# VIPA
## CONTROLS AMERICA

# System Summary

## for Specialists in Automation and Control Technology

# Contents

| VIPA MICRO

# MICRO

| Order no. | Name/Description | |
|-----------|------------------|---|
| **CPUs STEP7 programmable, C-Klasse** | | |
| M13-CCF0000 | **CPU M13C**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 64...128<br>‣ Integrated PROFINET controller (limited to 8 Devices) / I-Device<br>‣ Onboard: 16x DI / 12x DO / 2x AI [voltage 0...10 V] / 4x Counter / 2x [PWM/Pulse Train]<br>‣ Interface [1x RJ45]: PROFINET, ModbusTCP master/slave, openCommunication<br>‣ Interface [1x RJ45]: active Ethernet PG/OP communication with DHCP support, switch<br>‣ Optional: [2x RS485]: MPI, PROFIBUS slave, PtP: ASCII, STX/ETX, 3964 (R), USS master, Modbus master/slave<br>‣ OPC UA / Web server<br>‣ SD card slot with locking, up to 8 expansion modules, configurable via SPEED7 Studio, SIMATIC Manager and TIA Portal | |
| **FeatureSets** | | |
| 955-C000S00 | **VIPASetCard 002 (VSC)**<br>‣ PROFIBUS slave | |
| 955-C000020 | **VIPASetCard 003 (VSC)**<br>‣ 64 KB | |
| 955-C000S20 | **VIPASetCard 005 (VSC)**<br>‣ 64 KB<br>‣ PROFIBUS slave | |
| **Memory modules for other components** | | |
| 955-0000000 | **VIPA SD-Card (VSD)**<br>‣ Industrial SD card<br>‣ 512 Mbyte (Industrial SLC)<br>‣ Extremely robust against EMC, shock and vibration<br>‣ Temperature range -40 up to 85°C<br>‣ Water-/dust proof in accordance with IP57/IP67<br>‣ MTBF (25°C) >5.000.000h<br>‣ unrecorded | |
| **Digital input modules** | | |
| M21-1BH00 | **SM M21 - Digital input**<br>‣ 16x DI<br>‣ DC 24 V | |
| **Digital output modules** | | |
| M22-1BH00 | **SM M22 - Digital output**<br>‣ 16x DO<br>‣ DC 24 V<br>‣ 0,5 A | |
| M22-1HF10 | **SM M22 - Digital output**<br>‣ 8x DO<br>‣ AC 230 V<br>‣ 2 A relay | |

# MICRO

| Order no. | Name/Description | |
|---|---|---|
| **Digital in/output modules** | | |
| M23-1BH00 | **SM M23 - Digital output**<br>‣ 8x DI<br>‣ 8x DO<br>‣ DC 24 V<br>‣ 0.5 A | |
| **Analog input modules** | | |
| M31-1CD50 | **SM M31 - Analog input**<br>‣ 4x AI<br>‣ 16 Bit<br>‣ Voltage 0...10 V +-10 V<br>‣ Current 0/4...20 mA<br>‣ Resistance 0....3000 Ohm, RTD, Pt100, Pt1000, NI100, NI1000 in 2/3/4 conductor measurement<br>‣ TC type J, K, N, R, S, T, B, C, E, L and U +-80 mV | |
| **Analog output modules** | | |
| M32-1BD40 | **SM M32 - Analog output**<br>‣ 4x AO<br>‣ 12 Bit<br>‣ Current 0/4...20 mA | |
| M32-1BD70 | **SM M32 - Analog output**<br>‣ 4x AO<br>‣ 12 Bit<br>‣ Voltage 0...10 V +-10 V | |
| **Extension** | | |
| M09-0CB00 | **MICRO Extension 2xRS485**<br>‣ Interface [1x RS422/RS485]: PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>‣ Interface [1x RS485]: MPI, optional PROFIBUS slave | |
| **Power supply** | | |
| M07-2BA00 | **PS M07 - Power supply**<br>‣ Input AC 120-240 V<br>‣ Output 24V DC 1.5 A 36 W<br>‣ Efficiency > 89 % | |
| **Accessories** | | |
| 290-1AF00 | **35 mm profile rail**<br>‣ Length: 2000 mm | |
| 290-1AF30 | **35 mm profile rail**<br>‣ Length: 530 mm | |

# | VIPA SLIO

# SLIO

| Order no. | Name/Description | |
|---|---|---|
| **CPUs STEP7 programmable, standard** | | |
| 014-CEF0R01 | **CPU 014**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 128...256<br>‣ Integrated PROFINET Controller (limited to 8 Devices) / I-Device<br>‣ Interface [1x RJ45]: PROFINET, ModbusTCP master/slave, openCommunication<br>‣ Interface [1x RJ45]: active Ethernet PG/OP communication with DHCP support, switch<br>‣ Interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master,<br>  Modbus master/slave<br>‣ Optional: PROFIBUS master/slave<br>‣ Web server<br>‣ SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio,<br>  SIMATIC Manager and TIA Portal<br>‣ *OPC UA under preperation, available with the release of hardware version 2* | |
| **CPUs STEP7 programmable, PROFINET** | | |
| 015-CEFPR01 | **CPU 015PN**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 256...512<br>‣ Integrated PROFINET Controller / I-Device<br>‣ Interface [2x RJ45]: PROFINET, ModbusTCP Master/Slave, openCommunication<br>‣ Interface [2x RJ45]: active Ethernet PG/OP communication with DHCP support, switch<br>‣ Interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master,<br>  Modbus master/slave<br>‣ Optional: PROFIBUS master/slave<br>‣ Web server<br>‣ SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio,<br>  SIMATIC Manager and TIA Portal<br>‣ *OPC UA under preperation, available with the release of hardware version 2* | |
| 017-CEFPR00 | **CPU 017PN**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 512...2.048<br>‣ Integrated PROFINET Controller / I-Device<br>‣ Interface [2x RJ45]: PROFINET, ModbusTCP master/slave, openCommunication<br>‣ Interface [2x RJ45]: active Ethernet PG/OP communication with DHCP support, switch<br>‣ Interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master,<br>  Modbus master/slave<br>‣ Optional: PROFIBUS master/slave<br>‣ Web server<br>‣ SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio,<br>  SIMATIC Manager and TIA Portal<br>‣ *OPC UA under preperation, available with the release of hardware version 2* | |
| 019-CEFPM00 | **CPU 019PN**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 3.072<br>‣ Integrated PROFINET Controller / I-Device<br>‣ Interface [2x RJ45]: PROFINET, ModbusTCP master/slave, openCommunication<br>‣ Interface [2x RJ45]: active Ethernet PG/OP communication with DHCP support, switch<br>‣ Interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master,<br>  Modbus master/slave<br>‣ Integrated PROFIBUS master/slave<br>‣ OPC UA / Web server<br>‣ SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio,<br>  SIMATIC Manager and TIA Portal | to be released |
| **CPUs STEP7 programmable, EtherCAT** | | |
| 015-CEFNR00 | **CPU 015N**<br>‣ Powered by SPEED7<br>‣ SD card slot with locking, up tp 64 expansion modules, configurable with SPEED7 Studio,<br>  SIMATIC manager<br>‣ Work memory [KB]: 256...512<br>‣ Integrated Ethernet CP | EtherCAT Controller<br>‣ Interface [1x RJ45]: EtherCAT-Master<br>‣ Interface [1x RJ45]: active Ethernet CP, ModbusTCP master/slave, openCommunication<br>‣ Interface [2x RJ45]: active Ethernet PG/OP-communication with DHCP support, switch,<br>  ModbusTCP master/slave, openCommunication, SmartPROFINET (iDevice)<br>‣ Interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master,<br>  Modbus master/slave<br>‣ Optional: Integrated motion Controller 4/8/20 axes, PROFIBUS master/slave<br>‣ Web server<br>‣ SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio,<br>  EtherCAT Managar for STEP 7 V5.6<br>‣ *OPC UA under preperation, available with the release of hardware version 3* | |
| **CPUs STEP7 programmable, C-Klasse** | | |

# SLIO

| Order no. | Name/Description | |
|-----------|------------------|---|
| 013-CCF0R00 | **CPU 013C**<br>▸ Powered by SPEED7<br>▸ Work memory [KB]: 64...128<br>▸ Integrated PROFINET Controller (limited to 8 Devices) / I-Device<br>▸ Onboard 16x DI / 12x DO / 2x AI [voltage 0...10 V] ] / 4x Counter / 2x [PWM/Pulse Train]<br>▸ Interface [1x RJ45]: PROFINET, ModbusTCP master/slave, openCommunication<br>▸ Interface [1x RJ45]: active Ethernet PG/OP communication with DHCP support, switch<br>▸ Interface [RS485]: MPI, PtP: ASCII, STX/ETX, 3964 (R), USS master, Modbus master/slave<br>▸ Optional: PROFIBUS master/slave<br>▸ OPC UA / Web server<br>▸ SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio, SIMATIC Manager and TIA Portal | |
| **FeatureSets** | | |
| 955-C000M00 | **VIPASetCard 001 (VSC)**<br>▸ PROFIBUS master | |
| 955-C000S00 | **VIPASetCard 002 (VSC)**<br>▸ PROFIBUS slave | |
| 955-C000020 | **VIPASetCard 003 (VSC)**<br>▸ 64 KB | |
| 955-C000M20 | **VIPASetCard 004 (VSC)**<br>▸ 64 KB<br>▸ PROFIBUS master | |
| 955-C000S20 | **VIPASetCard 005 (VSC)**<br>▸ 64 KB<br>▸ PROFIBUS slave | |
| 955-C000030 | **VIPASetCard 006 (VSC)**<br>▸ 128 KB | |
| 955-C000M30 | **VIPASetCard 007 (VSC)**<br>▸ 128 KB<br>▸ PROFIBUS master | |
| 955-C000S30 | **VIPASetCard 008 (VSC)**<br>▸ 128 KB<br>▸ PROFIBUS slave | |
| 955-C000040 | **VIPASetCard 009 (VSC)**<br>▸ 256 KB | |
| 955-C000M40 | **VIPASetCard 010 (VSC)**<br>▸ 256 KB<br>▸ PROFIBUS master | |
| 955-C000S40 | **VIPASetCard 011 (VSC)**<br>▸ 256 KB<br>▸ PROFIBUS slave | |
| 955-C000050 | **VIPASetCard 012 (VSC)**<br>▸ 512 KB | |
| 955-C000M50 | **VIPASetCard 013 (VSC)**<br>▸ 512 KB<br>▸ PROFIBUS master | |
| 955-C000060 | **VIPASetCard 014 (VSC)**<br>▸ 1 MB | |
| 955-C000M60 | **VIPASetCard 015 (VSC)**<br>▸ 1 MB<br>▸ PROFIBUS master | |
| 955-C000070 | **VIPASetCard 016 (VSC)**<br>▸ 1,5 MB | |
| 955-C000M70 | **VIPASetCard 017 (VSC)**<br>▸ 1,5 MB<br>▸ PROFIBUS master | |
| 955-C0ME040 | **VIPASetCard 031 (VSC)**<br>▸ 256 KB<br>▸ Motion control 4-axes | |
| 955-C0MEM40 | **VIPASetCard 041 (VSC)**<br>▸ 256 KB<br>▸ Motion control 4-axes<br>▸ PROFIBUS master | |

# SLIO

| Order no. | Name/Description | |
|---|---|---|
| 955-C0NEM40 | **VIPASetCard 042 (VSC)**<br>▸ 256 KB<br>▸ Motion control 8-axes<br>▸ PROFIBUS master | |
| 955-C0PEM40 | **VIPASetCard 043 (VSC)**<br>▸ 256 KB<br>▸ Motion control 20-axes<br>▸ PROFIBUS master | |
| 955-C0NE040 | **VIPASetCard 032 (VSC)**<br>▸ 256 KB<br>▸ Motion control 8-axes | |
| 955-C0PE040 | **VIPASetCard 033 (VSC)**<br>▸ 256 KB<br>▸ Motion control 20-axes | |
| Memory modules for other components | | |
| 955-0000000 | **VIPA SD-Card (VSD)**<br>▸ Industrial SD card<br>▸ 512 Mbyte (Industrial SLC)<br>▸ Extremely robust against EMC, shock and vibration<br>▸ Temperature range -40 up to 85°C<br>▸ Water-/dust proof in accordance with IP57/IP67<br>▸ MTBF (25°C) >5.000.000h<br>▸ unrecorded | |
| Clamp modules | | |
| 001-1BA00 | **CM 001 - Potential distributor module**<br>▸ 8x DC 24 V clamps | |
| 001-1BA10 | **CM 001 - Potential distributor module**<br>▸ 8x DC 0 V clamps | |
| 001-1BA20 | **CM 001 - Potential distributor module**<br>▸ 4x DC 24 V clamps<br>▸ 4x DC 0 V clamps | |
| Power modules | | |
| 007-0AA00 | **PM 007 - Power module**<br>▸ Power supply DC 24 V<br>▸ (Only electronic module as a spare part for PLC and field bus module) | |
| 007-1AB00 | **PM 007 - Power module**<br>▸ Output supply<br>▸ Power supply DC 24 V<br>▸ 10 A<br>▸ Reverse polarity protection<br>▸ Overvoltage protection | |
| 007-1AB10 | **PM 007 - Power module**<br>▸ Output supply<br>▸ Power supply DC 24 V, 4 A<br>▸ Power supply DC 24 V for bus supply 5 V, 2 A<br>▸ Reverse polarity protection<br>▸ Overvoltage protection<br>▸ Module supply | |
| Digital input modules | | |
| 021-1BB00 | **SM 021 - Digital input**<br>▸ 2x DI<br>▸ DC 24 V | |
| 021-1BB10 | **SM 021 - Digital input**<br>▸ 2x DI (fast)<br>▸ DC 24 V<br>▸ Input filter time delay parameterizable 2 µs...4 ms | |
| 021-1BD00 | **SM 021 - Digital input**<br>▸ 4x DI<br>▸ DC 24 V | |
| 021-1BD10 | **SM 021 - Digital input**<br>▸ 4x DI (fast)<br>▸ DC 24 V<br>▸ Input filter time delay parameterizable 2 µs...4 ms | |
| 021-1BD40 | **SM 021 - Digital input**<br>▸ 4x DI<br>▸ DC 24 V<br>▸ Connect 2/3 wire | |
| 021-1BD50 | **SM 021 - Digital input**<br>▸ 4x DI<br>▸ DC 24 V<br>▸ NPN | |

# SLIO

| Order no. | Name/Description | |
|---|---|---|
| 021-1BD70 | **SM 021 - Digital input**<br>▸ 4x DI<br>▸ DC 24 V<br>▸ Input filter time delay parameterizable 2 µs…3 ms<br>▸ ETS function with µsec time stamp | |
| 021-1BF00 | **SM 021 - Digital input**<br>▸ 8x DI<br>▸ DC 24 V | |
| 021-1BF01 | **SM 021 - Digital input**<br>▸ 8x DI<br>▸ DC 24 V<br>▸ 0.5 ms time delay | |
| 021-1BF50 | **SM 021 - Digital input**<br>▸ 8x DI<br>▸ DC 24 V<br>▸ NPN | |
| 021-1DF00 | **SM 021 - Digital input**<br>▸ 8x DI<br>▸ DC 24 V<br>▸ Diagnostic of wiring errors | |
| 021-1SD00 | **SM 021 - Digital input**<br>▸ 4x SDI<br>▸ DC 24 V<br>▸ Safety / PROFIsafe | |
| 021-1SD10 | **SM 021 - Digital input**<br>▸ 4x SDI<br>▸ DC 24 V<br>▸ Safety / FSoE | to be released |
| Digital output modules | | |
| 022-1BB00 | **SM 022 - Digital output**<br>▸ 2x DO<br>▸ DC 24 V<br>▸ 0.5 A | |
| 022-1BB90 | **SM 022 - Digital output**<br>▸ 2x DO<br>▸ DC 24 V<br>▸ 0.5 A<br>▸ PWM till 40 kHz | |
| 022-1BD00 | **SM 022 - Digital output**<br>▸ 4x DO<br>▸ DC 24 V<br>▸ 0.5 A | |
| 022-1BD20 | **SM 022 - Digital output**<br>▸ 4x DO<br>▸ DC 24 V<br>▸ 2 A | |
| 022-1BD50 | **SM 022 - Digital output**<br>▸ 4x DO<br>▸ DC 24 V<br>▸ 0.5 A<br>▸ NPN | |
| 022-1BD70 | **SM 022 - Digital output**<br>▸ 4x DO<br>▸ DC 24 V<br>▸ 0.5 A<br>▸ ETS function – control the exact µs by using time stamp | |
| 022-1BF00 | **SM 022 - Digital output**<br>▸ 8x DO<br>▸ DC 24 V<br>▸ 0.5 A | |
| 022-1BF50 | **SM 022 - Digital output**<br>▸ 8x DO<br>▸ DC 24 V<br>▸ 0.5 A<br>▸ NPN | |
| 022-1HB10 | **SM 022 - Digital output**<br>▸ 2x DO<br>▸ DC 30 V<br>▸ AC 230 V<br>▸ 3 A<br>▸ Potential separated per channel<br>▸ Relay | |

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Accessories
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# SLIO

| Order no. | Name/Description | |
|---|---|---|
| 022-1HD10 | **SM 022 - Digital output**<br>› 4x DO<br>› DC 30 V<br>› AC 230 V<br>› 1.8 A<br>› Potential separated per group (2 channel)<br>› Relay | |
| 022-1DF00 | **SM 022 - Digital output**<br>› 8x DO<br>› DC 24 V<br>› 0.5 A<br>› Diagnostic of wiring errors | |
| 022-1SD00 | **SM 022 - Digital output**<br>› 4x SDO<br>› DC 24 V<br>› 0.5 A<br>› Safety / PROFIsafe | |
| 022-1SD10 | **SM 022 - Digital output**<br>› 4x SDO<br>› DC 24 V<br>› 0.5 A<br>› Safety / FSoE | to be released |
| Analog input modules | | |
| 031-1BB10 | **SM 031 - Analog input**<br>› 2x AI<br>› 12 Bit<br>› Current 0(4)…20 mA<br>› 2 wire<br>› Potential separated per channel | |
| 031-1BB30 | **SM 031 - Analog input**<br>› 2x AI<br>› 12 Bit<br>› Voltage 0…10 V | |
| 031-1BB40 | **SM 031 - Analog input**<br>› 2x AI<br>› 12 Bit<br>› Current 0(4)…20 mA | |
| 031-1BB60 | **SM 031 - Analog input**<br>› 2x AI<br>› 12 Bit<br>› Current 0(4)…20 mA<br>› 2 wire | |
| 031-1BB70 | **SM 031 - Analog input**<br>› 2x AI<br>› 12 Bit<br>› Voltage -10 V…+10 V | |
| 031-1BB90 | **SM 031 - Analog input**<br>› 2x AI<br>› 16 Bit<br>› Voltage -80 mV…+80 mV<br>› TC type J, K, N, R, S, T, B, C, E, L | |
| 031-1BD30 | **SM 031 - Analog input**<br>› 4x AI<br>› 12 Bit<br>› Voltage 0…10 V | |
| 031-1BD40 | **SM 031 - Analog input**<br>› 4x AI<br>› 12 Bit<br>› Current 0(4)…20 mA | |
| 031-1BD70 | **SM 031 - Analog input**<br>› 4x AI<br>› 12 Bit<br>› Voltage -10 V…+10 V | |
| 031-1BD80 | **SM 031 - Analog input**<br>› 4x AI<br>› 16 Bit<br>› Resistance 0…3000 Ohm<br>› Resistance measurement with 2-, 3- and 4-wires<br>› Resistance temperature transmitter Pt100, Pt1000, Nl100 und Nl1000 | |

