INSEVIS

Catalog 2017

- S7-Panel-PLC
- S7-Compact-PLC
- S7-Panel-HMI
- Periphery
- Software
- Energy management

General Catalog 2017

Content

About INSEVIS

for independent minds

The INSEVIS product families are the result of long termed and exhaustive developments and tests. They allow a very smart, easy and economic implementation of an automation solution for small and medium applications in the S7-programming language and with the well known S7-programming tools from Siemens. Just the almost simple way to realize complex solutions and absolute high class quality, made in Germany.

Additional technical benefits and a complete custom branding from the 1st piece with logo and article numbers of our customers help them to increase their independence and to protect themselves against illegal copies and post calculations. A real effective know-how protection helps to generate and hold sustainable business and to get an safe and long termed return on investment with the INSEVIS projects.

As supplement to existing system components INSEVIS develops and produces for its customers small and medium series of customized parts, who will increase their technological advance and increase their leading market position. And all that is still programmable by S7 with the well known S7-programming environment and integrable in existing solutions – an strategic and very economic supplement to existing solutions or for development of new markets.

Uncompromising quality and maximal customer´s value in each detail are the highest business objectives at INSEVIS what dominates all thinking and acting of the whole company.

About INSEVIS

S7-system components for industrial automation technology

The range of INSEVIS- product families enables an integrated solution and easy to handle for small and medium automation applications with latest technology, very high quality level and with additional interfaces like CANopen® and Modbus, to be configured easily.

The easy integration of INSEVIS products into the S7-world meanwhile is famous and exemplary. Complex communication settings will be assigned easily and intuitively, so that these properties expand the common S7-world by far. A large and multilingual visualization in a modern design is done by a few clicks and the work flow is known by every WinCCflexible® user. It can be simulated on the visualization PC and is accessible remote.

The S7-CPUs -V and -P are the base of the successfully INSEVIS product families with Profibus DP Master/Slave. With the new S7-CPU-T there are available larger and faster Panel-PLCs and Panel-HMI with Profinet IO Controller.

Step®7 programmability

INSEVIS-S7-CPUs are programmable by STEP 7® - AWL, KOP, FUP, S7-SCL, S7-Graph from Siemens and in general command-compatible to Siemens-CPU S7-315-2PNDP. Some special INSEVIS blocks expand the functionality and allow outstanding solutions. The S7-programming will be done by good known tools Simatic®-Manager or by TIA-Portal® from Siemens always.

Independence

INSEVIS products does not base on Windows or Linux, they have an own firmware. Thereby the hard- and software can be exactly designed for a perfect co-ordination with this firmware and a low power consumption. Booting times of less than 4 seconds and completely no software licenses and a current drain of <100mA @ 24V are the result of these facts.

Get your software rid of licenses

INSEVIS stands for a clear and honest license policy, what gives the customer sustainable cost benefits. Because of the ownership of BIOS, firmware and PC-software for visualization, configuration and remote access INSEVIS can offer its products completely without licenses.

Made in Germany

Development, PCB-design and -production, test and mounting of all INSEVIS products - all this is made in Germany. So every product is a proof for the combination of German engineering and economy and is available with a certification of German origin.


Certificato Certyfikat Certificate Certificado Certificat

Zertifikat

TAW Cert

INSEVIS

Gesellschaft für industrielle Systemelektronik und Visualisierung mbH

DIN EN ISO 9001

TAW Cert GmbH • Fritz-Bauer-Str. 13 • 90518 Altdorf

INSEVIS operates a yearly certified quality management system ref. to DIN EN ISO 9001.

All suppliers of INSEVIS obligate to this quality management and contribute to the high quality level of INSEVIS products.

Already during planning these families one goal was indicated as most important: to design highest quality and ergonomics into all products.

These products were put into comprehensive validation tests before they were produced in selected and certified production lines.

INSEVIS Made in Germany

Data to INSEVIS-S7-CPUs

INSEVIS-CPUs are not single products, they are the “heart” to be placed in every PLC or HMI to supply their special properties there. When they are used in Panel-HMIs the PLC-functionality is disabled and the one and only communication channel is Ethernet RFC1006 (S7-communication).

Devices with CPU-V and CPU-P fit properly to small and medium sized applications in the low cost-areas of Panel-PLCs with high graded visualization (Typ V best for 3,5 to 5,7“ and Typ P better for 7 to 10,2“) and with lots of communication interfaces. Profibus is optional available.

CPU-V and CPU-P

Property	Technical data
OB, FC, FB, DB Local data	each 1.024 32kByte (2kByte per block)
Number of inputs and outputs Process image	in each case 2.048 Byte (16.384 Bit) addressable in each case 2.048 Byte (default set is 128 Byte)
Number of Merkerbytes Number of Taktmerker	2.048 (remanence adjustable, default set is 0..15) 8 (1 Merkerbyte)
Number of timer, counter Depth of nesting	in each case 256 (each remanence adjustable, default set is 0) up to 16 code blocks
Real-time clock elapsed hour counter	yes (accumulator-backed hardware clock) 1 (32Bit, resolution 1h)
Program language Program system	STEP 7® - AWL, KOP, FUP, S7-SCL, S7-Graph from Siemens SIMATIC® Manager from Siemens or products compatible to it
Operating system Program unit to reference	compatible to S7-300® from Siemens CPU 315-2DP/PN (6ES7 315-2EH14-0AB0 firmware V3.1 Siemens)
	Communication
Serial interfaces (protocols)	COM1: RS 232 (free ASCII) COM2: RS 485 (free ASCII, Modbus-RTU)
Ethernet (protocols)	Ethernet: 10/100 MBit with CP343 functionality (RFC1006, TCP, UDP, Modbus-TCP)
CAN (protocols)	CAN-telegrams (Layer 2), compatible to CANopen® master/ slave 10 kBaud ... 1 MBaud
optional interfaces (protocols)	Profibus DP V0 master/ slave 9,6kBaud ... 12 MBaud
	Periphery access
Decentral periphery	- INSEVIS- periphery (with automatic configuration via „ConfigStage“) - diverse external periphery families (Modbus RTU/TCP, CAN) - all CANopen® slaves according to DS401 - all Profibus DP-V0-slaves

Memory	CPU-V	CPU-P
Working memory, thereof akku-buffered	512kB (256 kByte remanent)	640kB (384 kByte remanent)
Load memory	2MB flash memory	2MB flash memory
Memory for visualization	4MB flash memory	24MB flash memory
external memory	Micro SD, up to 8 GB	Micro SD, up to 8 GB

Remark:
The S7-program data are kept in the flash memory (Flash) and the S7-process data are kept in the akku-buffered RAM (SRAM) and not on the Micro-SD-card. This is for archiving and backup only.

Most important properties at a glance

S7-Programming

Use existing Siemens-S7-programming tools;
either SIMATIC®-Manager or TIA-Portal®
in the programming languages KOP, FUP, AWL, SCL.
Or use existing FB´s like for PID in analog operations...

System boot time 4 seconds

No Windows-firmware means to boot up in less than 4 seconds and primarily: no run time licenses.
And also no run-time limitations for any power tags. Therewith today´s devices still may be able to update in more than 20 years...

Know-how-protection

Save your work from illegal copying,
save you know-how to sell it more than once.
Set really heavy protections by free ServiceStage
(Siemens-password functions are still available.)

Gateway-functionality

Ethernet with TCP, UDP, RFC1006 or Modbus TCP,
Profibus-DP V0 Master/Slave, CANopen® or Layer2,
free ASCII on RS232 and RS485 and Modbus RTU
INSEVIS-S7-PLC - a communication talent

Data to INSEVIS S7-CPUs

Devices with CPU-T have more memory, a higher speed and can drive larger panels with more visualization objects. They fit perfectly for medium and large sized automation solutions.

2 separated Ethernet ports for separated networks or together as an Ethernet switch are onboard. Profinet IO Controller is available as an option. Panel-PLC and Panel-HMIs with these CPUs contain an VNC-server. Panel-PLCs and Compact-PLCs contain a static web-server.

CPU-T

Property	Technical data
OB, FC, FB, DB Local data	Each 2.048 32kByte (2kByte per block)
Number of inputs and outputs Process image	in each case 4.096 Byte (32.796 Bit) addressable in each case 4.096 Byte (default set is 128 Byte)
Number of Merkerbytes Number of Taktmerker	4.096 (remanence adjustable, default set is 0..15) 8 (1 Merkerbyte)
Number of timer, counter Depth of nesting	in each case 512 (each remanence adjustable, default set is 0) up to 16 code blocks
Real-time clock elapsed hour counter	yes (accumulator-backed hardware clock) 1 (32Bit, resolution 1h)
Program language Program system	STEP 7® - AWL, KOP, FUP, S7-SCL, S7-Graph from Siemens SIMATIC® Manager from Siemens or products compatible to it
Operating system Program unit to reference	compatible to S7-300® from Siemens CPU 315-2DP/PN (6ES7 315-2EH14-0AB0 firmware V3.1 Siemens)
	Communication
Serial interfaces (protocols)	COM1: RS 232 (free ASCII) COM2: RS 485 (free ASCII, Modbus-RTU)
Ethernet (protocols)	Ethernet: 10/100 MBit with CP343 functionality (RFC1006, TCP, UDP, Modbus-TCP)
CAN (protocols)	CAN-telegrams (Layer 2), compatible to CANopen® master/ slave 10 kBaud ... 1 MBaud
optional interfaces (protocols)	Profinet IO Controller
	Periphery access
Decentral periphery	- INSEVIS- periphery (with automatic configuration via „ConfigStage“) - diverse external periphery families (Modbus RTU/TCP, CAN) - all CANopen® slaves according to DS401 - all Profinet IO-devices

Memory	CPU-T
Working memory (thereof akku buffered)	1MB (512 kByte remanent)
Load memory	8MB flash memory
Memory for visualization	48MB flash memory
external memory	Micro SD, up to 8 GB

Remark:
The S7-program data are kept in the flash memory (Flash) and the S7-process data are kept in the akku-buffered RAM (SRAM) and not on the Micro-SD-card. This is for archiving and backup only.

