00	<b>SM 222 - Digital output</b> ▶ 8 solide-state outputs ▶ AC 230 V/ DC 400 V ▶ Output current 0.5 A
222-1HD10	<b>SM 222 - Digital output</b> ▶ 4 isolated relay outputs ▶ AC 230 V/ DC 30 V ▶ Output current 5 A
222-1HD20	<b>SM 222 - Digital output</b> ▶ 4 isolated relay outputs ▶ AC 230 V/ DC 30 V ▶ Output current 16 A
222-1HF00	<b>SM 222 - Digital output</b> ▶ 8 relay outputs ▶ AC 230 V/ DC 30 V ▶ Output current 5 A
222-2BL10	<b>SM 222 - Digital output</b> ▶ 32 outputs ▶ Output current 1 A
KSD222-1BH00	<b>SM 222 Set - Digital output</b> ▶ 16 outputs ▶ LED status display on conversion module UB48D ▶ Output current 0.5 A
KS222-1BH00	<b>SM 222 Set - Digital output</b> ▶ 16 outputs ▶ LED status display on conversion module UB48 ▶ Output current 0.5 A
Digital in/output modules	
223-1BF00	<b>SM 223 - Digital in-/output</b> ▶ 8 channels (as input or output) ▶ Output current 1 A ▶ Diagnostics function
223-2BL10	<b>SM 223 - Digital in-/output</b> ▶ 16 inputs/ 16 outputs ▶ DC 24 V ▶ Output current 1 A
Analog input modules	
231-1BD30	<b>SM 231 - Analog input ECO</b> ▶ 4 inputs ▶ Configurable ▶ Voltage +/-10 V
231-1BD40	<b>SM 231 - Analog input ECO</b> ▶ 4 inputs ▶ Configurable ▶ Current 4...20 mA, +/-20 mA
231-1BD53	<b>SM 231 - Analog input</b> ▶ 4 inputs ▶ Configurable ▶ Voltage, current ▶ Resistance ▶ Resistance thermometer, thermocouple
231-1BD60	<b>SM 231 - Analog input</b> ▶ 4 input 12 bit ▶ Current 4...20 mA ▶ Potential separated per channel
231-1BD70	<b>SM 231 - Analog input</b> ▶ 4 input 12 bit ▶ Voltage +/-10 V ▶ Potential separated per channel
231-1BF00	<b>SM 231 - Analog input</b> ▶ 8 inputs ▶ Configurable ▶ Voltage 0...60 mV ▶ Resistance thermometer, thermocouple
231-1FD00	<b>SM 231 - Analog input FAST</b> ▶ 4 fast inputs ▶ Configurable ▶ Voltage, current ▶ Cycle time 0.8 ms

# 200V

Order no.	Name/Description
<b>Analog output modules</b>	
232-1BD30	<b>SM 232 - Analog output ECO</b> ▶ 4 outputs ▶ Configurable ▶ Voltage +/-10 V, 0..10 V
232-1BD40	<b>SM 232 - Analog output ECO</b> ▶ 4 outputs ▶ Configurable ▶ Current 0(4)...20mA
232-1BD51	<b>SM 232 - Analog output</b> ▶ 4 outputs ▶ Configurable ▶ Voltage, current
<b>Analog in/output modules</b>	
234-1BD50	<b>SM 234 - Analog in-/output</b> ▶ 2 inputs/2 outputs ▶ Configurable ▶ Voltage, current
234-1BD60	<b>SM 234 - Analog in-/output</b> ▶ 4 inputs/2 outputs ▶ Configurable ▶ Voltage, current ▶ Resistance, resistance thermometer
<b>Combination modules</b>	
238-2BC00	<b>SM 238C - Digital in-/output, counter, analog in-/output</b> ▶ 16 (12) digital inputs ▶ 0 (4) digital outputs ▶ max. 3 counter ▶ 4 analog inputs ▶ 2 analog outputs
<b>RS232/422/485 and other CPs</b>	
240-1DA10	<b>CM 240 - Mini-switch</b> ▶ 4 Ports for 10/100 MBit/s ▶ "plug and play" through Auto-MDI/MDIX-crossover for 100BASE-TX and 10BASE-T ▶ LEDs for activity, speed and collision
240-1BA20	<b>CP 240 - Communication processor</b> ▶ RS232 interface
240-1CA20	<b>CP 240 - Communication processor</b> ▶ RS485 interface
240-1CA21	<b>CP 240 - Communication processor</b> ▶ RS422/485 interface
240-1EA20	<b>CP 240 - Communication processor</b> ▶ 16 Byte parameter data ▶ The transceiver module works at 868.3 MHz
240-1FA20	<b>CP 240 - Communication processor</b> ▶ Standardized bus system acc. DIN 1434-3 ▶ 6 slaves connectable
<b>Fieldbus master modules</b>	
208-1CA00	<b>IM 208CAN - CANopen master</b> ▶ CANopen master ▶ 125 CAN slaves connectable ▶ Project engineering under VIPA WinCoCT ▶ 40 Transmit PDOs, 40 Receive PDOs
208-1DP01	<b>IM 208DP - PROFIBUS-DP master</b> ▶ PROFIBUS-DP master ▶ 125 DP slaves connectable
208-1DP11	<b>IM 208DPO - PROFIBUS-DP master</b> ▶ PROFIBUS-DP master ▶ 16 DP slaves connectable ▶ FO interface
<b>Counter modules</b>	
250-1BA00	<b>FM 250 - Counter module</b> ▶ 2/4 channels with 32/16 Bit ▶ DC 24 V or via backplane bus ▶ Free configurable DC 24 V outputs (1 A) ▶ Up to 1 MHz
<b>SSI modules</b>	
250-1BS00	<b>FM 250S - SSI module</b> ▶ 1 SSI channel ▶ Direct power supply to the SSI transducer ▶ Baud rate: 100/300/600 kBit/s (default: 300 kBit/s) ▶ 2 configurable digital outputs, one may be used as hold input



## 200V

Order no.	Name/Description
<b>Positioning modules</b>	
253-1BA00	<b>FM 253 - Positioning module</b> ▶ Positioning module for 1axis drive with stepper ▶ 3 inputs for connecting end switches and 2 outputs
254-1BA00	<b>FM 254 - Positioning module</b> ▶ Positioning module for 1axis drive with servo ▶ For drives with an analog set point interface (+/-10 V control voltage) ▶ 3 inputs for connecting end switches and 2 outputs
<b>Row interface connection</b>	
260-1AA00	<b>IM 260 - Interface module</b> ▶ Only be used in conjunction with the PC 288 or a CPU
261-1CA00	<b>IM 261 - Interface module</b> ▶ Only be used in conjunction with the PC 288 or a CPU
<b>Fieldbus slave modules without I/Os</b>	
253-1CA01	<b>IM 253CAN - CANopen slave</b> ▶ CANopen slave ▶ 10 Rx and 10 Tx PDO ▶ 2 SDOs ▶ PDO linking ▶ PDO mapping
253-1CA30	<b>IM 253CAN - CANopen slave ECO</b> ▶ CANopen slave ▶ 10 Rx and 10 Tx PDO ▶ 2 SDOs ▶ PDO linking ▶ PDO mapping
253-1DN00	<b>IM 253DN - DeviceNET slave</b> ▶ Group 2 only Device - employs predefined connection set ▶ Baud rates: 125, 250, 500 kBit/s ▶ For max. 32 peripheral modules (8 analog)
253-1DP01	<b>IM 253DP - PROFIBUS-DP slave</b> ▶ PROFIBUS-DP slave (DP-V0, DP-V1) ▶ For max. 32 peripheral modules (16 analog) ▶ 244 Byte input and 244 Byte output data
253-1DP11	<b>IM 253DPO - PROFIBUS-DP slave</b> ▶ PROFIBUS-DP slave (DP-V0, DP-V1) ▶ For max. 32 peripheral modules (16 analog) ▶ 244 Byte input and 244 Byte output data
253-1DP31	<b>IM 253DP - PROFIBUS-DP slave ECO</b> ▶ PROFIBUS-DP slave (DP-V0, DP-V1) ▶ For max. 8 peripheral modules ▶ 244 Byte input and 244 Byte output data
253-2DP50	<b>IM 253DPR - PROFIBUS-DP slave</b> ▶ PROFIBUS-DP slave ▶ 2 redundant channels ▶ For max. 32 peripheral modules (16 analog) ▶ 152 Byte input and 152 Byte output data
253-1IB00	<b>IM 253IBS - INTERBUS slave</b> ▶ INTERBUS slave ▶ For 16 input and 16 output modules
253-1NE00	<b>IM 253NET - Ethernet slave</b> ▶ Ethernet coupler with ModbusTCP and Siemens S5 Header protocol ▶ For max. 32 peripheral modules ▶ Max. 256 Byte I/O data ▶ RJ45 jack 100BaseTX, 10BaseT
<b>Bus connectors</b>	
290-0AA10	<b>Bus connector</b> ▶ 1-tier
290-0AA20	<b>Bus connector</b> ▶ 2-tier
290-0AA40	<b>Bus connector</b> ▶ 4-tier
290-0AA80	<b>Bus connector</b> ▶ 8-tier
<b>35 mm profile rail</b>	
290-1AF00	<b>35 mm profile rail</b> ▶ length 2000 mm
290-1AF30	<b>35 mm profile rail</b> ▶ length 530 mm

# 200V

Order no.	Name/Description
<b>Front connector</b>	
292-1AF00	<b>Front connector</b> ‣ 10 pin with cage clamps (included in the scope of delivery of signal modules)
292-1AH00	<b>Front connector</b> ‣ 18 pin with cage clamps (included in the scope of delivery of signal modules)
<b>Cables</b>	
260-1XY05	<b>Connection cable</b> ‣ Connection cable for interface modules, length 0.5 m
260-1XY10	<b>Connection cable</b> ‣ Connection cable for interface modules, length 1.0 m
260-1XY15	<b>Connection cable</b> ‣ Connection cable for interface modules, length 1.5 m
260-1XY20	<b>Connection cable</b> ‣ Connection cable for interface modules, length 2.0 m
260-1XY25	<b>Connection cable</b> ‣ Connection cable for interface modules, length 2.5 m
<b>Antennas, connectors etc.</b>	
970-0CM00	<b>CM 240 - Jack</b> ‣ For communication processor CM 240 - mini switch, external DC 24 V power supply
240-0EA00	<b>CP 240 - Portable Antenna</b> ‣ EnOcean Antenna portable, incl. SMA connector
240-0EA10	<b>CP 240 - Magnetic base antenna</b> ‣ EnOcean Antenna magnetic base, incl. 150 cm cable and SMA connector
<b>MMC memory</b>	
953-0KX10	<b>MMC - MultiMediaCard</b> ‣ Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)
<b>Labelling</b>	
292-1XY10	<b>Labelling cards</b> ‣ I/O labelling, perforated, 10 sheets each 8 cards
292-1XY20	<b>Clip-on cards</b> ‣ Module labelling, perforated, 10 sheets each 108 cards
292-1XY00	<b>Labelling cards</b> ‣ I/O labelling, with transparent cover foil, 10 pieces
<b>Manuals and operating instructions</b>	
HB97D	<b>Manual System 200V - Compendium, German</b> ‣ HB97D_PS-CM, HB97D_SM, HB97D_CP, HB97D_IM, HB97D_FM
HB97D_CP	<b>Manual System 200V - German</b> ‣ CP 240 Communication processors
HB97D_CPU	<b>Manual System 200V - German</b> ‣ CPU 21x, incl. operations list
HB99D_CPU	<b>Manual System 200V - German</b> ‣ CPU 24x, incl. operations list
HB97D_FM	<b>Manual System 200V - German</b> ‣ FM - Function modules
HB97D_IM	<b>Manual System 200V - German</b> ‣ IM - Interface modules
HB97D_PS-CM	<b>Manual System 200V - German</b> ‣ PS-CM - Power supply / Expansion modules
HB97D_SM	<b>Manual System 200V - German</b> ‣ SM - Signal modules
HB97E	<b>Manual System 200V - Compendium, English</b> ‣ HB97E_PS-CM, HB97E_SM, HB97E_CP, HB97E_IM, HB97E_FM
HB97E_CP	<b>Manual System 200V - English</b> ‣ CP 240 Communication processors
HB97E_CPU	<b>Manual System 200V - English</b> ‣ CPU 21x, incl. operations list
HB99E_CPU	<b>Manual System 200V - English</b> ‣ CPU 24x, incl. operations list
HB97E_FM	<b>Manual System 200V - English</b> ‣ FM - Function modules
HB97E_IM	<b>Manual System 200V - English</b> ‣ IM - Interface modules