# SLIO

| Order no. | Name/Description | |
|---|---|---|
| 031-1BF60 | **SM 031 - Analog input**<br>‣ 8x AI single ended (reference potential 0V)<br>‣ 12 Bit<br>‣ Current 0(4)...20 mA<br>‣ Separate parameterizable inputs<br>‣ Isolated opposite backplane bus | |
| 031-1BF74 | **SM 031 - Analog input**<br>‣ 8x AI single ended (reference potential 0V)<br>‣ 12 Bit<br>‣ Voltage 0...10 V +-10 V<br>‣ Separate parameterizable inputs<br>‣ Isolated opposite backplane bus | |
| 031-1CB30 | **SM 031 - Analog input**<br>‣ 2x AI<br>‣ 16 Bit<br>‣ Voltage 0…10 V | |
| 031-1CB40 | **SM 031 - Analog input**<br>‣ 2x AI<br>‣ 16 Bit<br>‣ Current 0(4)…20 mA | |
| 031-1CB70 | **SM 031 - Analog input**<br>‣ 2x AI<br>‣ 16 Bit<br>‣ Voltage -10 V…+10 V | |
| 031-1CD30 | **SM 031 - Analog input**<br>‣ 4x AI<br>‣ 16 Bit<br>‣ Voltage 0…10 V | |
| 031-1CD35 | **SM 031 - Analog input**<br>‣ 4x AI<br>‣ 16 Bit<br>‣ Voltage 0…10 V<br>‣ Reduced parameter bytes | |
| 031-1CD40 | **SM 031 - Analog input**<br>‣ 4x AI<br>‣ 16 Bit<br>‣ Current 0(4)…20 mA | |
| 031-1CD45 | **SM 031 - Analog input**<br>‣ 4x AI<br>‣ 16 Bit<br>‣ Current 0(4)…20 mA<br>‣ Reduced parameter bytes | |
| 031-1CD70 | **SM 031 - Analog input**<br>‣ 4x AI<br>‣ 16 Bit<br>‣ Voltage -10 V…+10 V | |
| 031-1LB90 | **SM 031 - Analog input**<br>‣ 2x AI<br>‣ 16 Bit<br>‣ Voltage -80 mV...+80 mV<br>‣ TC type J, K, N, R, S, T, B, C, E, L<br>‣ Reduced parameter bytes | |
| 031-1LD80 | **SM 031 - Analog input**<br>‣ 4x AI<br>‣ 16 Bit<br>‣ Resistance 0…3000 Ohm<br>‣ Resistance measurement 2-, 3-, and 4-wires<br>‣ Resistance temperature transmitter Pt100, Pt1000, Nl100 and Nl1000<br>‣ Reduced parameter bytes | |

# SLIO

| Order no. | Name/Description | |
|---|---|---|
| **DMS modules** | | |
| 031-1CA20 | **SM 031 - Analog input**<br>▸ Direct connection of a resistor full bridge (DMS) or load cell<br>▸ 4- or 6-wire connection 16 (24) Bit resolution<br>▸ Auto self calibration zero point and final value<br>▸ Absolute exactness radical error ±0,1 % (± 0,01 %)<br>▸ Onboard power supply 2V5, 5 V, 7V5, 10 V und 12 V | |
| **Energy measurement modules** | | |
| 031-1PA00 | **Energy measurement module**<br>▸ AI1x 3Ph 230/400V 1A<br>▸ Remanente Speicherung der Energiewerte \| Diagnosefunktion<br>▸ Auflösung Messwert 24 Bit<br>▸ 3-Phasen und N-Leiter<br>▸ Elektrische Leistung \| Elektrische Arbeit<br>▸ Harmonische Oberwellen<br>▸ Phasenverschiebung cos<br>▸ Frequenz | |
| 031-1PA10 | **Energy measurement module**<br>▸ AI1x 3Ph 230/400V 1/5A<br>▸ Remanente Speicherung der Energiewerte \| Diagnosefunktion<br>▸ Auflösung Messwert 24 Bit<br>▸ 3-Phasen und N-Leiter<br>▸ Elektrische Leistung \| Elektrische Arbeit<br>▸ Harmonische Oberwellen<br>▸ Phasenverschiebung cos<br>▸ Frequenz | to be released |
| **Analog output modules** | | |
| 032-1BB30 | **SM 032 - Analog output**<br>▸ 2x AO<br>▸ 12 Bit<br>▸ Voltage 0…10 V | |
| 032-1BB40 | **SM 032 - Analog output**<br>▸ 2x AO<br>▸ 12 Bit<br>▸ Current 0(4)…20 mA | |
| 032-1BB70 | **SM 032 - Analog output**<br>▸ 2x AO<br>▸ 12 Bit<br>▸ Voltage -10 V…+10 V | |
| 032-1BD30 | **SM 032 - Analog output**<br>▸ 4x AO<br>▸ 12 Bit<br>▸ Voltage 0…10 V | |
| 032-1BD40 | **SM 032 - Analog output**<br>▸ 4x AO<br>▸ 12 Bit<br>▸ Current 0(4)…20 mA | |
| 032-1BD70 | **SM 032 - Analog output**<br>▸ 4x AO<br>▸ 12 Bit<br>▸ Voltage -10 V…+10 V | |
| 032-1CB30 | **SM 032 - Analog output**<br>▸ 2x AO<br>▸ 16 Bit<br>▸ Voltage 0…10 V | |
| 032-1CB40 | **SM 032 - Analog output**<br>▸ 2x AO<br>▸ 16 Bit<br>▸ Current 0(4)…20 mA | |
| 032-1CB70 | **SM 032 - Analog output**<br>▸ 2x AO<br>▸ 16 Bit<br>▸ Voltage -10 V…+10 V | |
| 032-1CD30 | **SM 032 - Analog output**<br>▸ 4x AO<br>▸ 16 Bit<br>▸ Voltage 0…10 V | |
| 032-1CD40 | **SM 032 - Analog output**<br>▸ 4x AO<br>▸ 16 Bit<br>▸ Current 0(4)…20 mA | |
| 032-1CD70 | **SM 032 - Analog output**<br>▸ 4x AO<br>▸ 16 Bit<br>▸ Voltage -10 V…+10 V | |

# SLIO

| Order no. | Name/Description | |
|---|---|---|
| **RS232/422/485 and other CPs** | | |
| 040-1BA00 | **CP 040 - Communication processor**<br>› RS232 interface<br>› Protocols ASCII, STX/ETX, 3964(R) and Modbus RTU (master, slave) | |
| 040-1CA00 | **CP 040 - Communication processor**<br>› RS422/485 interface<br>› Protocols ASCII, STX/ETX, 3964(R) and Modbus RTU (master, slave) | |
| **Positinier-Module** | | |
| 054-1BA00 | **FM054 – Stepper motor module**<br>› 1-channel with feedback<br>› 4 inputs/outputs DC 24 V, which can be used as encoder inputs<br>› Power control frequency 32 kHz<br>› Step pattern 64 times microstepping | |
| 054-1CB00 | **FM054 - DC motor module**<br>› 2-channel with feedback<br>› 4 inputs/outputs DC 24 V, which can be used as encoder inputs<br>› PWM clock frequency 32 kHz | |
| 054-1DA00 | **FM054 - Pulse Train Output Module**<br>› 1-channel RS422 with feedback<br>› 4 configurable in-/outputs I/O1... I/O4<br>› Operating modes: CW/CCW, PLS/DIR, ENC/SIM | |
| **SSI modules** | | |
| 050-1BS00 | **FM 050S - SSI module**<br>› SSI - Encoder, master or slave mode<br>› Encoder frequency 125 kHz...2 MHz<br>› µs time stamp for encoder value<br>› Comparison function<br>› Alarm function<br>› Diagnostic function | |
| **Counter modules** | | |
| 050-1BA00 | **FM 050 - Counter module**<br>› 1x Counter 32 Bit (AB), DC 24 V<br>› Up to 400 kHz<br>› 1x DO, DC 24 V<br>› 0,5 A | |
| 050-1BA10 | **FM 050 - Counter module**<br>› 1x Counter 32 Bit (AB), DC 5 V<br>› Up to 2 MHz (difference signal) | |
| 050-1BB00 | **FM 050 - Counter module**<br>› 2x Counter 32 Bit (AB), DC 24 V<br>› Up to 400 kHz | |
| 050-1BB30 | **FM 050 - Counter module Eco**<br>› 2x Counter 32 Bit (AB) DC 24 V<br>› Up to 400 kHz | |
| 050-1BB40 | **FM 050 - Frequency measurement**<br>› Frequency measurement<br>› 2x Counter 24 Bit (AB), DC 24 V<br>› Up to 600 kHz | |
| **Fieldbus slave modules without I/Os** | | |
| 053-1CA00 | **IM 053CAN - CANopen slave**<br>› 16x Rx and 16x Tx PDOs<br>› 2x SDOs<br>› PDO-Linking<br>› PDO-Mapping: fix<br>› Up to 64 peripheral modules | |
| 053-1DN00 | **IM 053DN - DeviceNet slave**<br>› Group 2 only Device<br>› Poll only Device<br>› Baud rate: 125, 250 and 500 Kbit/s<br>› Up to 64 peripheral modules | |
| 053-1DP00 | **IM 053DP - PROFIBUS-DP slave**<br>› DP-V0, DP-V1<br>› 244 byte input and 244 byte output data<br>› 244 byte parameter data<br>› Various diagnostics functions<br>› Integrated DC 24V power supply for power and electronic section supply of the periphery modules<br>› Status LEDs<br>› Up to 64 peripheral modules | |

# SLIO

| Order no. | Name/Description | |
|-----------|------------------|---|
| 053-1EC01 | **IM 053EC - EtherCAT slave**<br>‣ 2-Port Switch RJ45 100BaseTX fullduplex<br>‣ Up to 64 peripheral modules<br>‣ Supports the application profile: CoE, EoE, FoE<br>‣ Supports FMM (Free Module Mapping)<br>‣ Various diagnostics functions<br>‣ Integrated DC 24V power supply for power and electronic section<br>  supply of the periphery modules<br>‣ Operation Modes (FreeRun, SyncManager-Event, Distributed Clock)<br>‣ Supports HotConnect, Easy Maintenance<br>‣ Web server integrated<br>‣ Status LEDs | |
| 053-1IP00 | **IM 053IP - EtherNet/IP slave**<br>‣ CIP<br>‣ Integrated DC 24V power supply for power and electronic section<br>  supply of the periphery modules<br>‣ Status LED<br>‣  Up to 64 peripheral modules | |
| 053-1IP01 | **IM 053IP - EtherNet/IP slave**<br>‣ 2-Port Switch RJ45 100BaseTX fullduplex<br>‣ Up to 64 peripheral modules<br>‣ Supports FMM (Free Module Mapping)<br>‣ Various diagnostics functions<br>‣ Integrated DC 24V power supply for power and electronic section supply<br>  of the periphery modules<br>‣ Supports HotConnect, Easy Maintenance<br>‣ Web server integrated<br>‣ Status LEDs | to be released |
| 053-1ML00 | **IM 053ML - MECHATROLINK**<br>‣ MECHATROLINK according to IEC 61158, IEC 61784<br>‣ Up to 64 peripheral modules<br>‣ Supports standard I/O profile (16byte and 64byte mode)<br>‣ Multi slave node with max. 9 stations<br>‣ Max. 492byte input and 492byte output data<br>‣ Integrated DC 24V power supply for power and electronic section supply<br>  of the periphery modules<br>‣ Integrated Web server<br>‣ Configuration is done via software tool respectively Web server | |
| 053-1MT00 | **IM 053MT  - Modbus/TCP slave**<br>‣ Configuration about the integrated web server<br>‣ Integrated DC 24V power supply for power and electronic section supply<br>  of the periphery modules<br>‣ Up to 64 peripheral modules | |
| 053-1MT01 | **IM 053MT  - Modbus/TCP slave**<br>‣ 2-Port Switch RJ45 100BaseTX fullduplex<br>‣ Up to 64 peripheral modules<br>‣ Supports FMM (Free Module Mapping)<br>‣ Various diagnostics functions<br>‣ Integrated DC 24V power supply for power and electronic section supply<br>  of the periphery modules<br>‣ Supports HotConnect, Easy Maintenance<br>‣ Web server integrated<br>‣ Status LEDs | to be released |
| 053-1PN01 | **IM 053PN - PROFINET-IO slave**<br>‣ Integrated 2-port switch<br>‣ Up to 64 peripheral modules<br>‣ Transfer rate 100Mbit/s full-duplex<br>‣ Supports MRP slave as MRP client, FMM (Free Module Mapping), Easy Maintenance<br>‣ Supports shared device with up to 3 connections<br>‣ Supports IRT (Isochronous Real Time communication)<br>‣ Supports multiple and single write (acyclic communication)<br>‣ Integrated Web server<br>‣ Integrated DC 24V power supply for power and electronic section supply<br>  of the periphery modules<br>‣ Status LEDs | |

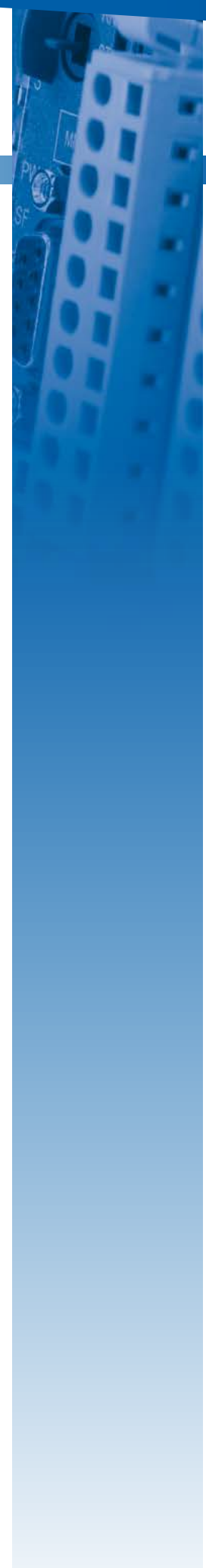| Order no. | Name/Description | |
|---|---|---|
| Line extensions | | |
| 060-1AA00 | **IM060 Line Extension**<br>▸ Extension to another line<br>▸ Connector: 1x RJ45 plug connector<br>▸ Module width 25,8 mm<br>▸ Connection: CAT6 cable<br>▸ Maximum length: 2 m<br>▸ Module is always installed at the last place in the line<br>▸ Module IM060 and IM061 always form a pair | |
| 061-1BA00 | **IM061 Line Extension**<br>▸ Extension up to 8 additional lines (up to 64 modules)<br>▸ Connector: 1x RJ45 plug connector<br>▸ Module width 48.5 mm<br>▸ Connection: CAT6 cable<br>▸ Maximum length: 2 m<br>▸ Module is always installed at the first place in the line<br>▸ Module IM060 and IM061 always form a pair | |
| 35 mm profile rail | | |
| 290-1AF00 | **35 mm profile rail**<br>▸ Length: 2000 mm | |
| 290-1AF30 | **35 mm profile rail**<br>▸ Length: 530 mm | |
| Cables | | |
| 950-0KD30 | **SLIO line extension cable**<br>▸ Length: 2 m<br>▸ Connector: 2x RJ45<br>▸ Plug connector<br>▸ Required to connect the modules IM060 and IM061 | |
| Miscellaneous | | |
| 000-0AA00 | **SLIO bus cover**<br>▸ 1 piece | |
| 000-0AB00 | **SLIO shield bus carrier**<br>▸ 10 pieces | |
| 000-0AC00 | **SLIO shield bus carrier**<br>▸ 100 pieces<br>▸ For secure coding of SLIO modules | |
| 000-0DN00 | **SLIO DeviceNet Connector**<br>▸ 1 piece<br>▸ For IM 053-1DN00<br>▸ Contact surface: gold<br>▸ Pole number: 5<br>▸ Contact termination: spring force connection | |

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| Order no. | Name/Description | Price in EUR |
|---|---|---|
| CPUs STEP7 programmable, Standard | | |
| 214-1BA03 | **VIPA CPU 214**<br>› Work memory [KB]: 96<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7 and SIMATIC Manager | |
| 214-1BA06 | **VIPA CPU 214**<br>› Work memory [KB]: 96<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 214-1BC03 | **VIPA CPU 214**<br>› Work memory [KB]: 48<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7 and SIMATIC Manager | |
| 214-1BC06 | **VIPA CPU 214**<br>› Work memory [KB]: 48<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 215-1BA03 | **VIPA CPU 215**<br>› Work memory [KB]: 128<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7 and SIMATIC Manager | |
| 215-1BA06 | **VIPA CPU 215**<br>› Work memory [KB]: 128<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| CPUs STEP7 programmable, NET-CPUs | | |
| 214-2BE03 | **VIPA CPU 214PG**<br>› Work memory [KB]: 96<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7 and SIMATIC Manager | |
| 214-2BT13 | **VIPA CPU 214NET PG**<br>› Work memory [KB]: 96<br>› Integrated Ethernet CP 243<br>› Interface [RJ45]: active Ethernet & PG/OP communication<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7, SIMATIC Manager and NetPro | |
| 215-2BE03 | **VIPA CPU 215PG**<br>› Work memory [KB]: 128<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7 and SIMATIC Manager | |
| 215-2BE06 | **VIPA CPU 215PG**<br>› Work memory [KB]: 128<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 215-2BT13 | **VIPA CPU 215NET PG**<br>› Work memory [KB]: 128<br>› Integrated Ethernet CP 243<br>› Interface [RJ45]: active Ethernet CP 343 & PG/OP communication<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7, SIMATIC Manager and NetPro | |
| 215-2BT16 | **VIPA CPU 215NET PG**<br>› Work memory [KB]: 128<br>› Integrated Ethernet CP 243<br>› Interface [RJ45]: active Ethernet PG/OP communication<br>› Interface [RS485]: MPI<br>› MMC card slot, up to 32 expansion modules<br>› Programmable with WinPLC7, SIMATIC Manager and TIA Portal | |