Most important properties at a glance

Usual S7-Programming

Use existing Siemens-S7-programming tools;
either SIMATIC®-Manager or TIA-Portal®
in the programming languages KOP, FUP, AWL, SCL, S7-Graph.
Or use existing FB´s like for PID in analog operations...

2 Ethernet-Ports

With 2 Ethernet-interfaces configurable as separated ports with each an own IP-address area you can use the PLC as gateway between office / maintenance and machine network and grant an easy service access, or use it as 2 port-switch

VNC- and Web-server

Show and control your panel content 1:1 on mobile devices like tablets or smart phones.
Display device identification and I/O status of the PLC by an static web server on a web browser.

Gateway-functionality

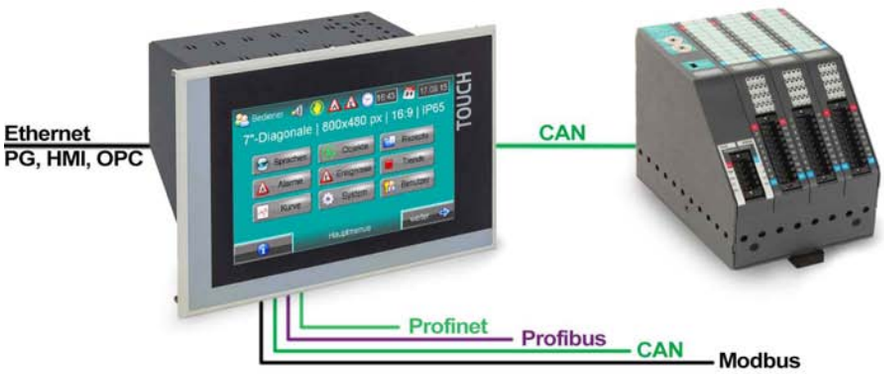
Ethernet with TCP, UDP, RFC1006 or Modbus TCP,
Profibus-DP V0 Master/Slave, CANopen® or Layer2,
free ASCII on RS232 and RS485 and Modbus RTU
INSEVIS-S7-PLC - a communication talent

Possible S7-System architectures

Each solution has its own characteristics, whereto the solution should be adapted. Customer demands,available space, kind and number of I/Os, demands for communication and - last but not least- the project budget. With INSEVIS all common S7-system architectures can be realized Always compatible to S7 but always open for your favorite system too. To become a leading technological and economical solution and to stay independent from only one supplier.

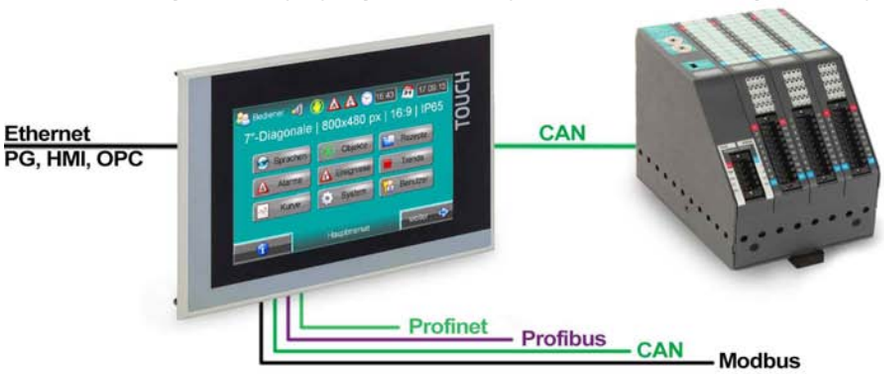
S7-Panel-PLC with onboard periphery (expandable decentral)

The most compact, simplest and economic solution. All in one device, Panel and S7-PLC use a common CPU (with one IP-address) and with free slots for Onboard-periphery. Always expandable by decentral periphery (INSEVIS- or external periphery).



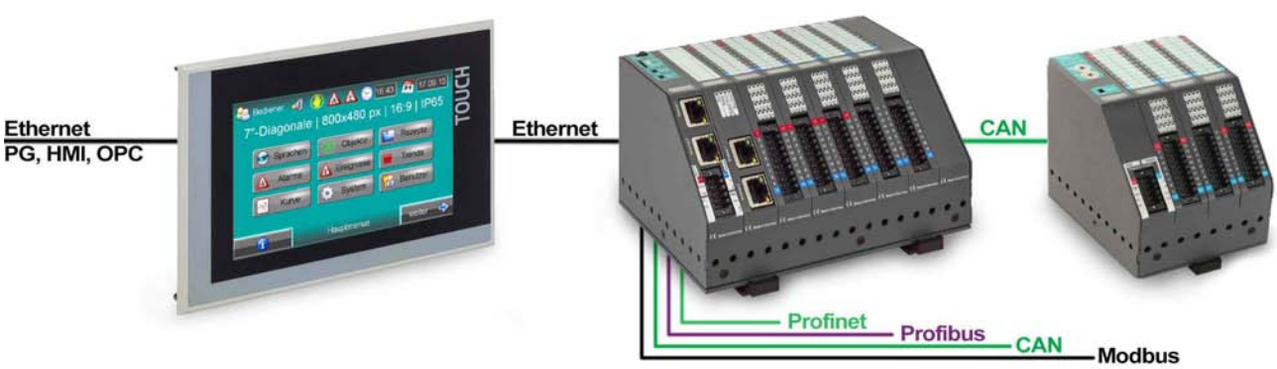
S7-Panel-PLC with decentral expandable periphery

In this solution Panel and S7-PLC use a common CPU (with one IP-address) and are expandable by decentral periphery. The most easiest and economic is mostly INSEVIS- periphery blocks – set up the node ID and be ready, but other peripheries are to use as well by multiple interfaces.



Panel with decentral S7-Compact-PLC with onboard periphery (expandable decentral)

This solution differs to that before in having only a Panel-HMI (with an own IP-address) in the switching cabinets door and an S7-PLC at the DIN-rail (with another IP-address) and with free slots for onboard periphery there. Always expandable by decentral periphery (INSEVIS- or external periphery).



S7-Panel-PLC

S7-Panel-PLC

INSEVIS-S7-Panel-PLC – Combination of S7-PLC and brilliant panel in a tight space

Controlling, visualization and communication in a narrow spot. The most compact way to automatize – and with INSEVIS the most economic too. Metal front frames with protection class IP65 provide a high quality, S7-programming keep your know-how and do not touch your way of programming with SimaticManager or TIA-Portal from Siemens. Equipped with comprehensive communication channel like Ethernet, Modbus, CAN, RS232 and RS485 and optional Profibus DP resp. Profinet IO Controller. With onboard- and/or decentral periphery in fine grades. Open for external periphery devices ans closed for illegal copy actions. Labeled with customers logo to make INSEVIS- customers inexchangeable.

