System summary 2014/2015

for specialists in automation and control technology

www.vipa.com

VIPA
A YASKAWA COMPANY

Welcome to VIPA

This is VIPA

- Specialist 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.

Preamble | VIPA

VIPA has traditionally been amongst the most innovative suppliers of programmable logic control (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 sustainable 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!

Management
Wolfgang Seel | Bob Linkenbach | Manfred Stern

We speak your language …

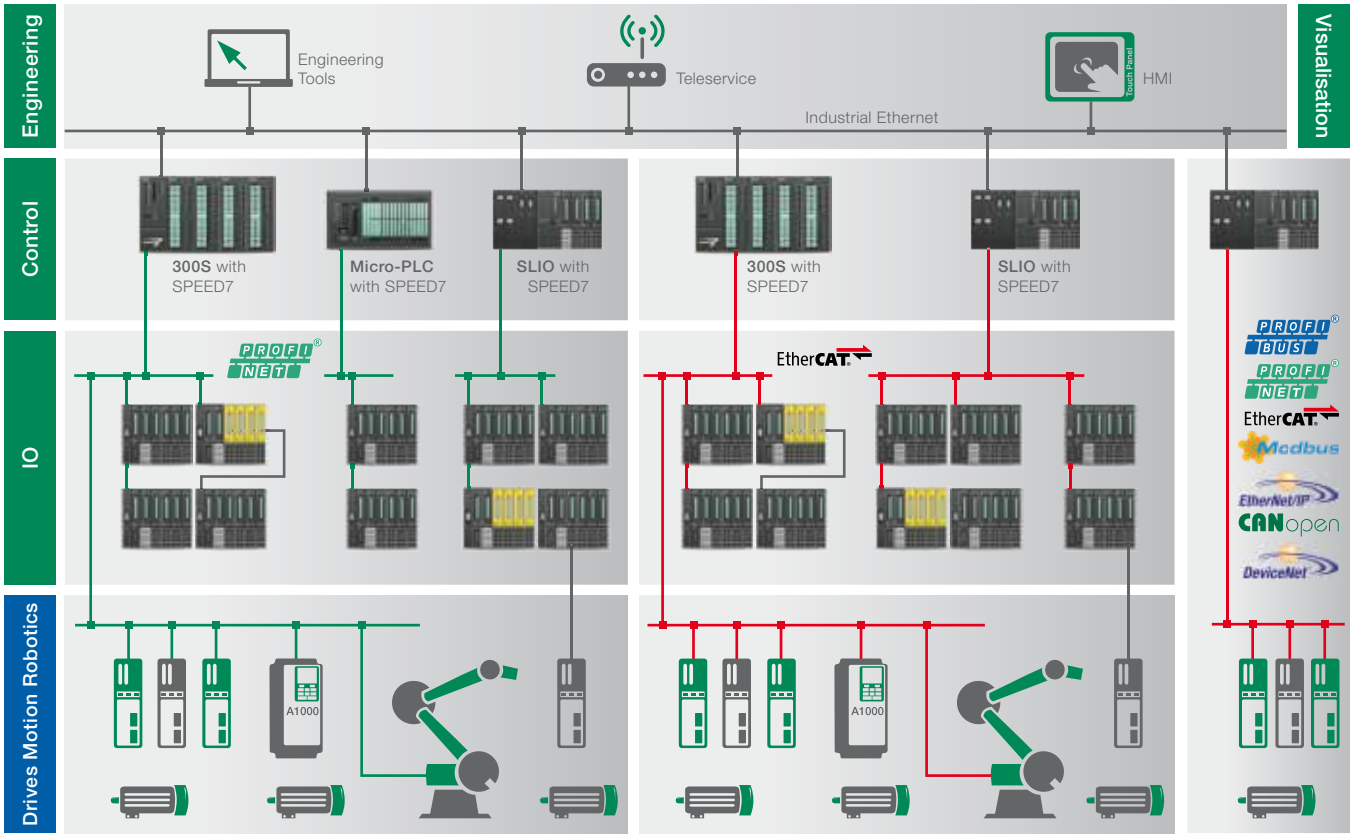
SPEED7 ensures your lead

- 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 and in the future with the new engineering framework SPEED7 Studio.
- **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, vaccum packing and pressurized filling go on here. The whole thing under the toughest hygene 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.

„From a producer of components to a supplier of systems“

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

worldwide
first Inrack-PC

300S One of the fastest
control systems programmable
with STEP7

200V Modular control system
for central and decentral
applications

1985

VIPA

profichip®
automation in silicon

Foundation of **VIPA GmbH**
by Wolfgang Seel

Foundation of
profichip GmbH

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

INNOVATIONSPREIS 2007
initiative mittelstand
KATEGORIESIEGER

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

Operating / monitoring devices
From two-line displays
to touch panels

Accessories
enhanceing, linking,
optimizing

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

Software for convenient
programming and
parameterization

2014

INDUSTRIE PREIS 2008

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

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

TOP 100

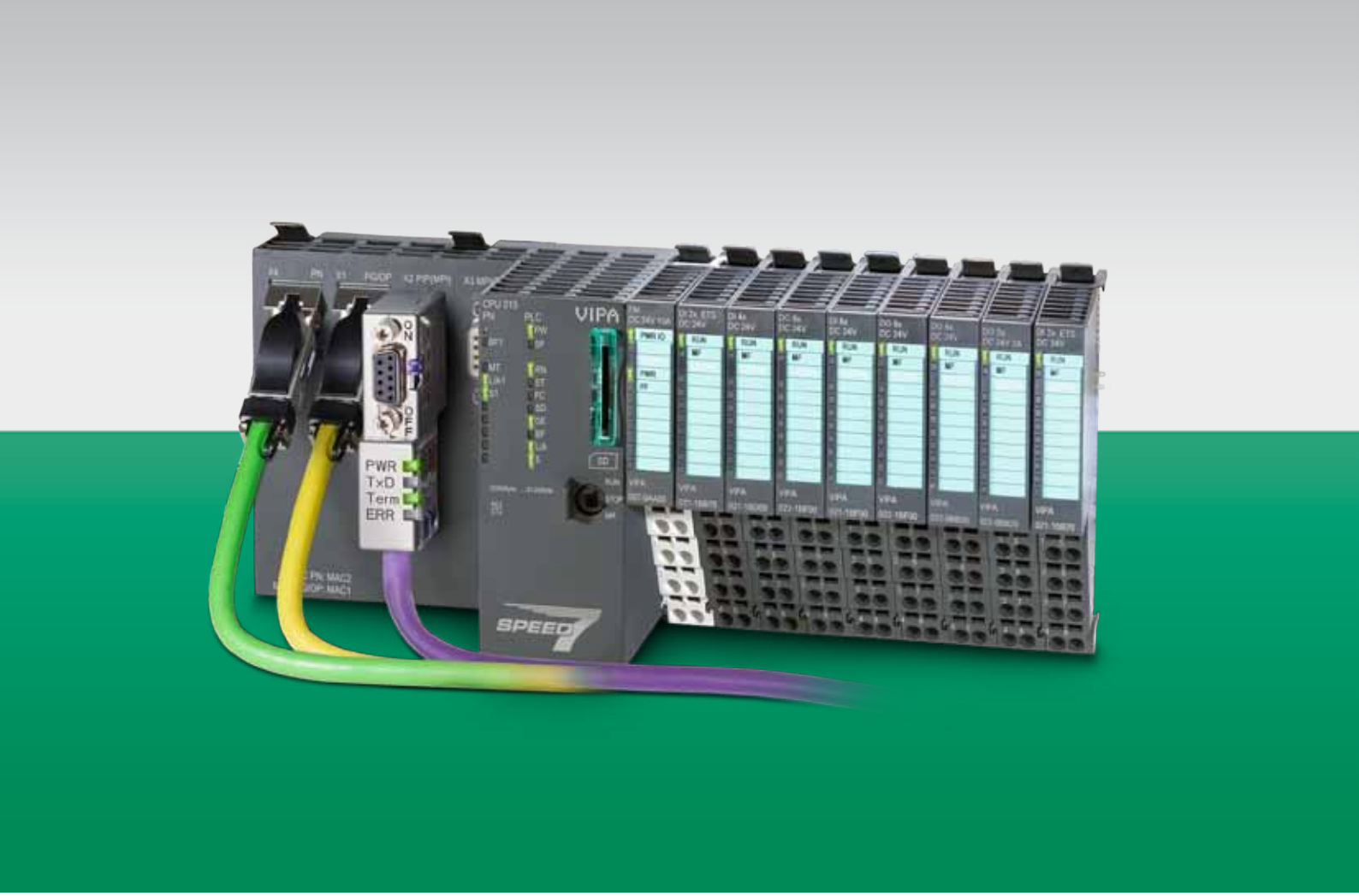
Honoured as top
innovator by **Top100**

YASKAWA

Majority shareholding of
YASKAWA Europe GmbH
at the VIPA GmbH

Contents | VIPA

At a glance



SLIO

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 central and decentralized automation tasks.

With the new SLIO CPU the I/O system has become one of the most advanced centralized control systems in the automation market. With the introduction of the VIPASetCards (VSC) the customer can confi gure a suitable CPU within an seconds. Besides expandable work memory you can also select between different fieldbus connections.

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, Ethernet/IP and Modbus/TCP 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

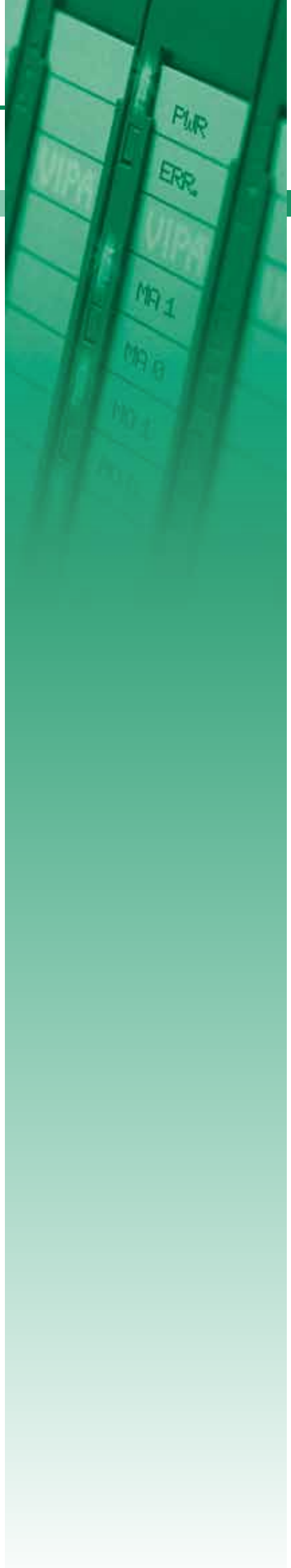
A variety of signal modules are available for the connection of sensors and actuators for acquiring digital and analog signals to and from the process.

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

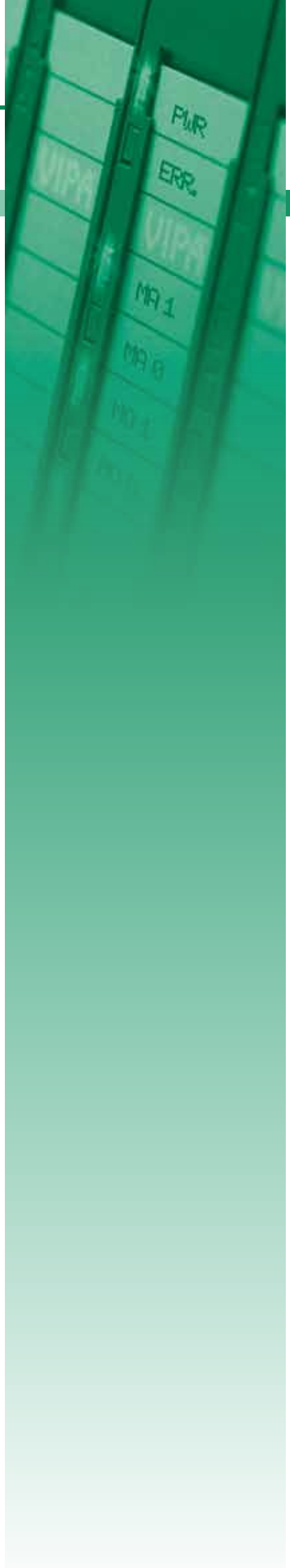


Order no.	Name/Description
CPUs STEP7 programmable, standard	
014-CEF0R00	**CPU 014 - SPEED7 technology** › SPEED7 technology › 64 kB work memory › Memory extension (max. 192 kB) via VIPASetCard › PROFIBUS slave/master activatable via VIPASetCard › Full-function RS485 interface integrated, switchable MPI/PtP › Ethernet PG/OP interface
CPUs STEP7 programmable, PROFINET	
015-CEFPR00	**CPU 015 - SPEED7 technology** › SPEED7 technology › 256 kB work memory › Memory extension (max. 512 kB) via VIPASetCard › PROFIBUS slave/master activatable via VIPASetCard › Full-function RS485 interface integrated, switchable MPI/PtP › PROFINET controller for up to 128 participants integrated
FeatureSets	
955-C000M00	**VIPASetCard 001 for SLIO CPU** › + PROFIBUS master
955-C000S00	**VIPASetCard 002 for SLIO CPU** › + PROFIBUS-slave
955-C000020	**VIPASetCard 003 for SLIO CPU** › + 64 kByte
955-C000M20	**VIPASetCard 004 for SLIO CPU** › + 64 kByte + PROFIBUS-master
955-C000S20	**VIPASetCard 005 for SLIO CPU** › + 64 kByte + PROFIBUS-slave
955-C000030	**VIPASetCard 006 for SLIO CPU** › + 128 kByte
955-C000M30	**VIPASetCard 007 for SLIO CPU** › + 128 kByte + PROFIBUS-master
955-C000S30	**VIPASetCard 008 for SLIO CPU** › + 128 kByte + PROFIBUS-slave
955-C000040	**VIPASetCard 009 for SLIO CPU** › + 256 kByte
955-C000M40	**VIPASetCard 010 for SLIO CPU** › + 256 kByte + PROFIBUS-master
955-C000S40	**VIPASetCard 011 for SLIO CPU** › + 256 kByte + PROFIBUS-slave
Clamp modules	
001-1BA00	**CM 001 - Potential distributor module** › 8xDC 24 V clamps
001-1BA10	**CM 001 - Potential distributor module** › 8xDC 0 V clamps
001-1BA20	**CM 001 - Potential distributor module** › 4xDC 24 V, 4xDC 0 V clamps
Power modules	
007-1AB00	**PM 007 - Power module** › Power supply DC 24 V, 10 A › Reverse polarity protection › Overvoltage protection
007-1AB10	**PM 007 - Power module** › Power supply DC 24 V, 4 A › Power supply DC 24 V for bus supply 5 V, 2 A › Reverse polarity protection › Overvoltage protection
Digital input modules	
021-1BB00	**SM 021 - Digital input** › 2 inputs
021-1BB10	**SM 021 - Digital input** › 2 fast inputs › Input filter time delay parameterizable 2 µs...4 ms
021-1BB50	**SM 021 - Digital input** › 2 inputs › Active low input

SLIO

Order no.	Name/Description
021-1BB70	**SM 021 - Digital input** › 2 inputs › Time stamp
021-1BD00	**SM 021 - Digital input** › 4 inputs
021-1BD10	**SM 021 - Digital input** › 4 fast inputs › Input filter time delay parameterizable 2 µs...4 ms
021-1BD40	**SM 021 - Digital input** › 4 inputs › Connect 2/3-wire
021-1BD50	**SM 021 - Digital input** › 4 inputs › Active low input
021-1BD70	**SM 021 - Digital input** › 4 inputs › Time stamp
021-1BF00	**SM 021 - Digital input** › 8 inputs
021-1BF50	**SM 021 - Digital input** › 8 inputs › Active low input
021-1DF00	**SM 021 - Digital input** › 8 inputs › diagnosis of wiring errors
021-1SD00	**SM 021 - Digital input** › 4 inputs › Safety
Digital output modules	
022-1BB00	**SM 022 - Digital output** › 2 outputs › Output current 0.5 A
022-1BB20	**SM 022 - Digital output** › 2 outputs › Output current 2 A
022-1BB50	**SM 022 - Digital output** › 2 Low-Side outputs › Output current 0.5 A
022-1BB70	**SM 022 - Digital output** › 2 outputs › Time stamp › Output current 0.5 A
022-1BB90	**SM 022 - Digital output** › 2 outputs › PWM
022-1BD00	**SM 022 - Digital output** › 4 outputs › Output current 0.5 A
022-1BD20	**SM 022 - Digital output** › 4 outputs › Output current 2 A
022-1BD50	**SM 022 - Digital output** › 4 Low-Side outputs › Output current 0.5 A
022-1BD70	**SM 022 - Digital output** › 4 outputs › Time stamp › Output current 0.5 A
022-1BF00	**SM 022 - Digital output** › 8 outputs › Output current 0.5 A
022-1BF50	**SM 022 - Digital output** › 8 Low-Side outputs › Output current 0.5 A
022-1HB10	**SM 022 - Digital output** › 2 relay outputs › DC 30 V/ AC 230 V › Output current 3 A

SLIO



Order no.	Name/Description
022-1DF00	**SM 022 - Digital output** › 8 outputs › Output current 0.5 A › diagnosis of wiring errors
022-1SD00	**SM 022 - Digital output** › 4 outputs › Safety › Output current 0.5 A
Analog input modules	
031-1BB10	**SM 031 - Analog input** › 2 inputs 12Bit › Current 4...20 mA › 2 wire
031-1BB30	**SM 031 - Analog input** › 2 inputs 12Bit › Voltage 0...10 V
031-1BB40	**SM 031 - Analog input** › 2 inputs 12Bit › Current 0(4)...20 mA
031-1BB60	**SM 031 - Analog input** › 2 inputs 12Bit › Current 4...20 mA › 2 wire
031-1BB70	**SM 031 - Analog input** › 2 inputs 12Bit › Voltage -10 V...+10 V
031-1BB90	**SM 031 - Analog input** › 2 inputs 16Bit › Thermocouple › Voltage -80mV...+80mV
031-1BD30	**SM 031 - Analog input** › 4 inputs 12Bit › Voltage 0...10 V
031-1BD40	**SM 031 - Analog input** › 4 inputs 12Bit › Current 0(4)...20 mA
031-1BD70	**SM 031 - Analog input** › 4 inputs 12Bit › Voltage -10 V...+10 V
031-1BD80	**SM 031 - Analog input** › 4 inputs 16Bit › 0 .. 3000 ohm resistance › Resistance measurment with 2, 3, and 4-wires
031-1CB30	**SM 031 - Analog input** › 2 inputs 16Bit › Voltage 0...10 V
031-1CB40	**SM 031 - Analog input** › 2 inputs 16Bit › Current 0(4)...20 mA
031-1CB70	**SM 031 - Analog input** › 2 inputs 16Bit › Voltage -10 V...+10 V
031-1CD30	**SM 031 - Analog input** › 4 inputs 16Bit › Voltage 0...10 V
031-1CD35	**SM 031 - Analog input** › 4 inputs 16Bit › Voltage 0...10 V
031-1CD40	**SM 031 - Analog input** › 4 inputs 16Bit › Current 0(4)...20 mA
031-1CD45	**SM 031 - Analog input** › 4 inputs 16Bit › Current 0(4)...20 mA
031-1CD70	**SM 031 - Analog input** › 4 inputs 16Bit › Voltage -10 V...+10 V