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| Order no. | Name/Description | Price in EUR |
|---|---|---|
| **CPUs STEP7 programmable, PtP** | | |
| 214-2BS13 | **VIPA CPU 214SER RS232**<br>▸ Work memory [KB]: 96<br>▸ Interface [RS232]: MPI<br>▸ Interface [RS232]: PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| 214-2BS33 | **VIPA CPU 214SER RS485**<br>▸ Work memory [KB]: 96<br>▸ Interface [RS485]: MPI<br>▸ Interface [RS485]: PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| 215-2BS03 | **VIPA CPU 215SER**<br>▸ Work memory [KB]: 128<br>▸ Interface [RS485]: MPI<br>▸ Interface [2x RS485]: PtP: ASCII, STX/ETX, 3964(R)<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| 215-2BS33 | **VIPA CPU 215SER RS485**<br>▸ Work memory [KB]: 128<br>▸ Interface [RS485]: MPI<br>▸ Interface [RS485]: PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| **CPUs STEP7 programmable, DP-Master** | | |
| 214-2BM06 | **VIPA CPU 214DPM**<br>▸ Work memory [KB]: 96<br>▸ Interface [RS485]: MPI<br>▸ Interface [RS485]: PROFIBUS-DP master<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 215-2BM03 | **VIPA CPU 215DPM**<br>▸ Work memory [KB]: 128<br>▸ Interface [RS485]: MPI<br>▸ Interface [RS485]: PROFIBUS-DP master<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| **CPUs STEP7 programmable, DP-Slave** | | |
| 214-2BP03 | **VIPA CPU 214DP**<br>▸ Work memory [KB]: 96<br>▸ Interface [RS485]: MPI<br>▸ Interface [RS485]: PROFIBUS-DP slave<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| 215-2BP03 | **VIPA CPU 215DP**<br>▸ Work memory [KB]: 128<br>▸ Interface [RS485]: MPI<br>▸ Interface [RS485]: PROFIBUS-DP slave<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| **CPUs STEP7 programmable, CAN Master** | | |
| 215-2CM03 | **VIPA CPU 215CAN**<br>▸ Work memory [KB]: 128<br>▸ Interface [9pol. Sub-D]: CANopen master<br>▸ Interface [RS485]: MPI<br>▸ MMC card slot, up to 32 expansion modules<br>▸ Programmable with WinPLC7 and SIMATIC Manager | |
| **Clamp modules** | | |
| 201-1AA00 | **CM 201 - Double clamps module**<br>▸ 2x 11 clamps, grey/grey<br>▸ Passive | |
| 201-1AA10 | **CM 201 - Double clamps module**<br>▸ 2x 11 clamps, green-yellow/gray<br>▸ Passive | |
| 201-1AA20 | **CM 201 - Double clamps module**<br>▸ 2x 11 clamps, red/blue<br>▸ Passive | |
| 201-1AA40 | **CM 201 - 4-tier clamps module**<br>▸ 2x 5 clamps, grey/grey<br>▸ 2x 6 clamps, red/blue<br>▸ Passive | |

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| Order no. | Name/Description | Price in EUR |
|---|---|---|
| Power supply | | |
| 207-1BA00 | **PS 207 - Power supply**<br>› AC 100…240 V without manual intervention<br>› DC 24 V<br>› 2 A<br>› 48 W | |
| 207-2BA20 | **PS 207 - Power supply**<br>› 2x 11 clamps, red/blue<br>› AC 100…240 V without manual intervention<br>› DC 24 V<br>› 2 A<br>› 48 W | |
| Digital input modules | | |
| 221-1BF00 | **SM 221 - Digital input**<br>› 8x DI<br>› DC 24 V | |
| 221-1BF10 | **SM 221 - Digital input**<br>› 8x DI<br>› DC 24 V<br>› Delay time 0.2 ms | |
| 221-1BF21 | **SM 221 - Digital input**<br>› 8x DI<br>› DC 24 V<br>› Delay time 0.2 ms<br>› Alarm | |
| 221-1BF30 | **SM 221 - Digital input ECO**<br>› 8x DI<br>› DC 24 V | |
| 221-1BF50 | **SM 221 - Digital input**<br>› 8x DI<br>› DC 24 V<br>› NPN | |
| 221-1BH00 | **SM 221 - Digital input**<br>› 16x DI<br>› DC 24 V<br>› For conversion module UB4x<br>› With LED status display | |
| 221-1BH10 | **SM 221 - Digital input**<br>› 16x DI<br>› DC 24 V | |
| 221-1BH20 | **SM 221 - Digital input**<br>› 16x DI<br>› DC 24 V<br>› 2 inputs configurable as counter 1x 32 bit<br>› Up to 100 kHz<br>› LED status display | |
| 221-1BH30 | **SM 221 - Digital input ECO**<br>› 16x DI<br>› DC 24 V | |
| 221-1BH50 | **SM 221 - Digital input**<br>› 16x DI<br>› DC 24 V<br>› NPN<br>› For conversion module UB4x<br>› With LED status display | |
| 221-1FF50 | **SM 221 - Digital input**<br>› 8x DI<br>› AC/DC 180...265 V | |
| 221-2BL10 | **SM 221 - Digital input**<br>› 32x DI<br>› DC 24 V | |

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| Order no. | Name/Description | Price in EUR |
|---|---|---|
| **Digitale Eingabe mit Zähler** | | |
| 221-1BH20 | **SM 221 - Digital input**<br>‣ 16x DI<br>‣ DC 24 V<br>‣ 2 inputs configurable as counter 1x 32 bit<br>‣ Up to 100 kHz<br>‣ LED status display | |
| **Digital output modules** | | |
| 222-1BF00 | **SM 222 - Digital output**<br>‣ 8x DO<br>‣ DC 24 V<br>‣ 1 A | |
| 222-1BF10 | **SM 222 - Digital output**<br>‣ 8x DO<br>‣ DC 24 V<br>‣ 2 A | |
| 222-1BF30 | **SM 222 - Digital output ECO**<br>‣ 8x DO<br>‣ DC 24 V<br>‣ 0.5 A | |
| 222-1BH00 | **SM 222 - Digital output**<br>‣ 16x DO<br>‣ DC 24 V<br>‣ 0.5 A<br>‣ For conversion module UB4x<br>‣ With LED status display | |
| 222-1BH10 | **SM 222 - Digital output**<br>‣ 16x DO<br>‣ DC 24 V<br>‣ 1 A<br>‣ Total current up to 10 A | |
| 222-1BH20 | **SM 222 - Digital output**<br>‣ 16x DO<br>‣ DC 24 V<br>‣ 2 A<br>‣ Total current up to 10 A | |
| 222-1BH30 | **SM 222 - Digital output ECO**<br>‣ 16x DO<br>‣ DC 24 V<br>‣ 0.5 A | |
| 222-1BH50 | **SM 222 - Digital output**<br>‣ 16x DO<br>‣ DC 24 V<br>‣ 0.5 A<br>‣ NPN<br>‣ For conversion module UB4x | |
| 222-1BH51 | **SM 222 - Digital output**<br>‣ 16x DO<br>‣ DC 24 V<br>‣ 0.5 A<br>‣ NPN | |
| 222-1FF00 | **SM 222 - Digital output**<br>‣ 8x DO<br>‣ DC 400 V<br>‣ AC 230 V<br>‣ 0.5 A<br>‣ Solid-state relay | |
| 222-1HD10 | **SM 222 - Digital output**<br>‣ 4x DO<br>‣ DC 30 V<br>‣ AC 230 V<br>‣ 5 A<br>‣ Isolated per channel<br>‣ Relay | |
| 222-1HF00 | **SM 222 - Digital output**<br>‣ 8x DO<br>‣ DC 30 V<br>‣ AC 230 V<br>‣ 5 A<br>‣ Relay | |
| 222-2BL10 | **SM 222 - Digital output**<br>‣ 32x DO<br>‣ DC 24 V<br>‣ 1 A<br>‣ 2 groups each 16x DO<br>‣ Total current per group 10 A | |

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| Order no. | Name/Description | Price in EUR |
|---|---|---|
| Digital in/output modules | | |
| 223-1BF00 | **SM 223 - Digital in-/output**<br>› 8x DIO<br>› DC 24 V<br>› DO 1 A<br>› Diagnostic function | |
| 223-2BL10 | **SM 223 - Digital in-/output**<br>› 16x DI<br>› 16x DO<br>› DC 24 V<br>› 1 A<br>› Total current up to 10 A | |
| Analog input modules | | |
| 231-1BD30 | **SM 231 - Analog input ECO**<br>› 4x AI<br>› 12 Bit<br>› Voltage +/-10 V<br>› Parameterizable | |
| 231-1BD40 | **SM 231 - Analog input ECO**<br>› 4x AI<br>› 12 Bit<br>› Current 4...20 mA, +/-20 mA<br>› Parameterizable | |
| 231-1BD53 | **SM 231 - Analog input**<br>› 4x AI<br>› 16 Bit<br>› Voltage, current<br>› Resistance thermometer, thermocouple<br>› Parameterizable | |
| 231-1BD60 | **SM 231 - Analog input**<br>› 4x AI<br>› 12 Bit<br>› Current 4...20 mA<br>› Potential separated per channel | |
| 231-1BD70 | **SM 231 - Analog input**<br>› 4x AI<br>› 12 Bit<br>› Voltage +/- 10 V<br>› Potential separated per channel | |
| 231-1BF00 | **SM 231 - Analog input**<br>› 8x AI<br>› 16 Bit (2-Leiter)<br>› 4x 16 Bit (4-Leiter)<br>› Voltage 0...60 mV<br>› Resistance thermometer, thermocouple<br>› Parameterizable | |
| 231-1FD00 | **SM 231 - Analog input FAST**<br>› 4x fast AI<br>› 16 Bit<br>› Voltage +/- 10 V, +/- 4 V, +/- 400 mV<br>› Current +/- 20 mA, 4…20 mA<br>› Parameterizable<br>› 0,8 ms cycle time | |
| Analog output modules | | |
| 232-1BD30 | **SM 232 - Analog output ECO**<br>› 4x AO<br>› 12 Bit<br>› Voltage 0...10 V, +/- 10 V<br>› Parameterizable | |
| 232-1BD40 | **SM 232 - Analog output ECO**<br>› 4x AO<br>› 12 Bit<br>› Current 0(4)...20 mA<br>› Parameterizable | |
| 232-1BD51 | **SM 232 - Analog output**<br>› 4x AO<br>› 12 Bit<br>› Voltage +/- 10 V, 1…5 V, 0…10 V<br>› Current +/- 20 mA, 0/4…20 mA<br>› Parameterizable | |

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| Order no. | Name/Description | Price in EUR |
|---|---|---|
| Analog in/output modules | | |
| 234-1BD50 | **SM 234 - Analog in-/output**<br>› 2x AI<br>› 2x AO<br>› 12 Bit<br>› Voltage +/- 10 V, 1…5 V, 0…10 V<br>› Current +/- 20 mA, 0/4…20 mA<br>› Parameterizable | |
| 234-1BD60 | **SM 234 - Analog in-/output**<br>› 4x AI<br>› 2x AO<br>› 12 Bit<br>› Voltage +/- 10 V, 1…5 V, 0…10 V<br>› Current +/- 20 mA, 0/4…20 mA<br>› Resistance thermometer<br>› Parameterizable | |
| Kombi-Module | | |
| 238-2BC00 | **SM 238C - Digital in-/output, counter, analog in-/output**<br>› 16 (12)x DI, DC 24 V<br>› 0 (4)x DO, DC 24 V, 1 A<br>› Up to 3x Counter up to 30 kHz<br>› 4x AI 12 Bit<br>› 3x voltage, current<br>› 1x RTD<br>› 2x AO 12 Bit voltage, current | |
| RS232/422/485- u. sonstige CPs | | |
| 240-1BA20 | **CP 240 - Communication processor**<br>› RS232 interface | |
| 240-1CA20 | **CP 240 - Communication processor**<br>› RS485 interface | |
| 240-1CA21 | **CP 240 - Communication processor**<br>› RS422/485 interface | |
| 240-1FA20 | **CP 240 - Communication processor**<br>› M-Bus master<br>› Isolated<br>› Up to 6 slaves | |
| Feldbus-Master-Module | | |
| 208-1CA00 | **IM 208CAN - CANopen master**<br>› CANopen master<br>› 1 Mbit/s<br>› Up to 125 CAN slaves<br>› Project engineering under VIPA WinCoCT<br>› 40 Transmit PDOs, 40 Receive PDOs | |
| 208-1DP01 | **IM 208DP - PROFIBUS-DP master**<br>› RS485<br>› 12 Mbit/s<br>› Up to 125 DP slaves | |
| Zählermodule | | |
| 250-1BA00 | **FM 250 - Counter module**<br>› 2/4 channels with 32/16 Bit<br>› Supply DC 24 V and above backplane bus<br>› 24 V outputs (1 A) free configurable<br>› Up to 1 MHz | |
| SSI-Module | | |
| 250-1BS00 | **FM 250S - SSI module**<br>› 1 SSI channel<br>› RS422<br>› 12/24 Bit<br>› Direct power supply to the SSI transducer<br>› Baud rate: 100/300/600 Kbit/s (default: 300 Kbit/s)<br>› 2x parameterizable DO, DC 24 V, 1 A<br>› One may be used as hold input | |

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| Order no. | Name/Description | Price in EUR |
|---|---|---|
| Positioning modules | | |
| 253-1BA00 | **FM 253 - Positioning module**<br>› For 1-axis drive with stepper<br>› 3x DI, DC 24 V<br>› Inputs for connecting end switches<br>› 2x DO, 24 V<br>› Isolated | |
| 254-1BA00 | **FM 254 - Positioning module**<br>› For 1-axis drive with servo<br>› RS422<br>› Isolated<br>› 3x DI, DC 24 V<br>› For connecting end switches<br>› 2x DO, DC 24 V<br>› 1 A | |
| Fieldbus slave modules without I/Os | | |
| 253-1CA01 | **IM 253CAN - CANopen slave**<br>› DC 24 V<br>› 1 Mbit/s<br>› Up to 32 modules<br>› 10 Rx and 10 Tx PDO<br>› 2x SDOs<br>› PDO linking, PDO mapping | |
| 253-1DP01 | **IM 253DP - PROFIBUS-DP slave**<br>› DC 24 V<br>› 12 Mbit/s<br>› Configuration via GSD-file of VIPA<br>› Up to 32 modules (16 analog)<br>› 244 Byte input and 244 Byte output data | |
| 253-1DP31 | **IM 253DP - PROFIBUS-DP slave ECO**<br>› DC 24 V<br>› 12 Mbit/s<br>› Configuration via GSD file of VIPA<br>› Up to 8 peripheral modules<br>› 244 Byte input- and 244 Byte output data | |
| 253-1NE00 | **IM 253NET - Ethernet slave**<br>› DC 24 V<br>› 10/100 Mbit/s<br>› Ethernet coupler with Modbus/TCP and Siemens S5 Header Protocol<br>› For up to 32 peripheral modules<br>› Max. 256 Byte I/O data<br>› RJ45<br>› 100BaseTX, 10BaseT | |
| Bus connectors | | |
| 290-0AA10 | **Bus connector**<br>› 1-tier | |
| 290-0AA20 | **Bus connector**<br>› 2-tier | |
| 290-0AA40 | **Bus connector**<br>› 4-tier | |
| 290-0AA80 | **Bus connector**<br>› 8-tier | |
| 35 mm profile rail | | |
| 290-1AF00 | **35 mm profile rail**<br>› Length: 2000 mm | |
| 290-1AF30 | **35 mm profile rail**<br>› Length: 530 mm | |

MICRO
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200V
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Safety
Software
Accessories
Appendix

# 200V

| Order no. | Name/Description | Price in EUR |
|---|---|---|
| **Front connector** | | |
| 292-1AF00 | **Front connector**<br>› 10 pin<br>› Cage clamps | |
| 292-1AH00 | **Front connector**<br>› 18 pin<br>› Cage clamps | |
| **Cables** | | |
| 260-1XY05 | **Connection cable**<br>› Connection cable for interface modules<br>› Length: 0,5 m | |
| 260-1XY10 | **Connection cable**<br>› Connection cable for interface modules<br>› Length: 1 m | |
| 260-1XY20 | **Connection cable**<br>› Connection cable for interface modules<br>› Length: 2 m | |
| **Antennas, connectors etc.** | | |
| 970-0CM00 | **CM 240 - Jack**<br>› For communication processor CM 240 - mini-switch<br>› External DC 24 V power supply | |
| **MMC memory** | | |
| 953-0KX10 | **MMC - MultiMediaCard**<br>› MMC for VIPA CPUs 11x, 21x, 24x, 31x and 51x<br>› MMC for 208-1DP01 and CC 03 | |
| **Labelling** | | |
| 292-1XY20 | **Clip-on cards**<br>› Perforated<br>› 10 sheets each 108 cards | |

| 300S+

# 300S+

# 300S+

| Order no. | Name/Description | |
|---|---|---|
| **CPUs STEP7 programmable, standard** | | |
| 314-2AG23 | **VIPA CPU 314SB DPM**<br>› Powered by SPEED7<br>› Work memory [KB]: 512...1.024<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [2x RS485]: MPI, PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>› SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 314-2BG23 | **VIPA CPU 314SE**<br>› Powered by SPEED7<br>› Work memory [KB]: 256...1.024<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [2x RS485]: MPI, PROFIBUS slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>› SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 315-2AG23 | **VIPA CPU 315SB**<br>› Powered by SPEED7<br>› Work memory [KB]: 1.024...4.096<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [2x RS485]: MPI, PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>› SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 317-2AJ23 | **VIPA CPU 317SE**<br>› Powered by SPEED7<br>› Work memory [KB]: 4.096...8.192<br>› SPEED-Bus<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [2x RS485]: MPI, PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>› SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| **CPUs STEP7 programmable, NET-CPUs** | | |
| 315-4NE23 | **VIPA CPU 315SN**<br>› Powered by SPEED7<br>› Work memory [KB]: 1.024...4.096<br>› Integrated Ethernet CP343-Lean<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [RJ45]: active Ethernet CP343 & PG/OP-communication<br>› Interface [RS485]: MPI<br>› Interface [RS485]: PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>› SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 317-4NE23 | **VIPA CPU 317SN**<br>› Powered by SPEED7<br>› Work memory [KB]: 4.096...8.192<br>› Integrated Ethernet CP343<br>› SPEED-Bus<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [RJ45]: active Ethernet CP 343 & PG/OP communication<br>› Interface [RS485]: MPI<br>› Interface [RS485]: PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>› SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| **CPUs STEP7 programmable, PROFINET** | | |
| 315-4PN23 | **VIPA CPU 315PN**<br>› Powered by SPEED7<br>› Work memory [KB]: 1.024...4.096<br>› Integrated PROFINET controller<br>› Interface [RJ45]: PROFINET<br>› Interface [RJ45]: Ethernet PG/OP communication<br>› Interface [RS485]: MPI<br>› Interface [RS485]: PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>› SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |

# 300S+

| Order no. | Name/Description | |
|---|---|---|
| 315-4PN43 | **VIPA CPU 315PN ECO**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 512...1.024<br>‣ Integrated PROFINET controller<br>‣ Interface [RJ45]: Ethernet / PROFINET-IO<br>‣ Interface [RJ45]: Ethernet PG/OP communication<br>‣ Interface [RS485]: MPI<br>‣ Interface [RS485]: PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>‣ SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 317-4PN23 | **VIPA CPU 317PN**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 8MB<br>‣ Integrated PROFINET controller<br>‣ SPEED-Bus<br>‣ Interface [RJ45]: PROFINET<br>‣ Interface [RJ45]: Ethernet PG/OP communication<br>‣ Interface [RS485]: MPI<br>‣ Interface [RS485]: PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>‣ SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| CPUs STEP7 programmable, C-Klasse | | |
| 312-5BE23 | **VIPA CPU 312SC**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 128...1.024<br>‣ Onboard 16x DI / 8x DO / 2x Counter / 2x PWM<br>‣ Interface [RJ45]: Ethernet PG/OP communication<br>‣ Interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>‣ Including front connector<br>‣ SD/MMC card slot with locking, up to 8 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 313-5BF23 | **VIPA CPU 313SC**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 256...1.024<br>‣ Onboard 24x DI / 16x DO / 5x AI [current/voltage] / 2x AO / 1x Pt100 / 3x Counter / 3x PWM<br>‣ Interface [RJ45]: Ethernet PG/OP communication<br>‣ Interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave<br>‣ Including front connector<br>‣ SD/MMC card slot with locking, up to 8 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 313-6CF23 | **VIPA CPU 313SC DPM**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 256...1.024<br>‣ Onboard 16x DI / 16x DO / 3x Counter / 3x PWM<br>‣ Interface [RJ45]: Ethernet PG/OP communication<br>‣ Interface [2x RS485]: MPI, PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964 (R), USS master, Modbus master/slave<br>‣ Including front connector<br>‣ SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 314-6CF23 | **VIPA CPU 314ST**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 512...2.048<br>‣ Onboard 8x DI / 8x DIO / 5x AI [current/voltage] / 2x AO / 1x Pt100 / 4x Counter<br>‣ SPEED-Bus<br>‣ Interface [RJ45]: Ethernet PG/OP communication<br>‣ Interface [2x RS485]: MPI, PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964 (R), USS master, Modbus master/slave<br>‣ Including front connector<br>‣ SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |
| 314-6CG23 | **VIPA CPU 314SC DPM**<br>‣ Powered by SPEED7<br>‣ Work memory [KB]: 512...2.048<br>‣ Onboard 24x DI / 16x DO / 8x DIO / 5x AI [current/voltage] / 2x AO / 1x Pt100 / 4x Counter / 4x PWM<br>‣ Interface [RJ45]: Ethernet PG/OP communication<br>‣ Interface [2x RS485]: MPI, PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964 (R), USS master, Modbus master/slave<br>‣ Including front connector<br>‣ SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal | |

# 300S+

| Order no. | Name/Description | |
|---|---|---|
| **Power supply** | | |
| 307-1BA00 | **PS 307 - Power supply**<br>› AC 100...240 V<br>› DC 24 V<br>› 2,5 A<br>› Without manual switch | |
| 307-1EA00 | **PS 307 - Power supply**<br>› AC 120...230 V<br>› DC 24 V<br>› 5 A<br>› 60/50 Hz switchable | |
| 307-1FB70 | **PS 307S - Power supply - SPEED-Bus**<br>› DC 24 V<br>› 5,5 A<br>› Only for 317S PLCs | |
| 307-1KA00 | **PS 307 - Power supply**<br>› AC 120...230 V<br>› DC 24 V<br>› 10 A<br>› 60/50 Hz switchable | |
| **Digital input modules** | | |
| 321-1BH01 | **SM 321 - Digital input**<br>› 16x DI<br>› DC 24 V<br>› For 20 pole front connector | |
| 321-1BH70 | **SM 321S - FAST Digital input - SPEED-Bus**<br>› 16x fast DI<br>› SPEED-Bus<br>› 2,56µs…40ms<br>› Parameterizable as Alarm/ETS<br>› For 20 pole front connector | |
| 321-1BL00 | **SM 321 - Digital input**<br>› 32x DI, two groups<br>› DC 24 V<br>› For 40 pole front connector | |
| 321-1FH00 | **SM 321 - Digital input**<br>› 16x DI, in groups of 4<br>› AC 120/230 V<br>› For 20 pole front connector | |
| **Digital output modules** | | |
| 322-1BF01 | **SM 322 - Digital output**<br>› 8x DO, in groups of 4<br>› DC 24 V<br>› 2 A<br>› For 20 pole front connector | |
| 322-1BH01 | **SM 322 - Digital output**<br>› 16x DO, in groups of 8<br>› 1 A (per group up to 4 A)<br>› For 20 pole front connector | |
| 322-1BH01-S | **SM 322 - Digital output**<br>› 16x DO, in groups of 8<br>› 1 A (per group up to 4 A)<br>› Safe shutdown according to EN ISO 13849-1 to category 3 PLd<br>› For 20 pole front connector | |
| 322-1BH41 | **SM 322 - Digital output**<br>› 16x DO, in groups of 8<br>› DC 24 V<br>› 2 A<br>› For 20 pole front connector | |
| 322-1BH60 | **SM 322 - Digital output**<br>› 16x DO<br>› (1x DI activation for outputs)<br>› DC 24 V<br>› 0.5 A<br>› 16 switch, automatic/manual 0/1<br>› For 20 pole front connector | |

# 300S+

| Order no. | Name/Description | |
|---|---|---|
| 322-1BH70 | **SM 322S - FAST Digital output - SPEED-Bus**<br>› 16x fast DO<br>› SPEED-Bus<br>› DC 24 V<br>› 0.5 A<br>› 100 kHz<br>› For 20 pole front connector | |
| 322-1BL00 | **SM 322 - Digital output**<br>› 32x DO, in groups of 8<br>› DC 24 V<br>› 1 A<br>› For 40 pole front connector | |
| 322-1BL00-S | **SM 322 - Digital output**<br>› 32x DO, in groups of 8<br>› DC 24 V<br>› 1 A<br>› Safe shutdown according to EN ISO 13849-1 to category 3 PLd<br>› For 40 pole front connector | |
| 322-1HH00 | **SM 322 - Digital output**<br>› 16x DO, in groups of 8<br>› Relay<br>› DC 24 V<br>› AC 230 V<br>› Contact rating per channel  5 A<br>› For 20 pole front connector | |
| 322-5FF00 | **SM 322 - Digital output**<br>› 8x DO in groups of 1<br>› AC 120/230 V<br>› 2 A<br>› Potential separated per channel<br>› Substitute value output (programmable)<br>› For 40 pole front connector | |
| **Digital in/output modules** | | |
| 323-1BH00 | **SM 323 - Digital in-/output**<br>› 16x DIO<br>› DC 24 V<br>› 1 A<br>› Diagnostic function<br>› For 20 pole front connector | |
| 323-1BH01 | **SM 323 - Digital in-/output**<br>› 8x DI<br>› 8x DO<br>› DC 24 V<br>› 1 A<br>› For 20 pole front connector | |
| 323-1BH70 | **SM 323S - FAST Digital in-/output - SPEED-Bus**<br>› 16x DIO<br>› SPEED-Bus<br>› DC 24 V<br>› 0.5 A<br>› 100 kHz<br>› For 20 pole front connector | |
| 323-1BL00 | **SM 323 - Digital in-/output**<br>› 16x DI<br>› 16x DO<br>› DC 24 V<br>› 1 A<br>› For 40 pole front connector | |
| 323-1BL00-S | **SM 323 - Digital in-/output**<br>› 16x DI<br>› 16x DO<br>› DC 24 V<br>› 1 A<br>› Safe shutdown according to EN ISO 13849-1 to category 3 PLd<br>› For 40 pole front connector | |

# 300S+

| Order no. | Name/Description | |
|---|---|---|
| **Analog input modules** | | |
| 331-1KF01 | **SM 331 - Analog input**<br>› 8x AI<br>› 13 Bit<br>› Voltage +/- 10 V, +/- 50 mV, +/- 500 mV, +/- 5 V, 0 V ... +10 V<br>› Current +/- 20 mA, 0/4…20 mA<br>› Resistance thermometer, thermocouple<br>› For 40 pole front connector | |
| 331-7KF01 | **SM 331 - Analog input**<br>› 8x AI, in 4 groups<br>› 12 Bit<br>› Voltage +/- 10 V, +/- 5 V, 1…5 V, +/- 80 mV, +/- 250 mV, +/- 500 mV<br>› Current +/- 20 mA, +/- 10 mA, 0/4…20 mA, +/- 3.2 mA<br>› Resistance thermometer, thermocouple<br>› For 20 pole front connector | |
| 331-7KB01 | **SM 331 - Analog input**<br>› 2x AI, in 1 group<br>› 12 Bit<br>› Voltage +/- 10 V, 1…5 V, 0…10 V<br>› Current +/- 20 mA, 0/4…20 mA<br>› Resistance thermometer, thermocouple<br>› For 20 pole front connectors | |
| 331-7AF70 | **SM 331S - Analog input FAST - SPEED-Bus**<br>› 8x fast AI<br>› 16 Bit<br>› Current +/- 20 mA<br>› Potential isolation between the channels<br>› 25µs...1000µs sampling rate (parameterizable)<br>› Memory: 8192 value/channel<br>› Oscilloscope-/FIFO-Function<br>› Alarm parameterizable<br>› For 20 pole front connectors | |
| 331-7BF70 | **SM 331S - Analog input FAST - SPEED-Bus**<br>› 8x fast AI<br>› 16 Bit<br>› Voltage +/- 10 V<br>› Potential isolation between the channels<br>› 25µs...1000µs sampiling rate (parameterizable)<br>› Memory: 8192 value/channel<br>› Oscilloscope-/FIFO-Function<br>› Alarm parameterizable<br>› For 20 pole front connectors | |
| **Analog output modules** | | |
| 332-5HB01 | **SM 332 - Analog output**<br>› 2x AO<br>› 12 Bit<br>› Voltage +/- 10 V, 1…5 V, 0…10 V<br>› Current +/- 20 mA, 0/4…20 mA<br>› Parameterizable<br>› For 20 pole front connectors | |
| 332-5HD01 | **SM 332 - Analog output**<br>› 4x AO<br>› 12 Bit<br>› Voltage +/- 10 V, 1…5 V, 0…10 V<br>› Current +/- 20 mA, 0/4…20 mA<br>› Parameterizable<br>› For 20 pole front connectors | |
| **Analog in/output modules** | | |
| 334-0KE00 | **SM 334 - Analog in-/output**<br>› 4x AI<br>› 2x AO<br>› 12 Bit<br>› Input: RTD / output voltage 0...10 V<br>› Parameterizable<br>› For 20 pole front connector | |

# 300S+

| Order no. | Name/Description | |
|---|---|---|
| **RS232/422/485 and other CPs** | | |
| 341-1AH01 | **CP 341 - Communication processor**<br>‣ RS232<br>‣ Isolated<br>‣ Function compatibility to Siemens CP 341<br>‣ Parameterization via the Siemens parameterization package<br>‣ Data transfer rate up to 76.8 Kbit/s<br>‣ Power supply via backplane bus | |
| 341-1CH01 | **CP 341 - Communication processor**<br>‣ RS422/485<br>‣ Isolated<br>‣ Function compatibility to Siemens CP 341<br>‣ Parameterization via the Siemens parameterization package<br>‣ Data transfer rate up to 76,8 Kbit/s<br>‣ Power supply via backplane bus | |
| 341-2CH71 | **CP 341S - Communication processor - SPEED-Bus**<br>‣ 2x RS422/485<br>‣ Isolated<br>‣ SPEED-Bus<br>‣ Data transfer rate up to 115.2 Kbit/s<br>‣ Integrated diagnostic buffer | |
| **Fieldbus master modules** | | |
| 342-1CA70 | **CP 342S CAN - CANopen master - SPEED-Bus**<br>‣ CANopen master<br>‣ SPEED-Bus<br>‣ 1 Mbit/s<br>‣ 125 CAN slaves connectable<br>‣ 40 Transmit PDOs, 40 Receive PDOs<br>‣ 1 SDO (Server), 127 SDO (Client)<br>‣ Project engineering: VIPA WinCoCT | |
| 342-1DA70 | **CP 342S DP - PROFIBUS-DP master - SPEED-Bus**<br>‣ PROFIBUS DP master<br>‣ SPEED-Bus<br>‣ 12 Mbit/s<br>‣ RS485<br>‣ 124 DP slaves connectable<br>‣ Project engineering: Siemens SIMATIC Manager<br>‣ Diagnostic facilities | |
| 342-2IA71 | **CP 342S IBS - INTERBUS master - SPEED-Bus**<br>‣ Dual INTERBUS master<br>‣ SPEED-Bus<br>‣ 2x RS422<br>‣ Diagnostic via LEDs<br>‣ Diagnostic device (2x RJ45)<br>‣ Dual Port Master<br>‣ Up to 512 slaves connectable | |
| **Actor/sensor interfaces** | | |
| 343-2AH10 | **CP 343-2P ASI - AS-i master**<br>‣ Up to 62 slaves connectable<br>‣ Corresponding to AS-i specification 3.0 (master profile M3)<br>‣ Support of analog slaves concerning profile 7.3 resp. 7.4<br>‣ Automatic address programming possible (address 0) | |
| **Ethernet-CPs** | | |
| 343-1EX71 | **CP 343S TCP/IP - Ethernet-CP 343 - SPEED-Bus**<br>‣ SPEED-Bus<br>‣ RJ45<br>‣ 16 connections via Siemens NetPro<br>‣ 64 connections via user program<br>‣ 32 PG/OP connections | |
| **Fieldbus slave modules w/o I/Os** | | |
| 353-1DP01 | **IM 353DP - PROFIBUS-DP slave**<br>‣ DC 24 V<br>‣ 12 Mbit/s<br>‣ Up to 29 peripheral modules (16 analog)<br>‣ 244 Byte input- und 244 Byte outputdata<br>‣ Integrated DC 24 V power supply<br>‣ Configuration via GSD-file of VIPA | |
| **Memory extensions** | | |
| 953-0KX10 | **MMC - MultiMediaCard**<br>‣ MMC for VIPA CPUs 11x, 21x, 24x, 31x and 51x<br>‣ MMC for 208-1DP01 and CC 03 | |
| 953-1LE00 | **Memory Configuration Card (MCC) 32 KB**<br>‣ For SPEED7-CPUs<br>‣ 32 KB<br>‣ 16 KB program/16 KB data | |

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| Order no. | Name/Description | |
|---|---|---|
| 953-1LF00 | **Memory Configuration Card (MCC) 64 KB**<br>› For SPEED7-CPUs<br>› 64 KB<br>› 32 KB program/32 KB data | |
| 953-1LG00 | **Memory Configuration Card (MCC) 128 KB**<br>› For SPEED7-CPUs<br>› 128 KB<br>› 64 KB program/64 KB data | |
| 953-1LH00 | **Memory Configuration Card (MCC) 256 KB**<br>› For SPEED7-CPUs<br>› 256 KB<br>› 128 KB program/128 KB data | |
| 953-1LJ00 | **Memory Configuration Card (MCC) 512 KB**<br>› For SPEED7-CPUs<br>› 512 KB<br>› 256 KB program/256 KB data | |
| 953-1LK00 | **Memory Configuration Card (MCC) 1 MB**<br>› For SPEED7-CPUs<br>› 1 MB<br>› 512 KB program/512 KB data | |
| 953-1LL00 | **Memory Configuration Card (MCC) 2 MB**<br>› For SPEED7-CPUs<br>› 2 MB<br>› 1 MB program/1 MB data | |
| 953-1LM00 | **Memory Configuration Card (MCC) 4 MB**<br>› For SPEED7-CPUs<br>› 4 MB<br>› 2 MB program/2 MB data | |
| 953-1LP00 | **Memory Configuration Card (MCC) 8 MB**<br>› For SPEED7-CPUs<br>› 8 MB<br>› 4 MB program/4 MB data | |
| **Memory modules for other components** | | |
| 955-0000000 | **VIPA SD-Card (VSD)**<br>› Industrial SD card<br>› 512 Mbyte (Industrial SLC)<br>› Extremely robust against EMC, shock and vibration<br>› Temperature range -40 up to 85°C<br>› Water-/dust proof in accordance with IP57/IP67<br>› MTBF (25°C) >5.000.000h<br>› unrecorded | |
| **Configuration and diagnosis modules** | | |
| 342-0IA01 | **CP 342 IBS - Configuration/diagnosis module**<br>› LC display<br>› 7 buttons<br>› Cable 0.5 m<br>› RJ45 connector<br>› For 342-2IA71 | |
| **Profile rail** | | |
| 391-1AF10 | **BP 391 - SPEED-Bus**<br>› Length: 530 mm<br>› With integrated High-SPEED rear panel bus<br>› For 2 expansion slots | |
| 391-1AF30 | **BP 391 - SPEED-Bus**<br>› Length: 530 mm<br>› With integrated High-SPEED rear panel bus<br>› For 6 expansion slots | |
| 391-1AF50 | **BP 391 - SPEED-Bus**<br>› Length: 530 mm<br>› With integrated High-SPEED rear panel bus<br>› For 10 expansion slots | |
| 391-1AJ10 | **BP 391 - SPEED-Bus**<br>› Length: 830 mm<br>› With integrated High-SPEED rear panel bus<br>› For 2 expansion slots<br>› Left justified | |
| 391-1AJ30 | **BP 391 - SPEED-Bus**<br>› Length: 830 mm<br>› With integrated High-SPEED rear panel bus<br>› For 6 expansion slots<br>› Left justified | |