Product groups

3,5″ and 5,7″ with S7-CPU-V or-P

High value for beginners already including high-class functions

- PC350V/P
- PC351V/P
- PC353V/P
- PC570V/P
- PC577V/P

7″ and 10,2″ with S7-CPU-P

S7-PLCs with larger displays and high-end-functions

- PC700P
- PC709P
- PC1000P
- PC1011P

4,3“ and 7″ with S7-CPU-T

Compact and very fast: the „small ones“ in 16:9 format

- PC430T
- PC433T
- PC710T
- PC717T

10,1″ and 15,6″ with S7-CPU-T

Allow new project chances: the „large ones“ with CPU-T

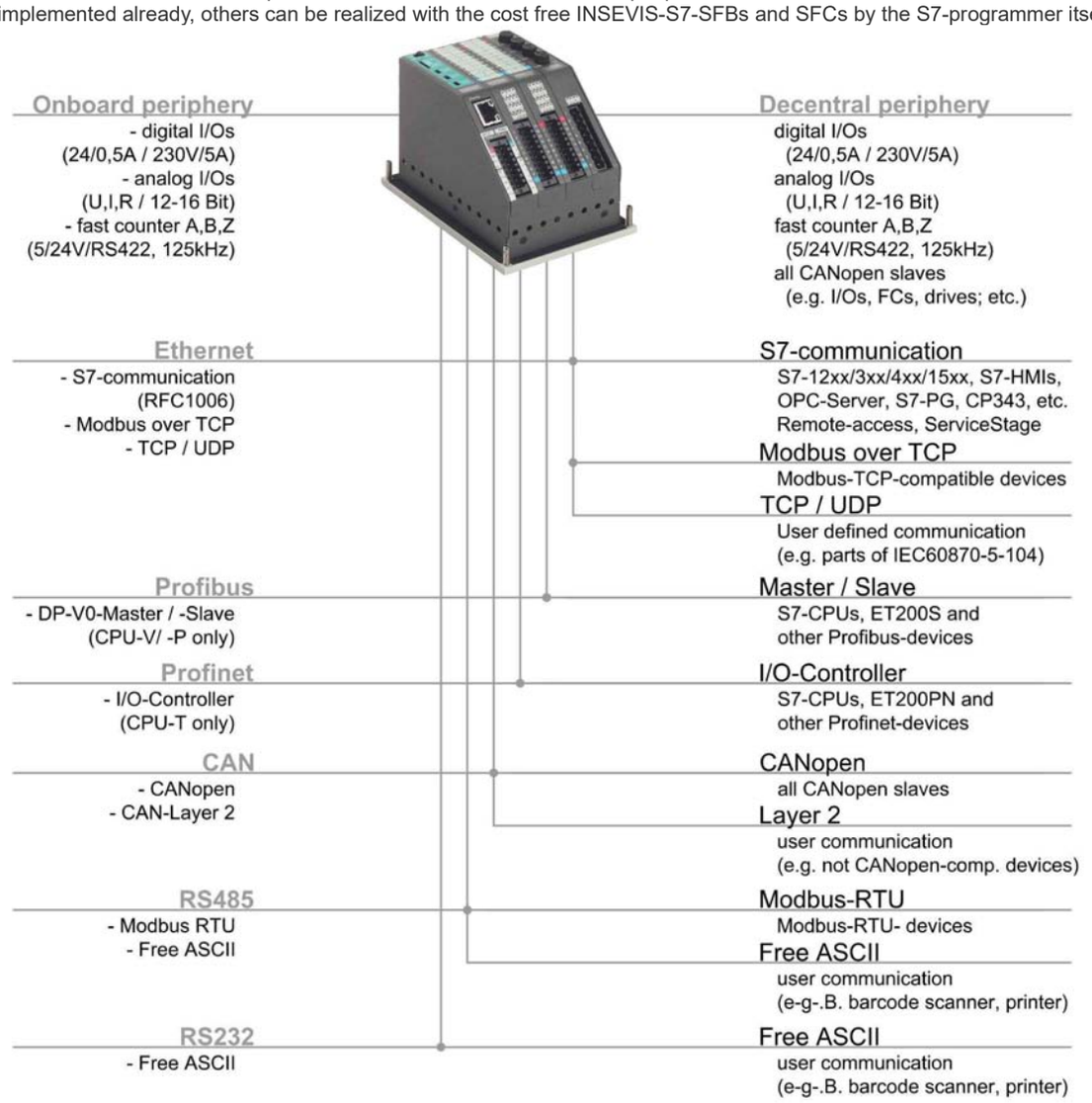
- PC1010T
- PC1017T
- PC1560T
- PC1567T

Fields of application

- Compact controllers for production data acquisition and OPC- forwarding by S7-communication / active Ethernet,
- Economical connection of different external peripheries, drives, frequency converters and so on into the S7-world,
- Remote data collecting and logging with visualization in combination with other S7-controllers,
- Event display for small switching cabinets, replacement of elements for manual operation,
- Improvement of connectivity and visualization of existing automation solutions,
- Replacement of failed or older C7-controllers and/or OP/TP/MP-panels, what are no more available.

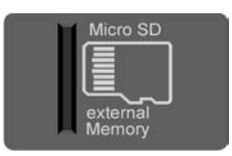
Communication overview

INSEVIS-S7-Panel-PLCs contain versatile possibilities for a connection to diverse peripheries or communication with other devices. Lots of protocols are implemented already, others can be realized with the cost free INSEVIS-S7-SFBs and SFCs by the S7-programmer itself.



External memory card

Each device has an own slot for an optional Micro-SD-card in the standard FAT32-format. This card is only needed for archiving message data, data from DBs, trend data as well as of data of the recipe management and for backup/restore. While updating the PLC- firmware by this card, the S7-data (program, data, process data, visualization data) will kept untouched - as they were before.



Most important properties at a glance

Usual S7-Programming

Use existing Siemens-S7-programming tools;
either SIMATIC®-Manager or TIA-Portal®
in the programming languages KOP, FUP, AWL, SCL, S7-Graph.
Or use existing FB´s like for PID in analog operations...

Backup & Restore – without PC

Easy to backup all data; S7-program, data, process data, visualization data, archive data – password protected as binary to use it in an identical device. This will go on working, where the old device was backed up – no need to have a computer therefore.

Ultra-compact design

INSEVIS offers the most compact combination of panel, PLC and onboard periphery worldwide (PC351V/P).
This allows to decrease the space and energy consumption and brings your solution to the top.

Remote access, Web- and VNC- server

Use multiple PC-monitors as additional panels by RemoteStage, display and control a 1:1-image by your VNC-Viewer.
Check the status of the PLC and of the in- and outputs in a web browser by an integrated static web server.

S7-Panel-PLC

S7-Panel-PLCs with 3,5“-displays

Large jumps for small applications, what need to be realized with low budget. This is the world of the smallest Panel-PLCs of INSEVIS with 320×240 pixel (QVGA) and in 4:3-format. But this smallest PLCs contain the instruction set of a S7-315-2PNDP – with more memory. For some it is the first PLC- application, for others a long wanted solution for long time available 5,7″ substitutions.

The abdication of Windows-OS reduces the power consumption (<100mA @ 24V) and the booting time (<3 seconds). Impress your customers by quality and power and keep your own economy. Compact, energy saving and customized labeled with the first device already.

Series PC350 without onboard periphery slots

3,5“-display (320x240 Pixel, 4:3-format, 65.000 colors) with resistive touch
Dimension front: 132x96mm, class of tightness: IP65, weight: ca. 450g
Range of operation temperature: -20°C...+60°C
Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 60mA (typ.)...200mA (max. with Profibus M/S)
Power dissipation: 1,5W (typ.)...4,8W (max. with Profibus M/S)
Depth into switching cabinet: 49mm

Series PC351 mit fixed onboard periphery

Front, operating temperature range, voltage supply, current consumption, power dissipation like series PC350 – but on rear side
with fixed onboard periphery (software configurable):
4 digital in- or outputs 24V / 0,5A
(to be configured bitwise by software, as well as counter 10kHz)
2 analog inputs- (± 20 mA, (0)4..20 mA, 0..10 V) or outputs ((0)4..20 mA, 0..10 V)
(each channel to be configured by software)
Periphery decentral expandable by Profibus, CAN, Modbus
Depth into switching cabinet: 49mmm

figure shows onboard periphery (optionally)

Series PC353 with 3 free slots for modular onboard periphery

Front and operating temperature range like series PC350 - but on rear side
with 3 free slots for INSEVIS periphery onboard:
- max. 48 digital inputs (24V) or 18 counter (5V/24V/RS422)
- max. 48 digital outputs (24V/0,5A) or 12 relays (230V/3A)
- max. 24 analog inputs (U/I/PT) or 12 analog outputs (U/I)
- max. 44 current- and 33 voltage measurements by E-Mess-UI

Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 60mA (typ.)...500mA (max. with Profibus M/S and PMs)
Power dissipation: 1,5W (typ.)...12W (max. with Profibus M/S and PMs)
Depth into switching cabinet: 84mmm

Article number	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		VNC-server	Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232/485	DP-M	DP-S	IO-Ctrl.	onboard	decentral		
PC350V-0-03	-V	√	√	√	√	-	-	-	-	(√)	-	-
PC350V-DPM-03	-V	√	√	√	√	√	-	-	-	(√)	-	-
PC350V-DPS-03	-V	√	√	√	√	-	√	-	-	(√)	-	-
PC350P-0-03	-P	√	√	√	√	-	-	-	-	(√)	-	-
PC350P-DPM-03	-P	√	√	√	√	√	-	-	-	(√)	-	-
PC350P-DPS-03	-P	√	√	√	√	-	√	-	-	(√)	-	-
PC351V-0-03	-V	√	√	√	√	-	-	-	4dIO/2aIO	(√)	-	-
PC351V-DPM-03	-V	√	√	√	√	√	-	-	4dIO/2aIO	(√)	-	-
PC351V-DPS-03	-V	√	√	√	√	-	√	-	4dIO/2aIO	(√)	-	-
PC351P-0-03	-P	√	√	√	√	-	-	-	4dIO/2aIO	(√)	-	-
PC351P-DPM-03	-P	√	√	√	√	√	-	-	4dIO/2aIO	(√)	-	-
PC351P-DPS-03	-P	√	√	√	√	-	√	-	4dIO/2aIO	(√)	-	-
PC353V-0-03	-V	√	√	√	√	-	-	-	3 slots	(√)	-	-
PC353V-DPM-03	-V	√	√	√	√	√	-	-	3 slots	(√)	-	-
PC353V-DPS-03	-V	√	√	√	√	-	√	-	3 slots	(√)	-	-

S7-Panel-PLC

S7-Panel-PLCs with 4,3“-displays

Brilliant, compact, strong and very communicative. And always programmable by common S7-tools from Siemens as SimaticManager and TIA-Portal. For those who need CPU-performance combined with a small panel. As stand-allone device or additional operating panel in an existing S7-network.

With only 44mm depth extremely compact these Panel-PLCs contain 2 separated Ethernet interfaces (S7-communication, TCP, UDP), Modbus (TCP, RTU), CAN (CANopen® and Layer2), RS232 and RS485 (free ASCII) and optional Profinet IO Controller- this is quite a lot.