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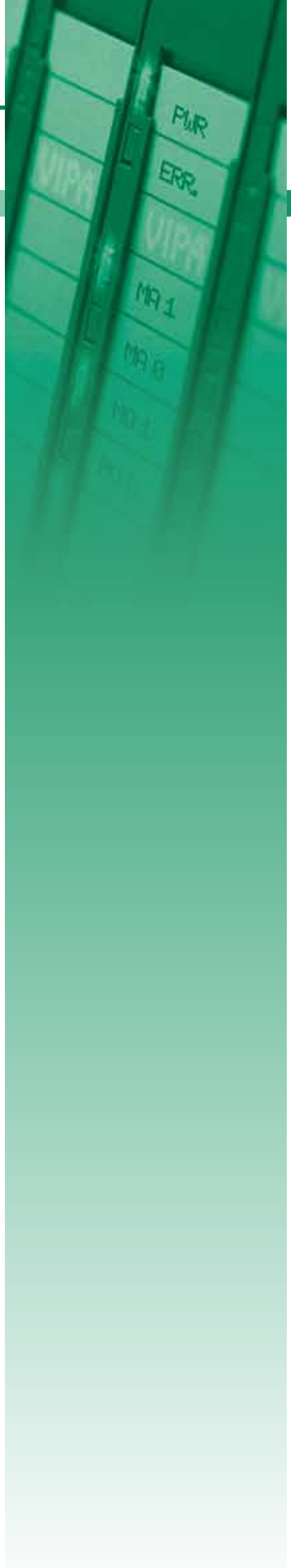
Order no.	Name/Description
031-1LB90	**SM 031 - Analog input** › 2 inputs 16Bit › Thermocouple › Voltage -80mV...+80mV › reqires less parameter bytes than module 031-1BB90
031-1LD80	**SM 031 - Analog input** › 4 inputs 16Bit › 0 .. 3000 ohm resistance › Resistance measurment with 2, 3, and 4-wires › reqires less parameter bytes than module 031-1BD80
Analog output modules	
032-1BB30	**SM 032 - Analog output** › 2 outputs 12Bit › Voltage 0...10 V
032-1BB40	**SM 032 - Analog output** › 2 outputs 12Bit › Current 0(4)...20 mA
032-1BB70	**SM 032 - Analog output** › 2 outputs 12Bit › Voltage -10 V...+10 V
032-1BD30	**SM 032 - Analog output** › 4 outputs 12Bit › Voltage 0...10 V
032-1BD40	**SM 032 - Analog output** › 4 outputs 12Bit › Current 0(4)...20mA
032-1BD70	**SM 032 - Analog output** › 4 outputs 12Bit › Voltage -10 V...+10 V
032-1CB30	**SM 032 - Analog output** › 2 outputs 16Bit › Voltage 0...10 V
032-1CB70	**SM 032 - Analog output** › 2 outputs 16Bit › Voltage -10 V...+10 V
032-1CD30	**SM 032 - Analog output** › 4 outputs 16Bit › Voltage 0...10 V
032-1CD70	**SM 032 - Analog output** › 4 outputs 16Bit › Voltage -10 V...+10 V
RS232/422/485 and other CPs	
040-1BA00	**CP 040 - Communication processor** › RS232 interface
040-1CA00	**CP 040 - Communication processor** › RS422/485 interface
Counter modules	
050-1BA00	**FM 050 - Counter module** › 1 Counter 32 Bit (AB) › DC 24 V
050-1BA10	**FM 050 - Counter module** › 1 Counter 32 Bit (AB) › DC 5 V (difference signal)
050-1BB00	**FM 050 - Counter module** › 2 Counter 32 Bit (AB) › DC 24 V
050-1BB30	**FM 050 - Counter module Eco** › 2 Counter 32 Bit (AB) › DC 24 V
050-1BB40	**FM 050 - Frequency measurement** › 2 channels 24 Bit › DC 24 V

SLIO



Order no.	Name/Description
SSI modules	
050-1BS00	**FM 050S - SSI module** › SSI - Encoder › Master or slave mode › Encoder frequency 125 kHz...2 MHz › µs time stamp for encoder value
Fieldbus slave modules without I/Os	
053-1CA00	**IM 053CAN - CANopen slave** › CANopen slave › 16 Rx and 16 Tx PDOs › 2 SDOs › PDO linking › PDO mapping: fix › up to 64 peripheral modules
053-1DN00	**IM 053DN - DeviceNet slave** › DeviceNet slave › Group 2 only device › Poll only device › Baud rate: 125, 250 and 500kbit/s › up to 64 peripheral modules
053-1DP00	**IM 053DP - PROFIBUS-DP slave** › PROFIBUS-DP slave (DP-V0, DP-V1) › 244 Byte input and 244 Byte output data › up to 64 peripheral modules
053-1EC00	**IM 053EC - EtherCAT slave** › EtherCAT slave › RJ45 jack 100BaseTX › up to 64 peripheral modules
053-1IP00	**IM 053IP - EtherNet/IP slave** › EtherNet/IP-Slave › I/O configuration via fieldbus › up to 64 peripheral modules
053-1MT00	**IM 053MT - Modbus/TCP slave** › Modbus/TCP slave › I/O configuration via fieldbus › up to 64 peripheral modules
053-1PN00	**IM 053PN - PROFINET-IO slave** › PROFINET-IO slave › Transfer rate 100Mbit/s › up to 64 peripheral modules
35 mm profile rail	
290-1AF00	**35 mm profile rail** › length 2000 mm
290-1AF30	**35 mm profile rail** › length 530 mm
Miscellaneous	
000-0AA00	**SLIO bus cover** › 1 piece
000-0AB00	**SLIO shield bus carrier** › 10 pieces
000-0AC00	**SLIO shield bus carrier** › Coding key for secure coding of SLIO modules › Quantity: 100 pieces
000-0DN00	**SLIO bus cover** › DeviceNet jack for IM › Contact surface: gold › Pole number: 5 › Contact termination: spring force connection

SLIO

Order no.	Name/Description
Manuals and operating instructions	
HB300D_CPU	**Manual System SLIO - German** › CPU 01x
HB300E_CPU	**Manual System SLIO - German** › CPU 01x
HB300D	**Manual System SLIO - German** › Manual System SLIO - Compendium, German HB300D_CP, HB300D_SM, HB300D_IM, HB300D_FM, HB300D_PS-CM
HB300E	**Manual System SLIO - English** › Manual System SLIO - Compendium, English HB300E_CP, HB300E_SM, HB300E_IM, HB300E_FM, HB300_PS-CM
HB300D_CP	**Manual System SLIO - German** › CP - Communication processor
HB300E_CP	**Manual System SLIO - English** › CP - Communication processor
HB300D_FM	**Manual System SLIO - German** › FM - Function modules
HB300E_FM	**Manual System SLIO - English** › FM - Function modules
HB300D_IM	**Manual System SLIO - German** › IM - Interface modules
HB300E_IM	**Manual System SLIO - English** › IM - Interface modules
HB300D_PS-CM	**Manual System SLIO - German** › PS-CM - Power modules / Clamp modules
HB300E_PS-CM	**Manual System SLIO - English** › PS-CM - Power modules / Clamps modules
HB300D_SM-AIO	**Manual System SLIO - German** › SM - Signal modules
HB300E_SM-AIO	**Manual System SLIO - English** › SM - Signal modules
HB300D_SM-DIO	**Manual System SLIO - German** › SM-DIO - Digital Signal modules
HB300E_SM-DIO	**Manual System SLIO - English** › SM - Signal modules
HB300D_SM-S	**Manual System SLIO - German** › SM-S - Safety Digital Signal modules
HB300E_SM-S	**Manual System SLIO - English** › SM-S - Safety Digital Signal modules

At a glance

100V

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 system 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 are 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.

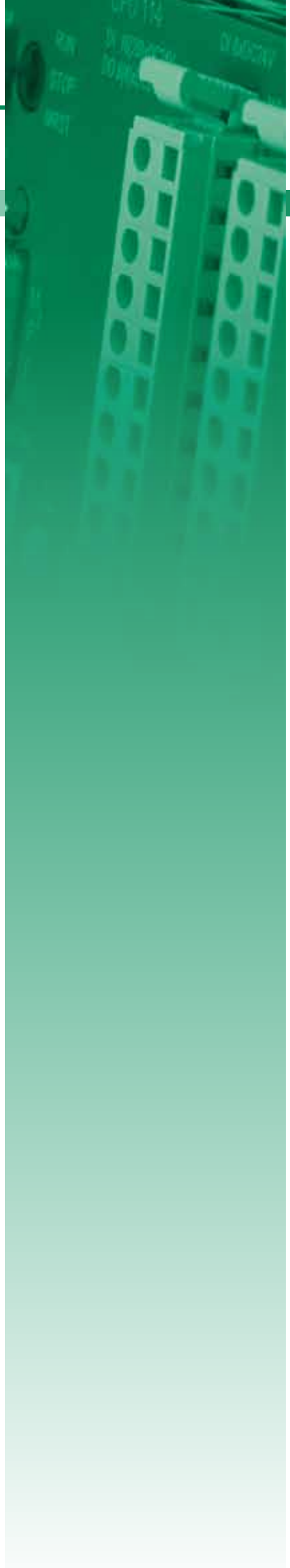
Depending on the CPU, variant counter inputs and PWM outputs are integrated. Due to the counter inputs, complex and fast counting tasks in the manufacturing and process industries will be economically realized. The adjustable PWM outputs via potentiometer allow, for example, CCFLs to be "dimmed" or the 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	**CPU 112 - Micro PLC** › 8 (12) inputs › 8 (4) outputs › 8 kB work memory, 16 kB load memory
114-6BJ02	**CPU 114 - Micro PLC** › 16 (20) inputs › 8 (4) outputs › from which are 2 PWM 50 kHz outputs › 16 kB work memory, 24 kB load memory
114-6BJ03	**CPU 114 - Micro PLC** › 16 (20) inputs › 8 (4) outputs › from which are 2 PWM 50 kHz outputs › 24 kB work memory, 32 kB load memory
114-6BJ04	**CPU 114 - Micro PLC** › 16 (20) inputs › 8 (4) outputs › from which are 2 PWM 50 kHz outputs › 32 kB work memory, 40 kB load memory
114-6BJ52	**CPU 114R - Micro PLC** › 16 inputs › 8 relay outputs › AC 230 V/ DC 30 V › 16 kB work memory, 24 kB load memory
114-6BJ53	**CPU 114R - Micro PLC** › 16 inputs › 8 relay outputs › AC 230 V/ DC 30 V › 24 kB work memory, 32 kB load memory
114-6BJ54	**CPU 114R - Micro PLC** › 16 inputs › 8 relay outputs › AC 230 V/ DC 30 V › 32 kB work memory, 40 kB load memory
115-6BL02	**CPU 115 - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 16 kB work memory, 24 kB load memory
115-6BL03	**CPU 115 - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 24 kB work memory, 32 kB load memory
115-6BL04	**CPU 115 - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 32 kB work memory, 40 kB load memory
CPUs STEP7 programmable, PtP	
115-6BL12	**CPU 115SER - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 16 kB work memory, 24 kB load memory › RS232 interface
115-6BL13	**CPU 115SER - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 24 kB work memory, 32 kB load memory › RS232 interface
115-6BL14	**CPU 115SER - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 32 kB work memory, 40 kB load memory › RS232 interface

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Order no.	Name/Description
115-6BL32	**CPU 115SER - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 16 kB work memory, 24 kB load memory › RS485 interface
115-6BL33	**CPU 115SER - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 24 kB work memory, 32 kB load memory › RS485 interface
115-6BL34	**CPU 115SER - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 32 kB work memory, 40 kB load memory › RS485 interface
CPUs STEP7 programmable, DP slave	
115-6BL22	**CPU 115DP - Micro PLC** › 16 (20) inputs › 16 (12) outputs › 16 kB work memory, 24 kB load memory › PROFIBUS-DP slave interface
115-6BL23	**CPU 115DP - Micro PLC** › 16 (20) inputs › 16 (12) outputs › from which are 2 PWM 50 kHz outputs › 24 kB work memory, 32 kB load memory › PROFIBUS-DP slave interface
115-6BL24	**CPU 115DP - Micro PLC** › 16 (20) inputs › 16 (12) outputs › 32 kB work memory, 40 kB load memory › PROFIBUS-DP slave interface
Clamp modules	
101-4FH50	**CM 101 - Clamp modules** › 8x11 clamps › passive
Digital in/output modules	
123-4EH01	**EM 123 - Expansion module, digital** › 8 inputs/ 8 outputs › DC 24 V
123-4EJ01	**EM 123 - Expansion module, digital** › 16 inputs/ 8 outputs › DC 24 V
123-4EJ11	**EM 123 - Expansion module, digital** › 16 inputs › 8 relay outputs
123-4EJ20	**EM 123 - Expansion module, digital** › 16 inputs › AC/DC 60...230 V › 8 relay outputs
123-4EL01	**EM 123 - Expansion module, digital** › 16 inputs/ 16 outputs › Isolated
Analog in/output modules	
134-4EE00	**EM 134 - Expansion module, analog** › 3 inputs U/I › 1 input Pt, Ni, R › 2 outputs U/I › Configurable

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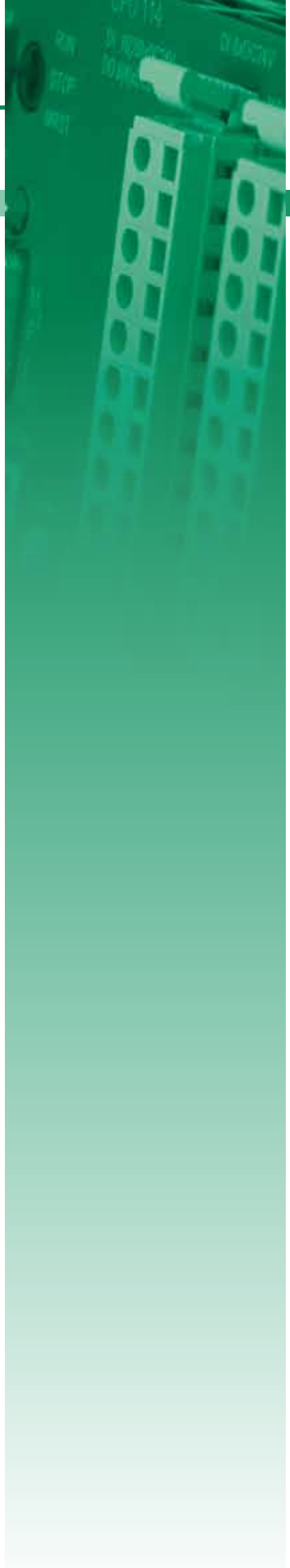

Order no.	Name/Description
Fieldbus slave modules with I/Os, DI	
151-4PH00	**SM 151 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 16 inputs
151-6PH00	**SM 151 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 16 inputs › 4x11 clamps
151-6PL00	**SM 151 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 32 inputs
Fieldbus slave modules with I/Os, DO	
152-4PH00	**SM 152 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 16 outputs
152-6PH00	**SM 152 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 16 outputs › 4x11 clamps
152-6PH50	**SM 152 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 16 relay outputs
152-6PL00	**SM 152 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 32 outputs
Fieldbus slave modules with I/Os, DIO	
153-4CF00	**SM 153 - CANopen slave, digital** › CAN slave › 8 channels as inputs or outputs › 2x11 clamps
153-4CH00	**SM 153 - CANopen slave, digital** › CAN slave › 8 (12) inputs › 4 (8) outputs
153-4PF00	**SM 153 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 8 channels as inputs or outputs › 2x11 clamps
153-4PH00	**SM 153 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 8 inputs › 8 outputs
153-6CH00	**SM 153 - CANopen slave, digital** › CAN slave › 8 (12) inputs › 4 (8) outputs › 4x11 clamps
153-6CL10	**SM 153 - CANopen slave, digital** › CAN slave › 24 inputs › 8 outputs
153-6PH00	**SM 153 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 8 inputs › 8 outputs › 4x11 clamps
153-6PL00	**SM 153 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 16 inputs › 16 outputs
153-6PL10	**SM 153 - PROFIBUS-DP slave, digital** › PROFIBUS-DP slave › 24 inputs › 8 outputs

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Order no.	Name/Description
Bus connectors	
290-0AA10	**Bus connector** › 1-tier
35 mm profile rail	
290-1AF00	**35 mm profile rail** › length 2000 mm
290-1AF30	**35 mm profile rail** › length 530 mm
Front connector	
292-1AF00	**Front connector** › 10 pin with cage clamps (included in the scope of delivery of signal modules)
MMC memory	
953-0KX10	**MMC - MultiMediaCard** › Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)
Manuals and operating instructions	
HB100D	**Manual System 100V - Compendium, German** › HB100D_CM, HB100D_EM, HB100D_SM-PB, HB100D_SM-CAN
HB100E	**Manual System 100V - Compendium, English** › HB100E_CM, HB100E_EM, HB100E_SM-PB, HB100E_SM-CAN
HB100D_CM	**Manual System 100V - German** › CM - Clamps modules
HB100E_CM	**Manual System 100V - English** › CM - Clamps modules
HB100D_CPU	**Manual System 100V - German** › CPU 11x, incl. operations list
HB100E_CPU	**Manual System 100V - English** › CPU 11x, incl. operations list
HB100D_EM	**Manual System 100V - German** › EM - Expansion modules
HB100E_EM	**Manual System 100V - English** › EM - Expansion modules
HB100D_SM-CAN	**Manual System 100V - German** › SM-CAN - Block I/O CAN
HB100E_SM-CAN	**Manual System 100V - English** › SM-CAN - Block I/O CAN
HB100D_SM-PB	**Manual System 100V - German** › SM-PB - Block I/O PROFIBUS
HB100E_SM-PB	**Manual System 100V - English** › SM-PB - Block I/O PROFIBUS

At a glance

200V

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.

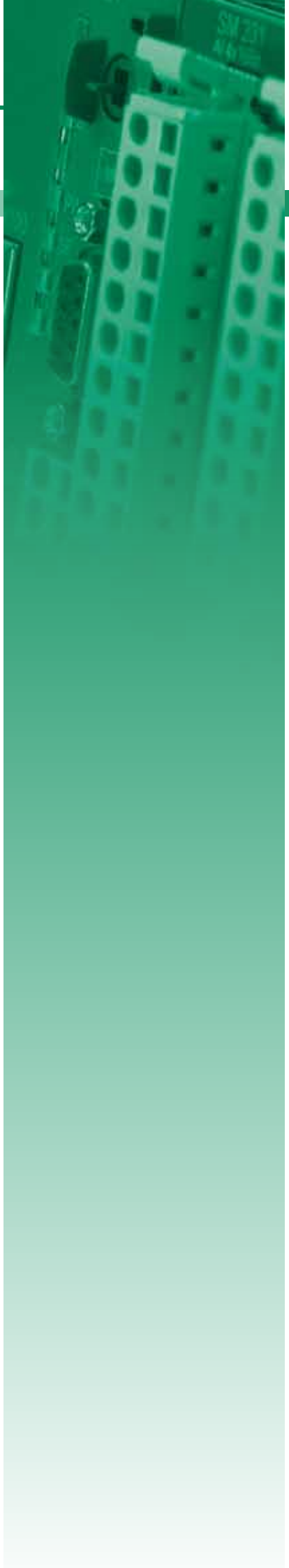
The counter modules in 200V also support complex and fast counting tasks in the manufacturing and process industry to calculate the comparative features and the connection of sensors, such as photoelectric barriers.

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.