## 200V

Order no.	Name/Description
HB97E_PS-CM	<b>Manual System 200V - English</b> ‣ PS-CM - Power supply / Expansion modules
HB97E_SM	<b>Manual System 200V - English</b> ‣ SM - Signal modules
Spare parts	
214-1BA02	<b>CPU 214 - PLC CPU</b> ‣ 48 kB work memory ‣ 80 kB load memory
214-1BC02	<b>CPU 214 - PLC CPU</b> ‣ 32 kB work memory ‣ 40 kB load memory
214-2BM02	<b>CPU 214DPM - PLC CPU</b> ‣ PROFIBUS-DP master ‣ 48 kB work memory ‣ 80 kB load memory
214-2BP02	<b>CPU 214DP - PLC CPU</b> ‣ PROFIBUS-DP slave ‣ 48 kB work memory ‣ 80 kB load memory
214-2BS02	<b>CPU 214SER - PLC CPU</b> ‣ Serial communication via 2x RS232 ‣ 48 kB work memory ‣ 80 kB load memory
214-2BS12	<b>CPU 214SER - PLC CPU</b> ‣ Serial communication via RS232 ‣ 48 kB work memory ‣ 80 kB load memory
214-2BS32	<b>CPU 214SER - PLC CPU</b> ‣ Serial communication via RS485 ‣ 48 kB work memory ‣ 80 kB load memory
214-2BT10	<b>CPU 214NET - PLC CPU</b> ‣ Ethernet CP 243 ‣ Twisted pair Ethernet via RJ45 ‣ 48 kB work memory ‣ 80 kB load memory
214-2CM02	<b>CPU 214CAN - PLC CPU</b> ‣ CANopen master ‣ 48 kB work memory ‣ 80 kB load memory
215-1BA02	<b>CPU 215 - PLC CPU</b> ‣ 96 kB work memory ‣ 144 kB load memory
215-2BM02	<b>CPU 215DPM - PLC CPU</b> ‣ PROFIBUS-DP master ‣ 96 kB work memory ‣ 144 kB load memory
215-2BP02	<b>CPU 215DP - PLC CPU</b> ‣ PROFIBUS-DP slave ‣ 96 kB work memory ‣ 144 kB load memory
215-2BS02	<b>CPU 215SER - PLC CPU</b> ‣ Serial communication via 2x RS232 ‣ 96 kB work memory ‣ 144 kB load memory
215-2BS12	<b>CPU 215SER - PLC CPU</b> ‣ Serial communication via RS232 ‣ 96 kB work memory ‣ 144 kB load memory
215-2BS32	<b>CPU 215SER - PLC CPU</b> ‣ Serial communication via RS485 ‣ 96 kB work memory ‣ 144 kB load memory
215-2BT10	<b>CPU 215NET - PLC CPU</b> ‣ Ethernet CP 243 ‣ Twisted pair Ethernet via RJ45 ‣ 96 kB work memory ‣ 144 kB load memory

# 200V

Order no.	Name/Description
215-2CM02	<b>CPU 215CAN - PLC CPU</b> † CANOpen master † 96 kB work memory † 144 kB load memory
216-1BA02	<b>CPU 216 - PLC CPU</b> † 128 kB work memory † 192 kB load memory
216-2BT10	<b>CPU 216NET - PLC CPU</b> † Ethernet CP 243 † Twisted pair Ethernet via RJ45 † 128 kB work memory † 192 kB load memory
216-2BM02	<b>CPU 216DPM - PLC CPU</b> † PROFIBUS-DP master † 128 kB work memory † 192 kB load memory
216-2BS02	<b>CPU 216SER - PLC CPU</b> † Serial communication via 2x RS232 † 128 kB work memory † 192 kB load memory
216-2BS12	<b>CPU 216SER - PLC CPU</b> † Serial communication via RS232 † 128 kB work memory † 192 kB load memory
216-2BS32	<b>CPU 216SER - PLC CPU</b> † Serial communication via RS485 † 128 kB work memory † 192 kB load memory
216-2BP02	<b>CPU 216DP - PLC CPU</b> † PROFIBUS-DP slave † 128 kB work memory † 192 kB load memory
216-2CM02	<b>CPU 216CAN - PLC CPU</b> † CANOpen master † 128 kB work memory † 192 kB load memory







At a glance

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300S

the High-Speed control system

# System description 300S

## Structure and Concept

300S is both a compact and a modular expandable system.

300S is designed for centralized and decentralized automation tasks in the manufacturing and process industry up to the highest power range.

With a central extension of up to 32 modules directly to the CPU and up to 126 fieldbus slave modules, it is deployable almost anywhere. The module size allows use in almost any automation environment.

The assembly is extremely simple. First, the backplane bus connectors for communication between the modules and the CPU are entered from behind and then the modules are individually placed and secured on the rail and screwed down.

The backplane bus connectors are supplied with the I/O modules. In the SPEED-Bus, the bus connection takes place via a SPEED-Bus terminal strip (PCB) integrated in the profile rail. The SPEED-Bus modules are mounted on the left of the CPU - depending on bus length 2, 6 or 10 SPEED-Bus modules can be deployed.



## Performance and Application

300S is designed for centralized and decentralized automation tasks. The integrated SPEED7 ASIC system 300S is among the world's fastest automation systems. A wide range of CPU options makes the system universally deployable. The selection ranges from C-class CPUs with integrated I/O peripherals for smaller applications up to CPU versions with built-in Ethernet, fieldbus master interfaces, and High-Speed-Bus.

The CPU versions with integrated SPEED-Bus have been especially developed for automation tasks with very high demands on performance. Furthermore special high-speed modules for communication and for digital as well as analog signal processing are available.

## Programming

300S is programmed with VIPA WinPLC7 or with Siemens STEP7 in LAD, FBD and STL.

## Memory

The CPUs in 300S have the work and load memory already integrated. Depending on the CPU variant different work memory are available for the user. The work and load memory can be adapted to the needs of memory card by plugging in an MCC memory expansion card. To back up program and data standard MMC cards are also supported.

## Functions

For the connection of sensors and actuators, a variety of signal modules are available for recording digital and analog signals into and out of the process is available - also as high-speed modules for SPEED-Bus.

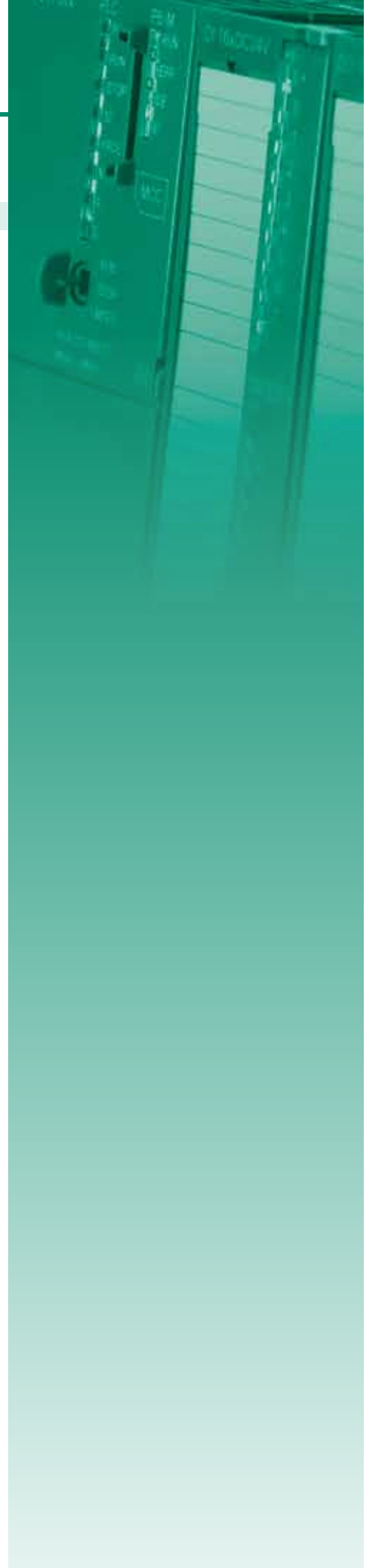
Measurements and the control of pressures, temperatures, flow rates and levels are realized at the highest level with the measurement and control modules.

## Communication

An Ethernet programming interface is integrated on all CPUs in system 300S. Ethernet communication processors link 300S horizontally and vertically into network structures. Therefore, all relevant data are made available to the connected host systems.

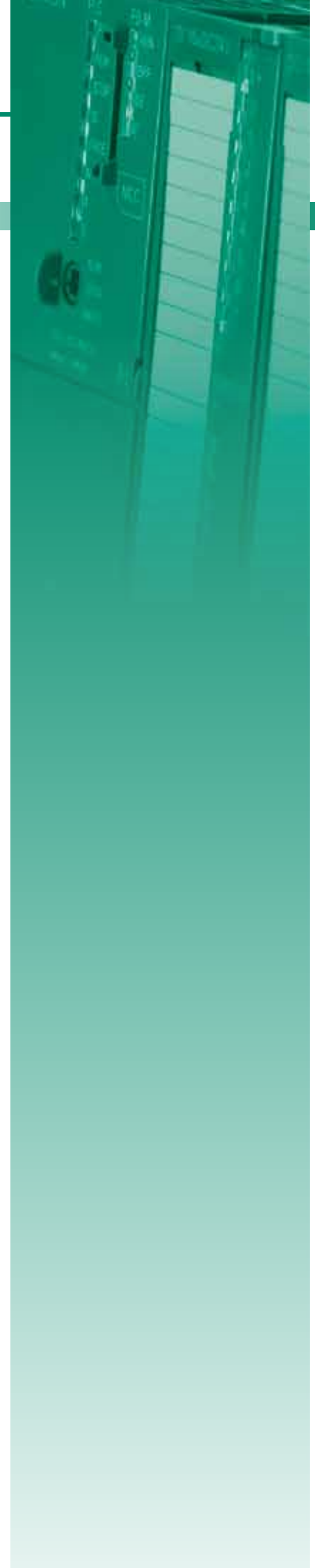
300S offers fieldbus master and slave modules with different fieldbus protocols and can act as a master controller or as a subordinate fieldbus slave unit.

Multi-master applications with very high performance of communication can be implemented via the fieldbus master module for SPEED-Bus.



# 300S

Order no.	Name/Description
CPUs STEP7 programmable, standard	
314-2AG12	<b>CPU 314SB/DPM - SPEED7 technology</b> † SPEED7 technology † 256 kB work memory † Memory extension (max. 512 kB) † PROFIBUS-DP master / PtP (switchable)
314-2AG13	<b>CPU 314SB/DPM - SPEED7 technology</b> † SPEED7 technology † 256 kB work memory † Memory extension (max. 512 kB) † PROFIBUS-DP master / PtP (switchable) † Configurable via TIA-Portal Coming soon
314-2BG03	<b>CPU 314SE/DPS - SPEED7 technology</b> † SPEED7 technology † 128 kB work memory † Memory extension (max. 512 kB) † PROFIBUS-DP slave / PtP (switchable) † Configurable via TIA-Portal
315-2AG12	<b>CPU 315SB/DPM - SPEED7 technology</b> † SPEED7 technology † 1 MB work memory † Memory extension (max. 2 MB) † PROFIBUS-DP master / PtP (switchable)
315-2AG13	<b>CPU 315SB/DPM - SPEED7 technology</b> † SPEED7 technology † 1 MB work memory † Memory extension (max. 2 MB) † PROFIBUS-DP master / PtP (switchable) † Configurable via TIA-Portal
317-2AJ12	<b>CPU 317SE/DPM - SPEED7 technology</b> † SPEED7 technology, SPEED-Bus † 2 MB work memory † Memory extension (max. 8 MB) † PROFIBUS-DP master / PtP (switchable)
317-2AJ13	<b>CPU 317SE/DPM - SPEED7 technology</b> † SPEED7 technology, SPEED-Bus † 2 MB work memory † Memory extension (max. 8 MB) † PROFIBUS-DP master / PtP (switchable) † Configurable via TIA-Portal
CPUs STEP7 programmable, NET-CPUs	
315-4NE12	<b>CPU 315SN/NET - SPEED7 technology</b> † SPEED7 technology † 1 MB work memory † Memory extension (max. 2 MB) † PROFIBUS-DP master / PtP (switchable) † CP 343 integrated
315-4NE13	<b>CPU 315SN/NET - SPEED7 technology</b> † SPEED7 technology † 1 MB work memory † Memory extension (max. 2 MB) † PROFIBUS-DP master / PtP (switchable) † CP 343 integrated † Configurable via TIA-Portal
317-4NE12	<b>CPU 317SN/NET - SPEED7 technology</b> † SPEED7 technology, SPEED-Bus † 2 MB work memory † Memory extension (max. 8 MB) † PROFIBUS-DP master / PtP (switchable) † CP 343 integrated
317-4NE13	<b>CPU 317SN/NET - SPEED7 technology</b> † SPEED7 technology, SPEED-Bus † 2 MB work memory † Memory extension (max. 8 MB) † PROFIBUS-DP master / PtP (switchable) † CP 343 integrated † Configurable via TIA-Portal