Series PC430 without onboard periphery slots

4,3“-display (480x272 Pixel, 4:3-format, 65.000 colors) with resistive touch
Dimension front: 140x100mm, class of tightness: IP65, weight: ca. 450g
Range of operation temperature: -20°C...+60°C
Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 150mA (typ.)...300mA (max. with Profinet)
Power dissipation: 3,6W (typ.)...7,2W (max. with Profinet)
Depth into switching cabinet: PC430T-0-02: 44mm
PC430T-0-03: 25mm

figure shows onboard periphery (optionally)

Series PC433 with 3 free slots for modular onboard periphery

Front and operating temperature range like series PC430 - but on rear side
with 3 (with Profinet 2) free slots for INSEVIS periphery onboard:
- max. 48 digital inputs (24V) or 18 counter (5V/24V/RS422)
- max. 48 digital outputs (24V/0,5A) or 12 relays (230V/3A)
- max. 24 analog inputs (U/I/PT) or 12 analog outputs (U/I)

Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 150mA (typ.)...300mA (max. with Profinet and PMs)
Power dissipation: 4W (typ.)...7,5W (max. with Profinet M/S and PMs)
Depth into switching cabinet: 89mm

Article-no.	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		VNC-server	Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232/485	DP-M	DP-S	IO-Ctrl.	onboard	decentral		
PC430T-0-02/ ...03	-T	2 √	√	√	√	-	-	-	-	(√)	√	√
PC430T-PNC-02	-T	2 √	√	√	√	-	-	√	-	(√)	√	√
PC433T-0-02	-T	2 √	√	√	√	-	-	-	3 slots	(√)	√	√
PC433T-PNC-02	-T	2 √	√	√	√	-	-	√	2 slots	(√)	√	√

S7-Panel-PLC

S7-Panel-PLCs with 5,7“-displays

For those, who miss this 5,7” (6”) panels from Siemens, these devices will be a good solution with long termed availability. But there is not only a panel, a PLC is integrated too! And this is a very strong PLC with the instruction set of a S7-315-2PNDP but more memory and a number of interfaces.

Often used as basic model or as additional control panel in combination to existing S7-PLCs. The large memory and the number of interfaces favor this part for an use as data logger or gateway with data preprocessing.

Series PC570 without onboard periphery slots

5,7“-display (320x240 Pixel, 4:3-format, 65.000 colors) with resistive touch
Dimension front: 182x140mm, class of tightness: IP65, weight: ca. 600g
Range of operation temperature: -20°C...+60°C
Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 100mA (typ.)...170mA (max. with Profibus M/S)
Power dissipation: 2,4W (typ.)...4,1W (max. with Profibus M/S)
Depth into switching cabinet: 49mm

figure shows onboard periphery (optionally)

Series PC577 with 7 free slots for modular onboard periphery

Front and operating temperature range like series PC570 - but on rear side
with 7 free slots for INSEVIS periphery onboard:
- max. 112 digital inputs (24V) or 42 counter (5V/24V/RS422)
- max. 112 digital outputs (24V/0,5A) or 28 relays (230V/3A)
- max. 56 analog inputs (U/I/PT) or 56 analog outputs (U/I)
- max. 56 current- and 21 voltage measurements by E-Mess-UI

Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11...30)V DC,
Current consumption: 60mA (typ.)...500mA (max. with Profibus M/S and PMs)
Power dissipation: 1,5W (typ.)...12W (max. with Profibus M/S and PMs)
Depth into switching cabinet: 95mm

Article-no.	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		VNC-server	Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232/485	DP-M	DP-S	IO-Ctrl.	onboard	decentral		
PC570V-0-03	-V	√	√	√	√	-	-	-	-	(√)	-	-
PC570V-DPM-03	-V	√	√	√	√	√	-	-	-	(√)	-	-
PC570V-DPS-03	-V	√	√	√	√	-	√	-	-	(√)	-	-
PC570P-0-03	-P	√	√	√	√	-	-	-	-	(√)	-	-
PC570P-DPM-03	-P	√	√	√	√	√	-	-	-	(√)	-	-
PC570P-DPS-03	-P	√	√	√	√	-	√	-	-	(√)	-	-
PC577V-0-03	-V	√	√	√	√	-	-	-	7 slots	(√)	-	-
PC577V-DPM-03	-V	√	√	√	√	√	-	-	7 slots	(√)	-	-
PC577V-DPS-03	-V	√	√	√	√	-	√	-	7 slots	(√)	-	-
PC577P-0-03	-P	√	√	√	√	-	-	-	7 slots	(√)	-	-
PC577P-DPM-03	-P	√	√	√	√	√	-	-	7 slots	(√)	-	-
PC577P-DPS-03	-P	√	√	√	√	-	√	-	7 slots	(√)	-	-

S7-Panel-PLC

S7-Panel-PLCs with 7“-displays

For those, who wanted to show a little more than basic objects on his 16:9-panels, this was a quite expensive deal until now. With these 7″-Panel-PLCs of INSEVIS these times are gone. These medium sized panels and its powerful integrated S7-CPU with the operation code of an S7-315-2PNDP allow projects with high class functionality together with a high own margin.

The visualization projects and cut outs for all these INSEVIS-7“-Panel-PLCs are identical – to get an own graduated product line with no extra efforts. Of course branded with your logo an article-numbers on the rear side.

Series PC700 without onboard periphery slots

7“-display (800x480 Pixel, 16:9-format, 65.000 colors) with resistive touch
Dimension front: 222x147mm, class of tightness: IP65, weight: ca. 600g
Range of operation temperature: -20°C...+60°C
Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 150mA (typ.)...220mA (max. with Profibus M/S)
Power dissipation: 3,6W (typ.)...5,3W (max. with Profibus M/S)
Depth into switching cabinet: 50mm

Series PC710 without onboard periphery slots

Front and operating temperature range like series PC700
Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11...30)V DC,
Current consumption: 250mA (typ.)...350mA (max. with Profinet)
Power dissipation: 5W (typ.)...8,5W (max. with Profinet)
Depth into switching cabinet: 45mm

figure shows onboard periphery (optionally)

Series PC709 with 9 free slots for modular onboard periphery

Front and operating temperature range like series PC700 - but on rear side
with 9 free slots for INSEVIS periphery onboard:
- max. 144 digital inputs (24V) or 54 counter (5V/24V/RS422)
- max. 144 digital outputs (24V/0,5A) or 36 relays (230V/3A)
- max. 72 analog inputs (U/I/PT) or 72 analog outputs (U/I)

Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 150mA (typ.)...1300mA (max. with Profibus M/S and PMs)
Power dissipation: 3,6W (typ.)...31,2W (max. with Profibus M/S and PMs)
Depth into switching cabinet: 95mm

figure shows onboard periphery (optionally)

Series PC717 with 7 free slots for modular onboard periphery

Front and operating temperature range like series PC700 - but on rear side
with 7 (with Profinet 6) free slots for INSEVIS periphery onboard:
- max. 112 digital inputs (24V) or 42 counter (5V/24V/RS422)
- max. 112 digital outputs (24V/0,5A) or 28 relays (230V/3A)
- max. 56 analog inputs (U/I/PT) or 56 analog outputs (U/I)

Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 200mA (typ.)...1300mA (max. with Profinet and PMs)
Power dissipation: 4,8W (typ.)...31,2W (max. with Profinet and PMs)
Depth into switching cabinet: 95mm

Article-no.	CPU	Ethernet	Modbus	CAN	Serieller CP	Profibus		Profinet	Periphery		VNC-server	Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232/485	DP-M	DP-S	IO-Ctrl.	onboard	decentral		
PC700P-0-03	-P	√	√	√	√	-	-	-	-	(√)	-	-
PC700P-DPM-03	-P	√	√	√	√	√	-	-	-	(√)	-	-
PC700P-DPS-03	-P	√	√	√	√	-	√	-	-	(√)	-	-
PC710T-0-02/ ...03	-T	2 √	√	√	√	-	-	-	-	(√)	√	√
PC710T-PNC-02	-T	2 √	√	√	√	-	-	√	-	(√)	√	√
PC709P-0-03	-P	√	√	√	√	-	-	-	9 slots	(√)	-	-
PC709P-DPM-03	-P	√	√	√	√	√	-	-	9 slots	(√)	-	-
PC709P-DPS-03	-P	√	√	√	√	-	√	-	9 slots	(√)	-	-
PC717T-0-02	-T	2 √	√	√	√	-	-	-	7 slots	(√)	√	√
PC717T-PNC-02	-T	2 √	√	√	√	-	-	√	6 slots	(√)	√	√

S7-Panel-PLC

S7-Panel-PLCs with 10“-displays

The shooting stars for 16:9-Panels in medium sizes offers chances because of its unique price/performance ratio in the S7-world. These devices will be a large showcase for your application. They do not only contain a brilliant touch panel, they provide a very strong PLC with the instruction set of a S7-315-2PNDP too. And not enough: a number of interfaces are integrated as well.

It is a combination of the high quality impression by the metal frame, the fast booting and page-turning times and the chance to label these parts with the first piece, what makes it so successfully. And of course – no runtime limitations of the visualization...