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Order no.	Name/Description
CPUs STEP7 programmable, standard	
214-1BA03	**CPU 214 - PLC CPU** › 96 kB work memory › 144 kB load memory
214-1BA06	**CPU 214 - PLC CPU** › 96 kB work memory › 144 kB load memory › Also configurable via TIA-Portal
214-1BC03	**CPU 214C - PLC CPU** › 48 kB work memory › 80 kB load memory
214-1BC06	**CPU 214C - PLC CPU** › 48 kB work memory › 80 kB load memory › Also configurable via TIA-Portal
215-1BA03	**CPU 215 - PLC CPU** › 128 kB work memory › 192 kB load memory
215-1BA06	**CPU 215 - PLC CPU** › 128 kB work memory › 192 kB load memory › Also configurable via TIA-Portal
CPUs STEP7 programmable, NET-CPUs	
214-2BE03	**CPU 214PG - PLC CPU** › Twisted pair Ethernet via RJ45 › 96 kB work memory › 144 kB load memory
214-2BT13	**CPU 214NET - PLC CPU** › Ethernet CP 243 › Twisted pair Ethernet via RJ45 › 96 kB work memory › 144 kB load memory
215-2BE03	**CPU 215PG - PLC CPU** › Twisted pair Ethernet via RJ45 › 128 kB work memory › 192 kB load memory
215-2BT13	**CPU 215NET - PLC CPU** › Ethernet CP 243 › Twisted pair Ethernet via RJ45 › 128 kB work memory › 192 kB load memory
CPUs STEP7 programmable, PtP	
214-2BS03	**CPU 214SER - PLC CPU** › Serial communication via 2x RS232 › 96 kB work memory › 144 kB load memory
214-2BS13	**CPU 214SER - PLC CPU** › Serial communication via RS232 › 96 kB work memory › 144 kB load memory
214-2BS33	**CPU 214SER - PLC CPU** › Serial communication via RS485 › 96 kB work memory › 144 kB load memory
215-2BS03	**CPU 215SER - PLC CPU** › Serial communication via 2x RS232 › 128 kB work memory › 192 kB load memory
215-2BS13	**CPU 215SER - PLC CPU** › Serial communication via RS232 › 128 kB work memory › 192 kB load memory
215-2BS33	**CPU 215SER - PLC CPU** › Serial communication via RS485 › 128 kB work memory › 192 kB load memory

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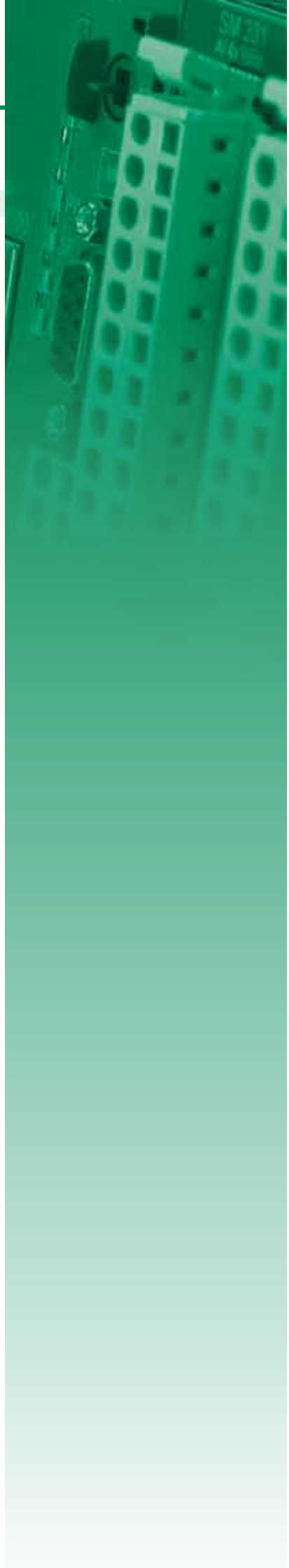

Order no.	Name/Description
CPUs STEP7 programmable, DP master	
214-2BM03	**CPU 214DPM - PLC CPU** › PROFIBUS-DP master › 96 kB work memory › 144 kB load memory
214-2BM06	**CPU 214DPM - PLC CPU** › PROFIBUS-DP master › 96 kB work memory › 144 kB load memory › Also configurable via TIA-Portal
215-2BM03	**CPU 215DPM - PLC CPU** › PROFIBUS-DP master › 128 kB work memory › 192 kB load memory
CPUs STEP7 programmable, DP slave	
214-2BP03	**CPU 214DP - PLC CPU** › PROFIBUS-DP slave › 96 kB work memory › 144 kB load memory
215-2BP03	**CPU 215DP - PLC CPU** › PROFIBUS-DP slave › 128 kB work memory › 192 kB load memory
CPUs STEP7 programmable, CAN master	
214-2CM03	**CPU 214CAN - PLC CPU** › CANopen master › 96 kB work memory › 144 kB load memory
215-2CM03	**CPU 215CAN - PLC CPU** › CANopen master › 128 kB work memory › 192 kB load memory
Clamp modules	
201-1AA00	**CM 201 - Double clamps module** › Dual terminals › 2x11 clamps, gray/gray › Passive
201-1AA10	**CM 201 - Double clamps module** › Dual terminals › 2x11 clamps, green-yellow/gray › Passive
201-1AA20	**CM 201 - Double clamps module** › Dual terminals › 2x11 clamps, red/blue › Passive
201-1AA40	**CM 201 - 4-tier clamps module** › Quad terminals › 2x5 clamps gray/gray › 2x6 clamps red/blue › Passive
Power supply	
207-1BA00	**PS 207 - Power supply** › AC 100...240 V w/o manual intervention › Output voltage DC 24 V
207-2BA20	**PS 207 - Power supply** › AC 100...240 V w/o manual intervention › Output voltage DC 24 V › Terminal module with 2x11 clamps
Digital input modules	
221-1BF00	**SM 221 - Digital input** › 8 inputs
221-1BF10	**SM 221 - Digital input** › 8 inputs, › Delay time 0.2 ms
221-1BF21	**SM 221 - Digital input** › 8 alarm inputs › Delay time 0.2 ms
221-1BF30	**SM 221 - Digital input ECO** › 8 inputs

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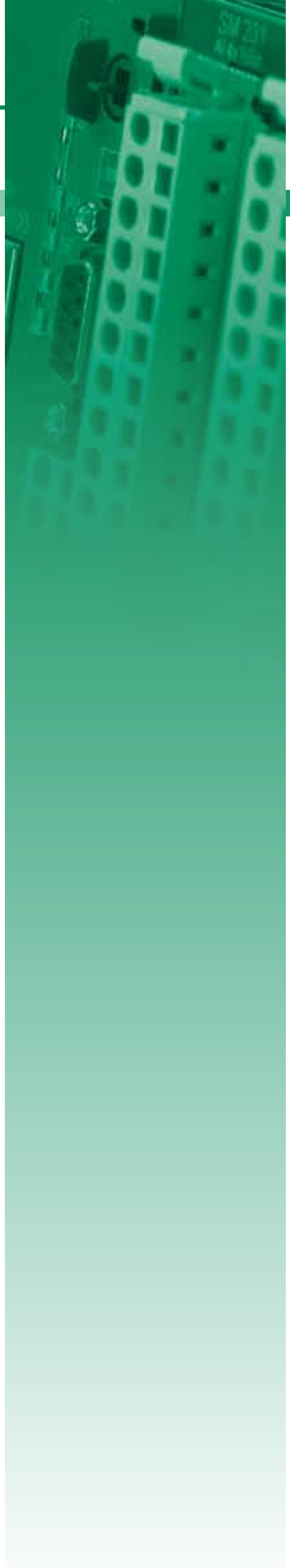

Order no.	Name/Description
221-1BF50	**SM 221 - Digital input** › 8 inputs › Active low input
221-1BH00	**SM 221 - Digital input** › 16 inputs › LED status display on the conversion module UB4x
221-1BH10	**SM 221 - Digital input** › 16 inputs
221-1BH30	**SM 221 - Digital input ECO** › 16 inputs
221-1BH50	**SM 221 - Digital input** › 16 inputs › Active low input › LED status display on conversion module UB4x
221-1BH51	**SM 221 - Digital input** › 16 inputs › Active low input
221-1FD00	**SM 221 - Digital input** › 4 inputs › AC/DC 90...230 V › Isolation per channel
221-1FF20	**SM 221 - Digital input** › 8 inputs › AC/DC 60...230 V
221-1FF30	**SM 221 - Digital input** › 8 inputs › AC/DC 24...48 V
221-1FF40	**SM 221 - Digital input** › 8 inputs › AC 230 V › Hysteresis
221-1FF50	**SM 221 - Digital input** › 8 inputs › AC 180...265 V
221-2BL10	**SM 221 - Digital input** › 32 inputs
KSD221-1BH00	**SM 221 Set - Digital input** › 16 inputs › LED status display on conversion module UB48D
KS221-1BH00	**SM 221 Set - Digital input** › 16 inputs › LED status display on conversion module UB48
Digital input with counter	
221-1BH20	**SM 221 - Digital input** › 16 inputs › 2 inputs are configurable as counter › LED status display
Digital output modules	
222-1BF00	**SM 222 - Digital output** › 8 outputs › Output current 1A
222-1BF10	**SM 222 - Digital output** › 8 outputs › Output current 2 A
222-1BF20	**SM 222 - Digital output** › 8 outputs › Isolation in 4 groups per 2 outputs › Output current 2 A
222-1BF30	**SM 222 - Digital output ECO** › 8 outputs › Output current 0.5 A
222-1BF50	**SM 222 - Digital output** › 8 Low-Side outputs › Output current 0.5 A
222-1BH00	**SM 222 - Digital output** › 16 outputs › Output current 0.5 A › LED status display on conversion module UB4x

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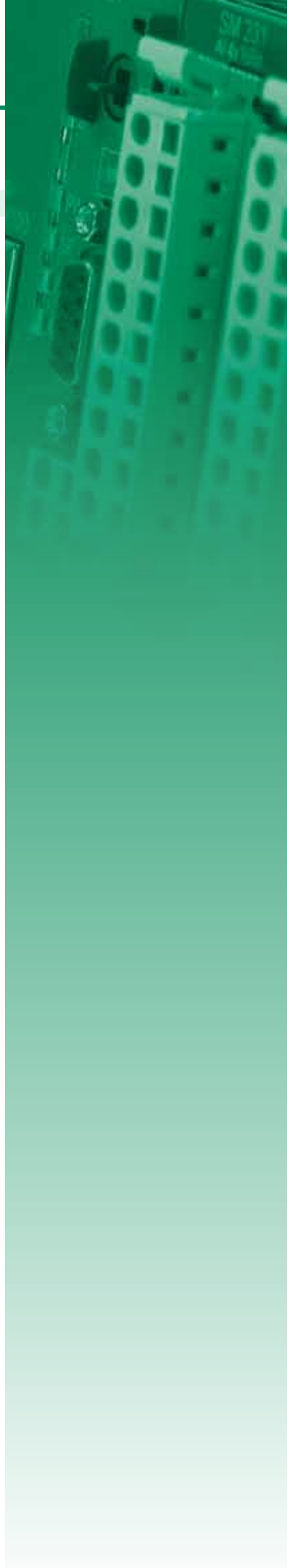

Order no.	Name/Description
222-1BH10	**SM 222 - Digital output** › 16 outputs › Output current 1 A
222-1BH20	**SM 222 - Digital output** › 16 outputs › Output current 2 A
222-1BH30	**SM 222 - Digital output ECO** › 16 outputs › Output current 0.5 A
222-1BH50	**SM 222 - Digital output** › 16 Low-Side outputs › Output current 0.5 A
222-1BH51	**SM 222 - Digital output** › 16 Low-Side outputs › Output current 0.5A
222-1DB00	**SM 222 - Digital output** › 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	**SM 222 - Digital output** › 4 isolated solid-state outputs › AC 230 V/ DC 400 V › Output current 0.5 A
222-1FF00	**SM 222 - Digital output** › 8 solide-state outputs › AC 230 V/ DC 400 V › Output current 0.5 A
222-1HD10	**SM 222 - Digital output** › 4 isolated relay outputs › AC 230 V/ DC 30 V › Output current 5 A
222-1HD20	**SM 222 - Digital output** › 4 isolated relay outputs › AC 230 V/ DC 30 V › Output current 16 A
222-1HF00	**SM 222 - Digital output** › 8 relay outputs › AC 230 V/ DC 30 V › Output current 5 A
222-2BL10	**SM 222 - Digital output** › 32 outputs › Output current 1 A
KSD222-1BH00	**SM 222 Set - Digital output** › 16 outputs › LED status display on conversion module UB48D › Output current 0.5 A
KS222-1BH00	**SM 222 Set - Digital output** › 16 outputs › LED status display on conversion module UB48 › Output current 0.5 A
Digital in/output modules	
223-1BF00	**SM 223 - Digital in-/output** › 8 channels (as input or output) › Output current 1 A › Diagnostics function
223-2BL10	**SM 223 - Digital in-/output** › 16 inputs/ 16 outputs › DC 24 V › Output current 1 A
Analog input modules	
231-1BD30	**SM 231 - Analog input ECO** › 4 inputs › Configurable › Voltage +/-10 V
231-1BD40	**SM 231 - Analog input ECO** › 4 inputs › Configurable › Current 4...20 mA, +/-20 mA

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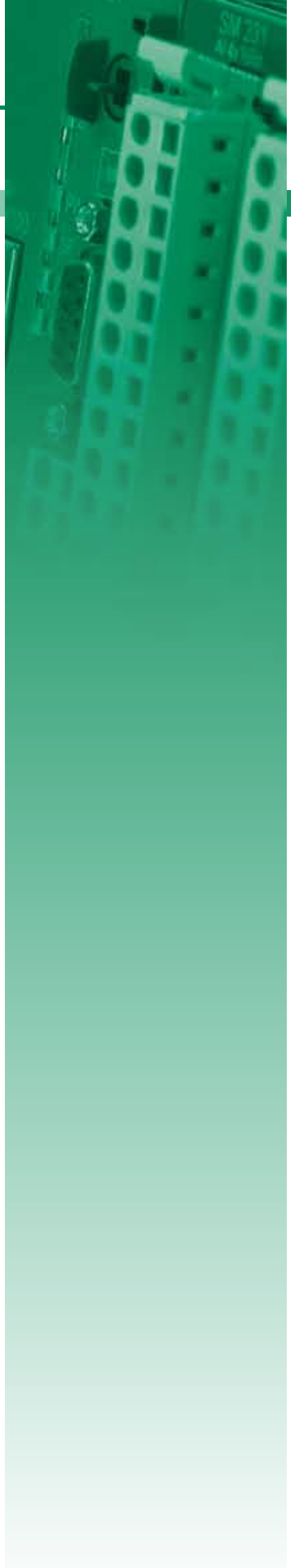

Order no.	Name/Description
231-1BD53	**SM 231 - Analog input** › 4 inputs › Configurable › Voltage, current › Resistance › Resistance thermometer, thermocouple
231-1BD60	**SM 231 - Analog input** › 4 input 12 bit › Current 4...20 mA › Potential separated per channel
231-1BD70	**SM 231 - Analog input** › 4 input 12 bit › Voltage +/-10 V › Potential separated per channel
231-1BF00	**SM 231 - Analog input** › 8 inputs › Configurable › Voltage 0...60 mV › Resistance thermometer, thermocouple
231-1FD00	**SM 231 - Analog input FAST** › 4 fast inputs › Configurable › Voltage, current › Cycle time 0.8 ms
Analog output modules	
232-1BD30	**SM 232 - Analog output ECO** › 4 outputs › Configurable › Voltage +/-10 V, 0..10 V
232-1BD40	**SM 232 - Analog output ECO** › 4 outputs › Configurable › Current 0(4)...20mA
232-1BD51	**SM 232 - Analog output** › 4 outputs › Configurable › Voltage, current
Analog in/output modules	
234-1BD50	**SM 234 - Analog in-/output** › 2 inputs/2 outputs › Configurable › Voltage, current
234-1BD60	**SM 234 - Analog in-/output** › 4 inputs/2 outputs › Configurable › Voltage, current › Resistance, resistance thermometer
Combination modules	
238-2BC00	**SM 238C - Digital in-/output, counter, analog in-/output** › 16 (12) digital inputs › 0 (4) digital outputs › max. 3 counter › 4 analog inputs › 2 analog outputs
RS232/422/485 and other CPs	
240-1DA10	**CM 240 - Mini-switch** › 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	**CP 240 - Communication processor** › RS232 interface
240-1CA20	**CP 240 - Communication processor** › RS485 interface
240-1CA21	**CP 240 - Communication processor** › RS422/485 interface
240-1EA20	**CP 240 - Communication processor** › 16 Byte parameter data › The transceiver module works at 868.3 MHz

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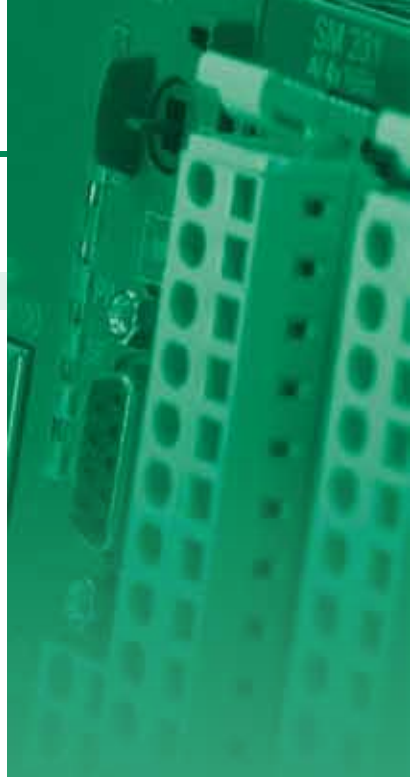

Order no.	Name/Description
240-1FA20	**CP 240 - Communication processor** › M-Bus master, potential separated › up to 6 slaves
Fieldbus master modules	
208-1CA00	**IM 208CAN - CANopen master** › CANopen master › 125 CAN slaves connectable › Project engineering under VIPA WinCoCT › 40 Transmit PDOs, 40 Receive PDOs
208-1DP01	**IM 208DP - PROFIBUS-DP master** › PROFIBUS-DP master › 125 DP slaves connectable
208-1DP11	**IM 208DPO - PROFIBUS-DP master** › PROFIBUS-DP master › 16 DP slaves connectable › FO interface
Counter modules	
250-1BA00	**FM 250 - Counter module** › 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
SSI modules	
250-1BS00	**FM 250S - SSI module** › 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
Positioning modules	
253-1BA00	**FM 253 - Positioning module** › Positioning module for 1axis drive with stepper › 3 inputs for connecting end switches and 2 outputs
254-1BA00	**FM 254 - Positioning module** › 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
Row interface connection	
260-1AA00	**IM 260 - Interface module** › Only be used in conjunction with the PC 288 or a CPU
261-1CA00	**IM 261 - Interface module** › Only be used in conjunction with the PC 288 or a CPU
Fieldbus slave modules without I/Os	
253-1CA01	**IM 253CAN - CANopen slave** › CANopen slave › 10 Rx and 10 Tx PDO › 2 SDOs › PDO linking › PDO mapping
253-1CA30	**IM 253CAN - CANopen slave ECO** › CANopen slave › 10 Rx and 10 Tx PDO › 2 SDOs › PDO linking › PDO mapping
253-1DN00	**IM 253DN - DeviceNET slave** › Group 2 only Device - employs predefined connection set › Baud rates: 125, 250, 500 kBit/s › For max. 32 peripheral modules (8 analog)
253-1DP01	**IM 253DP - PROFIBUS-DP slave** › PROFIBUS-DP slave (DP-V0, DP-V1) › For max. 32 peripheral modules (16 analog) › 244 Byte input and 244 Byte output data
253-1DP11	**IM 253DPO - PROFIBUS-DP slave** › PROFIBUS-DP slave (DP-V0, DP-V1) › For max. 32 peripheral modules (16 analog) › 244 Byte input and 244 Byte output data
253-1DP31	**IM 253DP - PROFIBUS-DP slave ECO** › PROFIBUS-DP slave (DP-V0, DP-V1) › For max. 8 peripheral modules › 244 Byte input and 244 Byte output data

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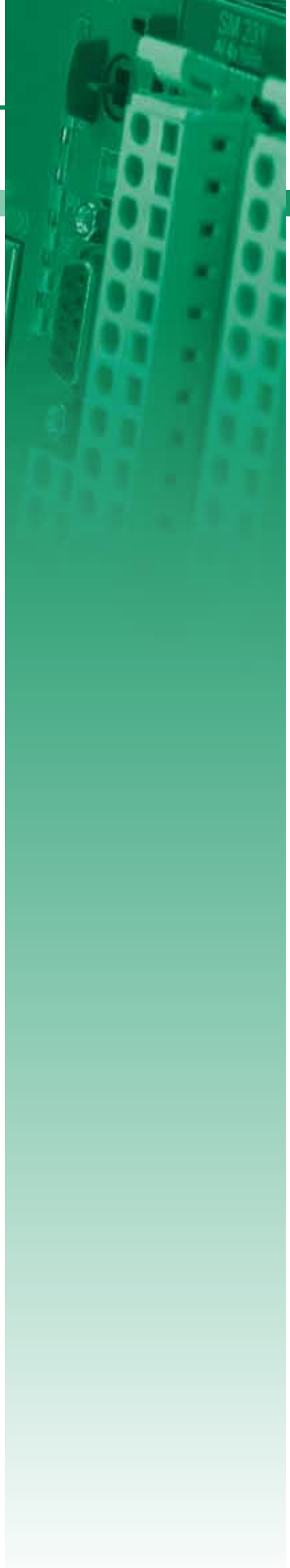
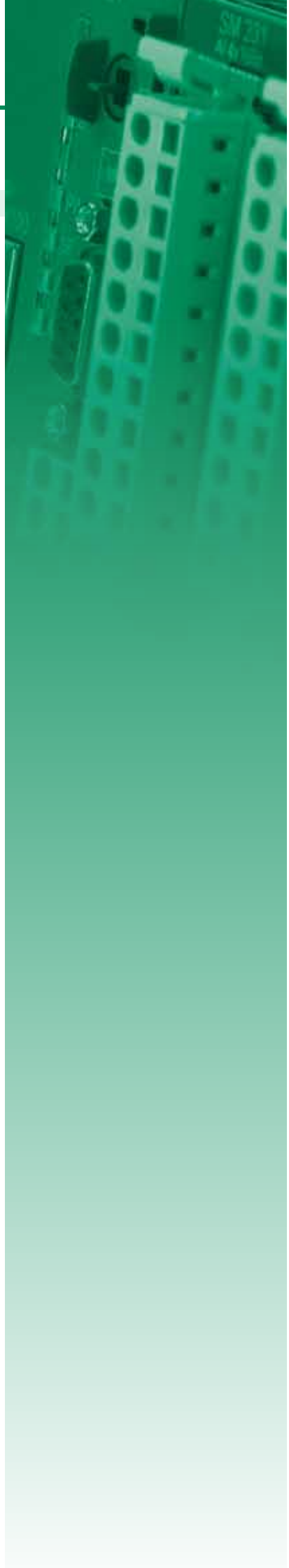