# 300S+

| Order no. | Name/Description | |
|---|---|---|
| 391-1AJ50 | **BP 391 - SPEED-Bus**<br>▸ Length: 830 mm<br>▸ With integrated High-SPEED rear panel bus<br>▸ For 10 expansion slots<br>▸ Left justified | |
| 390-1AB60 | **Profile rail**<br>▸ Length: 160 mm | |
| 390-1AE80 | **Profile rail**<br>▸ Length: 482 mm | |
| 390-1AF30 | **Profile rail**<br>▸ Length: 530 mm | |
| 390-1AJ30 | **Profile rail**<br>▸ Length: 830 mm | |
| **Front connector** | | |
| 392-1AJ00 | **Front connector**<br>▸ 20 pole<br>▸ Screw contact | |
| 392-1BJ00 | **Front connector**<br>▸ 20 pole<br>▸ Cage clamps | |
| 392-1AM00 | **Front connector**<br>▸ 40 pole<br>▸ Screw contact | |
| 392-1BM01 | **Front connector**<br>▸ 40 pole<br>▸ Cage clamps | |
| 922-3BC50 | **Preassembled front connectors**<br>▸ For 300 series<br>▸ 20 pin with 20 single cores 0,5 mm²<br>▸ All the wires are marked at regular intervals with wire numbers<br>▸ Wire type H05V-K<br>▸ Permissible constant current by pressure of all wires, max. 1,5 A<br>▸ Nominal operating voltage DC 24 V<br>▸ Cable length: 2,5 m | |
| 922-3BD20 | **Preassembled front connectors**<br>▸ For 300 series<br>▸ 20 pin with 20 single cores 0,5 mm²<br>▸ All the wires are marked at regular intervals with wire numbers<br>▸ Wire type H05V-K<br>▸ Permissible constant current by pressure of all wires, max. 1,5 A<br>▸ Nominal operating voltage DC 24 V<br>▸ Cable length: 3,2 m | |
| 922-3BF00 | **Preassembled front connectors**<br>▸ For 300 series<br>▸ 20 pin with 20 single cores 0,5 mm²<br>▸ All the wires are marked at regular intervals with wire numbers<br>▸ Wire type H05V-K<br>▸ Permissible constant current by pressure of all wires, max. 1,5 A<br>▸ Nominal operating voltage DC 24 V<br>▸ Cable length: 5 m | |
| 922-6BC50 | **Preassembled front connectors**<br>▸ For 300 series<br>▸ 40 pin with 40 single cores 0,5 mm²<br>▸ All the wires are marked at regular intervals with wire numbers<br>▸ Wire type H05V-K<br>▸ Permissible constant current by pressure of all wires, max. 1,5 A<br>▸ Nominal operating voltage DC 24 V<br>▸ Cable length: 2,5 m | |
| 922-6BD20 | **Preassembled front connectors**<br>▸ For 300 series<br>▸ 40 pin with 40 single cores 0,5 mm²<br>▸ All the wires are marked at regular intervals with wire numbers<br>▸ Wire type H05V-K<br>▸ Permissible constant current by pressure of all wires, max. 1,5 A<br>▸ Nominal operating voltage DC 24 V<br>▸ Cable length: 3,2 m | |
| 922-6BF00 | **Preassembled front connectors**<br>▸ For 300 series<br>▸ 40 pin with 40 single cores 0,5 mm²<br>▸ All the wires are marked at regular intervals with wire numbers<br>▸ Wire type H05V-K<br>▸ Permissible constant current by pressure of all wires, max. 1,5 A<br>▸ Nominal operating voltage DC 24 V²<br>▸ Cable length: 5 m | |

| HMI

MICRO

SLIO

200V

300S+

HMI

Teleservice

Safety

Software

Accessories

Appendix

# HMI

| Order no. | Name/Description | |
|---|---|---|
| professional Panels | | |
| 62G-FID0-CB | **VIPA Touch Panel TP 606C**<br>▸ Display: 6,5"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 1x USB-A \| 1x USB-B \| 1x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional \| Movicon CE Standard | |
| 62I-JID0-CB | **VIPA Touch Panel TP 608C**<br>▸ Display: 8,4"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional \| Movicon CE Standard | |
| 62I-JID0-CX | **VIPA Touch Panel TP 608C**<br>▸ Display: 8,4"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional | |
| 62I-JIDR-CX | **VIPA Touch Panel TP608C RFID**<br>▸ Display: 8,4"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional | |
| 62K-JID0-CB | **VIPA Touch Panel TP 610C**<br>▸ Display: 10,4"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional \| Movicon CE Standard | |
| 62K-JID0-CX | **VIPA Touch Panel TP 610C**<br>▸ Display: 10,4"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional | |
| 62K-JIDR-CX | **VIPA Touch Panel TP610C RFID**<br>▸ Display: 10,4"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional | |
| 62M-JID0-CB | **VIPA Touch Panel TP 612C**<br>▸ Display: 12"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional \| Movicon CE Standard | |

# HMI

| Order no. | Name/Description | |
|---|---|---|
| 62M-JID0-CX | **VIPA Touch Panel TP 612C**<br>▸ Display: 12"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional | |
| 62M-JIDR-CX | **VIPA Touch Panel TP 612C RFID**<br>▸ Display: 12"<br>▸ Processor: XScale-CPU \| 1066 MHz<br>▸ RAM [MB]: 256<br>▸ User memory [MB]: 512<br>▸ External slot: SD Card \| CF Card<br>▸ Onboard Interface: 1x RS232 \| 1x 422/485 \| 2x USB-A \| 1x USB-B \| 2x RJ45 (Ethernet) \| 1x MPI/PROFIBUS-DP<br>▸ Software: CE6.0 Professional | |
| **Panel PC** | | |
| 67K-RSL0-JB | **Panel PC PPC010 ES**<br>▸ Display: 10.1"<br>▸ Processor: Intel Celeron J1900 quad core @2 GHz<br>▸ Work memory: 4 GB<br>▸ Operating system and user memory: 16 GB<br>▸ Memory card plug-in place: CFast<br>▸ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/RS485), Audio out<br>▸ Incl. operating system Windows Embedded Standard 7<br>▸ Visualization system Movicon 11.5 Runtime and editor | |
| 67K-RSL0-JX | **Panel PC PPC010 ES**<br>▸ Display: 10.1"<br>▸ Processor: Intel Celeron J1900 quad core @2 GHz<br>▸ Work memory: 4 GB<br>▸ Operating system and user memory: 16 GB<br>▸ Memory card plug-in place: CFast<br>▸ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/RS485), Audio out<br>▸ Incl. operating system Windows Embedded Standard 7 | |
| 67K-RRJ0-EB | **Panel PC PPC010 CE**<br>▸ Display: 10.1"<br>▸ Processor: Intel Celeron J1900 quad core @2 GHz<br>▸ Work memory: 2 GB<br>▸ Operating system and user memory: 2 GB<br>▸ Memory card plug-in place: CFast<br>▸ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/RS485), Audio out<br>▸ Incl. operating system Windows Embedded Compact 7 and Runtime Movicon CE Standard<br>▸ Visualization system Movicon 11.5 Runtime | |
| 67P-RSL0-JB | **Panel PC PPC015 ES**<br>▸ Display: 15.6"<br>▸ Processor: Intel Celeron J1900 quad core @2 GHz<br>▸ Work memory: 4 GB<br>▸ Operating system and user memory: 16 GB<br>▸ Memory card plug-in place: CFast<br>▸ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/RS485), Audio out<br>▸ Incl. operating system Windows Embedded Standard 7<br>▸ Visualization system Movicon 11.5 Runtime and editor | |
| 67P-RSL0-JX | **Panel PC PPC015 ES**<br>▸ Display: 15.6"<br>▸ Processor: Intel Celeron J1900 quad core @2 GHz<br>▸ Work memory: 4 GB<br>▸ Operating system and user memory: 16 GB<br>▸ Memory card plug-in place: CFast<br>▸ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/RS485), Audio out<br>▸ Incl. operating system Windows Embedded Standard 7 | |
| 67P-RRJ0-EB | **Panel PC PPC015 CE**<br>▸ Display: 15.6"<br>▸ Processor: Intel Celeron J1900 quad core @2 GHz<br>▸ Work memory: 2 GB<br>▸ Operating system and user memory: 2 GB<br>▸ Memory card plug-in place: CFast<br>▸ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/RS485), Audio out<br>▸ Incl. operating system Windows Embedded Compact 7 and Runtime Movicon CE Standard<br>▸ Visualization system Movicon 11.5 Runtime | |

# HMI

| Order no. | Name/Description | |
|---|---|---|
| 67S-RSL0-JB | **Panel PC PPC021 ES**<br>‣ Display: 21.5"<br>‣ Processor: Intel Celeron J1900 quadcore @2 GHz<br>‣ Work memory: 4 GB<br>‣ Operating system and user memory: 16 GB<br>‣ Memory card plug-in place: CFast<br>‣ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/ RS485), Audio out<br>‣ Incl. operating system Windows Embedded Standard 7<br>‣ Visualization system Movicon 11.5 Runtime and editor | |
| 67S-RSL0-JX | **Panel PC PPC021 ES**<br>‣ Display: 21.5"<br>‣ Processor: Intel Celeron J1900 quadcore @2 GHz<br>‣ Work memory: 4 GB<br>‣ Operating system and user memory: 16 GB<br>‣ Memory card plug-in place: CFast<br>‣ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/ RS485), Audio out<br>‣ Incl. operating system Windows Embedded Standard 7 | |
| 67S-RRJ0-EB | **Panel PC PPC021 CE**<br>‣ Display: 21.5"<br>‣ Processor: Intel Celeron J1900 quad core @2 GHz<br>‣ Work memory: 2 GB<br>‣ Operating system and user memory: 2 GB<br>‣ Memory card plug-in place: CFast<br>‣ Interfaces: 2x Ethernet (10/100/1000), 2x USB 2.0, 1x USB 3.0, 2x serial (RS232,RS422/ RS485), Audio out<br>‣ Incl. operating system Windows Embedded Standard 7 and Runtime Movicon CE Standard<br>‣ Visualization system Movicon 11.5 Runtime | |
| **smartPanel** | | |
| H41-71A41-0 | **smartPanel TP304-SM**<br>‣ Display: 4.3"<br>‣ Processor: Cortex-A8 \| 1GHz<br>‣ Work memory [MB]: 512<br>‣ User memory [GB]: 4<br>‣ Interface onboard: 1x RS232/422/485 \| 1x USB-A \| 1x RJ45 (Ethernet)<br>‣ Software: Windows Embedded Compact 7<br>‣ Movicon CE Standard | |
| H71-71A41-0 | **smartPanel TP307-SM**<br>‣ Display: 7"<br>‣ Processor: Cortex-A8 \| 1GHz<br>‣ Work memory [MB]: 512<br>‣ User memory [GB]: 4<br>‣ Interface onboard: 1x RS232/422/485 \| 1x USB-A \| 1x RJ45 (Ethernet)<br>‣ Software: Windows Embedded Compact 7<br>‣ Movicon CE Standard | |
| HA1-71A41-0 | **smartPanel TP310-SM**<br>‣ Display: 10.1"<br>‣ Processor: Cortex-A8 \| 1GHz<br>‣ Work memory [MB]: 512<br>‣ User memory [GB]: 4<br>‣ Interface onboard: 1x RS232/422/485 \| 1x USB-A \| 1x RJ45 (Ethernet)<br>‣ Software: Windows Embedded Compact 7<br>‣ Movicon CE Standard | |
| **Text displays and operator panels** | | |
| 603-1TD00 | **VIPA Text Display TD 03**<br>‣ Display: 2 x 20 characters<br>‣ Interface: MP²I<br>‣ Languages: DE, EN<br>‣ Visualization of the connected CPU via MPI<br>‣ Project engineering via TD-Wizard of VIPA | |
| 603-1OP00 | **VIPA Operator Panel OP 03**<br>‣ Display: 2 x 20 characters<br>‣ Interface: MP²I<br>‣ User memory: 256 KB<br>‣ Languages: DE, EN, FR, ES, IT, SV, NO, DA<br>‣ Project engineering via VIPA OP-Manager or Siemens ProTool | |

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# HMI

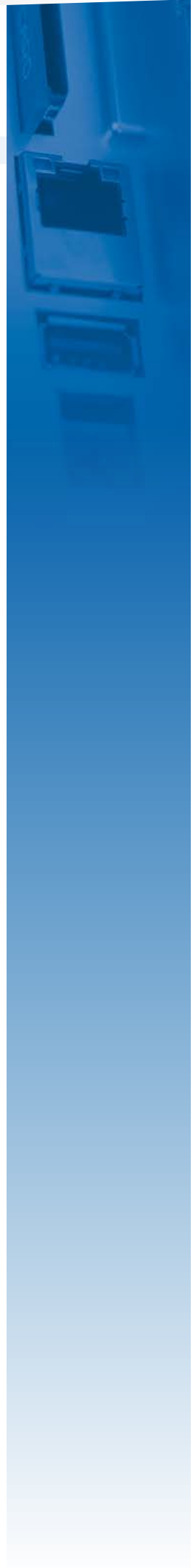| Order no. | Name/Description | |
|---|---|---|
| **Commander Compact** | | |
| 603-1CC23 | **VIPA Commander Compact CC 03** <br> ▸ Display: 2 x 20 characters <br> ▸ Interface: MP²I <br> ▸ User memory: 128 KB <br> ▸ Languages: DE, EN, FR, ES, IT, SV, NO, DA <br> ▸ Project engineering via VIPA OP-Manager or Siemens ProTool <br> ▸ Integrated PLC-CPU: 32/40 KB work/load memory <br> ▸ 16x DI, 16x DO <br> ▸ Up to 4 I/O expansion modules | |
| **HMI-Software - Runtime** | | |
| SW514S31B | **Movicon Version 11.x für Windows \| Upgrade [128 IO-Bytes]** <br> ▸ USB dongle <br> ▸ Executable only on VIPA Panel PCs with Movicon basic license (128 IO bytes) <br> ▸ Variable use up to 128 IO-bytes | |
| SW514S33B | **Movicon Version 11.x für Windows \| Upgrade [512 IO-Bytes]** <br> ▸ USB dongle <br> ▸ Executable only on VIPA Panel PCs with Movicon basic license (512 IO bytes) <br> ▸ Variable use up to 512 IO-bytes | |
| SW514S35B | **Movicon Version 11.x für Windows \| Upgrade [2048 IO-Bytes]** <br> ▸ USB dongle <br> ▸ Executable only on VIPA Panel PCs with Movicon basic license (2048 IO bytes) <br> ▸ Variable use up to 2048 IO-bytes | |
| UPGWB-1101PC128 | **Expansion by 1 web client [128 IO bytes]** <br> ▸ for Movicon version 11.x for Windows <br> ▸ up to 128 IO-Bytes <br> ▸ online upgrade <br> ▸ executable only on VIPA Panel PCs <br> ▸ expansion for a Movicon 11 Win Standard license <br> ▸ the number of the IO bytes has to correspond <br> ▸ Non-recurring costs per order of 150€ (Art. no. CPTZ) | |
| UPGWB-1101PC512 | **Expansion by 1 web client [512 IO bytes]** <br> ▸ for Movicon version 11.x for Windows <br> ▸ up to 512 IO-Bytes <br> ▸ online upgrade <br> ▸ executable only on VIPA Panel PCs <br> ▸ expansion for a Movicon 11 Win Standard license <br> ▸ the number of the IO bytes has to correspond <br> ▸ Non-recurring costs per order of 150€ (Art. no. CPTZ) | |
| UPGWB-1101PC2048 | **Expansion by 1 web client [2048 IO bytes]** <br> ▸ for Movicon version 11.x for Windows <br> ▸ up to 2048 IO-Bytes <br> ▸ online upgrade <br> ▸ executable only on VIPA Panel PCs <br> ▸ expansion for a Movicon 11 Win Standard license <br> ▸ the number of the IO bytes has to correspond <br> ▸ Non-recurring costs per order of 150€ (Art. no. CPTZ) | |
| UPGWB-1102PC128 | **Expansion by 2 web clients [128 IO bytes]** <br> ▸ for Movicon version 11.x for Windows <br> ▸ up to 128 IO-Bytes <br> ▸ online upgrade <br> ▸ executable only on VIPA Panel PCs <br> ▸ expansion for a Movicon 11 Win Standard license <br> ▸ the number of the IO bytes has to correspond <br> ▸ Non-recurring costs per order of 150€ (Art. no. CPTZ) | |
| UPGWB-1102PC512 | **Expansion by 2 web clients [512 IO bytes]** <br> ▸ for Movicon version 11.x for Windows <br> ▸ up to 512 IO-Bytes <br> ▸ online upgrade <br> ▸ executable only on VIPA Panel PCs <br> ▸ expansion for a Movicon 11 Win Standard license <br> ▸ the number of the IO bytes has to correspond <br> ▸ Non-recurring costs per order of 150€ (Art. no. CPTZ) | |
| UPGWB-1102PC2048 | **Expansion by 2 web clients [2048 IO bytes]** <br> ▸ for Movicon version 11.x for Windows <br> ▸ up to 2048 IO-Bytes <br> ▸ online upgrade <br> ▸ executable only on VIPA Panel PCs <br> ▸ expansion for a Movicon 11 Win Standard license <br> ▸ the number of the IO bytes has to correspond <br> ▸ Non-recurring costs per order of 150€ (Art. no. CPTZ) | |

# HMI

| Order no. | Name/Description | |
|---|---|---|
| **Memory modules for Touch Panels** | | |
| 574-2AH00 | **Compact Flash Card (CF) 1 GB**<br>▸ For VIPA professional Panels | |
| 574-2AI00 | **Compact Flash Card (CF) 2 GB**<br>▸ For VIPA professional Panels | |
| 574-2BK00 | **CFast-Card 8GB SLC**<br>▸ For VIPA Panel PC | |
| 574-2BL00 | **CFast-Card 16GB SLC**<br>▸ For VIPA Panel PC | |
| 953-1SI00 | **Secure Disc (SD) 2 GB**<br>▸ For VIPA professional Panels | |
| **Protective foil** | | |
| 574-1AE01 | **Protective foil TP606**<br>▸ For professional Panels 5,7" and 6,5"<br>▸ 10 pieces | |
| 574-1AF01 | **Protective foil TP608**<br>▸ For professional Panels 8,4"<br>▸ 10 pieces | |
| 574-1AG01 | **Protective foil TP610**<br>▸ For professional Panels 10,4"<br>▸ 10 pieces | |
| 574-1AH01 | **Protective foil TP612**<br>▸ For professional Panels 12,1"<br>▸ 10 pieces | |
| **Cables** | | |
| 670-0KB20 | **Ethernet programming cable**<br>▸ For Touch Panels with Movicon<br>▸ Length: 3 m | |
| 670-0KB00 | **OP/AG cable 0°/90° with PU/Diagnostic port**<br>▸ For VIPA CC 03, OP 03, TD 03 | |
| 670-0KB01 | **OP/AG cable 90°/90° with PU/Diagnostic port**<br>▸ PU/Diagnostic port<br>▸ Length: 2,5 m<br>▸ For VIPA CC03, OP 03, TD 03 | |
| 660-0KB00 | **Periphery expansion cable CC 03**<br>▸ For up to 4 expansion modules EM 123 or System 200V modules<br>▸ Length: 0,5 m | |
| 950-0KB50 | **PC/AG programming cable**<br>▸ MPI cable with PU-/Diagnostic port<br>▸ Length: 2,5 m | |
| **Housings, connectors etc.** | | |
| HYA-7E7S | **7" ECO / 7" Smart mounting adapter**<br>▸ Mounting adapter | |