Series PC1000 without onboard periphery slots

10,2“-display (800x480 Pixel, 16:9-format, 65.000 colors) with resistive touch
Dimension front: 286x188mm (like PC1010), class of tightness: IP65, weight: ca. 1000g
Range of operation temperature: -20°C...+60°C
Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11...30)V DC,
Current consumption: 200mA (typ.)...270mA (max. with Profibus M/S)
Power dissipation: 4,8W (typ.)...6,5W (max. with Profibus M/S)
Depth into switching cabinet: 50mm

Series PC1010 without onboard periphery slots

10,1“-display (1024x600 Pixel, 16:9-format, 65.000 colors) with resistive touch
Dimension front: 286x188mm (like PC1000), class of tightness: IP65, weight: ca. 1000g
Range of operation temperature: -20°C...+60°C
Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 350mA (typ.)...500mA (max. with Profinet)
Power dissipation: 8,5W (typ.)...12W (max. with Profinet)
Depth into switching cabinet: 48mm

figure shows onboard periphery (optionally)

Series PC1011 with 11 free slots for modular onboard periphery

Front and operating temperature range like series PC1000, - but on rear side
with 11 free slots for INSEVIS periphery onboard:
- max. 176 digital inputs (24V) or 66 counter (5V/24V/RS422)
- max. 176 digital outputs (24V/0,5A) or 44 relays (230V/3A)
- max. 88 analog inputs (U/I/PT) or 44 analog outputs (U/I)

Periphery decentral expandable by Profibus, CAN, Modbus
Voltage supply: 24 (11..30)V DC
Current consumption: .150mA (typ.)...1600mA (max. with Profibus M/S and PMs)
Power dissipation: 4,8W (typ.)...38,4W (max. with Profibus M/S and PMs)
Depth into switching cabinet: 95mm

figure shows onboard periphery (optionally)

Series PC1017 with 7 free slots for modular onboard periphery

Front and operating temperature range like series PC1010- but on rear side
with 7 (with Profinet 6) free slots for INSEVIS periphery onboard:
- max. 112 digital inputs (24V) or 42 counter (5V/24V/RS422)
- max. 112 digital outputs (24V/0,5A) or 28 relays (230V/3A)
- max. 56 analog inputs (U/I/PT) or 56 analog outputs (U/I)

Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11...30)V DC
Current consumption: 200mA (typ.)...1300mA (max. with Profinet and PMs)
Power dissipation: 4,8W (typ.)...31,2W (max. with Profinet and PMs)
Depth into switching cabinet: 98mm

Article-no.	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		VNC-server	Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232/485	DP-M	DP-S	IO-Ctrl.	onboard	decentral		
PC1000P-0-03	-P	√	√	√	√	-	-	-	-	(√)	-	-
PC1000P-DPM-03	-P	√	√	√	√	√	-	-	-	(√)	-	-
PC1000P-DPS-03	-P	√	√	√	√	-	√	-	-	(√)	-	-
PC1010T-0-02/ ...03	-T	2 √	√	√	√	-	-	-	-	(√)	√	√
PC1010T-PNC-02	-T	2 √	√	√	√	-	-	√	-	(√)	√	√
PC1011P-0-03	-P	√	√	√	√	-	-	-	11 slots	(√)	-	-
PC1011P-DPM-03	-P	√	√	√	√	√	-	-	11 slots	(√)	-	-
PC1011P-DPS-03	-P	√	√	√	√	-	√	-	11 slots	(√)	-	-
PC1017T-0-02	-T	2 √	√	√	√	-	-	-	7 slots	(√)	√	√
PC1017T-PNC-02	-T	2 √	√	√	√	-	-	√	6 slots	(√)	√	√

S7-Panel-PLC

S7-Panel-PLCs with 15,6“-displays

These devises set free you creative sense and are a real low-budget substitution for industrial PCs with expensive visualization- RunTimes. Not to forget: they do not contain any Windows and even in 20 years there will be no performance problem when updating these devices.

These S7-Panel-PLCs with large diagonals push forward into new application areas: Instead of using expensive IPC- solutions with tag based soft-visualizations these devices can bring high quality, long term availability and economy in this field of application. If it is a firmware update or new user program – you can do it by Ethernet or by a simple Micro-SD-card.

Series PC1560 without onboard periphery slots

15,6“-Display (1366x768 Pixel, 16:9-Format, 65.000 colors) with resistive touch
Dimension front: 410x250, class of tightness: IP65, weight: ca. 1400g
Range of operation temperature: 0°C...+50°C
Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11..30)V DC
Current consumption: 500mA (typ.)...650mA (max. with Profinet)
Power dissipation: 12W (typ.)...15W (max. with Profinet)
Depth into switching cabinet: 54mm

figure shows onboard periphery (optionally)

Series PC1567 with 7 free slots for modular onboard periphery

Front and operating temperature range like series PC1560- but on rear side
with 7 (with Profinet 6) free slots for INSEVIS periphery onboard:
- max. 112 digital inputs (24V) or 42 counter (5V/24V/RS422)
- max. 112 digital outputs (24V/0,5A) or 28 relays (230V/3A)
- max. 56 analog inputs (U/I/PT) or 56 analog outputs (U/I)

Periphery decentral expandable by Profinet, CAN, Modbus
Voltage supply: 24 (11..30)V DC
Current consumption: 500mA (typ.)...1500mA (max. with Profinet and PMs)
Power dissipation: 12W (typ.)...36W (max. with Profinet and PMs)
Depth into switching cabinet: 104mm

Article-no.	CPU	Ethernet	Modbus	CAN	Serieller CP	Profibus		Profinet	Periphery		VNC-server	VNC-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232/485	DP-M	DP-S	IO-Ctrl.	onboard	decentral		
PC1560T-0-02/ ...03	-T	2 √	√	√	√	-	-	-	-	(√)	√	√
PC1560T-PNC-02	-T	2 √	√	√	√	-	-	√	-	(√)	√	√
PC1567T-0-02	-T	2 √	√	√	√	-	-	-	3 slots	(√)	√	√
PC1567T-PNC-02	-T	2 √	√	√	√	-	-	√	2 slots	(√)	√	√

Accessories for S7-Panel-PLCs

There are available pin marked removable connectors either with lift arms or with bolt flanges to connect INSEVIS devices. This allows a explicit positioning of each pin to the signals and makes the wiring easier. The wire-contact is done by maintenance free cage-clamps for max. 1,5mm² cross sections without wire end sleeves.

A mounting set with grounding terminal is part of every delivery. If periphery modules are ordered, they will be mounted for free at the INSEVIS production together with the referring rear foil, standard inserting and signal stripes.

Figure accessories	Accessories	Article-no.	MOQ (pcs)
Connectors   E-CON16 E-CONS16 (pin marked connectors for max. 1,5mm² cross sections)	**For CPU V:** Connector 2x8pin, lift arms Connector 2x8pin, bolt flanges (no image) Adapter for Profibus SUB-D 9	 E-CON16-00 E-CONS16-00 E-AD-DP12-00	 1 1 1
  E-CON10 E-CONS10 (pin marked connectors for max. 1,5mm² cross sections)	**For CPU T:** Connector 2x5pin, lift arms Connector 2x5pin, bolt flanges	 E-CON10-00 E-CONS10-00	 1 1
 (pin marked connector for max. 1,5mm² cross sections)	**Only for PC351V/P (periphery):** Connector 2x4pin	 E-CON09	 1
External memory  **Hint:** S7-program runs without these cards, these parts are used for archiving / recipes / updating only	Micro SD-card 1GB (external memory) Micro SD-card 2GB (external memory) Micro SD-card 4GB (external memory) Micro SD-card 8GB (external memory)	E-MSD1-00 E-MSD2-00 E-MSD4-00 E-MSD8-00	1 1 1 1
Customized labeling **Hint:** [1] Single fix costs only, no run-time costs per single PLC	OEM-firmware with integrated customer logo Inserting stripes H with customer logo (rear) Inserting stripes V with customer logo (rear)	SW-BS-OEM [1] E-LABH-00 E-LABV-00	1 100 100
Software **Hint:** [2] Company license, no run-time costs per single PC [3] Maintenance license due yearly, if new versions are required, otherwise only old versions do run Software available for free download at INSEVIS web sites	VisuStage ConfigStage RemoteStage ServiceStage VisuStage full version company license VisuStage full version maintenance license	- - - - SW-VS-2.0 [2] SW-VSW-2.0 [2] [3]	free download free download free download free download 1 1
Spare parts **Hint:** A mounting set with grounding terminal is part of every delivery	Additional mounting set with grounding terminal for 3,5“ and 4,3“-devices Additional mounting set with grounding terminal for 5,7“ and 7“-devices Additional mounting set with grounding terminal for 10,1“ and 10,2“-devices Additional mounting set with grounding terminal for 15,6““-devices	E-MNT35-00 E-MNT57-00 E-MNT100-00 E-MNT156-00	10 10 10 10
Part of every delivery	mounting set with grounding terminal technical data sheet	none	-

Stainless steel front plates, attached parts and customized designs on request.

S7-Compact-PLC

S7-Compact-PLC

INSEVIS-S7-Compact-PLC – DIN-rail controllers with onboard advance

These S7-Compact-PLCs in a metal cover contain beside its S7-CPU with huge memory size and lots of communication interfaces a permanently expanded range of fine graded periphery modules, designed for for slim spaces and short cable runs it fits perfectly to any mounting plate. Either as S7-to-anywhere-gateway or for onboard periphery applications. Always with wide temperature range from -20°C...+60°C and on demand labeled with custom logo and article-number. Use the lots of onboard interfaces for your preferred external periphery or realize expensive protocols with cost free function blocks from INSEVIS. Stay independent and increase your profit to defend your market position. But always keep on using a high quality level.

Product groups

without periphery slots with S7-CPU-V or-T

Enormous number of interfaces in a very thin metal cover...