Order no.	Name/Description
253-1IB00	**IM 253IBS - INTERBUS slave** › INTERBUS slave › For 16 input and 16 output modules
253-1NE00	**IM 253NET - Ethernet slave** › Ethernet coupler with Modbus/TCP and Siemens S5 Header protocol › For max. 32 peripheral modules › Max. 256 Byte I/O data › RJ45 jack 100BaseTX, 10BaseT
Bus connectors	
290-0AA10	**Bus connector** › 1-tier
290-0AA20	**Bus connector** › 2-tier
290-0AA40	**Bus connector** › 4-tier
290-0AA80	**Bus connector** › 8-tier
35 mm profile rail	
290-1AF00	**35 mm profile rail** › length 2000 mm
290-1AF30	**35 mm profile rail** › length 530 mm
Front connector	
292-1AF00	**Front connector** › 10 pin with cage clamps (included in the scope of delivery of signal modules)
292-1AH00	**Front connector** › 18 pin with cage clamps (included in the scope of delivery of signal modules)
Cables	
260-1XY05	**Connection cable** › Connection cable for interface modules, length 0.5 m
260-1XY10	**Connection cable** › Connection cable for interface modules, length 1.0 m
260-1XY20	**Connection cable** › Connection cable for interface modules, length 2.0 m
260-1XY25	**Connection cable** › Connection cable for interface modules, length 2.5 m
Antennas, connectors etc.	
970-0CM00	**CM 240 - Jack** › For communication processor CM 240 - mini switch, external DC 24 V power supply
970-0DN00	**CM 240 - Jack** › DeviceNET jack for IM › Pole number: 5 › Contact termination: screw terminal
240-0EA00	**CP 240 - Portable Antenna** › EnOcean Antenna portable, incl. SMA connector
240-0EA10	**CP 240 - Magnetic base antenna** › EnOcean Antenna magnetic base, incl. 150 cm cable and SMA connector
MMC memory	
953-0KX10	**MMC - MultiMediaCard** › Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)
Labelling	
292-1XY10	**Labelling cards** › I/O labelling, perforated, 10 sheets each 8 cards
292-1XY20	**Clip-on cards** › Module labelling, perforated, 10 sheets each 108 cards
292-1XY00	**Labelling cards** › I/O labelling, with transparent cover foil, 10 pieces

200V



Order no.	Name/Description
Manuals and operating instructions	
HB97D	**Manual System 200V - Compendium, German** › HB97D_PS-CM, HB97D_SM, HB97D_CP, HB97D_IM, HB97D_FM
HB97E	**Manual System 200V - Compendium, English** › HB97E_PS-CM, HB97E_SM, HB97E_CP, HB97E_IM, HB97E_FM
HB97D_CP	**Manual System 200V - German** › CP 240 Communication processors
HB97E_CP	**Manual System 200V - English** › CP 240 Communication processors
HB97D_CPU	**Manual System 200V - German** › CPU 21x, incl. operations list
HB97E_CPU	**Manual System 200V - English** › CPU 21x, incl. operations list
HB99D_CPU	**Manual System 200V - German** › CPU 24x, incl. operations list
HB99E_CPU	**Manual System 200V - English** › CPU 24x, incl. operations list
HB97D_FM	**Manual System 200V - German** › FM - Function modules
HB97E_FM	**Manual System 200V - English** › FM - Function modules
HB97D_IM	**Manual System 200V - German** › IM - Interface modules
HB97E_IM	**Manual System 200V - English** › IM - Interface modules
HB97D_PS-CM	**Manual System 200V - German** › PS-CM - Power supply / Expansion modules
HB97E_PS-CM	**Manual System 200V - English** › PS-CM - Power supply / Expansion modules
HB97E_SM-AIO	**Manual System 200V - English** › SM-AIO - Analog Signal modules

At a glance

300S

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 or with Siemens TIA Portal .

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.

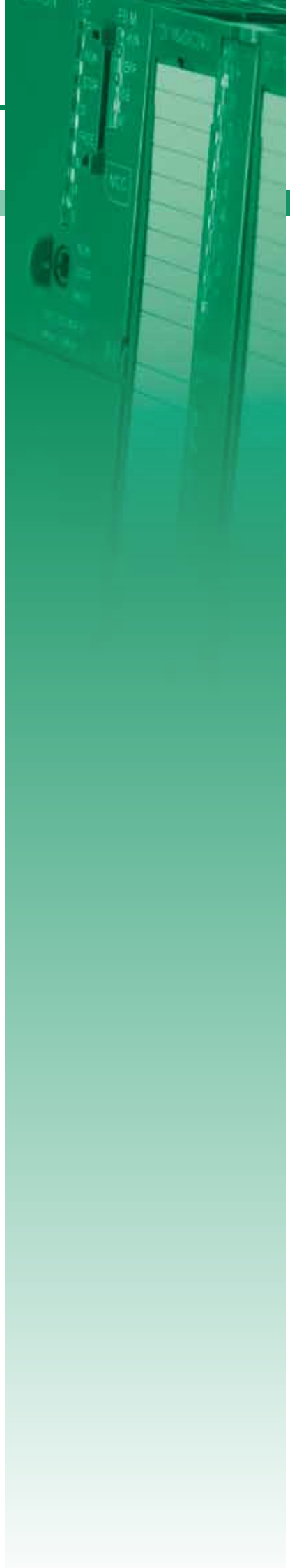
Communication

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.

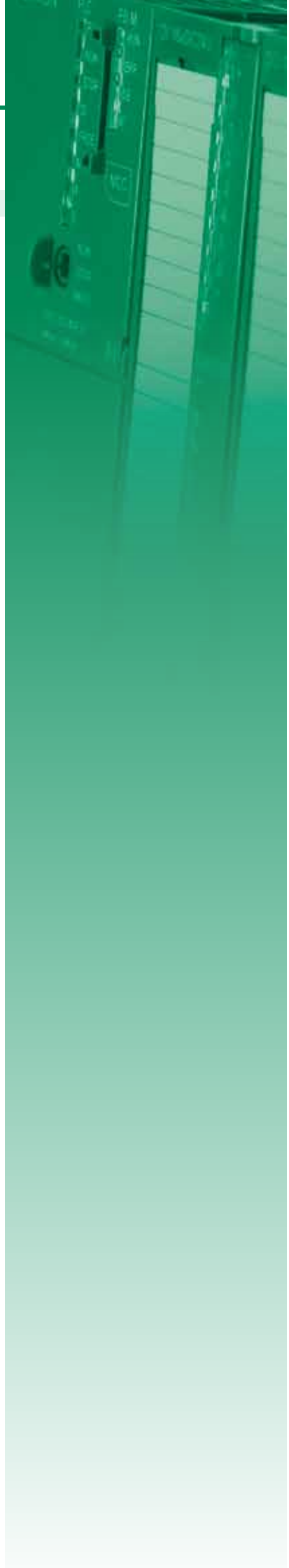
Multi-master applications with very high performance of communication can be implemented via the fieldbus master module for SPEED-Bus.

300S



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

300S



Order no.	Name/Description
CPUs STEP7 programmable, PROFINET	
315-4PN12	**CPU 315SN/PN - SPEED7 technology** › SPEED7 technology › 1 MB work memory › Memory extension (max. 2 MB) › PROFIBUS-DP master / PtP (switchable) › PROFINET controller integrated › Also configurable via TIA-Portal
315-4PN33	**CPU 315SN/PN ECO - SPEED7 technology** › SPEED7 technology › 512 KB work memory › PtP › PROFINET controller integrated › Also configurable via TIA-Portal
317-4PN12	**CPU 317SN/PN - SPEED7 technology** › SPEED7 technology, SPEED-Bus › 2 MB work memory › Memory extension (max. 8 MB) › PROFIBUS-DP master / PtP (switchable) › PROFINET Controller integrated › Also configurable via TIA-Portal
CPUs STEP7 programmable, class C	
312-5BE13	**CPU 312SC - SPEED7 technology** › SPEED7 technology › 16 x DI, 8 x DO › 64 kB work memory › Memory extension (max. 512 kB) › PtP interface › Also configurable via TIA-Portal
313-5BF13	**CPU 313SC - SPEED7 technology** › SPEED7 technology › 24 x DI, 16 x DO, 4 x AI, 2 x AO, 1 x AI Pt100 › 128 kB work memory › Memory extension (max. 512 kB) › PtP interface › Also configurable via TIA-Portal
313-6CF13	**CPU 313SC/DPM - SPEED7 technology** › SPEED7 technology › 16 x DI, 16 x DO › 128 kB work memory › Memory extension (max 512 kB) › PROFIBUS-DP master / PtP (switchable) › Also configurable via TIA-Portal
314-6CF02	**CPU 314ST/DPM - SPEED7 technology** › SPEED7 technology, SPEED-Bus › 8 x DI, 8 x DO, 4 x AI, 2 x AO, 1 x AI Pt100 › 512 kB work memory › Memory extension (max. 2 MB) › PROFIBUS-DP master / PtP (switchable)
314-6CF03	**CPU 314ST/DPM - SPEED7 technology** › SPEED7 technology, SPEED-Bus › 8 x DI, 8 x DO, 4 x AI, 2 x AO, 1 x AI Pt100 › 512 kB work memory › Memory extension (max. 2 MB) › PROFIBUS-DP master / PtP (switchable) › Also configurable via TIA-Portal
314-6CG13	**CPU 314SC/DPM - SPEED7 technology** › SPEED7 technology › 24 x DI, 16 x DO, 8 x DIO, 4 x AI, 1 x AI Pt100, 2 x AO › 256 kB work memory › Memory extension (max. 1 MB) › PROFIBUS-DP master / PtP (switchable) › Also configurable via TIA-Portal

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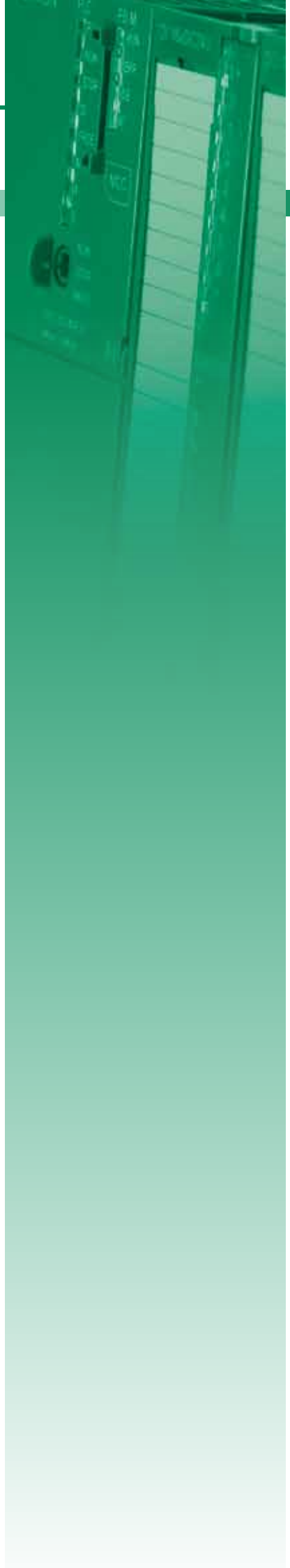

Order no.	Name/Description
CPUs STEP7 programmable, EtherCAT	
315-4EC12	**CPU 315SN/NET - SPEED7 technology** › SPEED7 technology › 1 MB work memory › Memory extension (max. 2 MB) › PROFIBUS-DP master / PtP (switchable) › EtherCAT controller integrated
317-4EC12	**CPU 317SN/NET - SPEED7 technology** › SPEED7 technology, SPEED-Bus › 2 MB work memory › Memory extension (max. 8 MB) › PROFIBUS-DP master / PtP (switchable) › EtherCAT-Master integrated
Power supply	
307-1BA00	**PS 307 - Power supply** › Output current 2.5 A › Output voltage DC 24 V › AC 100...240 V without manual switch
307-1EA00	**PS 307 - Power supply** › Output current 5 A › Output voltage DC 24 V › AC 120/230 V, 60/50 Hz switchable
307-1FB70	**PS 307S - Power supply - SPEED-Bus** › Only for CPU 317S › Output current 5.5A
307-1KA00	**PS 307 - Power supply** › Output current 10 A › Output voltage DC 24 V › AC 120/230 V, 60/50 Hz switchable
Digital input modules	
321-1BH01	**SM 321 - Digital input** › 16 inputs
321-1BH70	**SM 321S - FAST Digital input - SPEED-Bus** › SPEED-Bus › 16 fast inputs › Parameterizable as alarm/ETS
321-1BL00	**SM 321 - Digital input** › 32 inputs
321-1FH00	**SM 321 - Digital input** › 16 inputs, in groups of 4 › AC 120/230 V
Digital output modules	
322-1BF01	**SM 322 - Digital output** › 8 outputs, in groups of 4 › Output current 2 A
322-1BH01	**SM 322 - Digital output** › 16 outputs, in groups of 8 › Output current 1 A
322-1BH41	**SM 322 - Digital output** › 16 outputs, in groups of 8 › DC 24 V › Output current 2 A
322-1BH60	**SM 322 - Digital output** › 16 outputs › 1 input (activation for outputs) › 16 switches (automatic, manual 0/1) › Output current 0.5 A
322-1BH70	**SM 322S - FAST Digital output - SPEED-Bus** › SPEED-Bus › 16 fast outputs › Output current 0.5 A
322-1BL00	**SM 322 - Digital output** › 32 outputs, in groups of 8 › DC 24 V › Output current 1 A
322-1HH00	**SM 322 - Digital output** › 16 relay outputs, in groups of 8 › AC 230 V/ DC 30 V › Contact rating per channel 5 A

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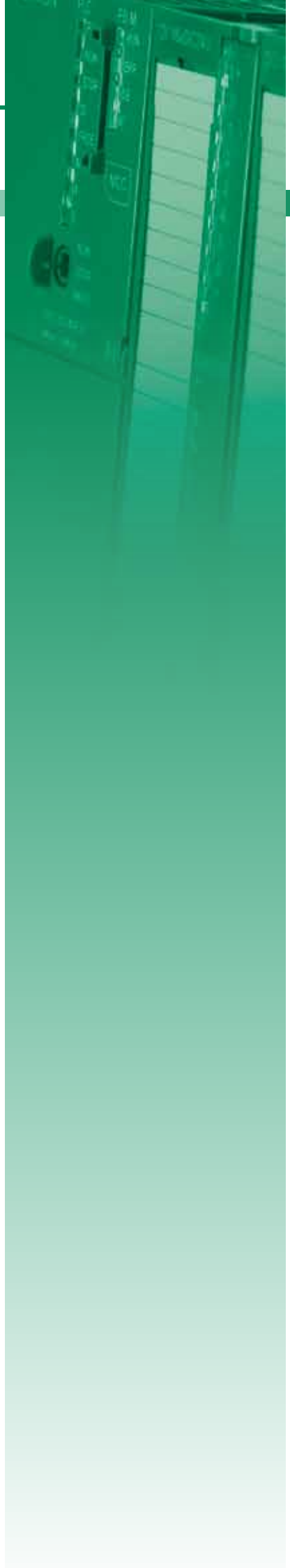
Order no.	Name/Description
322-5FF00	**SM 322 - Digital output** › 8 outputs, in groups of 1 › AC 120/230 V › Output current 2 A › Substitute value output (programmable)
Digital in/output modules	
323-1BH00	**SM 323 - Digital in-/output** › 16 channels (as inputs or outputs) › Diagnostic function › Output current 1 A
323-1BH01	**SM 323 - Digital in-/output** › 8 inputs/ 8 outputs › Output current 1 A
323-1BH70	**SM 323S - FAST Digital in-/output - SPEED-Bus** › SPEED-Bus › 16 fast inputs/outputs › Output current 0.5 A
323-1BL00	**SM 323 - Digital in-/output** › 16 inputs/ 16 outputs › Output current 1 A
Analog input modules	
331-1KF01	**SM 331 - Analog input** › 8 inputs 13 bit › Voltage, current › Resistance › Resistance thermometer
331-7KF01	**SM 331 - Analog input** › 8 inputs, in 4 groups › Voltage, current › Resistance › Resitance thermometer › Thermocouples
331-7KB01	**SM 331 - Analog input** › 2 inputs, in 1 group › Voltage, current › Resistance › Resistance thermometer › Thermocouples
331-7AF70	**SM 331S - Analog input FAST - SPEED-Bus** › 8 inputs › Current ±20 mA › Oscilloscope-/FIFO function › Interrupt parameterizable
331-7BF70	**SM 331S - Analog input FAST - SPEED-Bus** › 8 inputs › Voltage ±10 V › Oscilloscope-/FIFO-Function › Interrupt parameterizable
Analog output modules	
332-5HB01	**SM 332 - Analog output** › 2 outputs › Configurable › Voltage, current
332-5HD01	**SM 332 - Analog output** › 4 outputs › Configurable › Voltage, current
Analog in/output modules	
334-0KE00	**SM 334 - Analog in-/output** › 4 inputs, 2 outputs › Configurable › Resistance › Voltage 0...10 V



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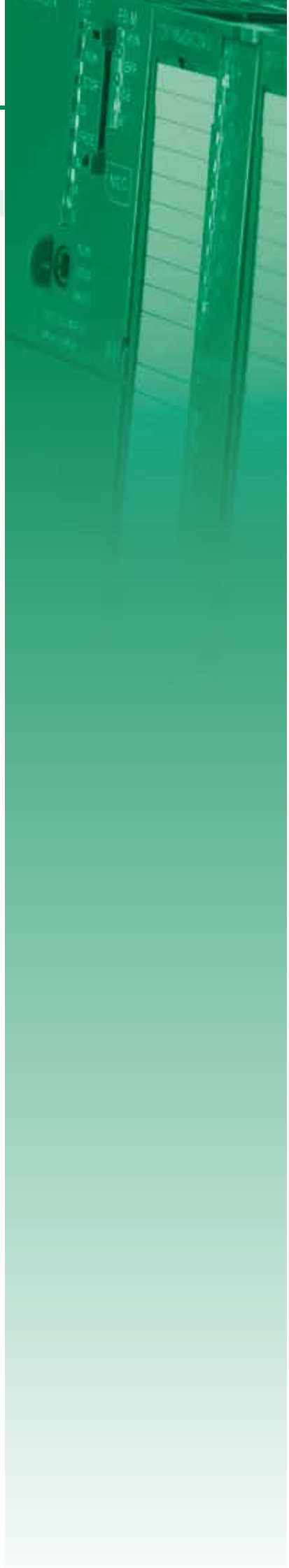
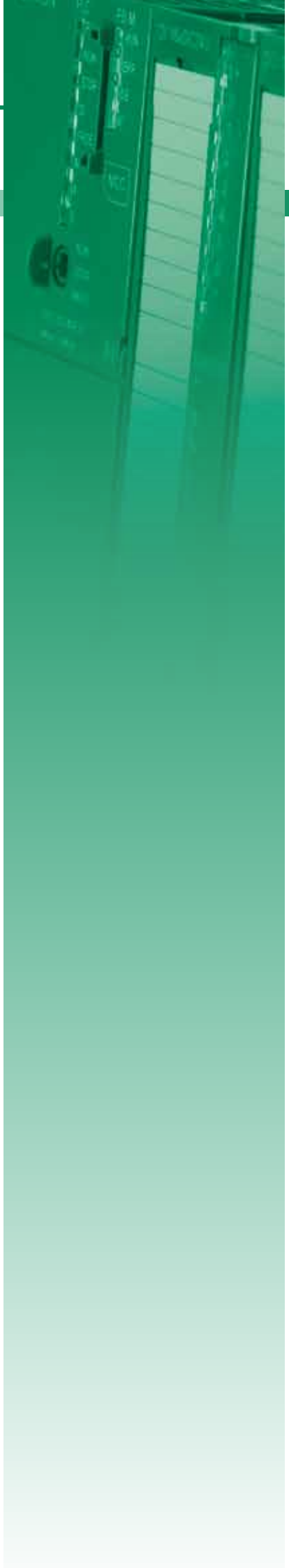
Order no.	Name/Description
RS232/422/485 and other CPs	
341-1AH01	**CP 341 - Communication processor** › RS232, isolated › Function compatibility to Siemens CP 341 › Parameterization via the Siemens parameterization package › Data transfer rate up to 76.8 kbit/s › Power supply via backplane bus
341-1CH01	**CP 341 - Communication processor** › 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	**CP 341S - Communication processor - SPEED-Bus** › 2x RS422/485, isolated › SPEED-Bus › Data transfer rate up to 115.2 kbit/s › Integrated diagnostics buffer
Fieldbus master modules	
342-1CA70	**CP 342S CAN - CANopen master - SPEED-Bus** › 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	**CP 342S DP - PROFIBUS-DP master - SPEED-Bus** › PROFIBUS-DP master (Class 1), SPEED-Bus › RS485 › 124 DP slaves connectable › Project engineering: Siemens SIMATIC Manager › Diagnostic facilities
342-1IA70	**CP 342S IBS - INTERBUS master - SPEED-Bus** › INTERBUS master, SPEED-Bus › RS422 › Diagnostics via LEDs, RS232, Mini-DIN, Dual Port Master › Up to 512 slaves connectable
342-2IA71	**CP 342S IBS - INTERBUS master - SPEED-Bus** › 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	**CP 343-2P ASI - AS-i master** › 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	**CP 343S TCP/IP - Ethernet-CP 343 - SPEED-Bus** › 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	**IM 353DP - PROFIBUS-DP slave** › 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
Memory extensions	
953-0KX10	**MMC - MultiMediaCard** › Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)
953-1LE00	**Memory Configuration Card (MCC) 32kByte** › for SPEED7 CPUs, 16kByte program/16kByte data
953-1LF00	**Memory Configuration Card (MCC) 64kByte** › for SPEED7 CPUs, 32kByte program/32kByte data
953-1LG00	**Memory Configuration Card (MCC) 128kByte** › for SPEED7 CPUs, 64kByte program/64kByte data