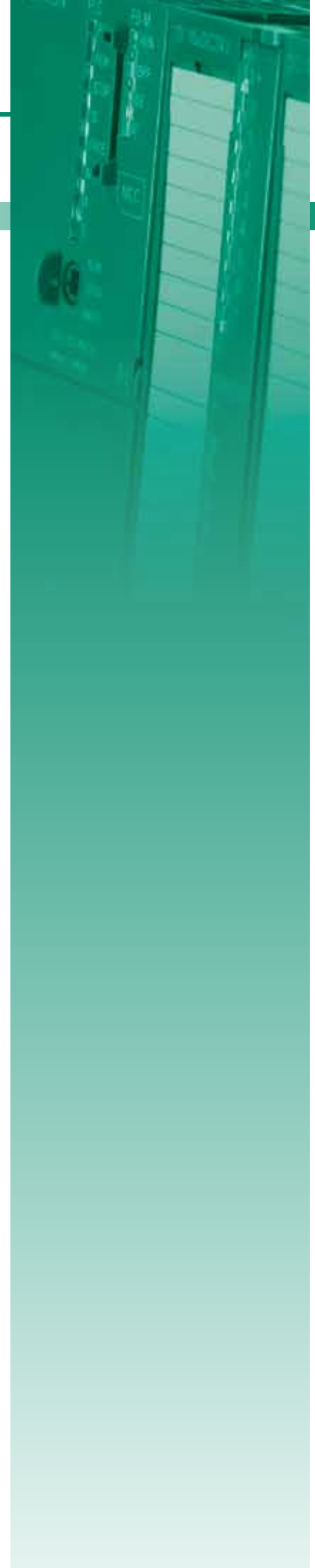


## 300S

Order no.	Name/Description
CPUs STEP7 programmable, class C	
312-5BE13	<b>CPU 312SC - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology</li> <li>‣ 16 x DI, 8 x DO</li> <li>‣ 64 kB work memory</li> <li>‣ Memory extension (max. 512 kB)</li> <li>‣ PtP interface</li> <li>‣ Configurable via TIA-Portal</li> </ul>
313-5BF13	<b>CPU 313SC - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology</li> <li>‣ 24 x DI, 16 x DO, 4 x AI, 2 x AO, 1xAI Pt100</li> <li>‣ 128 kB work memory</li> <li>‣ Memory extension (max. 512 kB)</li> <li>‣ PtP interface</li> <li>‣ Configurable via TIA-Portal</li> </ul>
313-6CF13	<b>CPU 313SC/DPM - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology</li> <li>‣ 16 x DI, 16 x DO</li> <li>‣ 128 kB work memory</li> <li>‣ Memory extension (max 512 kB)</li> <li>‣ PROFIBUS-DP master / PtP (switchable)</li> <li>‣ Configurable via TIA-Portal</li> </ul>
314-6CF02	<b>CPU 314ST/DPM - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology, SPEED-Bus</li> <li>‣ 8 x DI, 8 x DO, 4 x AI, 2 x AO, 1xAI Pt100</li> <li>‣ 512 kB work memory</li> <li>‣ Memory extension (max. 2 MB)</li> <li>‣ PROFIBUS-DP master / PtP (switchable)</li> </ul>
314-6CF03	<b>CPU 314ST/DPM - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology, SPEED-Bus</li> <li>‣ 8 x DI, 8 x DO, 4 x AI, 2 x AO, 1xAI Pt100</li> <li>‣ 512 kB work memory</li> <li>‣ Memory extension (max. 2 MB)</li> <li>‣ PROFIBUS-DP master / PtP (switchable)</li> <li>‣ Configurable via TIA-Portal</li> </ul>
314-6CG13	<b>CPU 314SC/DPM - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology</li> <li>‣ 24 x DI, 16 x DO, 8 x DIO, 4 x AI, 1 x AI Pt100, 2xAO</li> <li>‣ 256 kB work memory</li> <li>‣ Memory extension (max. 1 MB)</li> <li>‣ PROFIBUS-DP master / PtP (switchable)</li> <li>‣ Configurable via TIA-Portal</li> </ul>
CPUs STEP7 programmable, PROFINET	
315-4PN12	<b>CPU 315SN/NET - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology</li> <li>‣ 1 MB work memory</li> <li>‣ Memory extension (max. 2 MB)</li> <li>‣ PROFIBUS-DP master / PtP (switchable)</li> <li>‣ PROFINET controller integrated</li> <li>‣ Configurable via TIA-Portal</li> </ul> <p>Update of PROFINET and Shared-Device functions in Q4/2012</p>
315-4PN33	<b>CPU 315SN/NET ECO - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology</li> <li>‣ 512 KB work memory</li> <li>‣ PtP</li> <li>‣ PROFINET controller integrated</li> <li>‣ Configurable via TIA-Portal</li> <li>‣ Available at Q4/2012</li> </ul> <p>Update of PROFINET and Shared-Device functions in Q4/2012</p>
317-4PN12	<b>CPU 317SN/NET - SPEED7 technology</b> <ul style="list-style-type: none"> <li>‣ SPEED7 technology, SPEED-Bus</li> <li>‣ 2 MB work memory</li> <li>‣ Memory extension (max. 8 MB)</li> <li>‣ PROFIBUS-DP master / PtP (switchable)</li> <li>‣ PROFINET Controller integrated</li> <li>‣ Configurable via TIA-Portal</li> </ul> <p>Update of PROFINET and Shared-Device functions in Q4/2012</p>

# 300S

Order no.	Name/Description
<b>Power supply</b>	
307-1BA00	<b>PS 307 - Power supply</b> ▶ Output current 2.5 A ▶ Output voltage DC 24 V ▶ AC 100...240 V without manual switch
307-1EA00	<b>PS 307 - Power supply</b> ▶ Output current 5 A ▶ Output voltage DC 24 V ▶ AC 120/230 V, 60/50 Hz switchable
307-1FB70	<b>PS 307S - Power supply - SPEED-Bus</b> ▶ Only for CPU 317S ▶ Output current 5.5 A extends the maximum total value at the back plane bus to 10 A
307-1KA00	<b>PS 307 - Power supply</b> ▶ Output current 10 A ▶ Output voltage DC 24 V ▶ AC 120/230 V, 60/50 Hz switchable
<b>Digital input modules</b>	
321-1BH01	<b>SM 321 - Digital input</b> ▶ 16 inputs
321-1BH70	<b>SM 321S - FAST Digital input - SPEED-Bus</b> ▶ SPEED-Bus ▶ 16 fast inputs ▶ Parameterizable as alarm/ETS
321-1BL00	<b>SM 321 - Digital input</b> ▶ 32 inputs
321-1FH00	<b>SM 321 - Digital input</b> ▶ 16 inputs, in groups of 4 ▶ AC 120/230 V
<b>Digital output modules</b>	
322-1BF01	<b>SM 322 - Digital output</b> ▶ 8 outputs, in groups of 4 ▶ Output current 2 A
322-1BH01	<b>SM 322 - Digital output</b> ▶ 16 outputs, in groups of 8 ▶ Output current 1 A
322-1BH41	<b>SM 322 - Digital output</b> ▶ 16 outputs, in groups of 8 ▶ DC 24 V ▶ Output current 2 A
322-1BH60	<b>SM 322 - Digital output</b> ▶ 16 outputs ▶ 1 input (activation for outputs) ▶ 16 switches (automatic, manual 0/1) ▶ Output current 0.5 A
322-1BH70	<b>SM 322S - FAST Digital output - SPEED-Bus</b> ▶ SPEED-Bus ▶ 16 fast outputs ▶ Output current 0.5 A
322-1BL00	<b>SM 322 - Digital output</b> ▶ 32 outputs, in groups of 8 ▶ DC 24 V ▶ Output current 1 A
322-1HH00	<b>SM 322 - Digital output</b> ▶ 16 relay outputs, in groups of 8 ▶ AC 230 V/ DC 30 V ▶ Contact rating per channel 5 A
322-5FF00	<b>SM 322 - Digital output</b> ▶ 8 outputs, in groups of 1 ▶ AC 120/230 V ▶ Output current 2 A ▶ Substitute value output (programmable)
<b>Digital in/output modules</b>	
323-1BH00	<b>SM 323 - Digital in-/output</b> ▶ 16 channels (as inputs or outputs) ▶ Diagnostic function ▶ Output current 1 A
323-1BH01	<b>SM 323 - Digital in-/output</b> ▶ 8 inputs/ 8 outputs ▶ Output current 1 A



## 300S

Order no.	Name/Description
323-1BH70	<b>SM 323S - FAST Digital in-/output - SPEED-Bus</b> † SPEED-Bus † 16 fast inputs/outputs † Output current 0.5 A
323-1BL00	<b>SM 323 - Digital in-/output</b> † 16 inputs/ 16 outputs † Output current 1 A
Analog input modules	
331-1KF01	<b>SM 331 - Analog input</b> † 8 inputs 13 bit † Voltage, current † Resistance † Resistance thermometer
331-7AF70	<b>SM 331S - Analog input FAST - SPEED-Bus</b> † 8 inputs † Current ±20 mA † Oscilloscope-/FIFO function † Interrupt parameterizable
331-7BF70	<b>SM 331S - Analog input FAST - SPEED-Bus</b> † 8 inputs † Voltage ±10 V † Oscilloscope-/FIFO-Function † Interrupt parameterizable
331-7KB01	<b>SM 331 - Analog input</b> † 2 inputs, in 1 group † Voltage, current † Resistance † Resistance thermometer † Thermocouples
331-7KF01	<b>SM 331 - Analog input</b> † 8 inputs, in 4 groups † Voltage, current † Resistance † Resistance thermometer † Thermocouples
Analog output modules	
332-5HB01	<b>SM 332 - Analog output</b> † 2 outputs † Configurable † Voltage, current, deactivated
332-5HD01	<b>SM 332 - Analog output</b> † 4 outputs † Configurable † Voltage, current, deactivated
Analog in/output modules	
334-0KE00	<b>SM 334 - Analog in-/output</b> † 4 inputs, 2 outputs † Configurable † Resistance † Voltage 0...10 V, deactivated
RS232/422/485 and other CPs	
341-1AH01	<b>CP 341 - Communication processor</b> † RS232, isolated † Function compatibility to Siemens CP 341 † Parameterization via the Siemens parameterization package † Data transfer rate up to 76.8 kbit/s † Power supply via backplane bus
341-1CH01	<b>CP 341 - Communication processor</b> † RS422/485, isolated † Function compatibility to Siemens CP 341 † Parameterization via the Siemens parameterization package † Data transfer rate up to 76.8 kbit/s † Power supply via backplane bus
341-2CH71	<b>CP 341S - Communication processor - SPEED-Bus</b> † 2x RS422/485, isolated † SPEED-Bus † Data transfer rate up to 115.2 kbit/s † Integrated diagnostics buffer

## 300S

Order no.	Name/Description
Fieldbus master modules	
342-1CA70	<b>CP 342S CAN - CANopen master - SPEED-Bus</b> † CANopen master, SPEED-Bus † 125 CAN slaves connectable † 40 Transmit PDOs, 40 Receive PDOs † 1 SDO (Server), 127 SDO (Client) † Project engineering: VIPA WinCoCT
342-1DA70	<b>CP 342S DP - PROFIBUS-DP master - SPEED-Bus</b> † PROFIBUS-DP master (Class 1), SPEED-Bus † RS485 † 124 DP slaves connectable † Project engineering: Siemens SIMATIC Manager † Diagnostic facilities
342-1IA70	<b>CP 342S IBS - INTERBUS master - SPEED-Bus</b> † INTERBUS master, SPEED-Bus † RS422 † Diagnostics via LEDs, RS232, Mini-DIN, Dual Port Master † Up to 512 slaves connectable
342-2IA71	<b>CP 342S IBS - INTERBUS master - SPEED-Bus</b> † Dual INTERBUS master, SPEED-Bus † 2x RS422 † Diagnostics via LEDs, diagnostics device (2x RJ45), Dual Port Master † Up to 512 slaves connectable
Actor/sensor interfaces	
343-2AH10	<b>CP 343-2P ASI - AS-i master</b> † Up to 62 slaves connectable † Corresponding to AS-i specification 3.0 (master profile M3) † Support of analog slaves concerning profile 7.3 resp. 7.4 † Automatic address programming possible (address 0)
Ethernet-CPs	
343-1EX71	<b>CP 343S TCP/IP - Ethernet-CP 343 - SPEED-Bus</b> † Ethernet CP 343S-NET, SPEED-Bus † RJ45 † 16 connections via Siemens NetPro † 64 connections via user program † 32 PG/OP connections
Fieldbus slave modules w/o I/Os	
353-1DP01	<b>IM 353DP - PROFIBUS-DP slave</b> † PROFIBUS-DP slave (DP-V0, DP-V1) † For max. 29 peripheral modules (16 analog) † 244 Byte input and 244 Byte output data † Integrated DC 24 V power supply
SPEED7 starterKIT	
800-7DK11	<b>CPU 312SC - SPEED7 technology</b> † SPEED7 technology † 16 x DI, 8 x DO † 64 kB work memory † Memory extension (max. 512 kB) † PtP interface
800-7DK21	<b>CPU 313SC - SPEED7 technology</b> † SPEED7 technology † 24 x DI, 16 x DO † 128 kB work memory † Memory extension (max. 512 kB) † PtP interface
800-7DK31	<b>CPU 313SC/DPM - SPEED7 technology</b> † SPEED7 technology † 16 x DI, 16 x DO † 128 kB work memory † Memory extension (max. 512 kB) † PROFIBUS-DP master integrated † PtP interface
Memory extensions	
953-0KX10	<b>MMC - MultiMediaCard</b> † Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)
953-1LE00	<b>Memory Configuration Card (MCC) 32kByte</b> † for SPEED7 CPUs, 16kByte program/16kByte data
953-1LF00	<b>Memory Configuration Card (MCC) 64kByte</b> † for SPEED7 CPUs, 32kByte program/32kByte data
953-1LG00	<b>Memory Configuration Card (MCC) 128kByte</b> † for SPEED7 CPUs, 64kByte program/64kByte data