- CC300V
- CC300T

with 3 periphery slots with S7-CPU-V or-T

Only 82mm wire but enough PLC-power for lots of solutions...

- CC303V
- CC303T

with 7 periphery slots with S7-CPU-V or-T

For up to 112 digital or 70 analog signals onboard...

- CC307V
- CC307T

with 11 periphery slots with S7-CPU-V or-T

If there must be some more I/Os to be processed...

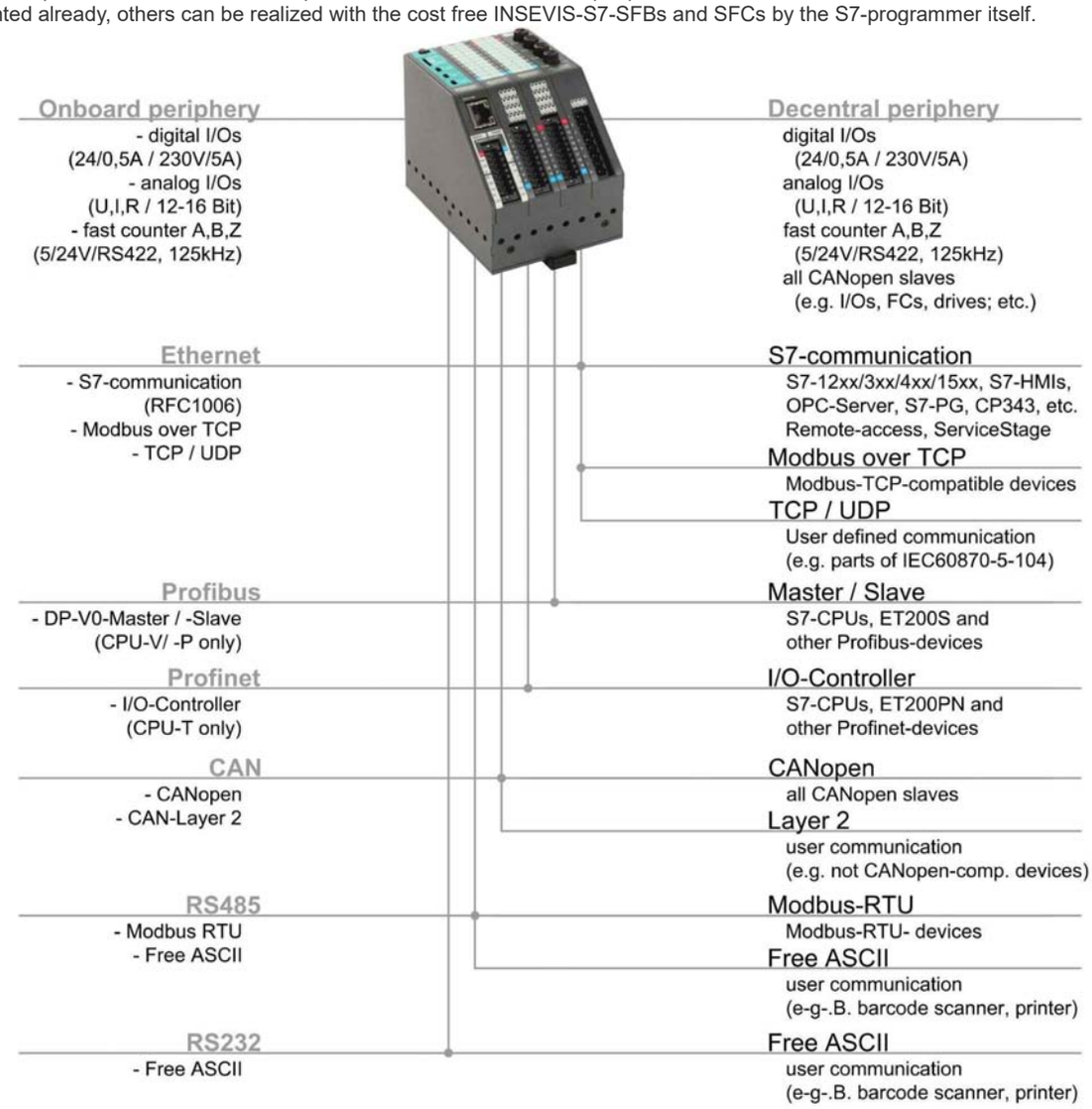
- CC311V
- CC311T

Fields of application

- Compact controllers for production data acquisition and OPC forwarding by S7-communication / active Ethernet,
- Economical connection of different external peripheries, drives, frequency converters and so on into the S7-world,
- Remote data collecting and logging in combination with other S7-controllers,
- Improvement of connectivity of existing automation solutions,
- S7-programmable gateway with preprocessing of data

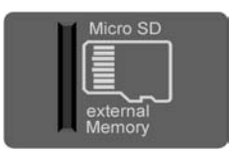
Communication overview

INSEVIS-S7-Compact-PLCs contain versatile possibilities to connect diverse peripheries or to communicate with other devices. Lots of protocols are implemented already, others can be realized with the cost free INSEVIS-S7-SFBs and SFCs by the S7-programmer itself.



External memory card

Each device has an own slot for an optional Micro-SD-card in the standard FAT32-format. This card is only needed for archiving data from DBs and for backup/restore. While updating the PLC firmware by this card, the S7-program and process data will kept untouched - as they were before.



Most important properties at a glance

Usual S7-Programming

Use existing Siemens-S7-programming tools;
either SIMATIC®-Manager or TIA-Portal®
in the programming languages KOP, FUP, AWL, SCL, S7-Graph.
Or use existing FB´s like for PID in analog operations...

Free firmware updates for a lifetime

Every device gets new firmware free for a lifetime.
Use new features to expand the benefit of your solution.
Update it by software or by a single Micro-SD-card without
PC and with keeping all your S7-program and process data

Backup & Restore – without PC

Easy to backup all data; S7-program, data, process data, visualization data, archive data – password protected as binary to use it in an identical device. This will go on working, where the old device was backed up – no need to have a computer therefore.

Gateway-functionality

Ethernet with TCP, UDP, RFC1006 or Modbus TCP,
Profibus-DP V0 Master/Slave, CANopen® or Layer2,
free ASCII on RS232 and RS485 and Modbus RTU
INSEVIS-S7-PLC - a communication talent

S7-Compact-PLC

S7-Compact-PLCs ultra slim

These S7-PLCs for 35mm-DIN-rail are suitable for an economical controlling and communication with S7-programming. Lots of external Peripherys can be connected very simple by integrated interfaces.

CC300V/T as data logger or protocol converter - these smallest S7-CPUs V/T are less than 50mm wide and built into a metal cover for rough environments. Every PLC and periphery is available with customized logos from the 1st piece, what shows your automation competence.

Series CC300 without onboard periphery slots

Weight: ca. 500g, Range of operation temperature: -20°C...+60°C
Periphery decentral expandable by CAN, Modbus, Profibus (CPU-V)
Periphery decentral expandable by CAN, Modbus, Profinet (CPU-T)
Voltage supply: 24 (11...30)V DC
CPU-V: Current consumption: 50mA (typ.)...120mA (max. with Profibus M/S)
Power dissipation: 1,2W (typ.)...2,9W (max. with Profibus M/S)
Dimensions (WxHxD): 46x116x94mm
CPU-T: Current consumption: 150mA (typ.)...300mA (max. with Profinet)
Power dissipation: 3,6W (typ.)...7,2W (max. with Profinet)
Dimensions (WxHxD): 47x116x94mm

Article-no.	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232+485	DP-M	DP-S	IO-Controller	onboard	decentral	
CC300V-0-03	-V	√	√	√	√	-	-	-	-	(√)	-
CC300V-DPM-03	-V	√	√	√	√	√	-	-	-	(√)	-
CC300V-DPS-03	-V	√	√	√	√	-	√	-	-	(√)	-
CC300T-0-02/ ...03	-T	2 √	√	√	√	-	-	-	-	(√)	√
CC300T-PNC-02	-T	2 √	√	√	√	-	-	√	-	(√)	√

S7-Compact-PLCs with 3 periphery slots 82mm wide

The CC303V/T devices contain beside all the CC300V/T-properties 3 free onboard periphery slots for INSEVIS-periphery modules. This allows an economical solution in the smallest switching cabinet already.

There can be made easy visualizations by our VisuStage for any PC-monitor resolutions. These can be used with the cost free RemoteStage for a free remote display to visualize and control the Compact PLC. Completely free of charge...

figure shows onboard periphery (optionally)

Series CC303 with 3 free slots for modular onboard periphery

Dimensions: 82 x 116,5 x 92mm, Weight: ca. 400g
Range of operation temperature: -20°C...+60°C
with 3 (with Profinet 2) free slots for INSEVIS periphery onboard:
- max. 48 digital inputs (24V) or 18 counter (5V/24V/RS422)
- max. 48 digital outputs (24V/0,5A) or 12 relays (230V/3A)
- max. 24 analog inputs (U/I/PT) or 12 analog outputs (U/I)
- max. 12 current- and 9 voltage measurements by E-Mess-UI (only CPU-V)

Periphery decentral expandable by Profibus (CPU-V) Profinet (CPU-T), CAN, Modbus
Voltage supply: 24 (11...30)V DC
CPU-V: Current consumption: 50mA (typ.)...500mA (max. with Profibus M/S and PMs)
Power dissipation: 1,2W (typ.)...12W (max. with Profibus M/S and PMs)
CPU-T: Current consumption: 150mA (typ.)...700mA (max. with Profinet and PMs)
Power dissipation: 3,6W (typ.)...16,8W (max. with Profinet and PMs)

Article-no.	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232+485	DP-M	DP-S	IO-Controller	onboard	decentral	
CC303V-0-03	-V	√	√	√	√	-	-	-	3 slots	(√)	-
CC303V-DPM-03	-V	√	√	√	√	√	-	-	3 slots	(√)	-
CC303V-DPS-03	-V	√	√	√	√	-	√	-	3 slots	(√)	-
CC303T-0-02	-T	2 √	√	√	√	-	-	-	3 slots	(√)	√
CC303T-PNC-02	-T	2 √	√	√	√	-	-	√	2 slots	(√)	√

S7-Compact-PLC

S7-Compact-PLCs with 7 periphery slots 161mm wide

The CC307V/T devices contain 4 more onboard-periphery slots as the CC303V/T and are the most sold INSEVIS S7-Compact-PLCs. Often the last slots are left as reserve space.