300S



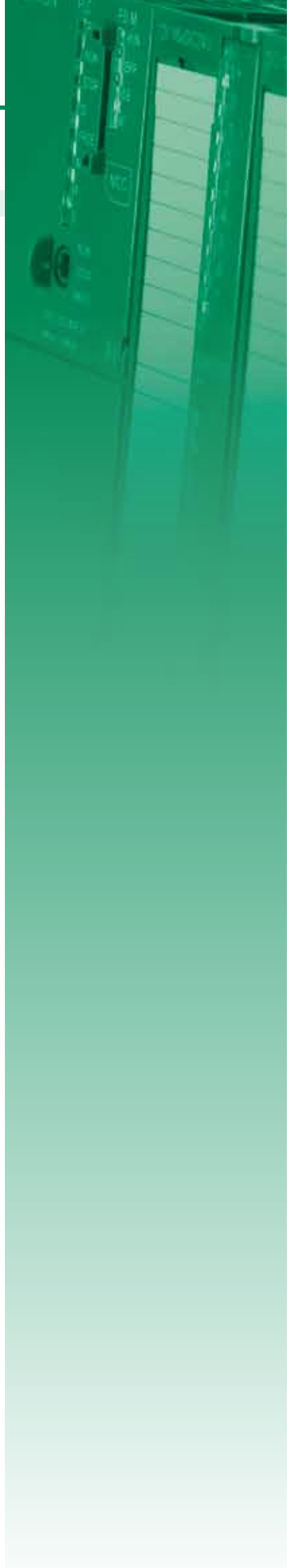
Order no.	Name/Description
953-1LH00	**Memory Configuration Card (MCC) 256kByte** › for SPEED7 CPUs, 128kByte program/128kByte data
953-1LJ00	**Memory Configuration Card (MCC) 512kByte** › for SPEED7 CPUs, 256kByte program/256kByte data
953-1LK00	**Memory Configuration Card (MCC) 1MByte** › for SPEED7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

300S



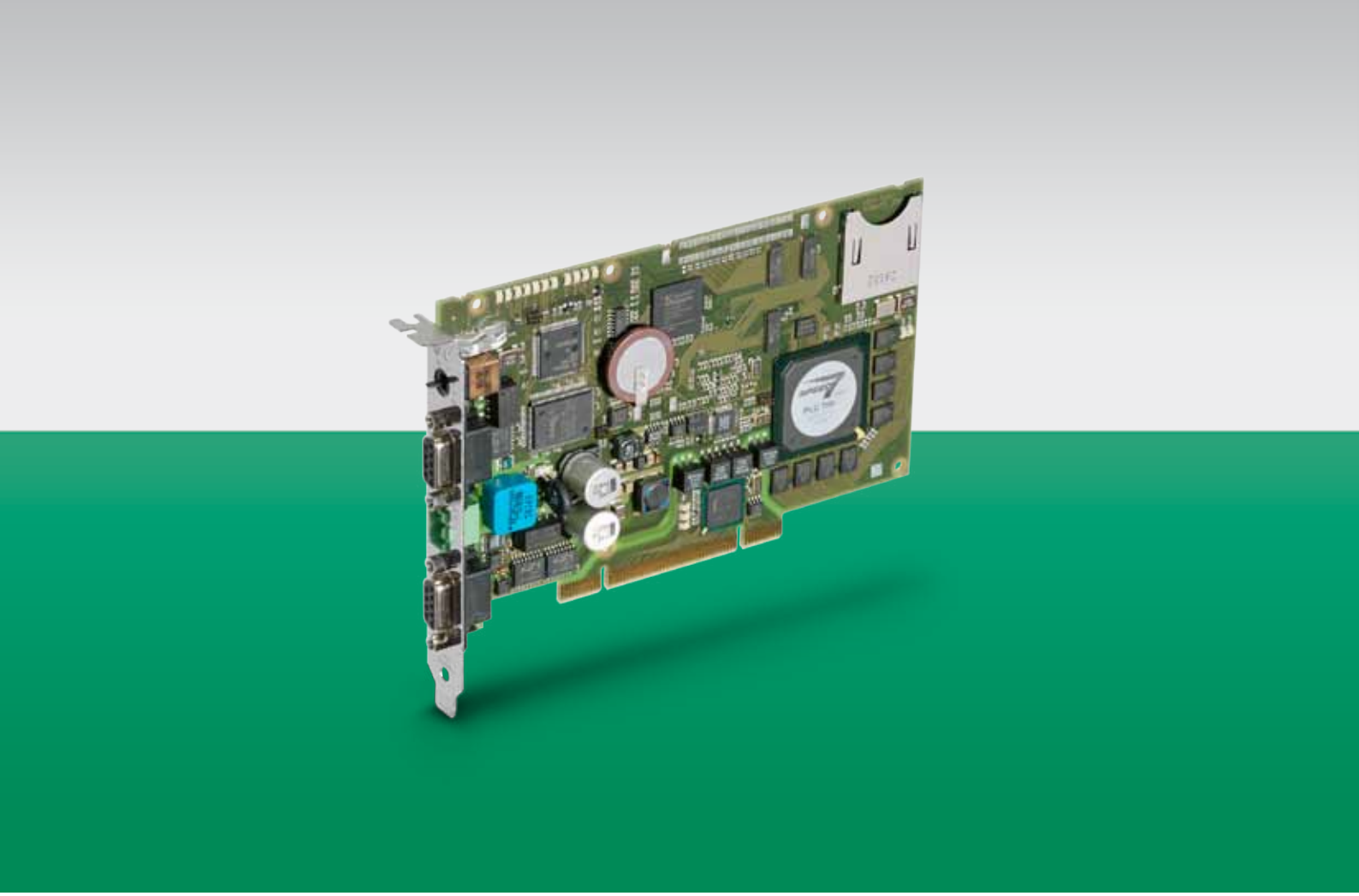
Order no.	Name/Description
922-3BC50	**Preassembled front connectors** › Preassembled front connectors for 300 series › cable length 2.5m › coretype H05V-K › nominal operating voltage DC 24 V › allowed continuous current al load of all cores max 1.5 A › 20 pin with 20 single cores 0,5 mm² › all the wires are marked at regular intervals with wire numbers
922-3BD20	**Preassembled front connectors** › Preassembled front connectors for 300 series › cable length 3.2m › coretype H05V-K › nominal operating voltage DC 24 V › allowed continuous current al load of all cores max 1.5 A › 20 pin with 20 single cores 0,5 mm² › all the wires are marked at regular intervals with wire numbers
922-3BF00	**Preassembled front connectors** › Preassembled front connectors for 300 series › cable length 5.0m › coretype H05V-K › nominal operating voltage DC 24 V › allowed continuous current al load of all cores max 1.5 A › 20 pin with 20 single cores 0,5 mm² › all the wires are marked at regular intervals with wire numbers
922-6BC50	**Preassembled front connectors** › Preassembled front connectors for 300 series › cable length 2.5m › coretype H05V-K › nominal operating voltage DC 24 V › allowed continuous current al load of all cores max 1.5 A › 40 pin with 40 single cores 0,5 mm² › all the wires are marked at regular intervals with wire numbers
922-6BD20	**Preassembled front connectors** › Preassembled front connectors for 300 series › cable length 3.2m › coretype H05V-K › nominal operating voltage DC 24 V › allowed continuous current al load of all cores max 1.5 A › 40 pin with 40 single cores 0,5 mm² › all the wires are marked at regular intervals with wire numbers
922-6BF00	**Preassembled front connectors** › Preassembled front connectors for 300 series › cable length 5.0m › coretype H05V-K › nominal operating voltage DC 24 V › allowed continuous current al load of all cores max 1.5 A › 40 pin with 40 single cores 0,5 mm² › all the wires are marked at regular intervals with wire numbers

300S



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

At a glance



500S

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.

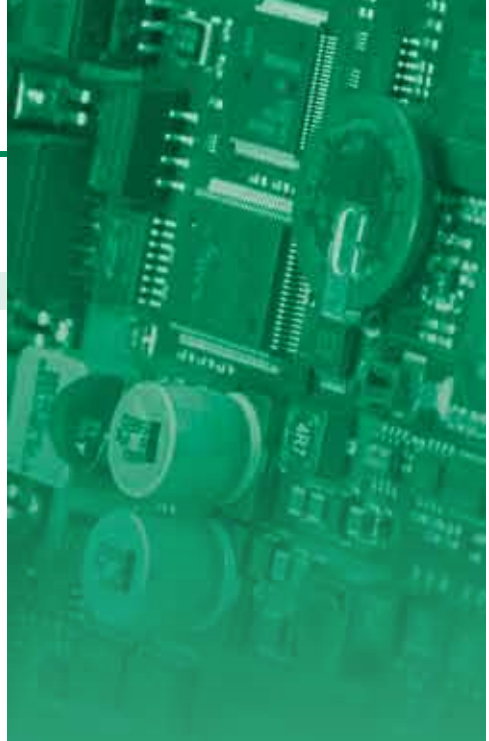
500S can be extended with up to 124 PROFIBUS-DP slave stations. Thereby all systems from VIPA can be used with PROFIBUS-DP slave peripherals.

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 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	
515-2AJ02	**CPU 515S/DPM - SPEED7 technology** › SPEED7 technology › 1 MB work memory › Memory extension (max. 2 MB) › PROFIBUS-DP master
517-2AJ02	**CPU 517S/DPM - SPEED7 technology** › SPEED7 technology › 2 MB work memory › Memory extension (max. 8 MB) › PROFIBUS-DP master
517-4NE02	**CPU 517SN/NET - SPEED7 technology** › SPEED7 technology › 2 MB work memory › Memory extension (max. 8 MB) › PROFIBUS-DP master and CP 543
Memory extensions	
953-0KX10	**MMC - MultiMediaCard** › Extension memory for VIPA CPUs 11x, 21x, 24x, 31x, 51x, and 208-1DP01, CC 03 (for load memory not necessary)
953-1LE00	**Memory Configuration Card (MCC) 32kByte** › for SPEED7 CPUs, 16kByte program/16kByte data
953-1LF00	**Memory Configuration Card (MCC) 64kByte** › for SPEED7 CPUs, 32kByte program/32kByte data
953-1LG00	**Memory Configuration Card (MCC) 128kByte** › for SPEED7 CPUs, 64kByte program/64kByte data
953-1LH00	**Memory Configuration Card (MCC) 256kByte** › for SPEED7 CPUs, 128kByte program/128kByte data
953-1LJ00	**Memory Configuration Card (MCC) 512kByte** › for SPEED7 CPUs, 256kByte program/256kByte data
953-1LK00	**Memory Configuration Card (MCC) 1MByte** › for SPEED7 CPUs, 512kByte program/512kByte data
953-1LL00	**Memory Configuration Card (MCC) 2MByte** › for SPEED7 CPUs, 1MByte program/1MByte data
953-1LM00	**Memory Configuration Card (MCC) 4MByte** › for SPEED7 CPUs, 2MByte program/2MByte data
953-1LP00	**Memory Configuration Card (MCC) 8MByte** › for SPEED7 CPUs, 4MByte program/4MByte data
Manuals	
HB145D_CPU	**Manual System 500S - SPEED7, German** › PCI CPU 51xS, incl. operations list
HB145E_CPU	**Manual System 500S - SPEED7, English** › PCI CPU 51xS, incl. operations list

At a glance


Movicon 11
Makes your supervision nearest to reality
Touch Panel
PANEL PC

HMI

System description HMI

Structure and Concept

The VIPA professional Touch Panels with 4,3“ to 12,1“ TFT display, the Windows Embedded CE 6.0 operating system, and the Movicon 11 visualization system can be used universally.

The VIPA eco Panels in four different display sizes from 4,3“ to 15“ are characterized by absolute reliability and flexibility and also special longevity and quality because of the special construction.

The VIPA panel PCs in the display sizes 15,6“ und 21,5“ are a combination of industrial PC with the most modern features and a Touch Panel with optimum display possibilities. The latest Intel Atom Processor technology combined with Windows Embedded Compact 7 or Standard 7 operating systems correspond to state of the art in the PC world.

The VIPA Commander Compact CC 03 with double spaced display and integrated PLC CPU is the ideal device for smaller controlling and operating tasks.

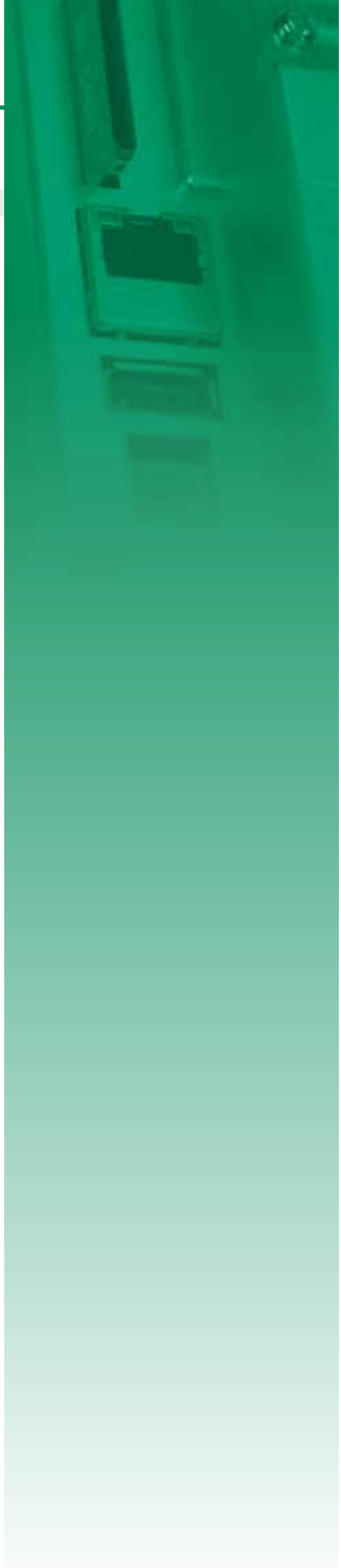
The VIPA Operator Panel OP 03 and the Text Display TD 03 are universal operating units for deployment with VIPA systems and other control systems with MPI interface.

Performance and deployment

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

Parameterization and programming

The Text Display TD 03 are parameterized with the free Tool TD Wizard. The Operator Panel OP 03 and the Commander Compact CC 03 devices are configured with the OP Manager or alternatively with Siemens ProTool. The PLC CPUs, integrated in Commander Compact CC 03, are programmed in addition via VIPA WinPLC7 or Siemens STEP7. The basis for the Touch Panels is Windows Embedded CE operating system from Microsoft. Here 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 CF 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

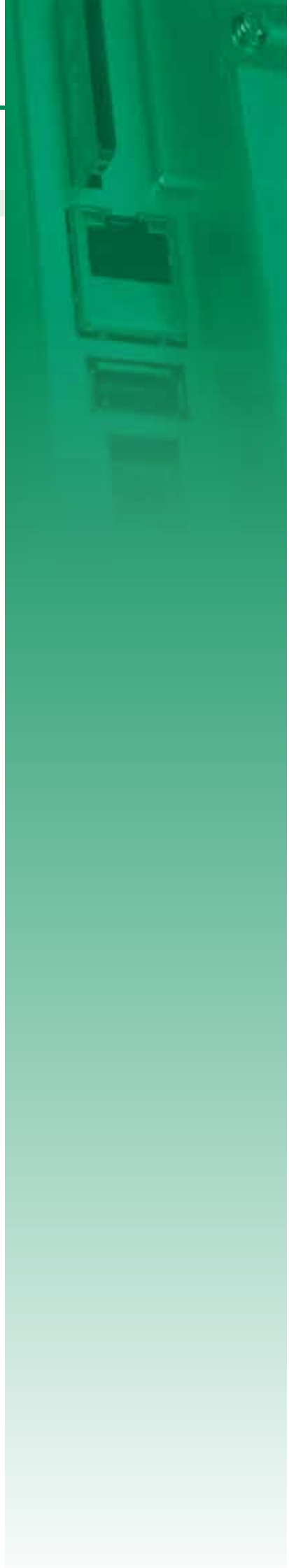
The exchange of data with the CPUs occurs at TD 03 and OP 03 via MPI. The Commander Compact CC 03 devices combine display and operating elements as well as PLC CPU with I/O peripherals in one casing. They can thus be used completely self-contained.

*) Downloadable under http://www.vipa.com/en/service-support/downloads/software/.