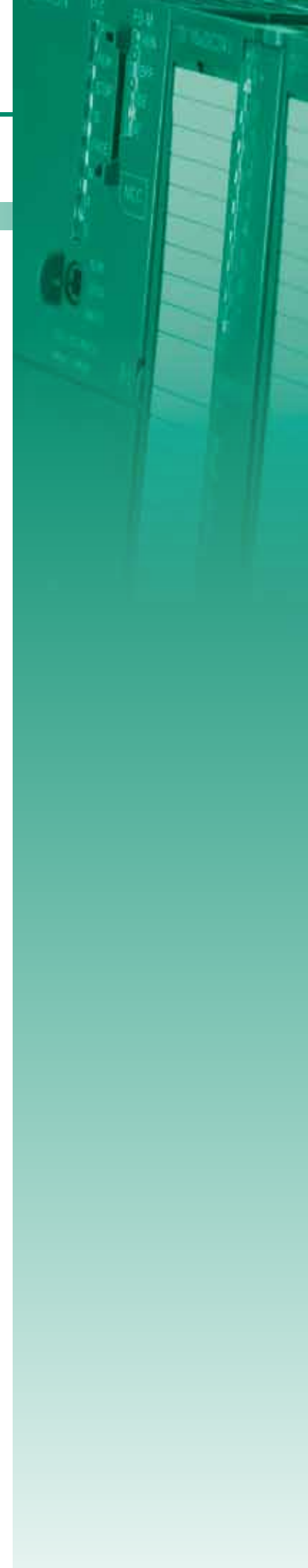


## 300S

Order no.	Name/Description
953-1LH00	<b>Memory Configuration Card (MCC) 256kByte</b> ‣ for SPEED7 CPUs, 128kByte program/128kByte data
953-1LJ00	<b>Memory Configuration Card (MCC) 512kByte</b> ‣ for SPEED7 CPUs, 256kByte program/256kByte data
953-1LK00	<b>Memory Configuration Card (MCC) 1MByte</b> ‣ for SPEED7 CPUs, 512kByte program/512kByte data
953-1LL00	<b>Memory Configuration Card (MCC) 2MByte</b> ‣ for SPEED7 CPUs, 1MByte program/1MByte data
953-1LM00	<b>Memory Configuration Card (MCC) 4MByte</b> ‣ for SPEED7 CPUs, 2MByte program/2MByte data
953-1LP00	<b>Memory Configuration Card (MCC) 8MByte</b> ‣ for SPEED7 CPUs, 4MByte program/4MByte data
Configuration and diagnosis modules	
342-0IA01	<b>CP 342 IBS - Configuration/diagnosis module</b> ‣ LC display, 7 buttons, cable 0.5 m, RJ45 plug, for 342-1IA71
Profile rail	
391-1AF10	<b>BP 391 - SPEED-Bus</b> ‣ Profile rail, 530 mm with integrated High-SPEED rear panel bus for 2 expansion slots
391-1AF30	<b>BP 391 - SPEED-Bus</b> ‣ Profile rail, 530 mm with integrated High-SPEED rear panel bus for 6 expansion slots
391-1AF50	<b>BP 391 - SPEED-Bus</b> ‣ Profile rail, 530 mm with integrated High-SPEED rear panel bus for 10 expansion slots
391-1AJ10	<b>BP 391 - SPEED-Bus</b> ‣ Profile rail, 830 mm with integrated High-SPEED rear panel bus for 2 expansion slots, left justified
391-1AJ30	<b>BP 391 - SPEED-Bus</b> ‣ Profile rail, 830 mm with integrated High-SPEED rear panel bus for 6 expansion slots, left justified
391-1AJ50	<b>BP 391 - SPEED-Bus</b> ‣ Profile rail, 830 mm with integrated High-SPEED rear panel bus for 10 expansion slots, left justified
390-1AB60	<b>Profile rail</b> ‣ Length: 160 mm
390-1AE80	<b>Profile rail</b> ‣ Length: 482 mm
390-1AF30	<b>Profile rail</b> ‣ Length: 530 mm
390-1AJ30	<b>Profile rail</b> ‣ Length: 830 mm
390-9AB60	<b>Profile rail</b> ‣ Length: 160 mm, ECO pack: 100 pieces
390-9AE80	<b>Profile rail</b> ‣ Length: 482 mm, ECO pack: 32 pieces
390-9AF30	<b>Profile rail</b> ‣ Length: 530 mm, ECO pack: 32 pieces
390-9AJ30	<b>Profile rail</b> ‣ Length: 830 mm, ECO pack: 20 pieces
390-9BC00	<b>Profile rail</b> ‣ Length: 2000 mm, ECO pack: 10 pieces
Front connector	
392-1AJ00	<b>Front connector</b> ‣ 20pole with screw contact
392-1BJ00	<b>Front connector</b> ‣ 20pole with cage clamps
392-1AM00	<b>Front connector</b> ‣ 40pole with screw contact
392-1BM01	<b>Front connector</b> ‣ 40pole with cage clamps
392-9AJ00	<b>Front connector</b> ‣ 20pole with screw contact, ECO pack: 100 pieces
392-9AM00	<b>Front connector</b> ‣ 40pole with screw contact, ECO pack: 100 pieces

# 300S

Order no.	Name/Description
Manuals and operating instructions	
HB140D	<b>Manual System 300S - SPEED7, Compendium, German</b> ‣ HB140D_PS, HB140D_SM, HB140D_CP
HB140D_CP	<b>Manual System 300S - SPEED7, German</b> ‣ CP 34x SPEED bus communication processors
HB140D_CPU	<b>Manual System 300S - SPEED7, German</b> ‣ CPU 31xS, incl. operations list
HB140D_CPU_SC	<b>Manual System 300S - SPEED7, German</b> ‣ CPU 31xSC, incl. operations list
HB140D_PS	<b>Manual System 300S - SPEED7, German</b> ‣ PS - SPEED-Bus power supply
HB140D_SM-AIO	<b>Manual System 300S, German</b> ‣ SM - SPEED-Bus signal modules
HB140E	<b>Manual System 300S - SPEED7, Compendium, English</b> ‣ HB140D_PS, HB140D_SM, HB140D_CP
HB140E_CP	<b>Manual System 300S - SPEED7, English</b> ‣ CP 34x SPEED-Bus communication processors
HB140E_CPU	<b>Manual System 300S - SPEED7, English</b> ‣ CPU 31xS, incl. operations list
HB140E_CPU_SC	<b>Manual System 300S - SPEED7, English</b> ‣ CPU 31xSC, incl. operations list
HB140E_PS	<b>Manual System 300S - SPEED7, English</b> ‣ PS - SPEED-Bus power supply
HB140E_SM-AIO	<b>Manual System 300S, English</b> ‣ SM - SPEED-Bus signal modules
HB130D	<b>Manual System 300V - Compendium, German</b> ‣ HB130D_PS, HB130D_SM, HB130D_CP, HB130D_FM, HB130D_IM
HB130D_CP	<b>Manual System 300V - German</b> ‣ CP 34x Communication processors
HB130D_CPU	<b>Manual System 300V - German</b> ‣ CPU 31x, incl. operations list
HB130D_FM	<b>Manual System 300V - German</b> ‣ FM 355 - Temperature control modules
HB130D_IM	<b>Manual System 300V - German</b> ‣ IM - Interface modules
HB130D_PS	<b>Manual System 300V - German</b> ‣ PS - Power supply
HB140D_SM-DIO	<b>Manual System 300S - German</b> ‣ SM - Signal modules
HB130E	<b>Manual System 300V - Compendium, English</b> ‣ HB130E_PS, HB130E_SM, HB130E_CP, HB130E_FM, HB130E_IM
HB130E_CP	<b>Manual System 300V - English</b> ‣ CP 34x Communication processors
HB130E_CPU	<b>Manual System 300V - English</b> ‣ CPU 31x, incl. operations list
HB130E_FM	<b>Manual System 300V - English</b> ‣ FM 355 - Temperature control modules
HB130E_IM	<b>Manual System 300V - English</b> ‣ IM - Interface modules
HB130E_PS	<b>Manual System 300V - English</b> ‣ PS - Power supply
HB140E_SM-DIO	<b>Manual System 300S - English</b> ‣ SM - Signal modules
HB144D_IBS-DIAG	<b>Manual CP 342 IBS-DIAG German</b> ‣ Manual CP 342 IBS-DIAG for configuration / diagnosis module 342-0IA00 or 342-0IA01
HB144E_IBS-DIAG	<b>Manual CP 342 IBS-DIAG English</b> ‣ Manual CP 342 IBS-DIAG for configuration / diagnosis module 342-0IA00 or 342-0IA01





SLIO

100V

200V

**300S**

500S

HMI

Software

Accessories

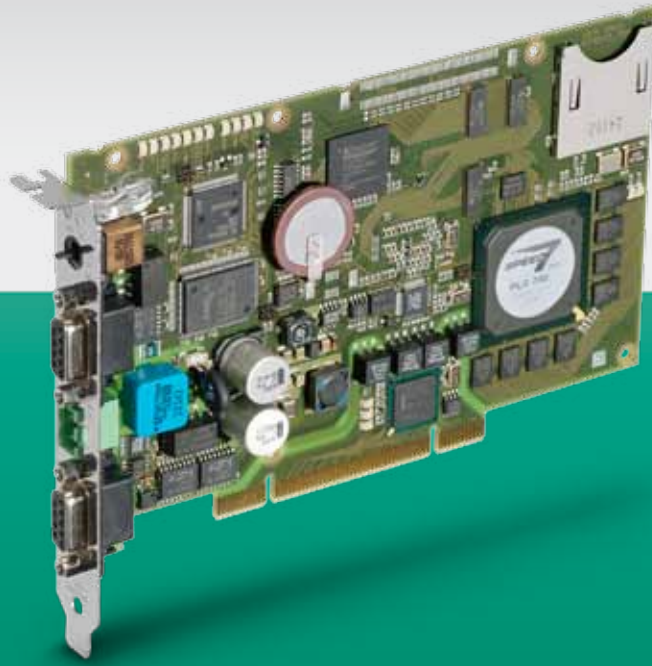
Appendix



At a glance

System description 500S  
500S

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# 500S

the PC slot PLC system

# System description 500S

## Structure and Concept

The slot PLC, based on the SPEED7 technology is designed for use within the core of a PC with a PCI interface.

500S can be extended with up to 124 PROFIBUS-DP slave stations. Thereby all systems from VIPA can be used with PROFIBUS-DP slave peripherals.

The CPU is supplied with power externally, for example with an interconnected UPS, thereby autarchic operation is possible and the operation of the CPU is also secured during a power outage.

Operation and monitoring of the CPU are supported by the program "PLCTool". The tool provides schematic representation of a CPU from 300S with all status LEDs on the PC monitor.

An OPC server for communication between the CPU and PC is included in the delivery.

Due to the module size, the CPUs fit into any standard desktop PC.



## Performance and Application

500S is designed for centralized automation tasks for application within a PC with a PCI interface. It covers all requirements in the manufacturing and process industries up to the highest power range. With 500S CPU integrated SPEED7 ASIC the system is among the fastest automation systems worldwide.

## Programming

500S is programmed with VIPA WinPLC7 or with STEP7 from Siemens in LAD, FBD and STL.

## Memory

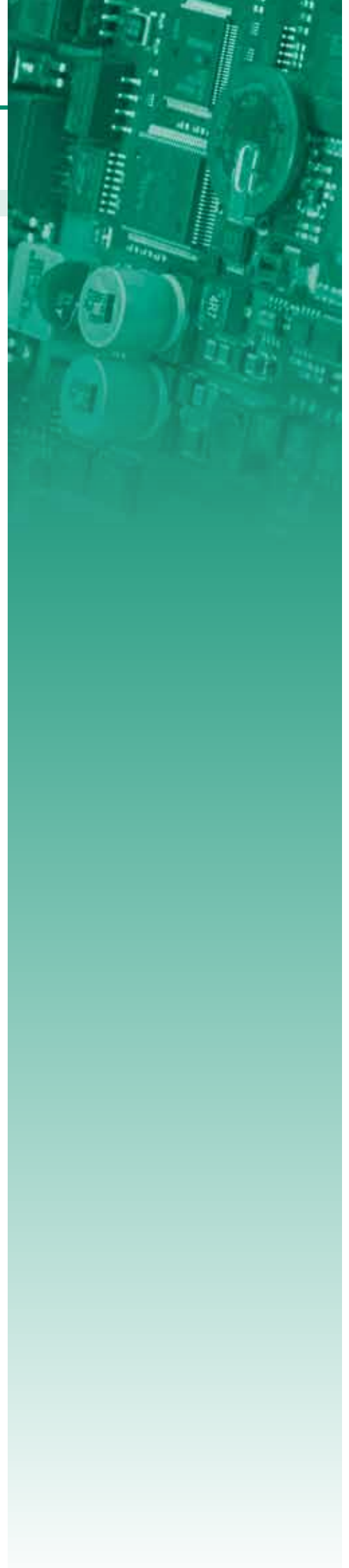
The CPUs in 500S have the work and load memory already integrated. Depending on the CPU-memory variant of the different users are available. The work and load memory can be adapted to the needs of memory card by plugging in an MCC memory expansion card. To back up program and data standard MMC cards are also supported.

## Functions

Signal, communication and function modules, and devices with PROFIBUS-DP slave interfaces are connected via the integrated PROFIBUS-DP master interface.

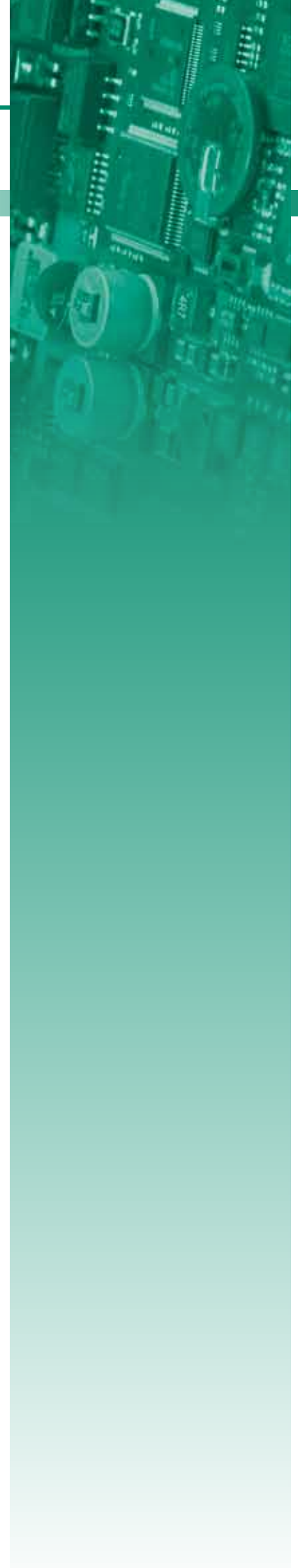
## Communication

An Ethernet programming interface is integrated on all CPUs in 500S. The integrated Ethernet communication processor CP 543 or a network card integrated in the PC link 500S horizontally and vertically into network structures. Therefore, all relevant data is made available to the connected host systems. The CPUs in 500S already have a PROFIBUS-DP master interface integrated, therefore the system can act, manufacturer-independent, as master control.