# HMI

| Teleservice

# Teleservice

| Order no. | Name/Description | |
|---|---|---|
| **Teleservice modules** | | |
| EC51460 | **Cosy 141 MPI VPN Router**<br>⟩ For remote access via Talk2M VPN<br>⟩ 4x RJ45 LAN 100 Mbit/s<br>⟩ 4x RJ45 switch LAN<br>⟩ 1x RJ45 WAN<br>⟩ 1x SUB-D 9pin MPI/PROFIBUS up to 12 Mbit/s<br>⟩ 1x digital input and output<br>⟩ Certifications: CE, cCSAus | |
| EC61330 | **Cosy 131 Eth. Router**<br>⟩ For remote access via Talk2M VPN<br>⟩ 4x RJ45 LAN 100 mbit/s (integrated switch, configurable LAN/WAN)<br>⟩ 2x digital input for internet / VPN-access<br>⟩ 1x digital output for Talk2M connection<br>⟩ Integrated web interface for configuration<br>⟩ SD card slot<br>⟩ USB interface for connection serial devices<br>⟩ Marking: CE, cULus listed, FCC | |
| EC6133C | **Cosy 131 WIFI Router**<br>⟩ For remote access via Talk2M VPN<br>⟩ 4x RJ45 LAN 100 mbit/s (integrated switch, configurable LAN/WAN)<br>⟩ 2x digital input for internet / VPN-access<br>⟩ 1x digital output for Talk2M connection<br>⟩ Integrated web interface for configuration<br>⟩ SD card slot<br>⟩ USB interface for connection serial devices<br>⟩ Marking: CE, cULus listed, FCC<br><br>**WIFI-Features:**<br>⟩ WAN Connectivity: Ethernet or WiFi 802.11 b/g/n<br>⟩ Frequencies: Channels: 1 to 11(inclusive)<br>⟩ Security: WPA2, WPA and WEP<br>⟩ Antenna Connector: RP-SMA female connector<br>⟩ Antenna: Included in the delivery; frequency: 2.4GHz; impedance: 50 Ohms; gain: 2.0dBi | |
| EC6133D | **Cosy 131 3G+ Router**<br>⟩ For remote access via Talk2M VPN<br>⟩ 4x RJ45 LAN 100 mbit/s (integrated switch, configurable LAN/WAN)<br>⟩ 2x digital input for internet / VPN-access<br>⟩ 1x digital output for Talk2M connection<br>⟩ Integrated web interface for configuration<br>⟩ SD card slot<br>⟩ USB interface for connection serial devices<br>⟩ Marking: CE, cULus listed, FCC<br><br>**Cellular 3G+ Features:**<br>⟩ Frequencies: GSM/GPRS/EDGE Quad-Band (850, 900, 1800, 1900 MHz) - HSPA+ UMTS Pentaband module (800/850, 900, AWS 1700, 1900, 2100 MHz)<br>⟩ Antenna Connector: Type SMA - Female<br>⟩ Antenna: not included in the delivery | |
| EC6133G | **Cosy 131 4G EU Router**<br>⟩ For remote access via Talk2M VPN<br>⟩ 4x RJ45 LAN 100 mbit/s (integrated switch, configurable LAN/WAN)<br>⟩ 2x digital input for internet / VPN-access<br>⟩ 1x digital output for Talk2M connection<br>⟩ Integrated web interface for configuration<br>⟩ SD card slot<br>⟩ USB interface for connection serial devices<br>⟩ Marking: CE, cULus listed, FCC<br><br>**Cellular 4G EU Features:**<br>⟩ Bands: 4G: B1, B3, B7, B8, B20; 3G: B1, B8; Automatic fallback to 3G<br>⟩ Antenna Connector: Type SMA - Female<br>⟩ Antenna: not included in the delivery | |
| Flexy20500 | **Flexy IOT Router Base Unit**<br>⟩ Flexy 205 base module<br>⟩ 4 x RJ45 Ethernet 10/100 Mb. Configurable LAN/WAN ports, port 1 always LAN<br>⟩ Alarms: Alarms notification by email, SMS, FTP put and/or SNMP traps.<br>⟩ Datalogging: Internal data base for data logging<br>⟩ SD card reader: YES, for easy commissioning (firmware upgrade, backup, Talk2M registration).<br>⟩ Router: IP filtering, IP forwarding, NAT, Port forwarding, Proxy, Routing table, DHCP client/server<br>⟩ VPN Tunnelling: Open VPN either in SSL UDP or HTTPS; VPN Security:end-to-end encrypted using SSL/TLS<br>⟩ User Flash Disk: up to 30MB available for user application<br>⟩ Input/output: 2x digital input: 0 to 12/24VDC; 1.5kV isolation, 1x digital output: open drain (MOSFET) 200mA; 1.5 kV isolation<br>⟩ Marking: CE, cULus listed, FCC | |

| Order no. | Name/Description | |
|---|---|---|
| FLA3301 | **Flexy Option Dual Serial Ports**<br>‣ 1x male SUBD9 serial port RS232/422/485 configurable by dipswitch and<br>‣ 1x male SUBD9 RS232 serial port with RTS, CTS signals | |
| FLB3202 | **Flexy Option Cellular 3G+**<br>‣ Pentaband UMTS/HSPA+ modem (800/850, 900, AWS1700, 1900, 2100 MHz)<br>‣ Quad band GPRS/EDGE (850, 900, 1800, 1900 MHz)<br>‣ Type SMA - Female   --- Antenna NOT included | |
| FLB3204 | **Flexy Option EU 4G LTE**<br>‣ 4G: B7(2600), B1(2100), B3(1800), B8(900), B20 (800)MHz<br>‣ 3G: B1 (2100), B8 (900) MHz<br>‣ 2G: B3 (1800) , B8(900) MHz<br>‣ Type SMA - Female   --- Antenna NOT included | |
| FLB3205 | **Flexy Option North America 4G LTE**<br>‣ AT&T compliant<br>‣ 4G: B12/B17(700),B5(850), B4(AWS1700),B2(1900), B13(700)MHz<br>‣ 3G: B2(1900), B5(850)MHz<br>‣ Type SMA - Female   --- Antenna NOT included | |
| FLB3203 | **Flexy Option VERIZON 4G LTE**<br>‣ only Verizon network compatible, no CDMA<br>‣ 4G: B4(AWS1700), B13(700) MHz<br>‣ Type SMA - Female   --- Antenna NOT included | |
| FLB3271 | **Flexy Option WIFI**<br>‣ WiFi: 802.11 b/g/n WiFi/WLAN client for remote connection<br>‣ Channels: 1 to 11 ( inclusive ) WPA2, WPA and WEP<br>‣ Reverse SMA male connector, Antenna included in the delivery;<br>‣ frequency: 2.4 GHz; impedance: 50 Ohms, gain:2.0 dB | |
| FLB3601 | **Flexy Option 3 USB Ports Card**<br>‣ 4 leds : 1 global status, 1 for each port status<br>‣ Type A female, Each port has its own 500mA current limit.<br>‣ Global current limit on the board is 500mA.<br>‣ All ports will be enabled/disabled together.<br>‣ Isolation:<br>‣ Earth GND isolation is limited to 500V due to USB connector design. | |
| FLX3101 | **Flexy Option Ethernet WAN**<br>‣ 1x RJ45 Ethernet 10/100 base Tx; 1.5kV isolation | |
| FLX3402 | **Flexy Option Extension I/O card**<br>‣ I/O card with 8x DI, 2x DO, 4x AI (0-10V, 4-20mA)<br>  **Range**:<br>‣ AI : voltage mode 0-10V - 16 bit resolution or current mode 4-20mA,<br>  user selectable with Dip Switch configuration.<br>‣ DI : 0 to 12/24 VDC,DO: 2A/30V VAC/VDC<br>  **Isolation**:<br>‣ AI: 1.5kV from power supply<br>‣ DI: 1.5 kV from electronic AND power supply<br>‣ DO: 1.5kV from electronic AND from power supply | |
| FLC3701 | **Flexy Option MPI / PB**<br>‣ 1 x female SUBD9 MPI port, 1.5kV functional isolation from power supply | |
| Antennas and accessories | | |
| 900-0AB51 | **TM antenna GSM/UMTS**<br>‣ Mobile antenna incl. 5 m cable<br>‣ SMA connector<br>‣ Resistance: 50 Ohm<br>‣ Power: 10 W<br>‣ Gain: 2.14 dBi<br>‣ 900/1800 MHz | |

| Safety

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# Safety

| Order no. | Name/Description | |
|---|---|---|
| **Safety electronics modules** | | |
| R119000300 | **samosPRO SP-SDIO84-P1-K-A**<br>› samosPRO<br>› IO-module with 8 input/4 solid state output<br>› Screw terminals pluggable | |
| R119000400 | **samosPRO SP-SDIO84-P1-K-C**<br>› samosPRO<br>› IO-module with 8 input/4 solid state output<br>› Spring clamp terminal pluggable | |
| R119000500 | **samosPRO SP-SDI8-P1-K-A**<br>› samosPRO<br>› IN-module with 8 input<br>› Screw terminals pluggable | |
| R119000600 | **samosPRO SP-SDI8-P1-K-C**<br>› samosPRO<br>› IN-module with 8 input<br>› Spring clamp terminal pluggable | |
| **Gateway modules** | | |
| R119001600 | **samosPRO SP-EN-ETC**<br>› samosPRO Gateway for EtherCAT | |
| R119001900 | **samosPRO SP-PROFIBUS-DP**<br>› samosPRO bus coupling modul for PROFIBUS-DP | |
| R119002100 | **samosPRO SP-CANopen**<br>› samosPRO gateway for CANopen | |
| **Safety relay** | | |
| R118805900 | **safeRELAY SNE 4004K-A**<br>› Output expansion unit<br>› 4 enabling current paths<br>› 3 signalling current paths<br>› AC/DC 24 V<br>› Screw terminals pluggable | |
| R118819800 | **safeRELAY SNE 4004K-C**<br>› Output expansion unit<br>› 4 enabling current paths<br>› 3 signalling current paths<br>› AC/DC 24 V<br>› Cage clamp terminals pluggable | |
| R118839300 | **safeRELAY SNE 4024K-A**<br>› Output expansion unit<br>› 2x2 enabling current paths<br>› 2x1 signalling outputs<br>› DC 24 V<br>› Screw-terminals pluggable | |
| R118839400 | **safeRELAY SNE 4024K-C**<br>› Output expansion unit<br>› 2x2 enabling current paths<br>› 2x1 signalling outputs<br>› DC 24 V<br>› Cage clamp-terminals pluggable | |
| **Compact modules** | | |
| R119011100 | **samosPRO SP-COP1-A**<br>› samosPRO-COP1-COMPACT-module safety control<br>› With USB-interface<br>› 20 safe inputs/4 safe outputs<br>› Screw terminals pluggable | |
| R119011200 | **samosPRO SP-COP1-A**<br>› samosPRO-COP1-COMPACT-module safety control<br>› With USB-interface<br>› 20 safe inputs/4 safe outputs<br>› Cage clamp terminals pluggable | |
| R119011300 | **samosPRO SP-COP1-P-A**<br>› samosPRO-COP1-COMPACT-module safety control, PLUS version<br>› Incl. press function and standstill monitoring<br>› With USB-interface<br>› 20 safe inputs/4 safe outputs<br>› Screw terminals pluggable | |

# Safety

| Order no. | Name/Description | |
|---|---|---|
| R119011400 | **samosPRO SP-COP1-P-C**<br>▸ samosPRO-COP1-COMPACT-module safety control, PLUS version<br>▸ Incl. press function and standstill monitoring<br>▸ With USB-interface<br>▸ 20 safe inputs/4 safe outputs<br>▸ Cage clamp terminals pluggable | |
| R119012100 | **samosPRO SP-COP2-EN-A**<br>▸ samosPRO-COP1-COMPACT-module safety control<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ 16 safe inputs/4 safe outputs/4 configurable safe I/O<br>▸ Screw terminals pluggable | |
| R119012200 | **samosPRO SP-COP2-EN-C**<br>▸ samosPRO-COP1-COMPACT-module safety control<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ 16 safe inputs/4 safe outputs/4 configurable safe I/O<br>▸ Cage clamp terminals pluggable | |
| R119012300 | **samosPRO SP-COP2-EN-P-A**<br>▸ samosPRO-COP1-COMPACT-module safety control, PLUS version<br>▸ Incl. press function and standstill monitoring<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ 16 safe inputs/4 safe outputs/4 configurable safe I/O<br>▸ Screw terminals pluggable | |
| R119012400 | **samosPRO SP-COP2-EN-P-C**<br>▸ samosPRO-COP2-COMPACT-module safety control, PLUS version<br>▸ Incl. press function and standstill monitoring<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ 16 safe inputs/4 safe outputs/4 configurable safe I/O<br>▸ Cage clamp terminals pluggable | |
| R119013100 | **samosPRO SP-COP2-ENI-A**<br>▸ samosPRO-COP2-COMPACT-module safety control<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ Industrial-Ethernet-protocols: PROFINET, MODBUS-TCP, ETHERNET IP<br>▸ 16 safe inputs / 4 safe outputs / 4 configurable safe I/O<br>▸ Screw terminals pluggable | |
| R119013200 | **samosPRO SP-COP2-ENI-C**<br>▸ samosPRO-COP2-COMPACT-module safety control<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ Industrial-Ethernet-protocols: PROFINET, MODBUS-TCP, ETHERNET IP<br>▸ 16 safe inputs / 4 safe outputs / 4 configurable safe I/O<br>▸ Cage clamp terminals pluggable | |
| R119013300 | **samosPRO SP-COP2-ENI-P-A**<br>▸ samosPRO-COP2-COMPACT-module safety control, PLUS version<br>▸ Incl. press function and standstill monitoring<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ Industrial-Ethernet-protocols: PROFINET, MODBUS-TCP, ETHERNET IP<br>▸ 16 safe inputs / 4 safe outputs / 4 configurable safe I/O<br>▸ Cage clamp terminals pluggable | |
| R119013400 | **samosPRO SP-COP2-ENI-P-C**<br>▸ samosPRO-COP2-COMPACT-module safety control, PLUS version<br>▸ Incl. press function and standstill monitoring<br>▸ With USB-interface<br>▸ With Ethernet-interface<br>▸ Industrial-Ethernet-protocols: PROFINET, MODBUS-TCP, ETHERNET IP<br>▸ 16 safe inputs / 4 safe outputs / 4 configurable safe I/O<br>▸ Screw terminals pluggable | |

# Safety

| Order no. | Name/Description | |
|---|---|---|
| Safety Accessoires | | |
| R119000900 | **samosPRO SP-CABLE1**<br>▸ samosPRO, cable, 2 m, M8-DSUB | |
| R119002500 | **samosPRO SP-CONVERTER**<br>▸ USB-RS232-adapter | |
| R119002600 | **samosPRO SP-FILTER1**<br>▸ samosPRO-Output-Filter, 680nF | |
| R119002700 | **samosPRO SP-FILTER2**<br>▸ samosPRO-Output-Filter, 2,2uF | |
| R119010000 | **samosPRO SP-COP-CARD1**<br>▸ samosPRO memory card for SP-COP | |
| R119010100 | **samosPRO SP-CABLE-USB1**<br>▸ samosPRO USB cable for SP-COP, 1,8 m | |
| R119010200 | **samosPRO SP-CABLE-ETH1**<br>▸ samosPRO Ethernet cable for SP-COP, 2 m | |
| R119011000 | **samosPRO SP-COP-STARTERSET**<br>▸ samosPRO starter set<br>▸ SP-COP2-EN-A<br>▸ SP-COP CARD1<br>▸ SP-PLAN 6 programming tool<br>▸ SP-CABLE-USB1<br>▸ SP-CABLE-ETH1 | |