Every PLC and periphery is available with customized logos from the 1st piece, what increases the automation competence of the customer by far. And the metal case allows an application in rough environments.

figure shows onboard periphery (optionally)

Series CC307 with 7 free slots for modular onboard periphery

Dimensions: 161 x 116,5 x 98mm, Weight: ca. 600g
Range of operation temperature: -20°C...+60°C
with 7 (with Profinet 6) free slots for INSEVIS periphery onboard:
- max. 112 digital inputs (24V) or 42 counter (5V/24V/RS422)
- max. 112 digital outputs (24V/0,5A) or 28 relays (230V/3A)
- max. 56 analog inputs (U/I/PT) or 28 analog outputs (U/I)
- max. 28 current- and 21 voltage measurements by E-Mess-UI (only CPU-V)

Periphery decentral expandable by Profibus (CPU-V) Profinet (CPU-T), CAN, Modbus
Voltage supply: 24 (11...30)V DC
CPU-V: Current consumption: 50mA (typ.)...1000mA (max. with Profibus M/S and PMs)
Power dissipation: 1,2W (typ.)...24W (max. with Profibus M/S and PMs)
CPU-T: Current consumption: 150mA (typ.)...1200mA (max. with Profinet and PMs)
Power dissipation: 3,6W (typ.)...28,8W (max. with Profinet and PMs)

Article-no.	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232+485	DP-M	DP-S	IO-Controller	onboard	decentral	
CC307V-0-03	-V	√	√	√	√	-	-	-	7 slots	(√)	-
CC307V-DPM-03	-V	√	√	√	√	√	-	-	7 slots	(√)	-
CC307V-DPS-03	-V	√	√	√	√	-	√	-	7 slots	(√)	-
CC307T-0-02	-T	2 √	√	√	√	-	-	-	7 slots	(√)	√
CC307T-PNC-02	-T	2 √	√	√	√	-	-	√	6 slots	(√)	√

S7-Compact-PLCs with 11 periphery slots 240mm wide

The CC311V/T devices contain again 4 more onboard-periphery slots as the CC307V/T and is perfect suitable for collecting more I/O-data from field area. It is no problem to connect a panel with RFC1006 / S7-communication to any of the CC3xxV/T -CPUs.

If this is not enough it can be expanded via multiple communication interfaces easily by the decentral periphery of INSEVIS or other vendors – thereby you keep on staying independent.

figure shows onboard periphery (optionally)

Series CC311 with 11 free slots for modular onboard periphery

Dimensions: 240 x 116,5 x 98mm, Weight: ca. 800g
Range of operation temperature: -20°C...+60°C
with 11 (with Profinet 10) free slots for INSEVIS periphery onboard:
- max. 176 digital inputs (24V) or 66 counter (5V/24V/RS422)
- max. 176 digital outputs (24V/0,5A) or 44 relays (230V/3A)
- max. 88 analog inputs (U/I/PT) or 44 analog outputs (U/I)
- max. 44 current- and 33 voltage measurements by E-Mess-UI (only CPU-V)

Periphery decentral expandable by Profibus (CPU-V) Profinet (CPU-T), CAN, Modbus
Voltage supply: 24 (11...30)V DC
CPU-V: Current consumption: 50mA (typ.)...1500mA (max. with Profibus M/S and PMs)
Power dissipation: 1,2W (typ.)...36W (max. with Profibus M/S and PMs)
CPU-T: Current consumption: 150mA (typ.)...1700mA (max. with Profinet and PMs)
Power dissipation: 3,6W (typ.)...40,8W (max. with Profinet and PMs)

Article-no.	CPU	Ethernet	Modbus	CAN	Serial CP	Profibus		Profinet	Periphery		Web-server
		S7/TCP/UDP	RTU/TCP	CANopen	RS232+485	DP-M	DP-S	IO-Controller	onboard	decentral	
CC311V-0-03	-V	√	√	√	√	-	-	-	11 Slots	(√)	-
CC311V-DPM-03	-V	√	√	√	√	√	-	-	11 Slots	(√)	-
CC311V-DPS-03	-V	√	√	√	√	-	√	-	11 Slots	(√)	-
CC311T-0-02	-T	2 √	√	√	√	-	-	-	11 Slots	(√)	√
CC311T-PNC-02	-T	2 √	√	√	√	-	-	√	10 Slots	(√)	√

Accessories for S7-Compact-PLC

There are available pin marked removable connectors either with lift arms or with bolt flanges to connect INSEVIS-devices. This allows a explicit positioning of each pin to the signals and makes the wiring easier. The wire-contact is done by maintenance free cage-clamps for max. 1,5mm² cross sections without wire end sleeves.

A mounting set with grounding terminal is part of every delivery. If periphery modules are ordered, they will be mounted for free at the INSEVIS production together with the referring rear foil, standard inserting and signal stripes.

Figure accessories	Accessories	Article-no.	MOQ (pcs)
Connectors   E-CON16 E-CONS16 (pin marked connectors for max. 1,5mm² cross sections)	**For CPU V:** Connector 2x8pin, lift arms Connector 2x8pin, bolt flanges (no image) Adapter for Profibus SUB-D 9	 E-CON16-00 E-CONS16-00 E-AD-DP12-00	 1 1 1
  E-CON10 E-CONS10 (pin marked connectors for max. 1,5mm² cross sections)	**For CPU T:** Connector 2x5pin, lift arms Connector 2x5pin, bolt flanges	 E-CON10-00 E-CONS10-00	 1 1
External memory  **Hint:** S7-program runs without these cards, these parts are used for archiving / recipes / updating only	Micro SD-card 1GB (external memory) Micro SD-card 2GB (external memory) Micro SD-card 4GB (external memory) Micro SD-card 8GB (external memory)	E-MSD1-00 E-MSD2-00 E-MSD4-00 E-MSD8-00	1 1 1 1
Customized labeling **Hint:** no initial costs for creating customized labels	Inserting stripes H with customer logo Inserting stripes V with customer logo	E-LABH-00 E-LABV-00	100 100
Software **Hint:** [2] Company license, no run-time costs per single PC [3] Maintenance license due yearly, if new versions are required, otherwise only old versions do run Software available for free download at INSEVIS web sites	VisuStage ConfigStage RemoteStage ServiceStage VisuStage full version company license VisuStage full version maintenance license	- - - - SW-VS-2.0 [2] SW-VSW-2.0 [2] [3]	free download free download free download free download 1 1
Spare parts **Hint:** A grounding terminal is part of every delivery	Additional set of grounding terminal for all devices	E-MNT00-00	10
Part of every delivery	grounding terminal technical data sheet	none	-

Attached parts and customized designs on request.

S7-Panel-HMI

S7-Panel-HMI

INSEVIS S7-Panel-HMI – because the visualization is the showcase of your product

Grade up your solution with a high class visualization to provide the essential market advantage. Comparing 2 equal solutions with the same costs buyers choose always the better looking one. With INSEVIS Panel-HMIs you will be the better one and have an economic calculation as well. Use all languages your customer needs, show fast changing screens and do not spend more than a few seconds for booting time - this will impress.

INSEVIS Panel-HMIs are color-touch panels with brilliant TFT- displays and energy saving LED- backlight. Every single device can be customized from 1st piece with foils, labels and firmware. IP65 leak-tightness, a wide temperature range mostly from -20°C up to +60°C and metal front and cover offer a sustainable quality value to your customer.

Product groups

3,5″ and 5,7″ with CPU-V or-P

High value for beginners already including high-class functions
- HMI350V/P
- HMI570V/P

7″ and 10,2″ with CPU-P

Panels with larger displays and high-end-functions
- HMI700P
- HMI1000P

4,3“ and 7″ with CPU-T

Compact and very fast: the “small ones“ with VNC- server inside
- HMI430T
- HMI710T

10,1″ and 15,6″ with CPU-T

Allow new project chances: the „large ones“ with CPU-T
- HMI1010T
- HMI1560T

Fields of application

- Display in external systems or additional to existing Panel-PLCs,
- Remote event logging and visualization in the S7-controllers network,
- Replacement of manually operated switches and 7-segment displays,
- Event display in very small switching cabinets,
- Replacement of failed or older P/TP/MP-panels, what are no more available,
- Improvement of existing visualizations

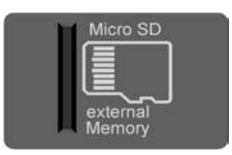
S7-Panel-HMI

Communication to PLC

INSEVIS-S7-Panel-HMIs will be connected to the PLC by its onboard Ethernet interface (RFC 1006, S7-communication). After assigning the partner-IP-address and TSAP each in panel and PLC the configuration is done already.