# 500S

Order no.	Name/Description
CPUs STEP7 programmable, standard	
515-2AJ02	<b>CPU 515S/DPM - SPEED7 technology</b> ▶ SPEED7 technology ▶ 1 MB work memory ▶ Memory extension (max. 2 MB) ▶ PROFIBUS-DP master
517-2AJ02	<b>CPU 517S/DPM - SPEED7 technology</b> ▶ SPEED7 technology ▶ 2 MB work memory ▶ Memory extension (max. 8 MB) ▶ PROFIBUS-DP master
CPUs STEP7 programmable, NET-CPUs	
517-4NE02	<b>CPU 517SN/NET - SPEED7 technology</b> ▶ SPEED7 technology ▶ 2 MB work memory ▶ Memory extension (max. 8 MB) ▶ PROFIBUS-DP master and CP 543
Memory extensions	
953-0KX10	<b>MMC - MultiMediaCard</b> ▶ Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)
953-1LE00	<b>Memory Configuration Card (MCC) 32kByte</b> ▶ for SPEED7 CPUs, 16kByte program/16kByte data
953-1LF00	<b>Memory Configuration Card (MCC) 64kByte</b> ▶ for SPEED7 CPUs, 32kByte program/32kByte data
953-1LG00	<b>Memory Configuration Card (MCC) 128kByte</b> ▶ for SPEED7 CPUs, 64kByte program/64kByte data
953-1LH00	<b>Memory Configuration Card (MCC) 256kByte</b> ▶ for SPEED7 CPUs, 128kByte program/128kByte data
953-1LJ00	<b>Memory Configuration Card (MCC) 512kByte</b> ▶ for SPEED7 CPUs, 256kByte program/256kByte data
953-1LK00	<b>Memory Configuration Card (MCC) 1MByte</b> ▶ for SPEED7 CPUs, 512kByte program/512kByte data
953-1LL00	<b>Memory Configuration Card (MCC) 2MByte</b> ▶ for SPEED7 CPUs, 1MByte program/1MByte data
953-1LM00	<b>Memory Configuration Card (MCC) 4MByte</b> ▶ for SPEED7 CPUs, 2MByte program/2MByte data
953-1LP00	<b>Memory Configuration Card (MCC) 8MByte</b> ▶ for SPEED7 CPUs, 4MByte program/4MByte data
Manuals	
HB145D_CPU	<b>Manual System 500S - SPEED7, German</b> ▶ PCI CPU 51xS, incl. operations list
HB145E_CPU	<b>Manual System 500S - SPEED7, English</b> ▶ PCI CPU 51xS, incl. operations list





At a glance

System description HMI  
HMI

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# HMI

Operating and Monitoring Systems

# System description HMI

## Structure and Concept

The VIPA Touch Panel with 4.3" to 12.1" display, Windows CE 6.0 and visualization system can be used universally. The touch panels are equipped with Windows CE 6.0 and the visualization software Movicon. The VIPA Commander Compact CC 03 with two-line display and integrated PLC-CPU is the ideal device for small control and operating tasks. The VIPA Operator Panel OP 03 and the Text Display TD 03 are universal operating units for use with VIPA systems and other control systems with MPI interface.



## Performance and Application

The operating and monitoring devices from VIPA are universal in the manufacturing and process industries, but can also be used in building automation. The line displays and touch panels are designed both for watching and for the active use of machinery, plant and buildings.

## Parameterization and Programming

The Text Display TD 03 is configured with the free tool, TD-Wizard \*). The operator panels OP 03 and Commander Compact CC 03 devices are configured with OP-Manager \*) or alternatively with Siemens ProTool. The PLC CPUs integrated in Commander Compact CC 03 are programmed in addition via WinPLC7 from VIPA or with Siemens STEP7.

The basis for the touch panels are Windows Embedded CE operating systems from Microsoft. Then the applications and visualizations offered by VIPA (also partially their own) are ported. VIPA Touch Panels are shipped with pre-installed operating system and Movicon. The project, created with the appropriate editor on the PC, is transferred via data cable or memory card from the PC to the Touch Panel.

## Memory

The Text Display TD 03 has no built-in memory. The messages, generated with TD-Wizard, are stored in the CPU. The Operator Panel OP 03 make 256 kByte and the Commander Compact CC 03 devices 128 kByte work memory available for projects. Incorporated in the Commander Compact CC 03 devices is an additional 16/24/32 kByte work memory for the PLC program. The touch panels offer up to 2048 MB of user memory (depending on the model). External expansion of the memory can easily be achieved by inserting a CFII or MMC-/SD-Card.

## Functions

Depending on the device type different and very versatile functions are realizable. The Text Display TD 03 is provided primarily for the simple presentation and the acknowledgement of messages. With the Operator Panels OP 03 advanced operating and monitoring tasks are already being realized with their own projects deposited in OP 03. Touch panels have multi-functional use. Depending on the application projects with up to several thousand variables will be realized on the PC. Thereby CPUs, higher-level systems and other devices are connected for the purpose of data collection, data sharing, visualization and operation.

## Communication

The exchange of data with the CPUs occurs at TD 03 and OP 03 via MPI. The Commander Compact CC 03 devices combine display and operating elements as well as PLC CPU with I/O peripherals in one casing. They can thus be used completely self-contained.

\*) Downloadable on the tool Demo-CD SW900T0LA or under <http://www.vipa.com/en/service-support/downloads/software/>.

# HMI

Order no.	Name/Description
Text displays and operator panels	
603-1TD00	<b>TD 03 - Text Display</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ MP<sup>2</sup></li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Visualization of the connected CPU via MPI</li> </ul>
603-1OP00	<b>OP 03 - Operator Panel</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ MP<sup>2</sup></li> <li>‣ 256 kB user memory</li> <li>‣ 4096 variables</li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Project engineering via VIPA OP-Manager or Siemens ProTool</li> </ul>
603-1OP10	<b>OP 03 - Operator Panel</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ MP<sup>2</sup></li> <li>‣ 256 kB user memory</li> <li>‣ 4096 variables</li> <li>‣ DE (without Umlaut), EN, RU</li> <li>‣ Project engineering only via VIPA OP-Manager</li> </ul>
Commander compact	
603-1CC21	<b>CC 03 - Commander Compact</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ Integrated PLC-CPU, MP<sup>2</sup></li> <li>‣ 16 x DI, 16 x DO</li> <li>‣ Up to 4 I/O expansion modules</li> <li>‣ 128 kB user memory, 4096 variables, 16/24kByte work/load memory</li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Project engineering via VIPA OP-Manager or Siemens ProTool</li> </ul>
603-1CC22	<b>CC 03 - Commander Compact</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ Integrated PLC-CPU, MP<sup>2</sup></li> <li>‣ 16 x DI, 16 x DO</li> <li>‣ Up to 4 I/O expansion modules</li> <li>‣ 128 kB user memory, 4096 variables, 24/32kByte work/load memory</li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Project engineering via VIPA OP-Manager or Siemens ProTool</li> </ul>
603-1CC23	<b>CC 03 - Commander Compact</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ Integrated PLC-CPU, MP<sup>2</sup></li> <li>‣ 16 x DI, 16 x DO</li> <li>‣ Up to 4 I/O expansion modules</li> <li>‣ 128 kB user memory, 4096 variables, 32/40kByte work/load memory</li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Project engineering via VIPA OP-Manager or Siemens ProTool</li> </ul>
603-2CC21	<b>CC 03 - Commander Compact</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ Integrated PLC-CPU, MP<sup>2</sup>, PROFIBUS-DP slave</li> <li>‣ 16 x DI, 16 x DO</li> <li>‣ Up to 4 I/O expansion modules</li> <li>‣ 128 kB user memory, 4096 variables, 16/24kByte work/load memory</li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Project engineering via VIPA OP-Manager or Siemens ProTool</li> </ul>
603-2CC22	<b>CC 03 - Commander Compact</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ Integrated PLC-CPU, MP<sup>2</sup>, PROFIBUS-DP slave</li> <li>‣ 16 x DI, 16 x DO</li> <li>‣ Up to 4 I/O expansion modules</li> <li>‣ 128 kB user memory, 4096 variables, 24/32kByte work/load memory</li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Project engineering via VIPA OP-Manager or Siemens ProTool</li> </ul>
603-2CC23	<b>CC 03 - Commander Compact</b> <ul style="list-style-type: none"> <li>‣ 2 x 20 characters</li> <li>‣ Integrated PLC-CPU, MP<sup>2</sup>, PROFIBUS-DP slave</li> <li>‣ 16 x DI, 16 x DO</li> <li>‣ Up to 4 I/O expansion modules</li> <li>‣ 128 kB user memory, 4096 variables, 32/40kByte work/load memory</li> <li>‣ DE, EN, FR, ES, IT, SV, NO, DA</li> <li>‣ Project engineering via VIPA OP-Manager or Siemens ProTool</li> </ul>

Order no.	Name/Description
<b>Professional Panels</b>	
62F-FEE0	<b>Touch Panel TP 605CQ</b> ▶ 5.7" QVGA, TFT color, Xscale 520 MHz ▶ 128 MB work memory, 2 GB memory for user data ▶ MPI/PROFIBUS-DP, RS232, RS422/RS485, USB-A, USB-B, Ethernet RJ45 ▶ Incl. Windows Embedded CE 6.0 Prof. and Runtime Movicon ▶ Order with Runtime (Order extension+CB), Order without Runtime (Order extension+CX)
62G-FEE0	<b>Touch Panel TP 606C</b> ▶ 6.5" VGA, TFT color, Xscale 800 MHz ▶ 128 MB work memory, 2 GB memory for user data ▶ MPI/PROFIBUS-DP, RS232, RS422/RS485, USB-A, USB-B, Ethernet RJ45 ▶ Incl. Windows Embedded CE 6.0 Prof. and Runtime Movicon ▶ Order with Runtime (Order extension+CB), Order without Runtime (Order extension+CX)
62I-IEE0	<b>Touch Panel TP 608C</b> ▶ 8.4" SVGA, TFT color, Xscale 800 MHz ▶ 128 MB work memory, 2 GB memory for user data ▶ MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2xRJ45 Ethernet ▶ Incl. Windows Embedded CE 6.0 Prof. and Runtime Movicon ▶ Order with Runtime (Order extension+CB), Order without Runtime (Order extension+CX)
62K-JEE0	<b>Touch Panel TP 610C</b> ▶ 10.4" SVGA, TFT color, Xscale 800 MHz ▶ 128 MB work memory, 2 GB memory for user data ▶ MPI/PROFIBUS-DP, RS232, RS422/485, 2xUSB-A, USB-B, 2xRJ45 Ethernet ▶ Incl. Windows Embedded CE 6.0 Prof. and Runtime Movicon ▶ Order with Runtime (Order extension+CB), Order without Runtime (Order extension+CX)
62M-JEE0	<b>Touch Panel TP 612C</b> ▶ 12.1" SVGA, TFT color, Xscale 800 MHz ▶ 128 MB work memory, 2 GB memory for user data ▶ MPI/PROFIBUS-DP, RS232, RS422/485, 2xUSB-A, USB-B, 2xRJ45 Ethernet (switch) ▶ Incl. Windows Embedded CE 6.0 Prof. and Runtime Movicon ▶ Order with Runtime (Order extension+CB), Order without Runtime (Order extension+CX)
<b>Eco Panel</b>	
62E-MDC0	<b>Touch Panel TP 605CQ</b> ▶ 4.3", PSP, TFT, resolution: 480 x 272 Pixel ▶ Processor: ARM11, 533 MHz ▶ Windows Embedded CE6.0 Core incl. Movicon Basic Runtime ▶ MPI/PROFIBUS-DP, RS232, RS422/RS485, USB-A, USB-B, Ethernet RJ45, MPI/DP interface optional available
62H-MDC0	<b>Touch Panel TP 605CQ</b> ▶ 7", WGA, TFT, resolution: 800 x 480 Pixel ▶ Processor: ARM11, 533 MHz ▶ MPI/PROFIBUS-DP, RS232, RS422/RS485, USB-A, USB-B, Ethernet RJ45, MPI/DP interface optional available ▶ Windows Embedded CE6.0 Core incl. Movicon Basic Runtime
<b>Optional interfaces</b>	
961-OMPO	<b>MPI/PROFIBUS-DP-Interface</b> ▶ For optional retrofitting of the MPI/DP interfaces at ecoPanels-series
<b>HMI software - Editors</b>	
SW614E1MB	<b>Movicon11.2 Editor</b> ▶ Movicon11.2 Editor for Windows CE projects, incl. USB dongle
SW614E1MAUB	<b>MoviconX Editor</b> ▶ Upgrade to Movicon 11.2
<b>Operating system and tools</b>	
SW41001EA	<b>PLC-Tool CE</b> ▶ Load-, test-, diagnosis tool for Windows CE, S7 communication via MPI, PROFIBUS-DP and Ethernet
SW41903EA	<b>Java (TM) VM</b> ▶ for Windows CE; the software is pre-installed on the Touch Panels
<b>Memory modules for Touch Panels</b>	
574-2AH00	<b>Compact Flash (CF) 1GByte</b> ▶ for VIPA Touch Panels
574-2AI00	<b>Compact Flash (CF) 2GByte</b> ▶ for VIPA Touch Panels
953-1SH00	<b>Secure Disc (SD) 1GByte</b> ▶ for VIPA Touch Panels
953-1SI00	<b>Secure Disc (SD) 2GByte</b> ▶ for VIPA Touch Panels