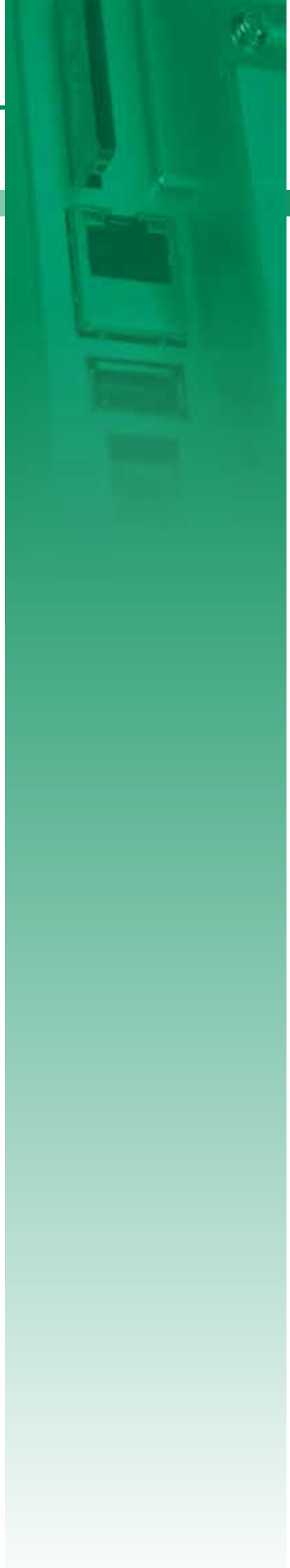
HMI

Order no.	Name/Description
professional Panels	
62F-FEE0-CB	**Touch Panel TP 605CQ** › 5,7", TFT, 320x240 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, Ethernet RJ45 › Windows Embedded CE 6.0 Professional, Movicon Runtime
62F-FEE0-CX	**Touch Panel TP 605CQ** › 5,7", TFT, 320x240 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, Ethernet RJ45 › Windows Embedded CE 6.0 Professional, without Movicon Runtime
62G-FEE0-CB	**Touch Panel TP 606C** › 6,5", TFT, 640x480 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, Ethernet RJ45 › Windows Embedded CE 6.0 Professional, Movicon Runtime
62G-FEE0-CX	**Touch Panel TP 606C** › 6,5", TFT, 640x480 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, Ethernet RJ45 › Windows Embedded CE 6.0 Professional, without Movicon Runtime
62I-IEE0-CB	**Touch Panel TP 608C** › 8,4", TFT, 800x600 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2x Ethernet RJ45 › Windows Embedded CE 6.0 Professional, Movicon Runtime
62I-IEE0-CX	**Touch Panel TP 608C** › 8,4", TFT, 800x600 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2x Ethernet RJ45 › Windows Embedded CE 6.0 Professional, without Movicon Runtime
62K-JEE0-CB	**Touch Panel TP 610C** › 10,4", TFT, 800x600 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2x Ethernet RJ45 › Windows Embedded CE 6.0 Professional, Movicon Runtime
62K-JEE0-CX	**Touch Panel TP 610C** › 10,4", TFT, 800x600 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2x Ethernet RJ45 › Windows Embedded CE 6.0 Professional, without Movicon Runtime
62M-JEE0-CB	**Touch Panel TP 612C** › 12,1", TFT, 800x600 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2x Ethernet RJ45 › Windows Embedded CE 6.0 Professional, Movicon Runtime
62M-JEE0-CX	**Touch Panel TP 612C** › 12,1", TFT, 800x600 pixel › XScale processor, 800MHz › 128 MB work memory, 2.048 MB user memory › MPI/PROFIBUS-DP, RS232, RS422/485, USB-A, USB-B, 2x Ethernet RJ45 › Windows Embedded CE 6.0 Professional, without Movicon
eco Panels	
62E-MDC0-DH	**Touch Panel TP 604LC** › 4,3", TFT, 480x272 Pixel › ARM11 processor, 533MHz › 128 MB work memory, 128 MB user memory › RS232, RS422/485, USB-A, Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Movicon Basic Runtime
62E-MGC0-CB	**Touch Panel TP 604LC** › 4,3", TFT, 480x272 Pixel › ARM11 processor, 533MHz › 128 MB work memory, 128 MB user memory › RS232, RS422/485, USB-A, Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Movicon Basic Runtime

HMI



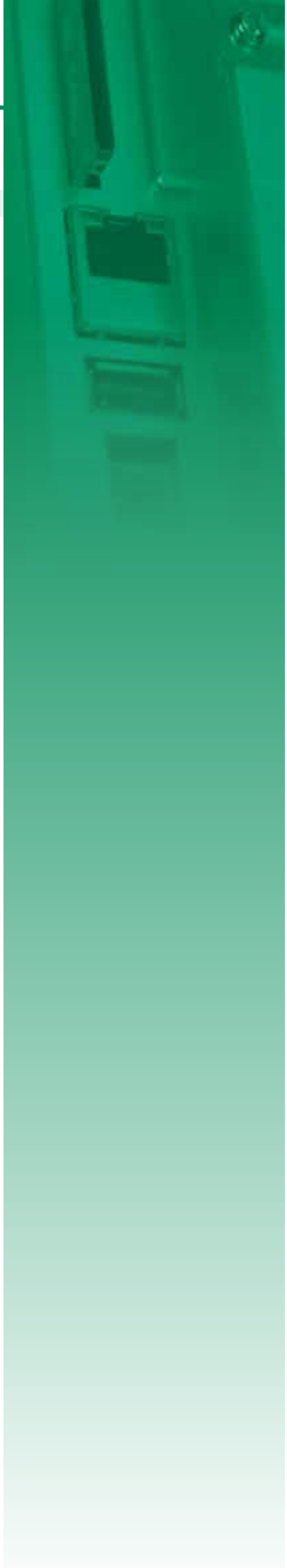
Order no.	Name/Description
62H-MDC0-DH	**Touch Panel TP 607LC** › 7", TFT, 800x480 pixel › ARM11 processor, 533MHz › 128 MB work memory, 128 MB user memory › RS232, RS422/485, USB-A, Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Movicon Basic Runtime
62H-MGC0-CB	**Touch Panel TP 607LC** › 7", TFT, 800x480 pixel › ARM11 processor, 533MHz › 128 MB work memory, 128 MB user memory › RS232, RS422/485, USB-A, Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Movicon Basic Runtime
62K-NHC0-DH	**Touch Panel TP 610LC** › 10", TFT, 1024x768 Pixel › Cortex-A8 processor, 1000MHz › 256 MB work memory, 128 MB user memory › RS232, RS232/RS422/485, USB-A, 2x Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Movicon Basic Runtime
62K-NHC0-CB	**Touch Panel TP 610LC** › 10", TFT, 1024x768 Pixel › Cortex-A8 processor, 1000MHz › 256 MB work memory, 128 MB user memory › RS232, RS232/RS422/485, USB-A, 2x Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Runtime Movicon CE
62P-NHC0-DH	**Touch Panel TP 615LC** › 15", TFT, 1024x768 pixel › Cortex-A8 processor, 1000MHz › 256 MB work memory, 128 MB user memory › RS232, RS232/RS422/485, USB-A, 2x Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Movicon Basic Runtime
62P-NHC0-CB	**Touch Panel TP 615LC** › 15", TFT, 1024x768 pixel › Cortex-A8 processor, 1000MHz › 256 MB work memory, 128 MB user memory › RS232, RS232/RS422/485, USB-A, 2x Ethernet RJ45 (MPI/DP interface optional available) › Windows Embedded CE 6.0 Core, Runtime Movicon CE Standard
Panel PC	
67P-PNJ0-EB	**Panel PC PPC015 CE** › Processor: Intel Atom D2550 dualcore @1,86 GHz › Work memory: 2 GB › Operating system and user memory: 2 GB › Memory card plug-in place: CFast › Interfaces: 2x Ethernet (10/100/1000), 4x USB 2.0, 2x serial (RS232,RS422/RS485), Audio out › Display: 15,6” › Incl. Betriebssystem Windows Embedded Compact 7 and Runtime Movicon CE Standard
67P-PNL0-JB	**Panel PC PPC015 ES** › Processor: Intel Atom D2550 dualcore @1,86 GHz › Work memory: 2 GB › Operating system and user memory: 8 GB › Memory card plug-in place: CFast › Interfaces: 2x Ethernet (10/100/1000), 4x USB 2.0, 2x serial (RS232,RS422/RS485), Audio out › Display: 15,6” › Incl. operating system Windows Embedded Standard 7 and Runtime Movicon 11 Win Standard
67P-PNL0-JX	**Panel PC PPC015 ES** › Processor: Intel Atom D2550 dualcore @1,86 GHz › Work memory: 2 GB › Operating system and user memory: 8 GB › Memory card plug-in place: CFast › Interfaces: 2x Ethernet (10/100/1000), 4x USB 2.0, 2x serial (RS232,RS422/RS485), Audio out › Display: 15,6” › Incl. operating system Windows Embedded Standard 7
67S-PNJ0-EB	**Panel PC PPC021 CE** › Processor: Intel Atom D2550 dualcore @1,86 GHz › Work memory: 2 GB › Operating system and user memory: 2 GB › Memory card plug-in place: CFast › Interfaces: 2x Ethernet (10/100/1000), 4x USB 2.0, 2x serial (RS232,RS422/RS485), Audio out › Display: 21,5” › Incl. operating system Windows Embedded Compact 7 and Runtime Movicon CE Standard



HMI

Order no.	Name/Description
67S-PNL0-JB	**Panel PC PPC021 ES** › Processor: Intel Atom D2550 dualcore @1,86 GHz › Work memory: 2 GB › Operating system and user memory: 8 GB › Memory card plug-in place: CFast › Interfaces: 2x Ethernet (10/100/1000), 4x USB 2.0, 2x serial (RS232,RS422/RS485), Audio out › Display: 21,5” › Incl. operating system Windows Embedded Standard 7 and Runtime Movicon 11 Win Standard
67S-PNL0-JX	**Panel PC PPC021 ES** › Processor: Intel Atom D2550 dualcore @1,86 GHz › Work memory: 2 GB › Operating system and user memory: 8 GB › Memory card plug-in place: CFast › Interfaces: 2x Ethernet (10/100/1000), 4x USB 2.0, 2x serial (RS232,RS422/RS485), Audio out › Display: 21,5” › Incl. operating system Windows Embedded Standard 7
Text displays and operator panels	
603-1TD00	**TD 03 - Text Display** › Display: 2 x 20 characters › Interface: MP²I › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Visualization of the connected CPU via MPI
603-1OP00	**OP 03 - Operator Panel** › Display: 2 x 20 characters › Interface: MP²I › User memory: 256 kB › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Project engineering via VIPA OP-Manager or Siemens ProTool
603-1OP10	**OP 03 - Operator Panel** › Display: 2 x 20 characters › Interface: MP²I › User memory: 256 kB › Languages: DE (without Umlaut), EN, RU › Project engineering only via VIPA OP-Manager
Commander compact	
603-1CC21	**CC 03 - Commander Compact** › Display: 2 x 20 characters › Interface: MP²I › User memory: 128 kB › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Project engineering via VIPA OP-Manager or Siemens ProTool › Integrated PLC-CPU: 16/24kByte work/load memory, 16 x DI, 16 x DO, up to 4 I/O expansion modules
603-1CC22	**CC 03 - Commander Compact** › Display: 2 x 20 characters › Interface: MP²I › User memory: 128 kB › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Project engineering via VIPA OP-Manager or Siemens ProTool › Integrated PLC-CPU: 24/32kByte work/load memory, 16 x DI, 16 x DO, up to 4 I/O expansion modules
603-1CC23	**CC 03 - Commander Compact** › Display: 2 x 20 characters › Interface: MP²I › User memory: 128 kB › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Project engineering via VIPA OP-Manager or Siemens ProTool › Integrated PLC-CPU: 32/40kByte work/load memory, 16 x DI, 16 x DO, up to 4 I/O expansion modules
603-2CC21	**CC 03 - Commander Compact** › Display: 2 x 20 characters › Interface: MP²I , PROFIBUS-DP slave › User memory: 128 kB › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Project engineering via VIPA OP-Manager or Siemens ProTool › Integrated PLC-CPU: 16/24kByte work/load memory, 16 x DI, 16 x DO, up to 4 I/O expansion modules

HMI



Order no.	Name/Description
603-2CC22	**CC 03 - Commander Compact** › Display: 2 x 20 characters › Interface: MP²I, PROFIBUS-DP slave › User memory: 128 kB › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Project engineering via VIPA OP-Manager or Siemens ProTool › Integrated PLC-CPU: 24/32kByte work/load memory, 16 x DI, 16 x DO, up to 4 I/O expansion modules
603-2CC23	**CC 03 - Commander Compact** › Display: 2 x 20 characters › Interface: MP²I, PROFIBUS-DP slave › User memory: 128 kB › Languages: DE, EN, FR, ES, IT, SV, NO, DA › Project engineering via VIPA OP-Manager or Siemens ProTool › Integrated PLC-CPU: 32/40kByte work/load memory, 16 x DI, 16 x DO, up to 4 I/O expansion modules
Optional interfaces	
961-0MP0	**MPI/PROFIBUS-DP interface** › For optional retrofitting of the MPI/DP interfaces at eco panels series
HMI software - Editors	
SW614E1MB	**Movicon11.2 Editor** › Movicon11 Editor for Windows CE projects, incl. USB dongle
SW614E1MAUB	**MoviconX Editor** › Upgrade to Movicon 11
HMI software - Runtime	
SW514S31B	**Movicon Version 11.x for Windows, standard version, upgrade variable use up to 128 IO-bytes** › USB dongle, executable only on VIPA Panel PCs with Movicon basic license (128 IO bytes) › Online upgrade, executable only on VIPA Panel PCs, expansion for a Movicon 11 Win Standard license, the number of the IO bytes has to correspond
SW514S33B	**Movicon Version 11.x for Windows, standard version, upgrade variable use up to 512 IO-bytes** › USB dongle, executable only on VIPA Panel PCs with Movicon basic license (512 IO bytes)
SW514S35B	**Movicon Version 11.x for Windows, standard version, upgrade variable use up to 2048 IO- bytes** › USB dongle, executable only on VIPA Panel PCs with Movicon basic license (2048 IO bytes)
SW514X11B1	**Expansion by 1 web client for Movicon version 11.x for Windows up to 128 IO bytes** › Online upgrade, executable only on VIPA Panel PCs, expansion for a Movicon 11 Win Standard license, the number of the IO bytes has to correspond
SW514X11B2	**Expansion by 2 web clients for Movicon version 11.x for Windows up to 128 IO bytes** › Online upgrade, executable only on VIPA Panel PCs, expansion for a Movicon 11 Win Standard license, the number of the IO bytes has to correspond
SW514X13B1	**Expansion by 1 web client for Movicon version 11.x for Windows up to 512 IO bytes** › Online upgrade, executable only on VIPA Panel PCs, expansion for a Movicon 11 Win Standard license, the number of the IO bytes has to correspond
SW514X13B2	**Expansion by 2 web clients for Movicon version 11.x for Windows up to 512 IO bytes** › Online upgrade, executable only on VIPA Panel PCs, expansion for a Movicon 11 Win Standard license, the number of the IO bytes has to correspond
SW514X15B1	**Expansion by 1 web client for Movicon version 11.x for Windows up to 2048 IO bytes** › Online upgrade, executable only on VIPA Panel PCs, expansion for a Movicon 11 Win Standard license, the number of the IO bytes has to correspond
SW514X15B2	**Expansion by 2 web clients for Movicon version 11.x for Windows up to 2048 IO bytes** › Online upgrade, executable only on VIPA Panel PCs, expansion for a Movicon 11 Win Standard license, the number of the IO bytes has to correspond
Memory modules for Touch Panels	
574-2AH00	**Compact Flash (CF) 1GByte** › for VIPA professional Panels
574-2AI00	**Compact Flash (CF) 2GByte** › for VIPA professional Panels

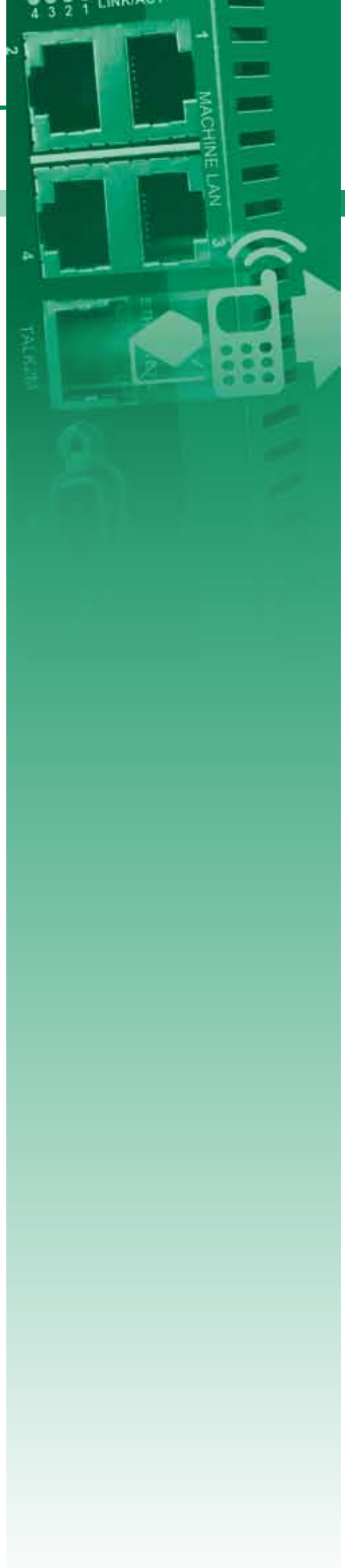
HMI

Order no.	Name/Description
574-2BJ00	**CFast memory card (4 GB)** › for VIPA Panel PC
574-2BK00	**CFast memory card (8 GB)** › for VIPA Panel PC
574-2BL00	**CFast memory card (16 GB)** › for VIPA Panel PC
953-1SI00	**Secure Disc (SD) 2GByte** › for VIPA eco and professional Panels
Protective foil	
574-1AE01	**Protective foil TP606** › for professional Panels 5.7" and 6.5", 10 pieces
574-1AF01	**Protective foil TP608** › for professional Panels 8.4", 10 pieces
574-1AG01	**Protective foil TP610** › for professional Panels 10.4", 10 pieces
574-1AH01	**Protective foil TP612** › for professional Panels 12.1", 10 pieces
574-1BS01	**Protective foil TP605** › for eco Panels 7.0", 10 pieces
574-1BC01	**Protective foil TP605** › for eco Panels 4.3", 10 pieces
Cables	
670-0KB20	**Ethernet programming cable** › for Touch Panels with Movicon 3.0 m
670-0KB00	**OP/AG cable 0°/90° with PU/Diagnostic port** › for VIPA CC 03, OP 03, TD 03
670-0KB01	**OP/AG cable 90°/90° with PU/Diagnostic port** › PU-/Diagnostic port, 2.5 m
660-0KB00	**Periphery expansion cable CC 03** › for up to 4 expansion modules EM 123 or Sytem 200V modules, 0.5 m
950-0KB50	**PC/AG programming cable** › MPI cable with with PU-/Diagnostic port, 2.5 m
Manuals and operating instructions	
HB116D	**Manual Line displays - Compendium, German** › HB116D_CC incl. operations list, HB116D_OP, HB116D_TD
HB116E	**Manual Line displays - Compendium, English** › HB116E_CC incl. operations list, HB116E_OP, HB116E_TD
HB116D_CC03	**Manual Line displays - German** › Commander Compact CC 03, incl. operations list
HB116E_CC03	**Manual Line displays - English** › Commander Compact CC 03, incl. operations list
HB116D_OP03	**Manual Line displays - German** › Operator Panel OP 03
HB116E_OP03	**Manual Line displays - English** › Operator Panel OP 03
HB160D_PPC	**Manual Panel PC PPC - Compendium, German** › Manual Panel PC PPC - Compendium, German
HB160E_PPC	**Manual Panel PC PPC - Compendium, English** › Manual Panel PC PPC - Compendium, German
HB116D_TD03	**Manual Line displays - German** › Text Display TD 03
HB116E_TD03	**Manual Line displays - English** › Text Display TD 03
HB160D_TP_X8	**Manual Touch Panel, XScale 800 MHz - Compendium, German** › Manual Touch Panel, XScale 800 MHz - Compendium, German
HB160E_TP_X8	**Manual Touch Panel, XScale 800 MHz - Compendium, English** › Manual Touch Panel, XScale 800 MHz - Compendium, English

At a glance

Teleservice

Teleservice



As demonstrated by numerous studies, up to 70% of the maintenance costs can be saved by preventive maintenance. A useful tool for this is the teleservice that enables a continuous monitoring and maintenance of the systems. For this reason with the VIPA teleservice modules we offer a modern and intelligent kind of teleservice for the different types of transmission. Whether on the conventional way via analog or ISDN line or via broadband connections as ADSL and HSUPA (mobile communications) VIPA offers here the complete product range on teleservice modules too. The communication to your automatization modules is established by MPI or PROFIBUS or via the Ethernet interface, which belongs to each of our devices as standard. The configuration of the VIPA teleservice modules is performed via a web browser. Additional software or the like is not required.

Beside the robust hardware, which shines with the usual VIPA interface variety, VIPA offers also a free service called Talk2M. Via this service you are able to establish a save connection to your construction within seconds, regardless of whether they are communicating via mobile phone or a line.

Teleservice of controllers, HMIs, frequency converters, roboters, IPCs etc. are not an impossible challenge for us. With the VIPA Teleservice modules, you have a perfectly balanced combination of hardware and software.