| Software
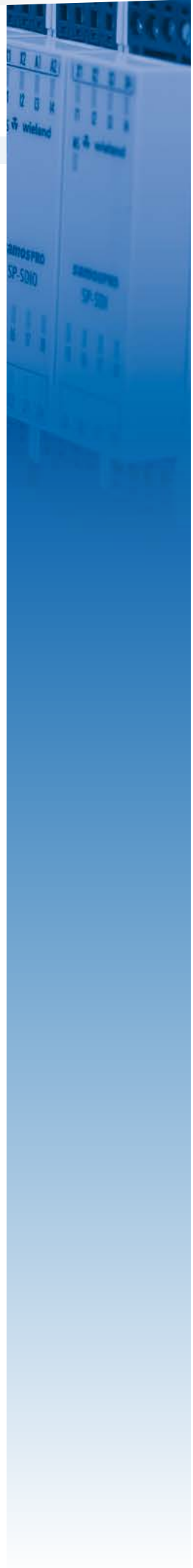
# Software

| Order no. | Name/Description | |
|---|---|---|
| **Communication software** | | |
| SW110M1MA | **VIPA OPC Server \| MPI \| License**<br>▸ Sealed Envelope with single user license for VIPA OPC Server \| Software Download<br>▸ Serial MPI communication (PC: COM Port <-> PLC: MPI Port)<br>▸ Windows XP (SP3), Windows Vista, Windows 7 (32 Bit/64 Bit)<br>▸ Windows Server 2003 (SP2), Windows Server 2008, Windows Server 2008 R2 | |
| SW110F1MA | **VIPA OPC Server \| Fetch/Write \| License**<br>▸ Sealed Envelope with single user license for VIPA OPC Server \| Software Download<br>▸ CP-communication with configurable connection (PC: Ethernet Port <-> PLC: Ethernet Port)<br>▸ Required: CP343, PLC315SN/NET, PLC317SN/NET<br>▸ Windows XP (SP3), Windows Vista, Windows 7 (32 Bit/64 Bit)<br>▸ Windows Server 2003 (SP2), Windows Server 2008, Windows Server 2008 R2 | |
| SW110T1MA | **VIPA OPC Server \| S7 TCP/IP \| License**<br>▸ Sealed Envelope with single user license for VIPA OPC Server \| Software Download<br>▸ PG/OP / TCP/IP-communication (PC: Ethernet Port <-> PLC Ethernet Port)<br>▸ All VIPA PLCs with integrated PG/OP interface<br>▸ Windows XP (SP3), Windows Vista, Windows 7 (32 Bit/64 Bit)<br>▸ Windows Server 2003 (SP2), Windows Server 2008, Windows Server 2008 R2 | |
| SW11131MA | **VIPA SPEED7 Com Driver \| 32 Bit \| Developer License**<br>▸ Sealed Envelope with single user licence for SPEED7 Com Drivers \| Software Download<br>▸ S7-communication driver (Windows 32-Bit-DLL) for all major high-level languages (C++. C#, VB, VB.NET, DELPHI)<br>▸ For VIPA SPEED7 PLCs and SIEMENS S7 PLCs<br>▸ Windows XP (SP3), Windows Vista, Windows 7 (32 Bit/64 Bit), Windows 8 (32bit/64bit) | |
| SW11161MA | **VIPA SPEED7 Com Driver \| 64 Bit \| Developer License**<br>▸ Sealed envelope with single user licence for SPEED7 Com Drivers \| Software Download<br>▸ S7-communication driver expansion* for 64 Bit applications (Windows 64Bit-DLL) for high-level language C++<br>▸ For VIPA SPEED7 PLC and SIEMENS S7 PLCs<br>▸ Windows 7 (64 Bit), Windows 8 (64 Bit)<br>▸ * SPEED7 Com Driver 32 Bit is required (SW11131MA or SW11135MA)! | |
| SW111C1MA | **VIPA SPEED7 Com Driver \| CE \| Developer License**<br>▸ Sealed envelope with single user licence for SPEED7 Com Drivers \| Software Licence<br>▸ S7-communication driver for Windows Embedded CE 6.0 (ARM) und C++<br>▸ For VIPA SPEED7 PLCs and SIEMENS S7 PLCs | |
| **Programming software** | | |
| SW010L1MA | **SPEED7 Studio LITE \| Single \| License**<br>▸ Sealed envelope with single user license for SPEED7 Studio LITE (activatable for 3 times) \| Software Download<br>▸ Configuration of VIPA MICRO and SLIO CPUs<br>▸ Project engineering of PROFIBUS / PROFINET / EtherCAT devices<br>▸ Visualization with the integrated SVG editor (Web visualization) | |
| SW010B1MA | **SPEED7 Studio BASIC \| Single \| License**<br>▸ Sealed envelope with single user license for SPEED7 Studio BASIC ( activatable for 3 times) \| Software Download<br>▸ Configuration of the VIPA MICRO und SLIO CPUs, VIPA Touch Panels and Panel-PCs<br>▸ Project engineering and diagnosis of the PROFIBUS / PROFINET / EtherCAT devices<br>▸ Visualization with the integrated SVG editor (Web visualization)<br>▸ Connection and licensing of the SCADA System Movicon 11 | |
| SW010P1MA | **SPEED7 Studio PRO \| Single \| License**<br>▸ Sealed envelope with single user license for SPEED7 Studio PRO (activatable for 3 times) \| Software Download<br>▸ Configuration of the VIPA MICRO and SLIO CPUs CPUs, VIPA Touch Panels and Panel-PCs<br>▸ Project engineering and diagnosis of the PROFIBUS / PROFINET / EtherCAT devices<br>▸ Visualization with the integrated SVG editor (Web visualization)<br>▸ Connection and licensing of the SCADA System Movicon 11<br>▸ Motion control functions for up to 20 axes<br>▸ Logic analyzer for detailed diagnosis | |
| SW310B1MA | **SPEED7 EtherCAT Manager \| Licence**<br>▸ SPEED7 EtherCAT Manager for configuration of VIPA EtherCAT CPUs<br>▸ Project engineering and diagnosis of EtherCAT networks<br>▸ Automatically read of EtherCAT network topologies | |

# Software

| Order no. | Name/Description | |
|-----------|------------------|---|
| Parameterization software | | |
| SW31OB1MA | **VIPA OP-Manager \| License**<br>▸ Parametrization tool for OP 03<br>▸ *NOT COMPATIBLE WITH WINDOWS 10 | |
| SW31WB1MA | **VIPA WinCoCT \| License**<br>▸ Parametrization tool for VIPA CANopen CPUs and CPs<br>▸ *NOT COMPATIBLE WITH WINDOWS 10 | |
| SW614B1MA | **Movicon 11 Yaskawa Edition - Standalone License**<br>▸ Standalone license for Movicon 11 Yaskawa Edition (Editor)<br>▸ * Does not require SPEED7 Studio | |

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| Accessoires

# Accessoires

| Order no. | Name/Description | |
|---|---|---|
| **S5 components** | | |
| 306-1LE00 | **IM 306 DP slave - 115U ZG/EG IM**<br>▸ Converting Siemens S5 PLCs to S7<br>▸ Exclusively suited for AG-115U central controller and expansion units<br>▸ Integrated DC 24 V power supply<br>▸ Adapter casing for S5-115U/F required, please order separately: 6ES5491-0LB11 | |
| 306-1UE00 | **IM 306 DP slave - 135U/155U ZG/EG IM**<br>▸ Converting Siemens S5 PLCs to S7<br>▸ Exclusively suited for AG-135U/155U central controller and expansion units<br>▸ Integrated DC 24 V power supply | |
| 306-1UZ00 | **IM 306 DP slave - 135U/155U ZG CPU**<br>▸ Converting Siemens S5 systems to S7<br>▸ Exclusively suited for AG-135U/155U central controller | |
| **DP-Repeater** | | |
| 920-1BB10 | **VIPA PROFIBUS-Repeater B1**<br>▸ 1 segment and 31 devices per channel<br>▸ 9,6 Kbps .. 12 Mbps (automatic recognition)<br>▸ 1200 m segment length (depending on the baud rate)<br>▸ Transparent for all PROFIBUS DP protocols<br>▸ No PROFIBUS address required | |
| 920-1BD10 | **VIPA PROFIBUS-Repeater D1 IP66**<br>▸ 1 segment and 31 devices per channel<br>▸ Screw terminal and DB9 plug connector<br>▸ Integrated terminators (disconnectable)<br>▸ Redundant power supply | |
| 920-1CA50 | **VIPA MultiRepeater A5**<br>▸ 5 segments and 31 devices per channel<br>▸ 9,6 Kbps .. 12 Mbps (automatic recognition)<br>▸ 1200 m segment length (depending on baud rate)<br>▸ Integrated terminators (disconnectable)<br>▸ IP65 | |
| 920-1CB20 | **VIPA PROFIBUS-MultiRepeater B2-R**<br>▸ 2 segments and 31 devices per channel<br>▸ 9,6 Kbps .. 12 Mbps (automatic recognition)<br>▸ 1200 m segment length (depending on baud rate)<br>▸ Integrated terminators (disconnectable)<br>▸ Telegram check (integrity check)<br>▸ Alarm contact and redundant power supply<br>▸ Optional bus redundancy<br>▸ Robust mode | |
| 920-1CB50 | **VIPA PROFIBUS-MultiRepeater B5-R**<br>▸ 5 segments and 31 devices per channel<br>▸ 9,6 Kbps .. 12 Mbps (automatic recognition)<br>▸ 1200 m segment length (depending on baud rate)<br>▸ Integrated terminators (dis-connectable)<br>▸ Alarm contact and redundant power supply<br>▸ Optional bus redundancy | |
| 920-1DB50 | **VIPA PROFIBUS-MultiRepeater B5-RD**<br>▸ 5 segments and 31 devices per channel<br>▸ 9,6 Kbps .. 12 Mbps (automatic recognition)<br>▸ 1200 m segment length (depending on the baud rate)<br>▸ Integrated terminators (disconnectable)<br>▸ Alarm contact and redundant power supply<br>▸ Optional bus redundancy<br>▸ DP slave with bus diagnostic | |
| 921-1EB50 | **VIPA PROFIBUS-MultiSwitch B5-R**<br>▸ 5 segments and 31 devices per channel<br>▸ Adjustable baud rate per channel (changes at the speed in the ongoing operation)<br>▸ Screw and DB9 terminal<br>▸ Grounding option configurable<br>▸ Integrated terminators<br>▸ Redundant power supply | |
| 924-1BB10 | **VIPA PROFIBUS-Term T1**<br>▸ 9,6 Kbps up to 12 Mbps<br>▸ Removable screw terminals and 1 DB9 terminal<br>▸ Power supply specifications<br>▸ Redundancy: current 1 OR 2<br>▸ Diagnostic LEDs | |

# Accessoires

| Order no. | Name/Description | |
|---|---|---|
| **Ethernet-Switches** | | |
| 910-1EN50 | **VIPA unmanaged Industrial-Switch EN5-R**<br>▸ 5x RJ45 10/100BaseTX full-/half-duplex<br>▸ Supports IEEE 802.3 and IEEE 802.3u/x and automatic MDI/MDI-X recognition<br>▸ Redundant power supply for DC 12- 45 V<br>▸ IP30 aluminium case for DIN rail mounting (wall mounting kit optional) | |
| 910-1EN80 | **VIPA unmanaged Industrial-Switch EN8-R**<br>▸ 8x RJ45 10/100BaseTX full-/half-duplex<br>▸ Supports IEEE 802.3 and IEEE 802.3u/x and automatic MDI/MDI-X recognition<br>▸ Redundant power supply for DC 12/24/48 V, AC 18 up to 30 V<br>▸ IP30 aluminium case for DIN rail mounting (wall mounting kit optional) | |
| 911-2PN50 | **VIPA managed Industrial-Switch PN5-RD**<br>▸ 5x RJ45 10/100BaseTX full-/half duplex, automatic MDI/MDI-X recognition<br>▸ PROFINET v2 Conformance Class B, PROFINET diagnosis via GSD integration<br>▸ Assurance of service quality, based on IEEE 802.1p and TOS/DiffServ, improves the deterministic operation<br>▸ Management functions such as IGMP Snooping, IEEE 802.1Q VLAN, QoS, Port Mirroring, SNMP, broad band management, and warning message by E-Mail or relay output<br>▸ DHCP option 82 for IP address allocation with different allocation rules<br>▸ Short boot times and recovery technologies Turbo Ring™ and Turbo Chain™<br>▸ Redundant power supply for DC 24 V<br>▸ IP30 aluminium case for DIN rail mounting (wall mounting kit optional) | |
| 911-2PN80 | **VIPA managed Industrial-Switch PN8-RD**<br>▸ 8x RJ45 10/100BaseTX full-/ half duplex, automatic MDI/MDI-X recognition<br>▸ PROFINET v2 Conformance Class B, PROFINET diagnosis via GSD integration<br>▸ Assurance of service quality, based on IEEE 802.1p and TOS/DiffServ, improves the deterministic operation<br>▸ Management function such as IGMP Snooping, IEEE 802.1Q VLAN, QoS, Port Mirroring, SNMP, broad band management, and warning message by E-Mail or relay output<br>▸ DHCP option 82 for IP address allocation with different allocation rules<br>▸ Short boot times and recovery technologies Turbo Ring™ and Turbo Chain™<br>▸ Redundant power supply for DC 24 V<br>▸ IP30 aluminium case for DIN rail mounting (wall mounting kit optional) | |
| **FIELDBUS accessories** | | |
| 972-0DP01 | **EasyConn 90° - PROFIBUS plug**<br>▸ Clock rate up to 12 Mbit/s<br>▸ Metal case<br>▸ PG jack<br>▸ Switchable terminating resistor<br>▸ 90° outgoing cable<br>▸ Packaging unit: 1 piece | |
| 972-0DP10 | **EasyConn 90° - PROFIBUS plug**<br>▸ Clock rate up to 12 Mbit/s<br>▸ Metal case<br>▸ PG jack<br>▸ Switchable terminating resistor<br>▸ 90° outgoing cable<br>▸ Bus diagnosis via LEDs<br>▸ Packaging unit: 1 piece | |
| 972-0DP20 | **EasyConn 45° - PROFIBUS plug**<br>▸ Clock rate up to 12 Mbit/s<br>▸ Metal case<br>▸ PG jack<br>▸ Switchable terminating resistor<br>▸ 45° outgoing cable<br>▸ Bus diagnosis via LEDs<br>▸ Packaging unit: 1 piece | |
| 972-0DP30 | **EasyConn 0° - PROFIBUS plug**<br>▸ Clock rate up to 12 Mbit/s<br>▸ Metal case<br>▸ Switchable terminating resistor<br>▸ 0° outgoing cable<br>▸ Bus diagnosis via LEDs<br>▸ Packaging unit: 1 piece | |
| 972-0PN00 | **PN/EC-Stecker 180° Field Plug**<br>▸ PROFINET & EtherCAT plug<br>▸ Plug: RJ45<br>▸ Connection: 8 wire<br>▸ Connection technique: IDC (insulation displacement connection) terminals<br>▸ Connection area: AWG24/1 - 22/1, AWG26/7 - 22/7<br>▸ Cable diameter: 5,5 - 8,5 mm<br>▸ Allocation: T568A, T568B, Industrial (4/8 wire)<br>▸ Packaging unit: 1 piece | |

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| Order no. | Name/Description | |
|---|---|---|
| 972-8PN00 | **PN/EC-Stecker 180° Field Plug**<br>‣ PROFINET & EtherCAT plug<br>‣ Plug: RJ45<br>‣ Connection: 8 wire<br>‣ Connection technique: IDC (insulation displacement connection) terminals<br>‣ Connection area: AWG24/1 - 22/1, AWG26/7 - 22/7<br>‣ Cable diameter: 5,5 - 8,5 mm<br>‣ Packaging unit: 10 pieces | |
| **Miscellaneous** | | |
| 905-6AA00 | **EasyStrip**<br>‣ Stripping tool for PROFIBUS cables | |
| **Cables** | | |
| 830-0LC00 | **FCC 2xAWG 22 - Standard PROFIBUS cable**<br>‣ 100 m cable reel | |
| 830-0LD00 | **FCC 2xAWG 22 - Standard PROFIBUS cable**<br>‣ 200 m cable reel | |
| 830-0LE00 | **FCC 2xAWG 22 - Standard PROFIBUS cable**<br>‣ 500 m cable reel | |
| 830-0LF00 | **FCC 2xAWG 22 - Standard PROFIBUS cable**<br>‣ 1000 m cable reel | |
| 830-0PC00 | **PROFINET cable**<br>‣ 100 m cable reel | |
| 830-0PD00 | **PROFINET cable**<br>‣ 200 m cable reel | |
| 830-0PE00 | **PROFINET cable**<br>‣ 500 m cable reel | |
| 830-0PF00 | **PROFINET cable**<br>‣ 1000 m cable reel | |
| 950-0KB00 | **VIPA "Green Cable"**<br>‣ only for CPU 11x, 21x, 31x, 51x | |
| 950-0KB01 | **PC/AG programming cable**<br>‣ RS232-MPI/PROFIBUS adapter<br>‣ Length: 3 m | |
| 950-0KB10 | **PC/AG programming cable**<br>‣ RS232-MPI/PPI adapter<br>‣ LCD<br>‣ Length: 3 m | |
| 950-0KB30 | **PC/AG programming cable**<br>‣ USB-MPI/PPI adapter<br>‣ LCD<br>‣ Length: 3 m | |
| 950-0KB31 | **PC/AG programming cable**<br>‣ USB-MPI/PROFIBUS adapter<br>‣ Length: 3 m | |
| 950-0KB40 | **PC/AG programming cable**<br>‣ TCP/IP-MPI/PPI/PROFIBUS adapter<br>‣ LCD<br>‣ Length: 3 m | |
| 950-0KB50 | **PC/AG programming cable**<br>‣ MPI cable with PU-/Diagnostic port<br>‣ Length: 2,5 m | |
| 900-0AB51 | **TM antenna GSM/UMTS**<br>‣ Mobile antenna incl. 5 m cable<br>‣ SMA connector<br>‣ Resistance: 50 Ohm<br>‣ Power: 10 W<br>‣ Gain: 2.14 dBi<br>‣ 900/1800 MHz | |

MICRO

SLIO

200V

300S+

HMI
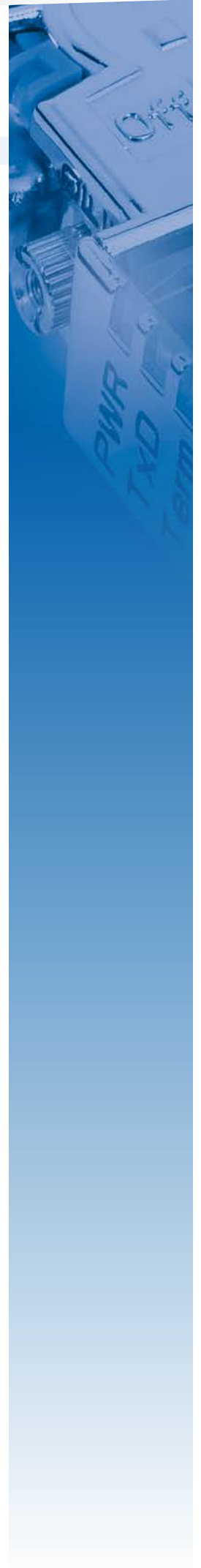
Teleservice

Safety

Software

Accessories

Appendix

| Appendix

# 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 € 250,- net.
Orders with a value less than € 250,- will be charged with a handling fee of € 75,- 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 YASKAWA Europe GmbH 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 01.03.2020 and replaces all
previous price lists.
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 as PDF on our webpage.
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

VIPA, SLIO, System 100V, System 200V, System 300V, System 300S, System
400V, System 500S and Commander Compact are registered trademarks of
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SPEED7 is a registered trademark of YASKAWA Europe GmbH.

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Portable Document Format (PDF) and Postscript are
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owned by their respective companies.

Any liability for misprints or errors is excluded.
Availability and technical specifications are subject to change
without notice.

# General terms and conditions

## 1. Scope

**(1)** The following General Terms and Conditions of Delivery and Payment (the „GTCs") shall apply to each order placed by the customer with us. They shall also apply to all future deliveries, performances or offers to customers even if not included again separately. If the creation and provision of computer programs is the object of a contract, our „General Licence Terms for the Provision and Use of Software" shall apply as far as they contain provisions that are contrary to these GTCs. Apart from that, these GTCs shall apply.