# HMI

Order no.	Name/Description
Protective foil	
574-1AD01	<b>Protective foil TP605</b> ‣ for Touch Panel 5.7", 10 pieces
574-1AE01	<b>Protective foil TP606</b> ‣ for Touch Panel 6.5", 10 pieces
574-1AF01	<b>Protective foil TP608</b> ‣ for Touch Panel 8.4", 10 pieces
574-1AG01	<b>Protective foil TP610</b> ‣ for Touch Panel 10.4", 10 pieces
574-1AH01	<b>Protective foil TP612</b> ‣ for Touch Panel 12.1", 10 pieces
Cables	
670-0KB20	<b>Ethernet programming cable</b> ‣ for Touch Panels with Movicon 3.0 m
670-0KB00	<b>OP/AG cable 0°/90° with PU/Diagnostic port</b> ‣ for VIPA CC 03, OP 03, TD 03
670-0KB01	<b>OP/AG cable 90°/90° with PU/Diagnostic port</b> ‣ PU-/Diagnostic port, 2.5 m
660-0KB00	<b>Periphery expansion cable CC 03</b> ‣ for up to 4 expansion modules EM 123 or Sytem 200V modules, 0.5 m
670-0KB10	<b>USB programming cable</b> ‣ for Touch Panels with Movicon, 3.0 m
950-0KB50	<b>PC/AG programming cable</b> ‣ MPI cable with PU-/Diagnostic port, 2.5 m; use as PC/AG or TP/AG
Manuals and operating instructions	
HB160D_TP_X8	<b>Manual Touch Panel, xScale 800 MHz - Compendium, German</b> ‣ Manual Touch Panel, xScale 800 MHz - Compendium, German
HB160E_TP_X8	<b>Manual Touch Panel, xScale 800 MHz - Compendium, English</b> ‣ Manual Touch Panel, xScale 800 MHz - Compendium, English
HB116D	<b>Manual Line displays - Compendium, German</b> ‣ HB116D_CC incl. operations list, HB116D_OP, HB116D_TD
HB116E	<b>Manual Line displays - Compendium, English</b> ‣ HB116E_CC incl. operations list, HB116E_OP, HB116E_TD
HB116D_CC03	<b>Manual Line displays - German</b> ‣ Commander Compact CC 03, incl. operations list
HB116E_CC03	<b>Manual Line displays - English</b> ‣ Commander Compact CC 03, incl. operations list
HB116D_OP03	<b>Manual Line displays - German</b> ‣ Operator Panel OP 03
HB116E_OP03	<b>Manual Line displays - English</b> ‣ Operator Panel OP 03
HB116D_TD03	<b>Manual Line displays - German</b> ‣ Text Display TD 03
HB116E_TD03	<b>Manual Line displays - English</b> ‣ Text Display TD 03
HB160D_TP_ECO	<b>Manual Touch Panel, ARM11 533MHz - Compendium, German</b> ‣ Manual Touch Panel, ARM11 533MHz - Compendium, German
HB160E_TP_ECO	<b>Manual Touch Panel, ARM11 533MHz - Compendium, English</b> ‣ Manual Touch Panel, xScale 520 MHz - Compendium, English

## HMI

Order no.	Name/Description
Spare parts	
62F-CCB0	<b>Touch Panel TP 605LQS</b> ▶ 5.7", QVGA, LCD monochrom, Xscale 520 MHz ▶ 64 MB work memory, 32 MB memory for user data ▶ MPI/PROFIBUS-DP, USB-B ▶ Incl. Windows CE 5.0 Core and Runtime Movicon Real Flexible ▶ Order with Runtime (Order extension+CB) Order without Runtime (Order extension+CX)
62F-DCB0	<b>Touch Panel TP 605LQE</b> ▶ 5.7", QVGA, LCD monochrom, Xscale 520 MHz ▶ 64 MB work memory, 32 MB memory for user data ▶ USB-B, Ethernet RJ45 ▶ Incl. Windows CE 5.0 Core and Runtime Movicon Real Flexible ▶ Order with Runtime (Order extension+CB) Order without Runtime (Order extension+CX)
62F-ECB0	<b>Touch Panel TP 605MQ</b> ▶ 5.7", QVGA, LCD monochrom, Xscale 520 MHz ▶ 64 MB work memory, 32 MB memory for user data ▶ MPI/PROFIBUS-DP, RS232, RS422/RS485, USB-A, USB-B, Ethernet RJ45 ▶ Incl. Windows CE 5.0 Core and Runtime Movicon Real Flexible ▶ Order with Runtime (Order extension+CB) Order without Runtime (Order extension+CX)
HZ608-1BC00	<b>VIPA IQ HomeZone HZ608C</b> ▶ 8.4" SVGA, TFT color, 520 MHz ▶ 64 MB work memory, 32 MB memory for user data ▶ MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2xRJ45 Ethernet (switch) ▶ Incl. Windows CE 5.0 and Runtime Movicon
HZ608-0UP00	<b>VIPA IQ-HomeZone HZ608C</b> ▶ Flush mounting case

At a glance

Software

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## | Software

# Software

Order no.	Name/Description
<b>Communication software</b>	
SW110A1LA	<b>OPC server MPI driver</b> ‣ Single licence, part of the ToolDemo CD SW900T0LA
SW110A2LA	<b>OPC server RFC1006 driver</b> ‣ Single licence, part of the ToolDemo CD SW900T0LA
SW110A3LA	<b>OPC server TCP/IP driver (read/write)</b> ‣ Single licence, part of the ToolDemo CD SW900T0LA
<b>Programming software</b>	
SW211C1DD	<b>WinPLC7 - Single licence, CD, German, Tool for STEP7 from Siemens</b> ‣ Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming
SW211C1ED	<b>WinPLC7 - Single licence, CD, English, Tool for STEP7 from Siemens</b> ‣ Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming
SW211D1DD	<b>WinPLC7 - Single licence, CD + Dongle, German, Tool for STEP7 from Siemens</b> ‣ Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming, Download version: <a href="http://www.winplc7.com/v5/vipa-download.htm">http://www.winplc7.com/v5/vipa-download.htm</a>
SW211D1ED	<b>WinPLC7 - Single licence, CD + Dongle, English, Tool for STEP7 from Siemens</b> ‣ Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming, Download version: <a href="http://www.winplc7.com/v5/vipa-download.htm">http://www.winplc7.com/v5/vipa-download.htm</a>
SW211K1OD	<b>WinPLC7 - Single licence, Key, Tool for STEP7 from Siemens</b> ‣ Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming, Download-Version: <a href="http://www.winplc7.com/v5/vipa-download.htm">http://www.winplc7.com/v5/vipa-download.htm</a>
SW211K2OD	<b>WinPLC7lite - Single licence</b> ‣ Licensable with System 100V CPUs, included on SW900T0LA ToolDemo CD, registration via Internet possible
<b>Parameterization software</b>	
SW300O1LA	<b>OP-Manager</b> ‣ Single licence, parameterization tool for OP 03
SW300T1EA	<b>TD-Wizard</b> ‣ Parameterization tool for TD 03 (included on Tool Demo CD SW900T0LA)
SW300C1EA	<b>WinCoCT</b> ‣ Single licence, CANopen configuration tool
SW300P1LA	<b>WinNCS parameterization software</b> ‣ Universal parameterization and configuration tool, components engineering, Ethernet protocols, TCP/IP, SINEC H1, IPK, RFC1006 - PROFIBUS-DP (2BF), included on Tool Demo CD SW900T0LA
<b>Analysis tool</b>	
SW711A1LA	<b>WinPLC-Analyzer</b> ‣ Single licence, CD + dongle, German/English, for VIPA Systems and S7-300/400 from Siemens (in combination with WinPLC7), incl. driver
SW711A2LA	<b>WinPLC-Analyzer</b> ‣ Single licence, CD + dongle, German/English, for VIPA Systems and S7-300/400 from Siemens, incl. driver
SW900T0LA	<b>ToolDemo-CD, complete VIPA software collection</b> ‣ Demo versions/registration possible, WinPLC7, Movicon11 Editor, OP manager, TD wizard, OPC server, WinCoCT, WinNCS, GSD-/EDS files, handling blocks, drivers, How-to-do's
<b>Manuals and operating instructions</b>	
S7-CRASHKURS-EX	<b>STEP®7-Crashkurs Extended Edition - German/English</b> ‣ Practical introduction into PLC programming with simulation software WinPLC. Targeted at users looking for introduction into PLC programming software STEP®7 and practical experience at the same time.
HB45D	<b>Manual OPC server - German</b> ‣ Installations and operating manual OPC server
HB45E	<b>Manual OPC server - English</b> ‣ Installations and operating manual OPC server
HB91D	<b>Manual WinNCS - German</b> ‣ Installations and operating manual WinNCS
HB91E	<b>Manual WinNCS - English</b> ‣ Installations and operating manual WinNCS
SW900HOLA	<b>DVD: Manuals &amp; More</b> ‣ Complete documentation on DVD



At a glance

Accessories

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## | Accessories

# Accessories

Order no.	Name/Description
<b>S5 components</b>	
306-1LE00	<b>IM 306 DP slave - 115U ZG/EG IM</b> ▶ Converting Siemens S5 PLCs to S7 ▶ Exclusively suited for AG-115U central controller and expansion units ▶ Integrated DC 24V power supply
306-1UE00	<b>IM 306 DP slave - 135U/155U ZG/EG IM</b> ▶ Converting Siemens S5 PLCs to S7 ▶ Exclusively suited for AG-135U/155U central controller and expansion units ▶ Integrated DC 24V power supply
306-1UZ00	<b>IM 306 DP slave - 135U/155U ZG CPU</b> ▶ Converting Siemens S5 systems to S7 ▶ Exclusively suited for AG-135U/155U central controller
<b>FIELDBUS connectors</b>	
972-0DP01	<b>EasyConn PB 90° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 90° outgoing cable
972-9DP01	<b>EasyConn PB 90° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 90° outgoing cable, ECO pack: 100 pieces
972-0DP10	<b>EasyConn PB 90° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 90° outgoing cable, bus diagnosis via LEDs
972-9DP10	<b>EasyConn PB 90° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 90° outgoing cable, bus diagnosis via LEDs, ECO pack: 100 pieces
972-0DP20	<b>EasyConn PB 45° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 45° outgoing cable, bus diagnosis via LEDs
972-9DP20	<b>EasyConn PB 45° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 45° outgoing cable, bus diagnosis via LEDs, ECO pack: 100 pieces
972-0DP30	<b>EasyConn PB 0° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 0° outgoing cable, bus diagnosis via LEDs
972-9DP30	<b>EasyConn PB 0° - SubD connector</b> ▶ 12 Mbit/s, metal case, PG-jack, insulation piercing connection, switchable termination resistor, 0° outgoing cable, bus diagnosis via LEDs, ECO pack: 100 pieces
972-0PN00	<b>PN-Stecker 180° Field Plug</b> ▶ -
972-8PN00	<b>PN-Stecker 180° Field Plug</b> ▶ -
<b>DP-Repeater</b>	
973-1BA00	<b>PROFIBUS-DP/MPI-Repeater</b> ▶ insulated channel (2 segments) ▶ up to 31 devices per segment connectable up to 1200 m cable length transparent for all PROFIBUS and MPI protocols
973-5BE00	<b>PROFIBUS-DP/MPI-Repeater</b> ▶ 5 dc-insulated channels (repeater segments) up to 31 devices per segment connectable ▶ 1200m tap line length ▶ Transparent for all PROFIBUS and MPI protocols
<b>Miscellaneous</b>	
905-6AA00	<b>EasyStrip</b> ▶ Stripping tool for PROFIBUS cable
6ES5491-0LB11	<b>Adaptation capsule for S5-115U/F</b> ▶ Siemens 6ES5 491-0LB11, Siemens SIMATIC S5, adaptation capsule for S5-115U/F (type ES 902) for connecting of up to 2 modules of S5-135U/155U, refreshed, 1 year warranty
<b>Teleservice modules</b>	
900-2C610	<b>TM-C Router</b> ▶ for a pure remote maintenance via Talk2M ▶ RS485 MPI/PROFIBUS DP interface ▶ 4xLAN RJ45 Ethernet interface ▶ 1xWAN RJ45 Ethernet interface
900-2E631	<b>TM-E ISDN Router VPN</b> ▶ RJ11 Euro ISDN modem ▶ RS485 MPI/PROFIBUS DP interface ▶ RJ45 Ethernet interface