Teleservice

Order no.	Name/Description
Teleservice modules	
900-2E631	**TM-E ISDN Router VPN** › For direct point to point teleservice via ISDN line or Talk2M & VPN › 1x RS485 MPI-/PROFIBUS-DP interface › 1x LAN RJ45 Ethernet interface › 1x integrated ISDN modem
900-2E641	**TM-E Analog Router VPN** › For direct point to point teleservice via analog line or Talk2M & VPN › 1x RS485 MPI-/PROFIBUS-DP interface › 1x LAN RJ45 Ethernet interface › 1x integrated PSTN modem
900-2E651	**TM-E GSM/GPRS Router VPN** › For direct point to point teleservice via cellular network or Talk2M & VPN › 1x RS485 MPI-/PROFIBUS-DP interface › 1x LAN RJ45 Ethernet interface › 1x integrated GSM/GPRS (quad-band) modem › Please order antenna separatly!
900-2H611	**TM-H Router VPN** › For teleservice through a broadband connection (ADSL) via Talk2M & VPN › 1x RS485 MPI-/PROFIBUS-DP interface › 4x LAN RJ45 Ethernet interface › 1x WAN RJ45 Ethernet interface
900-2H681	**TM-H HSDPA Router VPN** › For teleservice through a mobile connection (GPRS/EDGE/UMTS/HSUPA) via Talk2M & VPN › 1x RS485 MPI-/PROFIBUS-DP interface › 4x LAN RJ45 Ethernet interface › 1x WAN RJ45 Ethernet interface › 1x integrated HSDPA/HSUPA modem (QB)
900-2C610	**TM-C Router** › For sheer teleservice through broadband connection (ADSL) via Talk2M › 1x RS485 MPI-/PROFIBUS-DP interface › 4x LAN RJ45 Ethernet interface › 1x WAN RJ45 Ethernet interface

At a glance

StarterKits

StarterKits

Structure and concept

The VIPA StarterKits are designed to allow newcomers immediate entry into the main product groups of the VIPA scope of supply by means of a complete product set. With this, it should be easier for the user to decide on new system configurations, in which he can first test the technology with the StarterKit and thereby save costs. The products included in the StarterKit are significantly subsidized, so that we can make possible a cost-effective introduction for every user. Depending on the product category the StarterKits include all hardware components required for the operational setup as well as some of the programming and parameterization software required for the unit configuration and/or the device master file (GSD). For transportation and presentation all components of the StarterKits are in a robust transport case.

300S, SPEED7 technology for the highest performance:

- **StarterKits with the compact CPUs 312SC, 313SC or 313SC/DPM:** Each StarterKit comprises a 300SC CPU and a suitable front connector for the connection of the in- and output channels integrated in the CPU, the programming software WinPLC7 and a programming cable.

Technologie-StarterKits:

- **Technologie StarterKit 1 PROFINET:** The StarterKit includes the SPEED7 PROFINET Eco CPU 315, the SLIO PROFINET I/O slave 053-1PN00, the SLIO potential distribution module 001-1BA20 together with different digital and analog in-/output modules and a PROFINET cable incl. two PROFINET plugs and a 35mm profile rail 140mm.
- **Technologie StarterKit 2 EtherCAT:** The Starter kit includes the SPEED7 EtherCAT CPU 315-4EC12, the SLIO EtherCAT slave 053-1EC00, the SLIO potential distribution module 001-1BA20 together with different digital and analog input/output modules and an EtherCAT cable incl. two EtherCAT plugs and a 35mm profile rail 140mm.

StarterKits

SLIO StarterKits:

- **SLIO StarterKit IM053DP:** The StarterKit includes a SLIO PROFIBUS DP slave 053-1DP00, a SLIO potential distribution module 001-1BA20, different digital and analog in-/output modulesl, a PROFIBUS cable with 1m length incl. two PB plugs and a 35mm profile rail with a length of 140mm and a SLIO USB stick with GSD file, manual, catalog (German/ English) and example programs.
- **SLIO CPU-StarterKit:** The StarterKit includes a SLIO CPU 015-CEFPR00 with PROFINET controller, the SLIO potential distribution module 021-1BA20, different digital and analog in-/output modules and a PROFINET cable with a length of 1m incl. 2 PROFINET plugs and a 35mm profile rail with a length of 227mm.

Performance and deployment

The StarterKits are assembled so that they are ready for use by the accessories and software included and also allow new users a quick start into the application. The combination of the single controller components and the accessories allows a practical and variable setup without additional parts. The robust transport case, which is supplied with each StarterKit, protects the single components from mechanical damage even with repeated use, for example during presentations.

Features

The hardware components included in the StarterKit are identical to the components which are available separately and perform in the same way. In this respect, the data given in the documentation and in this catalog apply to the components of the StarterKit.

Communication

In particular, the purpose of the two technology StarterKits for PROFINET and EtherCAT is to give the user an understanding of modern PROFINET or EtherCAT communication and to allow him to try it out in practice. Here our support team will gladly help you with the first steps, even if you entering new territory.

StarterKits

Order no.	Name/Description
300S	
800-7DK11	**CPU 312SC - SPEED7 technology** › contains › 1x 312-5BE13 CPU312SC › 1x 392-1AM00 front connector › 1x SW873 WINPLC7 › 1x CAT6 cable 2m green › 1x case
800-7DK21	**CPU 313SC - SPEED7 technology** › contains › 1x 313-5BF13 CPU313SC › 2x 392-1AM00 front connectors › 1x SW873 WINPLC7 › 1x CAT6 cable 2m green › 1x case
800-7DK31	**CPU 313SC/DPM - SPEED7 technology** › contains › 1x 313-6CF13 CPU313SC/DPM › 1x 392-1AM00 front connector › 1x SW873 WINPLC7 › 1x CAT6 cable 2m green › 1x case
Technologie	
800-5DK10	**Technology Starter-Kit 1 - PROFINET** › contains › 1x 950-0KD10 PN/EC cable 1m incl. 2x PN/EC connectors (972-0PN00 + 830-0PC00) › 1x 35mm profile rail 140mm › 1x case › 1x 315-4PN33 CPU 315SN/PN ECO › 1x 053-1PN00 IM 053PN - PROFINET IO Slave › 1x 001-1BA20 CM 001 potential distribution module (4xDC24V, 4xDC0V) › 1x 021-1BF00 SM 021 digital input (DI 8xDC 24V) › 1x 021-1BD00 SM 021 digital input (DI 4xDC 24V › 1x 022-1BD00 SM 022 digital output (DO 4xDC 24V, 0,5A) › 1x 031-1BB30 SM 031 analog input (AI 2x12Bit, U) › 1x 032-1BB30 SM 032 analog output (AO 2x12Bit, U)
800-5DK20	**Technology Starter-Kit 2 - EtherCAT** › contains › 1x 950-0KD10 PN/EC cable 1m incl. 2x PN/EC connectors (972-0PN00 + 830-0PC00) › 1x 35mm profile rail 140mm › 1x case › 1x 315-4EC12 CPU 315SN/EC › 1x 053-1EC00 IM 053EC - EtherCAT slave › 1x 001-1BA20 CM 001 potential distribution module (4xDC24V, 4xDC0V) › 1x 021-1BF00 SM 021 digital input (DI 8xDC 24V) › 1x 021-1BD00 SM 021 digital input (DI 4xDC 24V › 1x 022-1BD00 SM 022 digital output (DO 4xDC 24V, 0,5A) › 1x 031-1BB30 SM 031 analog input (AI 2x12Bit, U) › 1x 032-1BB30 SM 032 analog output (AO 2x12Bit, U)
SLIO	
800-1DK10	**SLIO_Starter-Kit 1- IM053DP** › contains › 1x 35 mm profile rail 140mm › 1x SLIO USB Stick (cont. GSD files, manual, catalog (German/English), example programms) › 1x case › 1x 053-1DP00 IM 053DP - Profibus DP slave › 1x 001-1BA20 CM 001 potential distribution module (4xDC24V, 4xDC0V) › 1x 021-1BF00 SM 021 digital input (DI 8xDC 24V) › 1x 021-1BD00 SM 021 digital input (DI 4xDC 24V) › 1x 022-1BD00 SM 022 digital output (DO 4xDC 24V, 0,5A) › 1x 031-1BB30 SM 031 analog input (AI 2x12Bit, U) › 1x 032-1BB30 SM 032 analog output (AO 2x12Bit, U) › 1x 950-0KD00 Profibus cable 1m incl. 2x PB connectors (972-0DP01 + 972-0DP10)
800-1DK50	**SLIO_CPU_Starter-Kit - incl. PROFINET Controller** › contains › 1x 35mm profile rail 227mm › 1x case › 1x 015-CEFPR00 SLIO-CPU 015 › 1x 001-1BA20 CM 001 potential distribution module (4xDC24V, 4xDC0V) › 1x 021-1BF00 SM 021 digital input (DI 8xDC 24V) › 1x 021-1BD00 SM 021 digital input (DI 4xDC 24V) › 1x 022-1BD00 SM 022 digital output (DO 4xDC 24V, 0,5A) › 1x 031-1BB30 SM 031 analog input (AI 2x12Bit, U) › 1x 032-1BB30 SM 032 analog output (AO 2x12Bit, U) › 1x 950-0KD10 PN/EC cable 1m incl. 2x PN/EC connectors (972-0PN00 + 830-0PC00)

StarterKits

At a glance


wieland
samosPRO
SP-SCDN
PORT 1
PWR
LINK / ACT 1
LINK / ACT 2
STATUS
SP-EN-PN
PORT 2
SP-SDI
SP-SDIO

Safety

System description Safety

Structure and concept

samosPRO is a fast, compact, modular safety controller for monitoring and controling mechanical and system engineering applications.

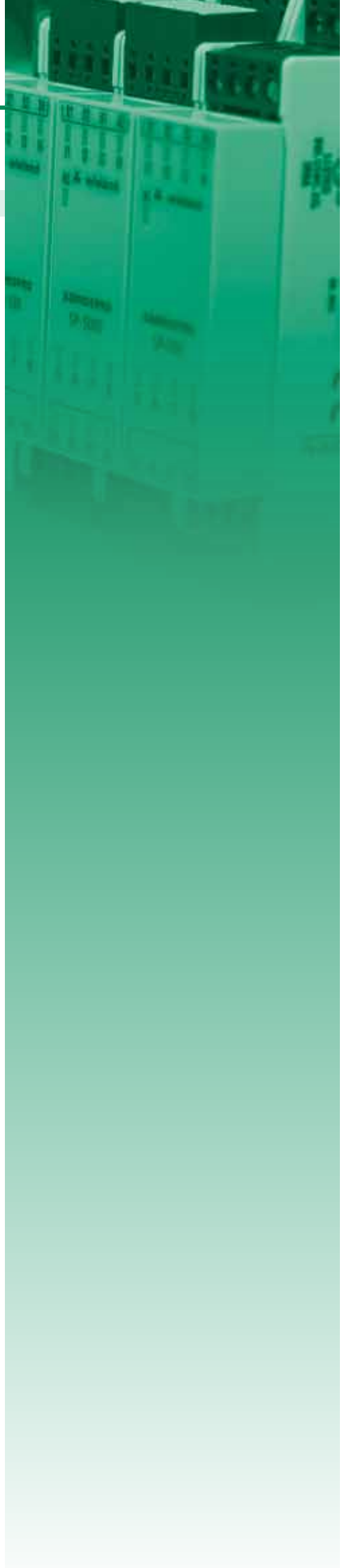
The system enables complete and economic safety solutions that are more flexible than conventional relay technology.

The graphic device configuration and a functional diagram editor with extensive certified function block library ensure convenient and clear programming.

The modular design also allows expansion at a later stage and therefore flexible planning with fewer module variations. Up to 12 input and output expansion modules each with a width of 22.5 mm can be connected to a controller module. In this way 8 to 96 safe inputs and 4 to 48 safe outputs can be implemented.

The safety control system samosPRO is certified in accordance with EN 61508 to SIL 3, EN 62061 to SIL CL 3 and in accordance with EN ISO 13849-1:2006 up to Performance Level e/category 4. This covers the requirements of mechanical and system engineering applications.

It is mounted on a 35mm profile rail.



Performance and deployment

samosPRO allows the implementation of compact, fast and modular safety solutions for applications in mechanical and system engineering.

Programming

The programming is carried out with the software samosPLAN that is available in the download area of the VIPA homepage.

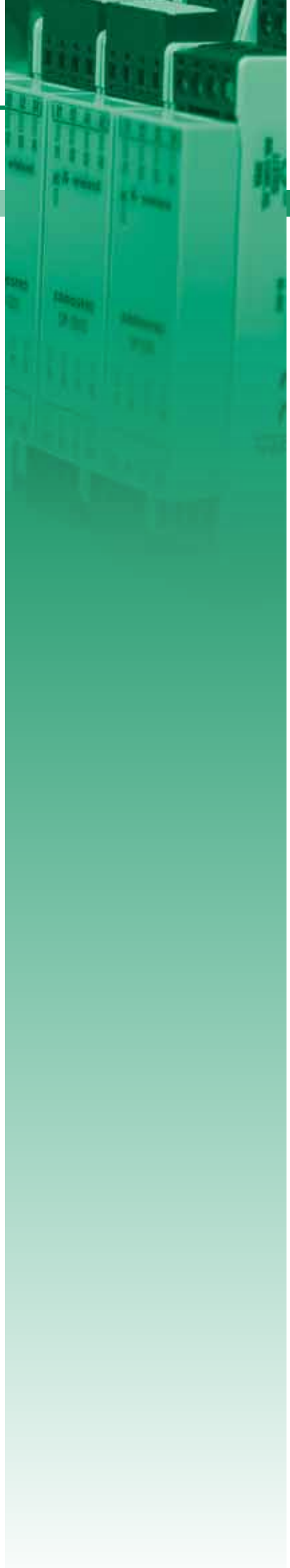
The programming software supports you during programming via a graphic device configuration and an intuitively easy to operate functional diagram editor. In the certified function block library there are standard logic blocks AND, OR, NOT, XNOR, XOR as well as application specific logic blocks like emergency stop, two-hand, muting, pressing, mode selector, reset and re-start. Up to 255 of these logic blocks are deployable in a project.

Memory

The system configuration including the system programs of the entire samosPRO systems is only stored in the program removable storage SP memory. This offers the advantage that the samosPRO system does not have to be reconfigured after the replacement of the connection modules.

Communication

Up to four samosPRO controller modules can be safely networked via the EFI interface. The connection with the standard VIPA controller is made via fieldbus gateways for PROFIBUS or PROFINET. The integration into other networks is made via gateways for CANopen, Modbus/TCP and Ethernet/IP. Up to two gateways can be connected to a controller module. The signal status (variables) can be replaced bi-directionally via these gateways. Gateways that are based on Ethernet additionally allow an online access including programming and remote maintenance.



Safety

Order no.	Name/Description
Safety electronics module	
R119000100	**samosPRO SP-SCON-P1-K** › samosPRO, controller module (without programm memory)
R119000200	**samosPRO SP-SCON-NET-P1-K** › samosPRO, Controller-module (without memory plug) with EFI-Interface for samosNET
R119000300	**samosPRO SP-SDIO84-P1-K-A** › samosPRO, IO-module with 8 input/4 solid state output, screw clamp terminal pluggable
R119000400	**samosPRO SP-SDIO84-P1-K-C** › samosPRO, IO-module with 8 input/4 solid state output, spring clamp terminal pluggable
R119000500	**samosPRO SP-SDI8-P1-K-A** › samosPRO, IN-module with 8 input, screw clamp terminal pluggable
R119000600	**samosPRO SP-SDI8-P1-K-C** › samosPRO, IN-module with 8 input, spring clamp terminal pluggable
Gateway modules	
R119001300	**samosPRO SP-EN-MOD** › samosPRO buscoupling modul for Modbus TCP
R119001400	**samosPRO SP-EN-PN** › samosPRO buscoupling modul for PROFINET IO
R119001500	**samosPRO SP-EN-IP** › samosPRO buscoupling modul for EtherNet/IP
R119001900	**samosPRO SP-PROFIBUS-DP** › samosPRO buscoupling modul for PROFIBUS-DP
R119002100	**samosPRO SP-CANopen** › samosPRO gateway for CANopen
Safety relay	
R118839300	**safeRELAY SNE 4024K-A** › Output expansion unit › 2x2 enabling current paths, › 2x1 signalling outputs › DC 24 V › screw-terminals pluggable
R118839400	**safeRELAY SNE 4024K-C** › Output expansion unit › 2x2 enabling current paths › 2x1 signalling outputs › DC 24 V › cage clamp-terminals pluggable
Safety Accessories	
R119000800	**samosPRO SP-MEMORY** › samosPRO, programm memory, pluggable
R119000900	**samosPRO SP-CABLE1** › samosPRO, cable, 2m, M8-DSUB
R119001000	**samosPRO SP-PRO-STARTER-SET** › samosPRO, Starter-Set (SP-SCON, SPSDIO84, SP-PLAN, SP-MEMORY, SP-CABLE1, SP-CONVERTER)
R119002500	**samosPRO SP-CONVERTER** › USB-RS232-adapter
R119002600	**samosPRO SP-FILTER1** › samosPRO-Output-Filter, 680nF
R119002700	**samosPRO SP-FILTER2** › samosPRO-Output-Filter, 2,2uF

At a glance

Solutions

Solutions

VIPA Green Solution

A new approach for energy management

Management systems are modern tools of corporate management that give enterprises a kind of regulation framework for important business areas. There are standards and certifications for the different areas to document the application of management systems within the company and externally. The best known are: the quality management in accordance with ISO 9001, the environment management in accordance with ISO 14001 and the energy management in accordance with DIN EN ISO 50001.

The conscious use of energy in all areas of life is becoming increasingly important. Protecting the environment is only one aspect. In fact with permanently increasing energy costs it's more a matter of finding suitable measures in businesses to uncover and implement potential savings in energy use. This is where the VIPA Green Solution, which can be adapted exactly to the requirements and needs of customers by means of individually selectable modules, takes effect.

With the VIPA Green Solution you receive an easy and reliable energy management system together with control components from a single source. Consultancy and implementing solutions form the scope of our service. With the Green Solution we offer you all tools that are required for the **energy audit and the certification in accordance with DIN EN ISO 50001 or DIN EN 16247-1**. Finally all measures in the framework of energy management lead to decreasing energy costs and a significant improvement of your **energy balance**.

Solutions

Order no.	Name/Description
Energiemanagement	
810-0AA20	**VIPA EnMS Training** › Training VIPA EnMS development packet › Professional target oriented technical in-house training, at supply of the development environment one days training must be booked in order to deal with the package can. › Recommendation: 2 days, further days optional (additionally hotel and travel costs according to voucher)
810-1AA20	**VIPA EnMS Ingenieur** › Engineer for integration, programming and commissioning › Installation and cabling is not part of our service
810-2CC31	**VIPA EnMS 16 TP CE (8,4")** › Energy management for 16 test points including VIPA 8,4“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2CD31	**VIPA EnMS 32 TP CE (8,4")** › Energy management for 32 test points including VIPA 8,4“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2CE31	**VIPA EnMS 48 TP CE (8,4")** › Energy management for 48 test points including VIPA 8,4“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2DC31	**VIPA EnMS 16 TP CE (10,4")** › Energy management for 16 test points including VIPA 10,4“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2DD31	**VIPA EnMS 32 TP CE (10,4")** › Energy management for 32 test points including VIPA 10,4“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2DE31	**VIPA EnMS 48 TP CE (10,4")** › Energy management for 48 test points including VIPA 10,4“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2EC31	**VIPA EnMS 16 TP CE (12,1")** › Energy management for 16 test points including VIPA 12,1“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2ED31	**VIPA EnMS 32 TP CE (12,1")** › Energy management for 32 test points including VIPA 12,1“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-2EE31	**VIPA EnMS 48 TP CE (12,1")** › Energy management for 48 test points including VIPA 12,1“ professional panel › Logging in MSSQL data base › connection of the measuring instruments via ModbusRTU/ModbusTCP
810-3AA61	**VIPA EnMS evaluation including IPC** › VIPA EnMS evaluation according to cost center development packet including IPC › Development software packet for step by step setup of an own energy management system, with functions and structures for classification of counter values to cost centers. › Basis are count values written from VIPA EnMS system in SQL databases. › No turn-key system, but expandable with easy expand- and addable functions › IPC for mounting on wall or in the control cubicle, without fan, 24VDC board connection, Windows 7 Professional, 32Bit DE, installed, incl. service pack 1, but without monitor, keyboard and mouse › You are able to expand the system to your demands with the VIPA training. Develop- and runtime version with 16000 tags › Including web license for 8 WebThin client, single license for 1 PC, installation on VIPA EnMS IPC
810-3AE61	**VIPA EnMS 48 including IPC** › Energy management for 48 test points including IPC for mounting on wall or in the control cubicle, without fan, 24VDC board connection, Windows 7 Professional, 32Bit DE, installed › installed, incl. service pack 1, but without monitor, keyboard and mouse › connection of the measuring instrument via ModbusTCP › Logging in MSSQL data base, MS-SQL-Express is preinstalled on this system
810-3AG61	**VIPA EnMS 128 including IPC** › Energy management for 128 test points including IPC for mounting on the wall or in the control cubicle, without fan, 24VDC board connection, Windows 7 Professional, 32Bit DE, installed › incl. service pack 1, but without monitor, keyboard and mouse › connection of the measuring instrument via ModbusTCP › Logging in MSSQL data base, MS-SQL-Express is preinstalled on this system

Solutions

Order no.	Name/Description
810-3AH61	**VIPA EnMS 256 including IPC** › Energy management for 256 test points including IPC for mounting on the wall or in the control cubicle, without fan, 24VDC board connection, Windows 7 Professional, 32Bit DE, installed › incl. service pack 1, but without monitor, keyboard and mouse › connection of the measuring instrument via ModbusTCP › Logging in MSSQL data base, MS-SQL-Express is preinstalled on this system
810-5AA21	**VIPA EnMS evaluation without IPC** › VIPA EnMS evaluation according to cost center development packet › Development software packet for step by step setup of an own energy management system, with functions and structures for classification of counter values to cost centers. Basis are count values written from VIPA EnMS system in SQL databases. › No turn-key system, but expandable with easy expand- and addable functions You are able to expand the system to your demands with the VIPA training. Develop and runtime version with 16000 tags. › Including web license for 8 WebThin client, single license for 1 PC, installation on VIPA EnMS IPC › Deliverable only in combination with a VIPA EnMS IPC system, a later installation is not possible!