**(2)** Any conflicting terms and conditions of the customer are hereby rejected; such terms and conditions shall only be binding if we have expressly agreed to them in writing.

## 2. Offers and Orders

**(1)** Offers made by us are non-binding until we confirm an order in writing. Samples and specimens are outline details only that are not binding to us.

**(2)** We shall be entitled to accept a customer's offer to enter into a contract within four weeks upon our receipt of the offer, unless the customer's offer provides otherwise. The scope of the delivery shall be as defined in our confirmation of the offer.

**(3)** Our acceptance of the customer's offer to enter into a contract must be in writing to be effective, facsimile and e-mail being sufficient.

**(4)** We shall be entitled to make partial deliveries as far as this is reasonably acceptable for the customer. A partial delivery is, in particular, reasonably acceptable if

**a)** the partial delivery may be used by the customer within the scope of the contractually intended use;

**b)** the delivery of the remaining ordered goods is ensured, and

**c)** no additional expenses or costs are incurred by the customer due to the partial delivery, unless we declare that we are willing to compensate such costs.

**(5)** Sample deliveries are considered to have been accepted by the customer subject to these GTCs after the expiration of the agreed time period, unless otherwise agreed in writing or the sample deliveries have been returned to us by the customer during the sample period.

## 3. Prices

**(1)** Our prices do not include statutory Value Added Tax (VAT) and are understood net ex works, excluding packaging, insurance, assembly, postage and delivery costs. This is without prejudice to clause 11.

**(2)** If the time period between the acceptance and the delivery date exceeds four months and our manufacturing or production costs during such time period increase, we shall be entitled to claim such increased costs from the customer.

## 4. Terms of Payment

**(1)** The terms of payment shall be subject to the relevant arrangement between Yaskawa and the customer. The relevant point of time regarding the timeliness of a payment shall be the receipt of the payment by us.

**(2)** In case the customer fails to render payment in due time, or in case payments are deferred, the outstanding amounts shall bear interest at a rate of 5% p.a. as of the due date. In case of any default in payment by the customer, the customer shall pay default interest accruing at a rate of 8 percentage points above the base interest rate p.a. In addition, we reserve the right to claim higher damages or assert further claims.

**(3)** A set-off against our claims shall only be valid with such claims of the customer that are undisputed or have been recognised in a final and absolute court judgment. The same shall also apply to retention rights that the customer may exercise.

## 5. Delivery

**(1)** All our delivery are free carrier from Yaskawa's warehouse or production site (FCA, Incoterms 2010), unless otherwise agreed.

**(2)** Unless agreed otherwise, periods agreed for our deliveries and performances commence on the receipt of our acceptance by the customer.

**(3)** Delivery dates and delivery periods shall only be binding upon an express and written confirmation by us.

**(4)** Deadlines are considered to be met if the goods have been delivered to the customer prior to the expiry of the deadline in accordance with FCA (Incoterms 2010) or other agreed Incoterms.

**(5)** We shall not be liable for impossibility of delivery or for delays in delivery as a result of events considered to be force majeure or of other events that were at the time of the conclusion of the contract unforeseeable (e.g. any kind of operational breakdowns, transport delays, strikes, lawful lockouts, shortages of labour, raw materials or energy supplies, difficulties in obtaining any requisite official permits, governmental actions or any deliveries by supplies which are outstanding, incomplete or late), that we are not responsible for. In such cases we shall immediately inform the customer. If the force majeure event persists for more than six months, each party may rescind from the contract.

**(6)** If the delivery of goods is delayed by us, we will use reasonable efforts to deliver the goods at a later stage at once.

**(7)** If the customer delays or fails to pick up the goods, we will charge a storage fee of 5 % of the purchase price for the goods, or alternatively the actual storage costs incurred.

## 6. Bearing of Risk

**(1)** Risk shall pass to the customer as soon as the goods are ready for dispatch and we have notified the customer in writing or orally about our readiness for dispatch, at the latest however if the goods have left our warehouse for delivery to the customer.

**(2)** Transport insurance shall only be concluded at customer's request and expense.

## 7. Reservation of Title

**(1)** We shall retain full title of the goods delivered until full payment of all current or future claims arising from the business relationship with the customer (the „Reserved Goods").

**(2)** If the customer alters or processes the Reserved Goods, such work shall be deemed to be carried out on our behalf. Where the Reserved Goods are processed or incorporated with other products, we shall be the co-owner of the resulting products in the proportion of the value of the Reserved Goods to the value of the other products. This clause 7 shall apply to any such new product accordingly.

**(3)** The customer shall keep the Reserved Goods on our behalf in safe custody with the diligence of a prudent businessman.

**(4)** Subject to withdrawal, the customer may only use the Reserved Goods in the ordinary course of business and only resell the Reserved Goods subject to retention of title. Without our prior consent, the customer shall not be entitled to otherwise dispose of the Reserved Goods in a way that interferes with or otherwise endangers our rights in such goods, including, but not limited to, pledge or transfer as security.

**(5)** The customer shall immediately inform us in the event of any third party action against the Reserved Goods or against any receivables assigned to us as security and to provide us with all documentation necessary to initiate third-party counterclaim proceedings. The costs of any such third-party counterclaim proceedings or any action required to otherwise redress such third-party action and to replace the Reserved Good shall be borne by the customer, to the extent not reimbursed by a third party.

**(6)** The customer hereby assigns to us all claims arising from the resale of the Reserved Goods or from the processing of the Reserved Goods, as security for the customer's current and future obligations arising from the business relationship between us and the customer. In the event that the customer resells the Reserved Goods to a third party together with other goods, the customer hereby assigns to us its purchase price claim in an amount of the value of the Reserved Goods. We hereby accept such assignment. As long as the customer complies with its contractual obligations, the assignment of the foregoing claims shall be treated as an undisclosed assignment. Subject to withdrawal, the customer is hereby authorised to collect such claims. In case of withdrawal, the customer shall, at our request, provide us with all information relating to the assigned claims and the debtors that are required to collect such claims by ourselves and shall inform the debtors of the assignment of such claims.

**(7)** We will not exercise our rights of withdrawal under clause 7(4) and clause 7(6) unless the customer is in default in making payments or unless an application to open a settlement or insolvency proceedings has been filed or the customer has suspended its payments.

**(8)** If and to the extent a reservation of title is not effective in the jurisdiction in which the contractual goods are located, it shall be deemed agreed that the customer provides us with a security that has the same or similar effect to a reservation of title. If the cooperation of the customer is required in order to create such security, the customer will, at its own expense, take all necessary actions without undue delay.

**(9)** The customer shall insure the Reserved Goods against theft, breakage, fire, water and other damage at its own expense.

## 8. Warranty

**(1)** To the extent that the products delivered by us and the performances rendered by us are defective, we shall, at our option, remedy such defects or arrange for a replacement delivery in accordance with the statutory regulations and the provisions of this clause 8. They customer may only rescind from the contract after two attempts to rectify the defect have failed. Claims for damages exist only to the extent as set out in clause 9. Any replaced products and parts not already owned by us will become our property.

**(2)** Any claims in relation to defects will become time-barred 12 months after passing of risk or completion of the service and/or repair works.

**(3)** The customer is required to inspect each delivered product upon receipt without undue delay. Warranty claims shall be excluded if any objections as to the quantity of goods and as to defects identifiable by careful inspection are not notified to us in writing within eight business days upon delivery; the same shall apply to objections regarding hidden defects which are not notified to us within eight business days after its identification.

**(4)** If a notice of defects of the customer is unjustified, the customer shall reimburse all expenses that we have incurred due to the unjustified notice of defect, provided that it was its fault.

**(5)** A defective assembly or assembly service conducted by us shall not be deemed as a material defect under the rules for purchase agreements, but only as a defect under the rules for works agreements.

### 9. Liability for Damages

**(1)** Our liability – irrespective of the legal basis – is limited to damages that we or our legal representatives or vicarious agents have caused by wilful misconduct or gross negligence or, in case of a breach of essential contractual duties, by simple negligence.

**(2)** Essential contractual obligations include, but are not limited to, the obligation to render performance in a timely manner and without defects, as well as obligations to give advice, to protect and to exercise due care, which shall have the purpose to enable the customer to use the delivered goods according to the contract or to protect the personnel of the customer or third parties from danger to life and limb or customer's property from substantial damage.

**(3)** In cases of simple negligence, our liability is limited to damages which are typical in comparable cases and which were foreseeable at the time the contract was concluded or, at the latest, at the time the breach of duty was committed, excluding any indirect damages.

**(4)** Claims for damages pursuant to the German Product Liability Act, due to guaranteed quality characteristics, or due to damage to life, body or health, shall not be affected by the above provisions.

### 10. Refusal of performance

**(1)** If a contract is not performed due to customer's fault and in breach of contract, the customer shall compensate damages in the amount of all costs incurred by us, but in any event no less than 5% of the net value of the ordered goods, unless the customer can demonstrate that we incurred fewer damages. The same shall apply if we withdraw from the contract for this reason.

### 11. Special Conditions for Delivery and Assembly

**(1)** Costs for assembly, hourly rates, daily rates, travel expenses, other costs etc. can be taken from the current relevant price sheet for the D&M Division or the Robotics Division, respectively.

**(2)** Prior to the start of the assembly, all structural works must be completed to a degree that the assembly can begin immediately after delivery. The foundation must be completely dry and hardened and the rooms in which the assembly should take place must be sufficiently protected against weather, well-lit and sufficiently heated.

**(3)** The customer must procure at its own costs

**a)** a sufficient number of auxiliary workers and skilled workers re-quired for the assembly;

**b)** the devices and materials required for the assembly and op-eration; and

**c)** the unloading of the railway wagons and the transportation of goods from the railway wagons, trucks or vessels to the place of assembly, free of charge. Delays of the assembly and operation that we are not responsible for shall be reimbursed by the customer in accordance with this clause 11. The risk of transportation for brought delivery parts shall be borne by the customer.

### 12. Special Conditions for Works

The following conditions shall apply if the contract is a contract for work:

**(1)** Without undue delay after notification of the completion of the work, the customer shall conduct a test-run of the subject matter of the contract, test its compliance with the contractually agreed functionality and performance and – provided no defects occur, which have to be notified without undue delay – accept the work in writing towards us at the latest within two weeks. If the customer does not notify us of any defects within such two-weeks period, the work is deemed to be accepted, with the effect that the risk as to the performance for the work shall pass to the customer.

**(2)** At customer's request, we shall instruct and train the customer's employees on the handling of the work at the customer's location. In such case, the customer shall bear any costs for travelling, accommodation and allowance of our training personnel and provide – if necessary – training rooms and protective clothing in sufficient quantities, free of charge.

**(3)** In order to deliver any work on time, the customer must timely and duly comply with its contractual duties to cooperate. If the customer does not or does not duly comply with its duties, the delivery periods shall be extended by the period of delay.

**(4)** Detailed provisions in relation to the customer's duty to cooperate are set out in the respective underlying contract.

**(5)** Rights of the customer in case of defects after acceptance

**a)** If the work is defective, the customer may claim supplementary performance (i.e. remediation of the defect or performance of new work). The choice between remediation of the defect or performance of new work is in our option.

**b)** After the fruitless expiration of a time period set for the supplementary performance, the customer may remedy any defect himself and claim for the compensation of any requisite expenses, unless we were entitled to refuse a supplementary performance.

**c)** In case the remedy of defects fails, we unjustifiably refuse a sup-plementary performance or we do not provide a supplementary performance within a reasonable time period set by the customer, the customer may abate the remuneration or rescind from the contract and claim expenses without avail or claim damages in lieu of performance.

**d)** The customer does not have any claims with regard to defects caused by or resulting from improper operation or maintenance of the work or modifications to the work by the customer or any third party.

**e)** The customer's claims for defects of work become time-barred one year after acceptance of the work.

### 13. Confidentiality

The customer shall treat all trade and business secrets which are dis-closed to him during the performance of the contract as confidential and shall not disclose such trade and business secrets to third parties. This duty of confidentiality shall remain in force for a period of five years after the expiration of the contract. Yaskawa may claim compensation of any incurred damages in case of an unpermitted disclosure. In addition, the customer shall pay at least EUR 50,000 for each case of noncompliance with its confidentiality obligation.

### 14. Rights to Work Results / Copyright

The customer shall have a simple, non-exclusive and non-transferable right to use the work results made in the scope of a contract (such as cost estimates, drawings, organisational analyses), to the extent that these are required for the utilisation of the work result in the course of the customer's business activities.

### 15. Data Protection

Yaskawa Europe GmbH takes the protection of its customers' data very serious. Therefore, we comply with all applicable data protection rules. Yaskawa will not make your data available to any undertaking outside our group, that is not involved in the delivery or performance of your order. Your data that is required for the performance of your order will be stored, processed and used in the Yaskawa group as reasonable necessary. Your data will not be transferred to non-affiliated undertakings. We store and process your address and your order data to improve our offering and for commercial com-munications. You may object against the storage and processing of your data for commercial communication at any time by mail to Yaskawa Europe GmbH, Ohmstr. 4, 91074 Herzogenaurach, Germany or via e-mail to info@yaskawa.eu.com. Following receipt of your objection, we will not use your data for any purposes other than the per-formance of your order.

### 16. Final Provisions

**(1)** The customer shall be responsible for the compliance with any applicable law, writs, rules, regulations and any regulatory actions and policies and shall procure any permissions, licenses and authorisations and the compliance with any other statutory provisions that are necessary to conduct its business in compliance with the applicable law.

**(2)** If a delivery of the goods to certain countries or territories or to one or more consignees is not permissible or restricted due to statutory provi-sions or trade regulations and trade sanction applicable to our goods or Yaskawa or Yaskawa's production sites or should such restrictions enter into force after the acceptance of an offer or during the delivery, Yaskawa reserves the right to rescind from the contract and to charge any incurred costs to the customer.

**(3)** The contractual relationship is governed by the laws of the Federal Republic of Germany, as between persons domiciled in Germany. This includes, without limitation, the legal concepts and terms contained in these GTCs, the English translations of which may not be identical with the original German terms in their respective legal understanding. The United Nations Convention on Contracts for the International Sale of Goods (CISG) does not apply.
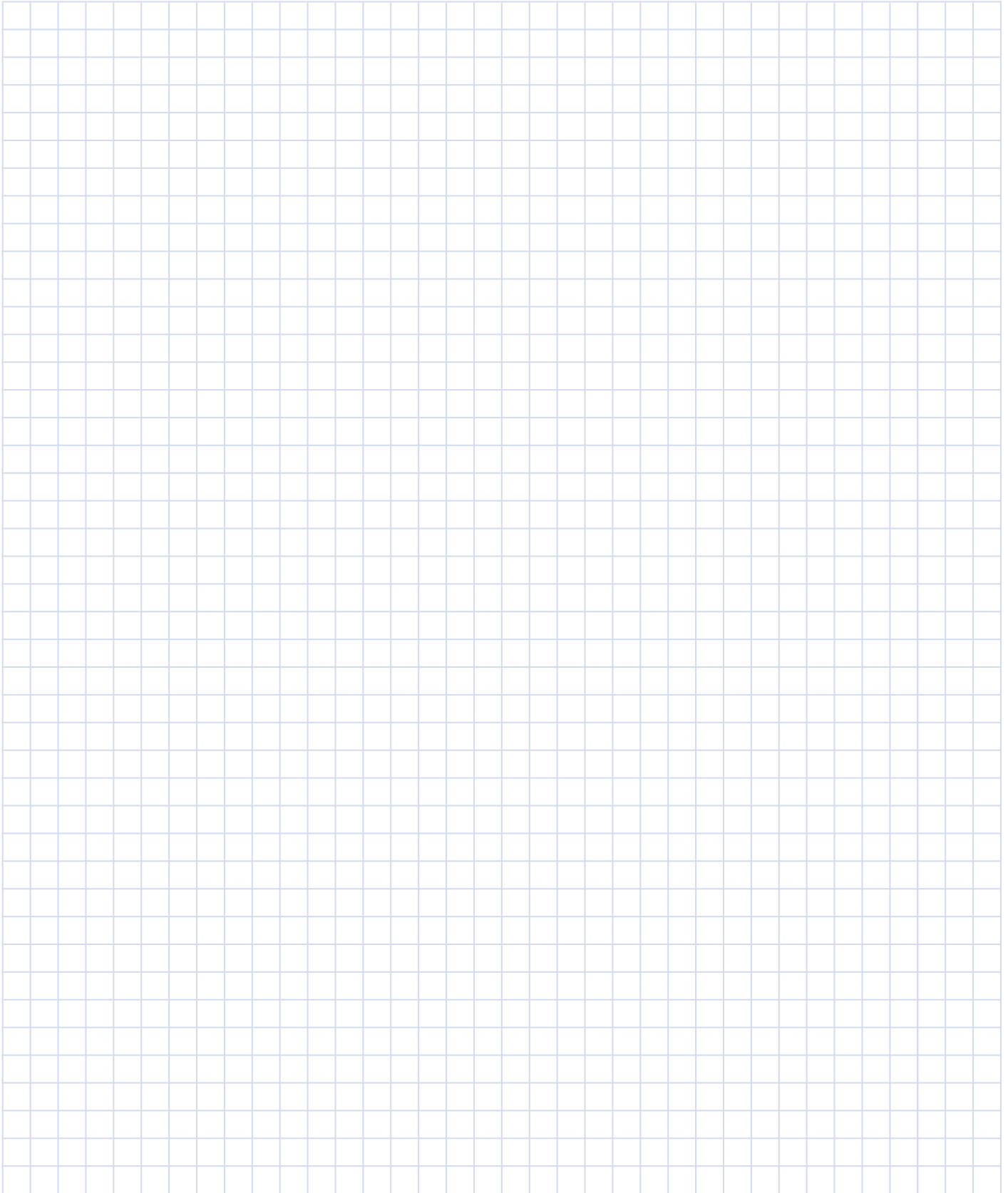
**(4)** The place of performance is Eschborn/Taunus in case of delivery by the Drives & Motion Division, respectively Allershausen in case of delivery by the Robotics Division.

**(5)** The exclusive place of jurisdiction is Frankfurt am Main. However, we are entitled to sue the customer in any other legal jurisdiction.

**(6)** There are no oral side agreements to this contract. Any amendments and supplements to these GTCs must be made in writing to be effective. This shall also apply to any amendment of this written form requirement.

**(7)** Should a provision of these GTCs be invalid, this does not affect the validity of the remaining provisions. An invalid provision of these GTCs shall be deemed to be replaced by such valid provision that comes closest to the intended commercial purpose of the invalid provision.

# Notizen

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...at Home in About 60 Countries

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