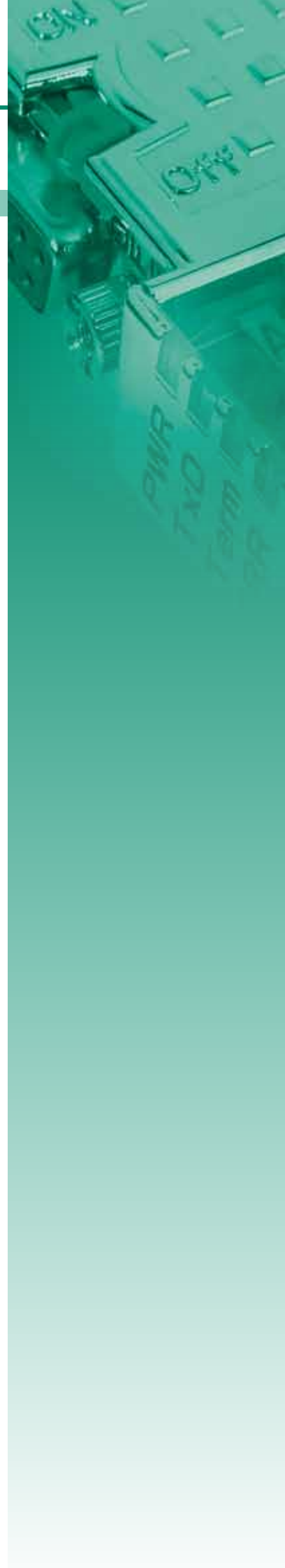
# Accessories

Order no.	Name/Description
900-2E641	<b>TM-E Analog Router VPN</b> ▶ RJ11 PSTN modem (analog) ▶ RS485 MPI/PROFIBUS DP interface ▶ RJ45 Ethernet interface
900-2E651	<b>TM-E GSM/GPRS Router VPN</b> ▶ integrated GSM/GPRS modem, quad-band ▶ RS485 MPI/PROFIBUS DP interface ▶ RJ45 Ethernet interface ▶ Slot for SIM-Card
900-2H611	<b>TM-H Router VPN</b> ▶ VPN Router ▶ RS485 MPI/PROFIBUS DP interface ▶ 4xLAN RJ45 Ethernet interface ▶ 1xWAN RJ45 Ethernet interface
900-2H681	<b>TM-H HSDPA Router VPN</b> ▶ VPN Router ▶ HSDPA modem ▶ RS485 MPI/PROFIBUS DP interface ▶ 4xLAN RJ45 Ethernet interface ▶ 1xWAN RJ45 Ethernet interface
<b>Cables</b>	
830-0LC00	<b>FCC 2xAWG 22 - Standard PROFIBUS cable</b> ▶ Fixed installation according to EN 50170, flame-retardant according to VDE 0472, T804 test type B, cable shell color violet, 100 m ring
830-0LD00	<b>FCC 2xAWG 22 - Standard PROFIBUS cable</b> ▶ Fixed installation according to EN 50170, flame-retardant according to VDE 0472, T804 test type B, cable shell color violet, 200 m ring
830-0LE00	<b>FCC 2xAWG 22 - Standard PROFIBUS cable</b> ▶ Fixed installation according to EN 50170, flame-retardant according to VDE 0472, T804 test type B, cable shell color violet, 500 m ring
830-0LF00	<b>FCC 2xAWG 22 - Standard PROFIBUS cable</b> ▶ Fixed installation according to EN 50170, flame-retardant according to VDE 0472, T804 test type B, cable shell color violet, 1000 m ring
830-0PC00	<b>PROFINET cable 100m</b> ▶ Cable reel
830-0PD00	<b>PROFINET cable 200m</b> ▶ Cable reel
830-0PE00	<b>PROFINET cable 500m</b> ▶ Cable reel
830-0PF00	<b>PROFINET cable 1000m</b> ▶ Cable reel
950-0AD00	<b>USB adapter</b> ▶ For MMC programming (Windows 98SE/ME/2000/XP)
950-0AD10	<b>PCMCIA adapter</b> ▶ For MMC programming
950-0KB00	<b>VIPA "Green Cable"</b> ▶ Programming and download cable, RS232/MP2I, 2 m for VIPA CPUs 100V, 200V and 300V
950-0KB01	<b>PC/AG programming cable</b> ▶ RS232-MPI/PROFIBUS adapter, 3 m
950-0KB10	<b>PC/AG programming cable</b> ▶ RS232-MPI/PPI adapter, LCD, 3 m
950-0KB20	<b>PC/AG programming cable</b> ▶ RS232/MPI adapter, external DC 24 V power supply, 1.3 m
950-0KB30	<b>PC/AG programming cable</b> ▶ USB-MPI/PROFIBUS adapter, LCD 3 m
950-0KB31	<b>PC/AG programming cable</b> ▶ USB-MPI/PROFIBUS adapter, 3 m
950-0KB40	<b>PC/AG programming cable</b> ▶ TCP/IP-MPI/PROFIBUS adapter, 3 m
950-0KB41	<b>PC/AG programming cable</b> ▶ TCP/IP-MPI/PROFIBUS adapter, 3 m, incl. driver, part of the ToolDemo-CD SW900TOLA
950-0KB50	<b>PC/AG programming cable</b> ▶ MPI cable with PU-/Diagnostic port, 2.5 m; use as PC/AG or TP/AG



# Accessories

Order no.	Name/Description
Memory modules for S7-300/400	
951-0KD00	<b>Memory Card (MC)</b> ‣ for S7-300/400 from Siemens, Flash Eeprom, short
951-0KE00	<b>Memory Card (MC)</b> ‣ for S7-300/400 from Siemens, Flash Eeprom, short
951-0KF00	<b>Memory Card (MC)</b> ‣ for S7-300/400 from Siemens, Flash Eeprom, short
951-0KG00	<b>Memory Card (MC)</b> ‣ for S7-300/400 from Siemens, Flash Eeprom, short
951-0KJ00	<b>Memory Card (MC)</b> ‣ for S7-300/400 from Siemens, Flash Eeprom, short
Antennas and accessories	
900-0AA00	<b>TM antenna GSM/GPRS</b> ‣ Dipole antenna incl. SMA (male), resistance: 50 Ohm, power: 3W, gain: 2.0 dBi, 900/1800 MHz
900-0AB50	<b>TM antenna GSM/UMTS</b> ‣ Portable antenna incl. 5m cable, SMA (male) and assembly bracket, resistance: 50 Ohm, power: 10 W, gain: 2.14 dBi, 900/1800 MHz
900-0AQ51	<b>TM antenna GSM/GPRS</b> ‣ Rod antenna incl. 5m cable and SMA (male) and mounting bracket, resistance: 50 Ohm, power: 20 W, gain: 2.14 dBi, 900/1800 MHz
Manuals and operating instructions	
HB37D_IM	<b>Manual Accessories - IM</b> ‣ IM 306 DP slave
HB37E_IM	<b>Manual Accessories - IM</b> ‣ IM 306 DP slave
HB39D_TM	<b>Manual Accessories - TM</b> ‣ TM-E 900-2E6x and TM-H 900-2H6x Teleservice modules
HB39E_TM	<b>Manual Accessories - TM</b> ‣ TM-E 900-2E6x and TM-H 900-2H6x Teleservice modules





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## | Appendix

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 http://www.vipa.es

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 http:// www.otes.com.tr

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# Terms and conditions

## General



The general supply and delivery terms are valid in their latest version (see next pages) as well as the addendum on extended retention of title. The prices are quoted in Euro (€) ex works, without insurance, freight and packaging. They do not include any VAT. Packaging cannot be returned. VAT will be indicated separately according to legal regulations and at the respective valid rate.

## Minimum Order Value



The minimum value for each order amounts to € 150,- net. Orders with a value less than € 150,- will be charged with a handling fee of € 20,- to cover costs.

## Dispatch and packing costs



### Export sales:

Dispatch will be organized on ex works basis with a forwarding agent/ courier service named by customer; alternatively freight cost will be calculated and charged according to weight and/or volume on the basis of VIPA Germany's freight rates at local partners..

### Domestic sales:

Order value to 1.000 €	= 10,00 €
1.001 € - 2.500 €	= 1,00% of net price
2.501 € - 5.000 €	= 0,85% of net price
5.001 € - 7.500 €	= 0,65% of net price
7.501 € and higher	= all inclusive 57,00 €

Freight charges for bulky goods (e.g. 2 m of rails and cable drums) are calculated separately.

# of sale and delivery

## Validity



With the date this price list comes into effect all former prices are no longer valid.

The price list may be subject to changes, especially as far as the values, dimensions and weights are concerned, if nothing different is noted explicitly.

The goods will be invoiced at the date of dispatch.

## Manuals



When ordering modules, you will receive the corresponding customer documentation free of charge in PDF format on DVD. If you wish to receive hard copies of manuals, please order them separately.

The latest versions of all our manuals can be found on our homepage: [www.vipa.com](http://www.vipa.com) -> Service -> manuals.

For further information please contact us:

Export sales: +49 (0)9132/744 - 1675 or -1670

Domestic sales: +49 (0)9132 / 744 - 1730

Homepage: <http://www.vipa.com>

## Legend/Trademarks



MP2I = MPI + RS232

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Any liability for misprints or errors is excluded.

Availability and technical specifications are subject to change without notice.

# General terms and conditions

## 1. General provisions

The following General Terms and Conditions of the Gesellschaft für Visualisierung und Prozessautomatisierung, hereinafter referred to as VIPA GmbH, shall apply for all present and future orders, deliveries and services (hereinafter referred to as: deliveries), unless expressly otherwise agreed by contract.

In case of deviations, supplements etc., we hereby expressly object to any conflicting or differing terms and conditions of contractual partners. We exclude all and any terms and conditions of contractual partners unless we expressly agree to them in writing.

## 2. Subject matter of the contract, scope of delivery, partial deliveries

- a) The offer and/or order confirmation of VIPA GmbH shall be decisive for the scope of delivery.
- b) Regarding cost estimates, drawings, wiring diagrams, samples, software source codes and other documentation, VIPA GmbH hereby retains its rights of ownership, copyrights and patent rights in their entirety. Such documents may only be made accessible to third parties with the prior written consent of VIPA GmbH. Drawings, wiring diagrams, samples, software source codes and other documentation that are part of the offer must be returned immediately on request in case the order is not awarded to VIPA GmbH. With regard to documents that were handed over to VIPA GmbH, the latter is entitled to make accessible such documents to third parties, as far as the company transfers services and deliveries to such third parties in a permissible way.
- c) VIPA GmbH is entitled to make partial deliveries, insofar as this is reasonable for the customer.

## 3. Prices and terms of payment, exclusion of set-off, cost estimates

- a) All the prices of VIPA GmbH are net prices quoted ex works, i.e. not including transport and packaging costs. All costs for delivery ex works, packaging, transport insurance etc. are invoiced separately. The same shall apply for the costs resulting from installation, erection and/or assembly, e.g. travel expenses. VAT will be charged separately. VIPA GmbH is entitled to charge a reminder fee of € 5.00 per reminder upon occurrence of a default.
- b) A set-off by the contractual partner is only permitted in case the outstanding claims are uncontested or established by final enforceable judgment. The same shall apply for any right of retention.
- c) Cost estimates shall be paid for.

## 4. Delivery period, deadlines, passing of risk

- a) Delivery dates and deadlines are not binding for VIPA GmbH unless it is agreed by contract that they are binding.
- b) The delivery time which was agreed upon shall be extended accordingly in the event of any circumstances beyond our control, which occur either in our own business or in that of a preliminary supplier. This applies in particular to strikes and lockouts as well as cases of force majeure which result from unforeseeable events or events over which the company and/or the preliminary suppliers have no control. VIPA GmbH undertakes to inform its contractual partners of any such delays as soon as they are foreseeable. If the performance of services by VIPA GmbH therefore becomes impossible or is seriously impaired, VIPA GmbH may cancel the contract wholly or in part. The customer is entitled to cancel the contract if VIPA GmbH does not perform the delivery after a written reminder until the end of a new appropriate deadline set by the customer. The compliance with expressly agreed delivery deadlines depends on the receipt in due time of all documents, necessary permits, clearances etc. which are to be supplied by the contractual partner, the clearance and approval of all plans in due time, as well as the compliance with the agreed terms of payment and other obligations by the contractual partner of VIPA GmbH. VIPA GmbH shall be entitled to exercise its right of retention despite a contractual delivery date in case due receivables from prior goods and services have not been settled by the contractual partner.
- c) The delivery deadline shall be considered met and the risk passes to the customer as soon as VIPA GmbH has handed over the item to the forwarding agent, the carrier or another person or institution responsible for dispatch or to the collector. If installation, erection or assembly is included in the scope of delivery, the risk shall pass and the delivery deadline shall be considered met on

the day of taking-over on the business premises of the contractual partner. If a test run was agreed, the latter shall be performed without delay after assembly and/or installation. If the dispatch, the assembly or installation/erection and/or the taking-over or a possible test run is delayed due to reasons for which the contractual partner is responsible or if a default of acceptance occurred, the risk shall pass to the contractual partner upon the start of delay caused by the contractual partner or upon occurrence of default of acceptance. This shall also apply for possible dispatches within the scope of replacement deliveries or after the performance of rectifications of defects by VIPA GmbH. The purchaser shall bear the risk for any reshipments effected by the customer to VIPA GmbH until the items of the reshipment are handed over in the premises of VIPA GmbH. Possible reshipments must always be free of carriage charges for VIPA GmbH.

## 5. Reservation of title

VIPA GmbH makes deliveries solely on the basis of the following reservation of title. This shall also apply to all future deliveries, even if VIPA GmbH does not make explicit reference to this.

- a) All deliveries / services are solely effected under reservation of title. VIPA GmbH shall remain the owner of the delivered goods until all accounts to which the company entitled from the customer as a result of the business relationship have been paid in full. The customer may neither pledge nor provide the goods as security to which we have retained ownership and it is also not allowed to resell such goods. The reseller is granted the revocable authorisation to resell such goods in the normal course of business, provided that its customers effect payment.
- b) As long as the ownership title has not been transferred, the customer shall be obliged to handle and stock the object of purchase with due care and to insure it at its own expense at replacement value against losses and damage from theft, fire and water. If any servicing or inspection work is required, the customer shall perform such work in due time at its own expense. As long as the ownership title has not been transferred, the customer shall be obliged to notify VIPA GmbH in writing as soon as possible in case the delivered item is pledged or is about to be pledged, retained or is threatened by execution or insolvency or is exposed to other third party interventions etc. In case of a compulsory execution or insolvency, the competent authorities must be informed about the ownership title of VIPA GmbH. The contractual partner shall be liable for damage resulting from neglect as well as for intervention expenses, if any. The expenses incurred by averting a seizure shall be borne by the customer. Where the third party is unable to reimburse the court and out-of-court expenses of a lawsuit pursuant to § 771 of the German Code of Civil Procedure (ZPO), the customer shall be liable for any loss incurred by VIPA GmbH.
- c) The customer shall be entitled to resell the goods subject to reservation of title in the normal course of business. The customer shall assign all purchase price and wage claims etc. arising from the resale of the goods subject to reservation of title to VIPA GmbH in the amount of the invoicing value including VAT. VIPA GmbH accepts this assignment. Such assignment shall be valid irrespective of the fact whether the goods were resold without or after processing. The customer shall be entitled to collect debts even after the assignment. The authority of VIPA GmbH to collect the debts itself shall not be affected by this. However, we undertake to refrain from collecting the claim as long as our contractual partner meets the payment obligations from the collected revenues, is not in delay of payment and, in particular, has not filed an application to open insolvency proceedings, and a cessation of payments does not exist.
- d) The processing, treatment or transformation of the purchased item shall always be made by the purchaser in the name and on behalf of VIPA GmbH. In this case, the customer shall continue to be eligible for the purchased item subsequent to processing or transformation. Should the purchased item be processed with other objects not belonging to VIPA GmbH, VIPA GmbH shall then acquire a joint ownership in the new item in the ratio of the value of the purchased item to the other processed objects at the time of processing. The same shall apply in the event of incorporation. If incorporation takes place in such a way that the customer's product is considered to be the main product, it is agreed that the customer shall transfer pro-rata joint ownership title to VIPA GmbH and shall safeguard on our behalf the sole title or joint title thereby arising. In order to secure the claims of VIPA GmbH against the customer, the latter shall assign to VIPA GmbH any claims that it acquires against a third party through the linking of the goods subject to reservation of title with a property. VIPA GmbH hereby accepts such assignment. VIPA GmbH undertakes to release the securities to which it is entitled, provided that their value exceeds the secured outstanding dues by more than 20%.