At a glance


VIPA
ToolDemo
SW900TDLA
VIPA
Manuals & More
SW900HDLA
Manuals
Datasheets
Catalogues
Presentations
Flyer

Software

Software

Structure and Function

Software tools allow a comfortable programming and parameterization of VIPA systems and other automation concepts.

OPC-Server

The OPC-Server provides the standard interface for accessing data from OPC clients to PLC systems from different manufacturers. The OPC-Server supports TCP/IP networks via standard network cards as well as MPI networks that have one or more COM ports, an MPI-serial converter and/or are connected via VIPA MPI-USB adapter.

Programming Software

WinPLC7 is a programming system for Systems 100V up to 500S as well as for the Siemens controllers S7-300 and S7-400.

Parameterization Software

Different parameterization tools are available to users:

TD-Wizard: Parameterization tool for VIPA TD 03

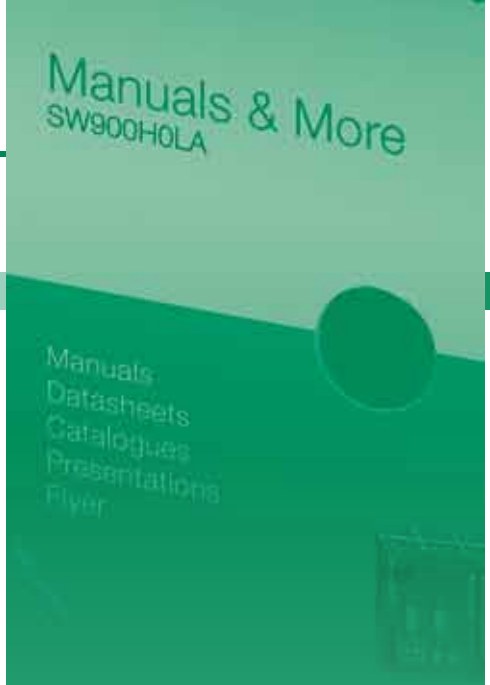
WinNCS: PROFIBUS-DP and Ethernet- parameterization/configuration by VIPA controllers and communication processors

WinCoCT: Configuration of CANopen networks with VIPA System

OP-Manager: Parameterization tool for VIPA OP 03 and CC 03

Other Software and Tools:

- WinPLC Analyzer for PLC user programs
- WinLP - Labeling software for VIPA System 200V
- EPLAN macros - technical information and drawings to the VIPA systems 100V, 200V, 300S and HMI
- Handling blocks - Libraries for VIPA systems and components
- Demo projects - configurations for VIPA System 200V and 300S
- GSD/EDS files - configuration files for PROFIBUS-DP and CANopen
- How-to-do - initial operation information

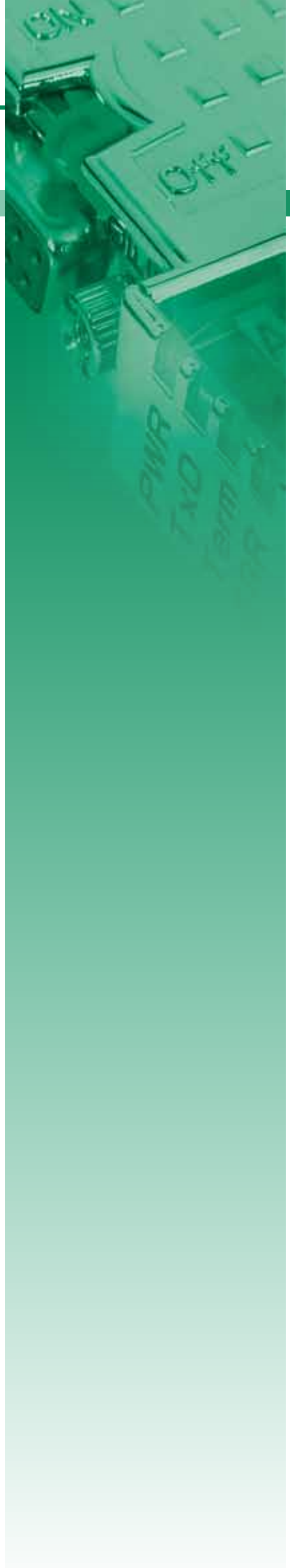


Software

Order no.	Name/Description
Communication software	
SW110A1LA	**OPC Server with connection via MPI Protocol** › For serial MPI communication (PC: COM Port PLC: MPI Port)
SW110A2LA	**OPC Server with connection via RFC1006 Protocol** › For PG/OP / TCP/IP communication (PC: Ethernet Port PLC: Ethernet Port) › For all VIPA CPUs with integrated PG/OP interface
SW110A3LA	**OPC Server with connection via TCP/IP Protocol** › For CP communication with configured connections (PC: Ethernet Port PLC: Ethernet Port) › Required: CP343, CPU315SN/NET, 317SN/NET
SW15AS21A	**SPEED7 Communication Driver (32bit)** › S7 communication driver (Windows-32-Bit-DLL) for all common high level languages ((C++, C#, VB, VB.NET, DELPHI). › For VIPA SPEED7 CPUs and Siemens S7 CPUs.
SW15AS22A	**SPEED7 Communication Driver (64bit)** › S7 communication driver expansion for 64Bit application (Windows-64-Bit-DLL) for high level language C++. › For VIPA SPEED CPUs and Siemens S7 CPUs.
SW15AS23A	**SPEED7 Communication Driver (CE)** › S7 communication driver for Windows Embedded CE 6.0 (ARM) and C++. › For VIPA SPEED7 CPUs and Siemens S7 CPUs.
Programming software	
SW211C1DD	**WinPLC7 - Single licence, CD, German, Tool for STEP7 from Siemens** › Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming
SW211C1ED	**WinPLC7 - Single licence, CD, English, Tool for STEP7 from Siemens** › Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming
SW211D1DD	**WinPLC7 - Single licence, CD + Dongle, German, Tool for STEP7 from Siemens** › Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming, Download version: http://www.winplc7.com/v5/vipa-download.htm
SW211D1ED	**WinPLC7 - Single licence, CD + Dongle, English, Tool for STEP7 from Siemens** › Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming, Download version: http://www.winplc7.com/v5/vipa-download.htm
SW211K1OD	**WinPLC7 - Single licence, Key, Tool for STEP7 from Siemens** › Programming-, test-, diagnosis- and simulation software for VIPA Systems and S7-300 from Siemens, STL-, LAD- and FBD programming, Download-Version: http://www.winplc7.com/v5/vipa-download.htm
SW211K2OD	**WinPLC7lite - Single licence** › Licensable with System 100V CPUs
Parameterization software	
SW300O1LA	**OP-Manager** › Single licence, parameterization tool for OP 03
SW300T1EA	**TD-Wizard** › Parameterization tool for TD 03
SW300C1EA	**WinCoCT** › CANopen configuration tool
SW300P1LA	**WinNCS parameterization software** › Universal parameterization and configuration tool, components engineering, Ethernet protocols, TCP/IP, SINEC H1, IPK, RFC1006 - PROFIBUS-DP (2BF)
SW310S1LA	**SPEED7 EtherCAT Manager 2014** › SPEED7 EtherCAT Manager for configuration of VIPA 300S EhterCAT CPUs. › Suitable for use with the SIMATIC Manager from Siemens [V5.5 SP2].
Analysis tool	
SW711A1LA	**WinPLC-Analyzer** › CD + dongle, German/English, for VIPA Systems and S7-300/400 from Siemens (in combination with WinPLC7), incl. driver

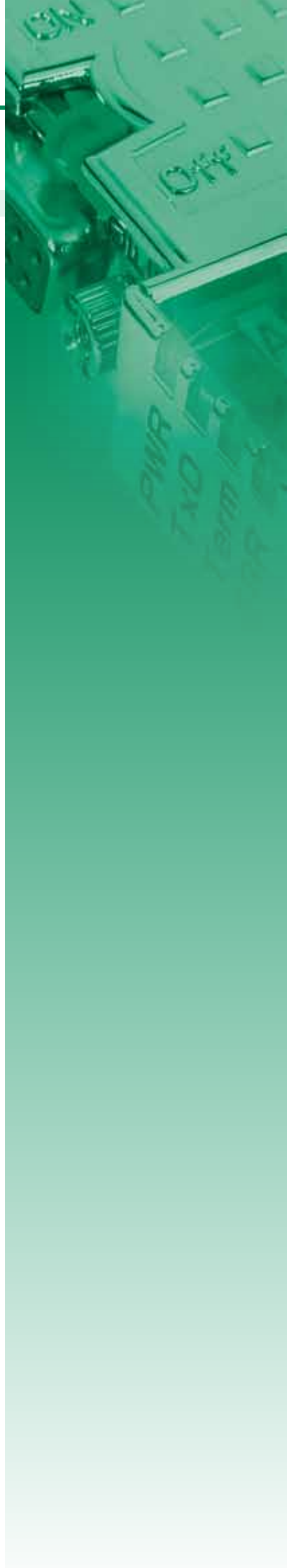
Accessories

Accessories



Order no.	Name/Description
S5 components	
306-1LE00	**IM 306 DP slave - 115U ZG/EG IM** › Converting Siemens S5 PLCs to S7 › Exclusively suited for AG-115U central controller and expansion units › Intagrated DC 24V power supply
306-1UE00	**IM 306 DP slave - 135U/155U ZG/EG IM** › Converting Siemens S5 PLCs to S7 › Exclusively suited for AG-135U/155U central controller and expansion units › Integrated DC 24V power supply
306-1UZ00	**IM 306 DP slave - 135U/155U ZG CPU** › Converting Siemens S5 systems to S7 › Exclusively suited for AG-135U/155U central controller
FIELDBUS accessories	
972-0DP01	**EasyConn 90° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › PG jack › Switchable terminating resistor › 90° outgoing cable › Packaging unit: 1 piece
972-9DP01	**EasyConn 90° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › PG jack › Switchable terminating resistor › 90° outgoing cable › Packaging unit: 100 pieces
972-0DP10	**EasyConn 90° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › PG jack › Switchable terminating resistor › 90° outgoing cable › Bus diagnosis via LEDs › Packaging unit: 1 piece
972-9DP10	**EasyConn 90° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › PG jack › Switchable terminating resistor › 90° outgoing cable › Bus diagnosis via LEDs › Packaging unit: 100 pieces
972-0DP20	**EasyConn 45° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › PG jack › Switchable terminating resistor › 45° outgoing cable › Bus diagnosis via LEDs › Packaging unit: 1 piece
972-9DP20	**EasyConn 45° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › PG jack › Switchable terminating resistor › 45° outgoing cable › Bus diagnosis via LEDs › Packaging unit: 100 pieces
972-0DP30	**EasyConn 0° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › Switchable terminating resistor › 0° outgoing cable › Bus diagnosis via LEDs › Packaging unit: 1 piece
972-9DP30	**EasyConn 0° - PROFIBUS plug** › Clock rate up to 12MBit/s › Metal case › Switchable terminating resistor › 0° outgoing cable › Bus diagnosis via LEDs › Packaging unit: 100 pieces

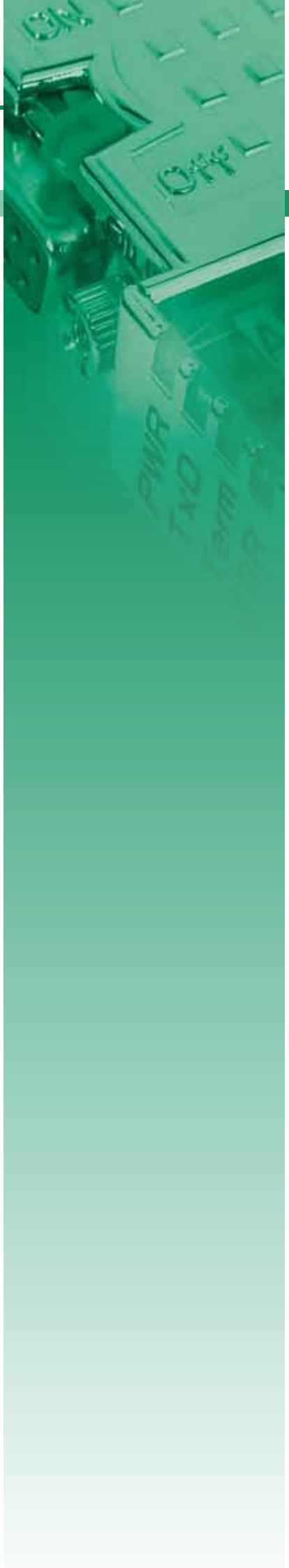
Accessories



Order no.	Name/Description
972-0PN00	**PN/EC-Stecker 180° Field Plug** › PROFINET & EtherCAT plug › Plug: RJ45 › Connection: 8 wire › Connection technique: IDC (insulation displacement connection) terminals › Connection area: AWG24/1 - 22/1; AWG26/7 - 22/7 › Cable diameter: 5,5 - 8,5 mm › Allocation: T568A, T568B › Industrial (4/8 wire) › Packaging unit: 1 piece
972-8PN00	**PN/EC-Stecker 180° Field Plug** › PROFINET & EtherCAT plug › Plug: RJ45 › Connection: 8 wire › Connection technique: IDC (insulation displacement connection) terminals › Connection area: AWG24/1 - 22/1; AWG26/7 - 22/7 › Cable diameter: 5,5 - 8,5 mm › Packaging unit: 10 pieces
973-1BA00	**PROFIBUS-DP/MPI-Repeater** › 1xRS485 for up to 12MBit/s, isolated › 1 electrical isolated channel (2 segments) › Up to 31 devices per segment connectable › Up to 1200m cable length possible › Transparent for all PROFIBUS and MPI protocols
973-5BE00	**PROFIBUS-DP/MPI-Repeater** › 5xRS485 for up to 12MBit/s, isolated › 5 electrical isolated channels (repeater segments) › Up to 31 devices per Segment connectable › Up to 1200m cable length possible › Transparent for all PROFIBUS and MPI protocols
Miscellaneous	
905-6AA00	**EasyStrip** › Stripping tool for PROFIBUS cable
6ES5491-0LB11	**Adaptation capsule for S5-115U/F** › 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
Cables	
830-0LC00	**FCC 2xAWG 22 - Standard PROFIBUS cable** › Cable reel 100m
830-0LD00	**FCC 2xAWG 22 - Standard PROFIBUS cable** › 200m Cable reel
830-0LE00	**FCC 2xAWG 22 - Standard PROFIBUS cable** › 500m Cable reel
830-0LF00	**FCC 2xAWG 22 - Standard PROFIBUS cable** › 1000m Cable reel
830-0PC00	**PROFINET cable** › Cable reel 100m
830-0PD00	**PROFINET cable** › 200m Cable reel
830-0PE00	**PROFINET cable** › 500m Cable reel
830-0PF00	**PROFINET cable** › 1000m Cable reel
950-0AD00	**USB adapter** › for MMC programming (Windows 98SE/ME/2000/XP)
950-0AD10	**PCMCIA adapter** › For MMC programming
950-0KB00	**VIPA "Green Cable"** › only for CPU 11x, 21x, 31x, 51x
950-0KB01	**PC/AG programming cable** › RS232-MPI/Profibus adapter, 3m
950-0KB10	**PC/AG programming cable** › RS232-MPI/PPI adapter, LCD, 3m
950-0KB30	**PC/AG programming cable** › USB-MPI/PROFIBUS adapter, LCD 3 m
950-0KB31	**PC/AG programming cable** › USB-MPI/Profibus Adaptor, 3m
950-0KB40	**PC/AG programming cable** › TCP/IP-MPI/PPI/Profibus adapter, LCD, 3m

Accessories

Order no.	Name/Description
950-0KB50	**PC/AG programming cable** › MPI cable with with PU-/Diagnostic port, 2.5 m
Antennas and accessories	
900-0AB50	**TM antenna GSM/UMTS** › 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	**TM antenna GSM/GPRS** › 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	**Manual Accessories - IM** › IM 306 DP slave
HB37E_IM	**Manual Accessories - IM** › IM 306 DP slave
HB39D_TM	**Manual Accessories - TM** › TM-E 900-2E6x and TM-H 900-2H6x Teleservice modules
HB39E_TM	**Manual Accessories - TM** › TM-E 900-2E6x and TM-H 900-2H6x Teleservice modules
HB45D	**Manual OPC server - German** › Installations and operating manual OPC server
HB45E	**Manual OPC server - English** › Installations and operating manual OPC server
HB91D	**Manual WinNCS - German** › Installations and operating manual WinNCS
HB91E	**Manual WinNCS - English** › Installations and operating manual WinNCS
S7-CRASHKURS-EX	**STEP®7-Crashkurs Extended Edition - German/English** › 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.



At a glance

Appendix

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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

This price list is valid from 01.05.2014.
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 -> 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 exists.

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.

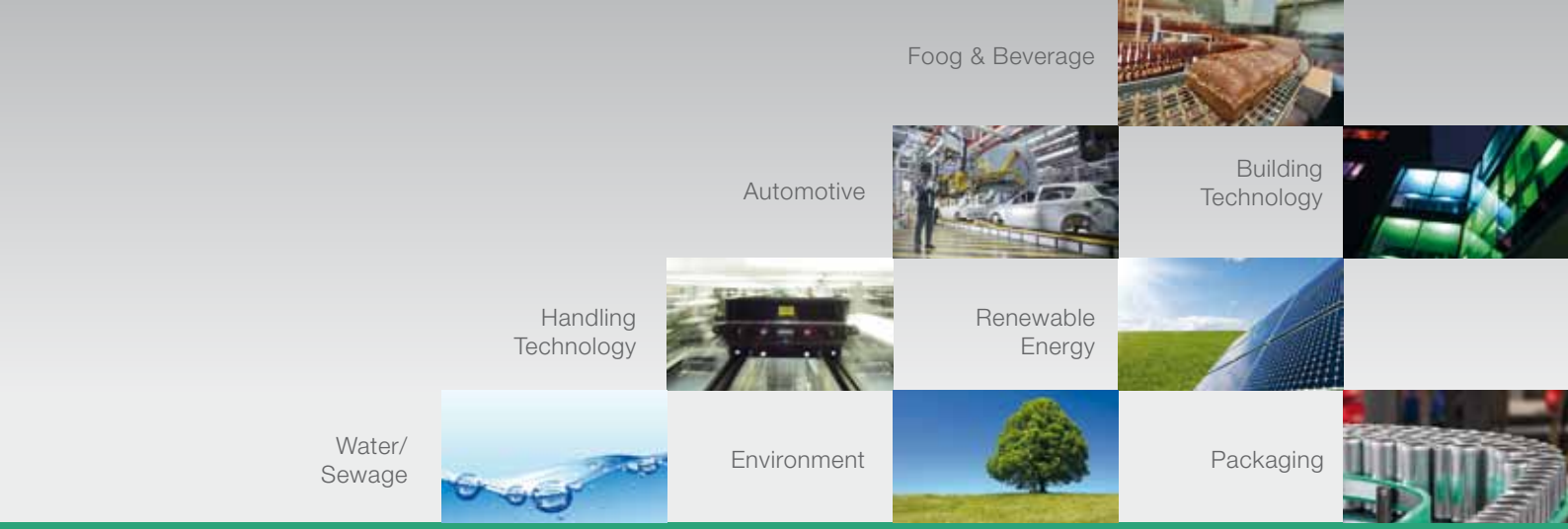
The contractual partner shall pay all required customs duties, taxes or levies which may arise from a delivery into or the rendering of a service in a foreign country.

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



VIPA worldwide

… in about 60 countries at home

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