## 6. Claims for damages

- a) VIPA GmbH shall only assume liability if this is expressly agreed upon in writing or if an exclusion of liability is not permitted by law, e.g. in the event of willful intent or gross negligence or in case of harm to life, health and body or if the company is liable according to the Product Liability Act. Any other liability of VIPA GmbH, in particular claims for damages and reimbursement of expenses by the contractual partners, shall be excluded. Liability is also and particularly excluded in the case of non-performance or defective performance and for consequential losses or indirect damage. Liability of VIPA GmbH due to culpa in contrahendo shall be expressly excluded. VIPA GmbH hereby accepts this exclusion.
- b) Contractual penalties are not permissible unless expressly otherwise agreed in writing.

## 7. Limitation period, suspension of the limitation period

The limitation period for warranty claims and other claims against VIPA GmbH shall be twelve months. In case of shorter statutory limitation periods or shorter limitation periods agreed upon, such shorter limitation period shall apply. A shortening of the limitation period shall not be valid if this is excluded by law, in particular in case of fraudulent concealment of a defect. For deliveries to VIPA GmbH, the statutory limitation periods shall apply. The statutory regulations on suspension of statute of limitation, suspension of and restart of the limitation period shall not be affected by this. Settlement negotiations shall be deemed terminated in case VIPA GmbH does not respond in writing to a letter of the contractual partner after expiration of a period of 8 weeks.

## 8. Warranty

- a) A warranty beyond the statutory warranty regulations shall only be granted if such warranty is expressly stated in writing.
- b) The goods supplied by VIPA GmbH must be inspected immediately after handover. VIPA GmbH must be notified in writing immediately after receipt and/or inspection of the delivery of any defects, the lack of guaranteed qualities, transport damage, shortfall quantity, wrong deliveries etc and all processing or treatment works must be stopped immediately. Possible hidden defects must be communicated to us in writing as soon as they have been discovered. If such notification is not made in time, the delivery shall be deemed accepted. VIPA GmbH and the carrier must be notified in writing and without delay of any transport damage after receipt of goods. In case the notification of defects is justified and was made in time, VIPA GmbH shall be entitled to either rectify the defects, to effect a faultless replacement delivery and/or to render a faultless service. The contractual partner's right of reduction of the purchase price shall not be affected by unsuccessful rectification or cancellation of the contract.
- c) In case of the following, any warranty and/or any guarantee to which the company exceptionally consented in writing shall be excluded, unless the defect was fraudulently concealed:

Damage or losses resulting from faulty installation made by the customer or third parties or caused by improper use or fire, lightning strike, force majeure etc.

Repairs or repair attempts performed incorrectly or other interventions by the customers or other persons not authorised by VIPA GmbH

Damage caused by non-observance of the operating instructions or other instructions given by the staff of VIPA GmbH

Transport damage

Damage caused by the use of unsuitable or inferior replacement parts

Damage resulting from wear, humidity, strong heating of rooms or other effects of weather and temperature

Wear and tear parts

In case of negligible deviation from the agreed characteristics, in case of negligible impairment of serviceability or in case the model presents only minor deviations from the specifications in catalogues, advertising materials, samples etc.

Insufficient maintenance of the goods by the contractual partner

- d) No warranty is granted for second-hand goods supplied by VIPA GmbH. Second-hand goods are sold as seen.

- e) VIPA GmbH is entitled to claim compensation for the costs and expenses it incurred from the contractual partner in case the notification of defects was not justified. Claims from the purchaser towards VIPA GmbH for compensation of expenses, in particular transport costs and service assignments, due to supplementary performance, are excluded insofar as the expenses increase due to the fact that the object of delivery was subsequently carried to a place other than the agreed delivery address of the contractual partner.

- f) For any software, the conditions of the software licence of VIPA GmbH and of the software producer shall apply.

## 9. Impossibility of performance, adaptation of the contract

If it becomes impossible for VIPA GmbH to effect or provide the agreed delivery or service, the general legal principles shall apply as follows:

If the impossibility is the fault of VIPA GmbH, the contractual partner is entitled to make a claim for damages; however, such claim for damages of the purchaser shall be limited to 10% of the value of such part of the delivery or service that could not be used properly or put into service due to the impossibility of performance.

Any claims for damages exceeding the aforementioned 10% shall be excluded. This shall not apply in the event of willful intent or gross negligence, where liability is mandatory, or in case of harm to life, health and body.

The customer's right to withdraw from the contract shall not be affected by this.

In case unforeseeable events considerably modify the economic importance or the content of the delivery or service or affect the business operations of VIPA GmbH, the contract shall be adapted accordingly by VIPA GmbH, provided that this is compliant with the principles of good faith.

As far as this is not economically feasible, VIPA GmbH shall have the right to withdraw from the contract. When the company intends to make use of its right of withdrawal, it shall inform the purchaser of its intention as soon as the significance of the event will have fully come to its knowledge, i.e. also in such cases when an extension of the time of delivery was agreed with the purchaser.

## 10. Place of jurisdiction, place of performance, applicable law

- a) The sole local and international place of jurisdiction (if the contractual partner is a merchant) for all disputes arising directly or indirectly from the contract shall be the registered office of VIPA GmbH.
- b) The contractual relationship shall be subject to German substantive law only.
- c) The place of performance for deliveries and services of VIPA GmbH shall be the registered office of VIPA GmbH.

## 11. Authorisations, foreign countries

The contractual partner shall be responsible for and obtain official authorisations that may be required, in particular export licences. VIPA GmbH shall not be responsible or liable for possible official authorisations, in particular export licences, that may be required. The contractual partner is obliged to comply with all export provisions and export restrictions and all other provisions of the foreign trade legislations, in particular those of Germany, the EU and the EU member states, and to ensure that its contractual partners and third parties comply with these provisions as well. The contractual partner shall be obliged to make all required notifications, to provide all required information and to make all other necessary declarations to foreign authorities duly and completely.

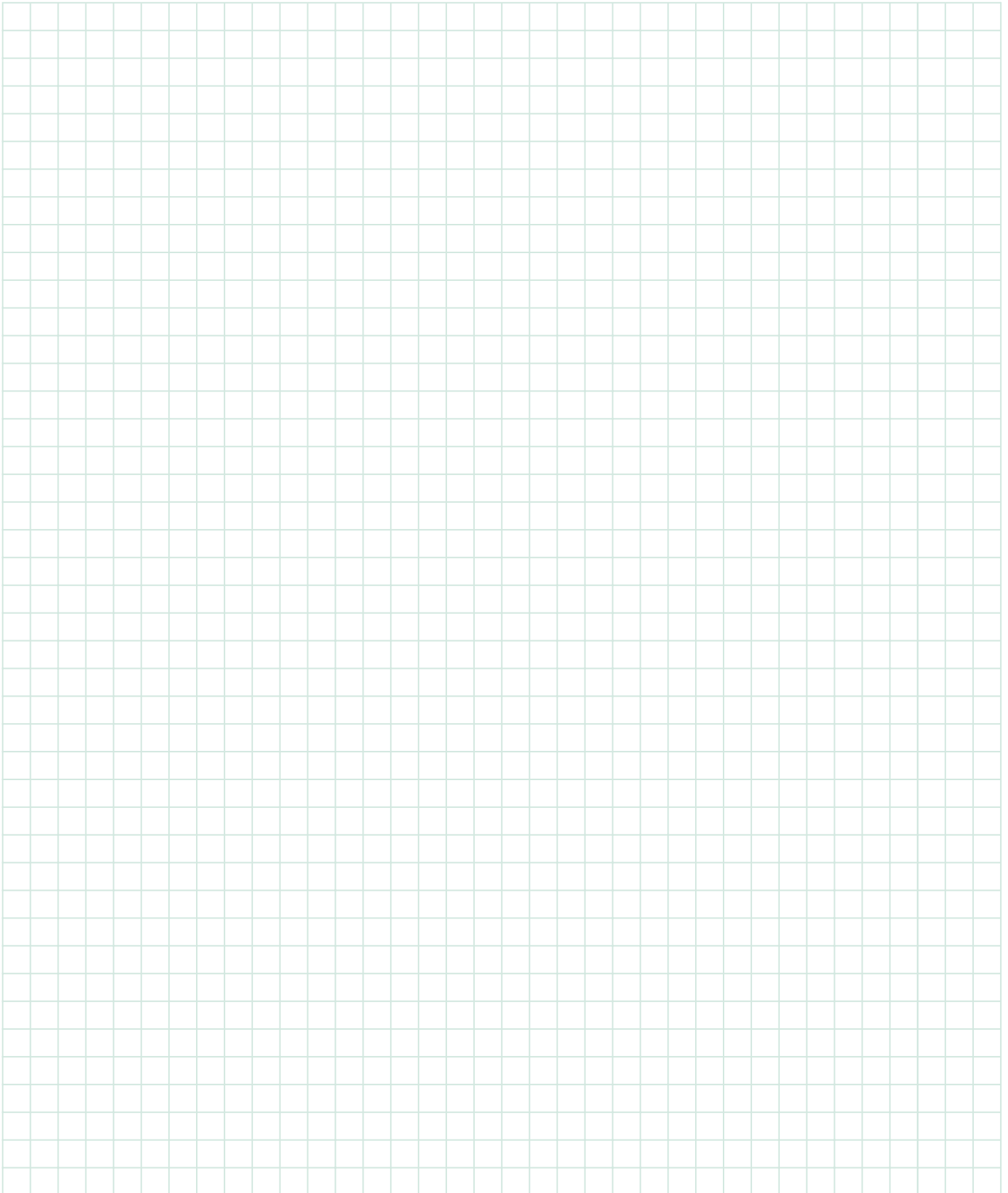
The contractual partner shall pay all required customs duties, taxes or levies which may arise from a delivery into or the rendering of a service in a foreign country.

## 12. Other provisions, validity of the contract, authorisations

Should one or several provisions of the contract, including these General Terms and Conditions, be invalid, the validity of the contract or the General Terms and Conditions as a whole shall not be effected. In this case, the parties undertake to replace the invalid provision by a valid one which comes closest to the economic purpose of the invalid provision. The same shall be done in case of contractual gaps.

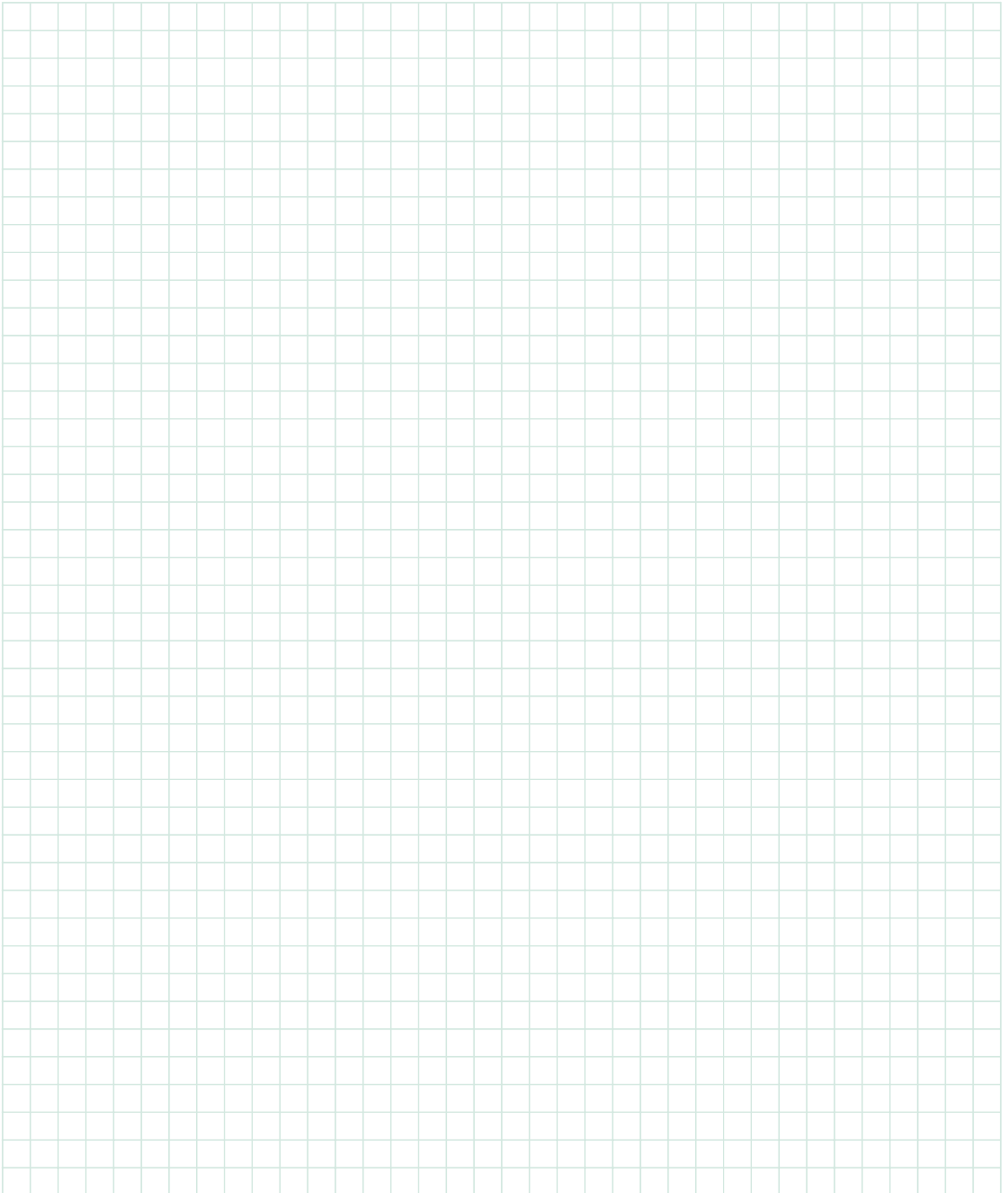
Changes and amendments to the contract must be effected in writing in order to be effective.

# Notices





# Notices





Food & Beverage



Automotive



Building  
Technology



Handling  
Technology



Renewable  
Energy



Water/  
Sewage



Environment



Packaging



# VIPA worldwide

... in about 60 countries at home



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