External memory card

Each device has an own slot for an optional Micro-SD-card in the standard FAT32-format. This card is only needed for archiving message data, trend data as well as of data of the recipe management and for backup/restore. While updating the HMI- firmware by this card, the visualization data will kept untouched - as they were before.



Most important properties at a glance

Short system boot time – long lifetime

No Windows-firmware means to boot up in only a few seconds and primarily: no run time licenses.
And also no run-time limitations for any power tags. Therewith today´s devices still may be able to update in more than 20 years...

Individualization with own logo

Keep your own as bitmap fix included in your OEM- firmware, or as inserting stripe with order-no at the rear side?
Everything is possible. Make you customer ordering all the time from you. No problem with INSEVIS devices....

Use of a standard Micro-SD card

Archive and read out message-, trend-, recipe- and other data, create backup data directly on the device, update visualization- and firmware data
An industrial Micro-SD card is just enough for that.

Backup & Restore – without PC

Easy to backup all visualization and archive data – password protected as binary to use it in an identical device.
This will go on working, where the old device was backed up – no need to have a computer therefore.

Use unlimited languages

Support all existing languages by an innovative approach.
No limitation, just use all installed languages on your PC. Don´t care about translation – simple import and export functions make it easy.
And -of course- no run time limitation at INSEVIS.

Remote access and VNC

Use your PC-screen as 2nd panel to display and control your application remote. Import and save archive and recipe data as txt- or csv- files. Or use the VNC- server of the CPU-T-panels to control an 1:1 screen copy of the panel in mobile devices.

Trend display and archiving

4 time based trends with 16 channels each can be started, stopped and continued manually or by variables.
Display and archive it as you want it to do.
Or display x;y-value couples from DBs in function graphs

Flexible multistructured recipes

Create up to 64 recipes with up to 256 different variables (elements), what result up to 256 data records per recipe.
Export and import recipes, records and elements via the Micro-SD-card.

Extensive error messaging system

Display, indicate and archive up to 1024 alarms and 128 events in all your project languages, as blinking text line or symbol, as single- or multi line message viewer and -archive.
Export this data automatically as csv-file to any network drive.

User management system

Manage up to 9 user levers by run-time editable PINs.
Define user based target screens and change screens depending on user level.
Allow or deny access to „hot keys“ as you want to.

S7-Panel-HMI

S7-Panel-HMIs with small displays – entrance in a new league of visualization

If as subsidiary panel, as low budget solution or as replacement of older TPs/ MPs: these Generation I panels will pimp your visualization with upper class functionality. Display and archive the error-messaging system, trend channels, multi structured recipes and much more with access rights from the user management system.

Go online remote wherever you want by RemoteStage. Metal front frames with protection class IP65 provides a high quality impression on the first view. Labeled with customers logo they make INSEVIS- customers inexchangeable.

3,5“-devices

3,5“-display (320x240 Pixel, 4:3-format, 65.000 colors) with resistive touch
Dimension front: 132x96mm, class of tightness: IP65, weight: ca. 450g
Range of operation temperature: -20°C...+60°C
Voltage supply: 24 (11...30)V DC
Current consumption: 60mA (typ.)
Power dissipation: 1,5W (typ.)
Depth into switching cabinet: 49mm

A small but immense brilliant image with 65k colors and extreme compact dimensions favor this devices to be used as low budget solution or subsidiary panel in the S7-network. Low power consumption and large temperature range from -20°…+60°C expands the fields of application nearly endless. The metal front frames with protection class IP65 underlines the high quality impression just on the first view.

4,3“-devices

4,3“-display (480x272 Pixel, 16:9-format, 65.000 colors) with resistive touch
Dimension front: 140x100mm, class of tightness: IP65, weight: ca. 450g
Range of operation temperature: -20°C...+60°C
Voltage supply: 24 (11...30)V DC
Current consumption: 150mA (typ.)
Power dissipation: 3,6W (typ.)
Depth into switching cabinet: HMI430T-0-02: 44mm
HMI430T-0-03: 25mm

This small but high resolutive panel in 16:9-format is characterized by its fine pixels, his fast CPU and large memory resources. Suitable for low budget solutions or subsidiary panel in the S7-network. Low power consumption and large temperature range from -20°…+60°C expands the fields of application nearly endless. The metal front frames with protection class IP65 underlines the high quality impression just on the first view.

5,7“-devices

5,7“-display (320x240 Pixel, 4:3-format, 65.000 colors) with resistive touch
Dimension front: 182x140mm, class of tightness: IP65, weight: ca. 600g
Range of operation temperature: -20°C...+60°C
Voltage supply: 24 (11...30)V DC
Current consumption: 100mA (typ.)
Power dissipation: 2,4W (typ.)
Depth into switching cabinet: 49mm

For those who miss the TP/MP177 panels from Siemens, this unit will be the solution: 320×240 pixel in 4:3 format at 5,7” diagonal with 65k colors better up old solutions by far and keep it alive for lots of years. There are so much more functions, solved in an easier way. A visualization is created, modified or converted into another panel in a very short time. The same resolution like the 3,5”-panels (QVGA) allows to offer different price levels with the exactly same visualization.

Article-no.	CPU	Ethernet	Display-diagonal	Number of pixels (WxH)	Visualization-memory	Remote access by	
						RemoteStage	VNC-Server
HMI 350V-0-03	-V	√	3,5“ / 89mm	320x240	4MB	√	-
HMI 350P-0-03	-P	√	3,5“ / 89mm	320x240	24MB	√	-
HMI 430T-0-02/ ...03	-T	2 √	4,3“ / 111mm	480x272	48MB	√	√
HMI 570V-0-03	-V	√	5,7“ / 145mm	320x240	4MB	√	-
HMI 570P-0-03	-P	√	5,7“ / 145mm	320x240	24MB	√	-

S7-Panel-HMI

S7-Panel-HMIs with middle and large displays – masters of the low-budget projects

With these panels you rise up into another league. What was impossible by rationality reasons can be realized now with these units. Never before your could visualize your know-how that easy and that economic in a German quality level. Use this chance to create a huge showcase to impress your customers.

The power of the new CPU-T allow functions, what where reserved for IPCs before. Use 1024 alarms, 128 events, 64 recipes with 256 elements and 256 records, 64 trend channels, 8 users unlimited and for free. Up to 5 panels can be combined with an INSEVIS S7-PLC by Ethernet.

7“ devices

7“-display (800x480 Pixel, 16:9-format, 65.000 colors) with resistive touch
Dimension front: 222x147mm, class of tightness: IP65, weight: ca. 600g
Range of operation temperature: -20°C...+60°C
Voltage supply: 24 (11...30)V DC
CPU-P: Current consumption: 150mA (typ.), Power dissipation: 3,6W (typ.)
Depth into switching cabinet: 50mm
CPU-T: Current consumption: 200mA (typ.), Power dissipation: 4,8W (typ.)
Depth into switching cabinet: 45mm

These panels with its 7″-diagonals fit perfect for medium sized applications because of its huge functionality. The modern 16:9-format allows to visualize more objects in one screen – good for trend graphs as well. The share the same cut out dimensions to allow scalable series with similar front cut outs. So you can create your own modular system without any additional costs.

10“-devices

Dimension front: 286x188mm (like PC1010), class of tightness: IP65, weight: ca. 1000g
Range of operation temperature: -20°C...+60°C
Voltage supply: 24 (11...30)V DC
CPU-P: 10,2“-display (800x480 Pixel, 16:9-format, 65.000 colors) with resistive touch
Current consumption: 200mA (typ.), Power dissipation: 4,8W (typ.)
Depth into switching cabinet: 50mm
CPU-T: 10,1“-display (1024x600 Pixel, 16:9-format, 65.000 colors), resistive Touch
Current consumption: 350mA (typ.), Power dissipation: 8,4W (typ.)
Depth into switching cabinet: 47mm

These panels have more pixels on nearly the same diagonal of 10”. The image is more fine or brilliant than before and your objects can be displayed with a higher resolution. And there is enough space and functionality to impress your customer by this brilliant and fast switching panel. The also share the same cut out dimensions to allow scalable series with similar front cut outs.

15,6“-devices

15,6“-Display (1366x768 Pixel, 16:9-format, 65.000 colors) with resistive touch
Dimension front: 410x250, class of tightness: IP65, weight: ca. 1400g
Range of operation temperature: 0°C...+50°C
Voltage supply: 24 (11...30)V DC
Current consumption: 500mA (typ.)
Power dissipation: 12W (typ.)
Depth into switching cabinet: 54mm

This size is actual the largest INSEVIS-Panel-HMI and the CPU-T has enough power to switch display menus very fast to impress your customer. Why not grading up your application by this huge panel? You will have no problem in communication with Siemens-S7-CPUs by Ethernet (active S7-communication). And you still will have no problem in your project cost estimation. Create your brand in a customized firmware to display your own automation competence.

Article-no.	CPU	Ethernet	Display-diagonal	Number of pixels (WxH)	Visualization-memory	Remote access by	
						RemoteStage	VNC-Server
HMI 700P-0-03	-P	√	7“ / 180mm	800x480	24MB	√	-
HMI 710T-0-02/ ...03	-T	2 √	7“ / 180mm	800x480	48MB	√	√
HMI 1000P-0-03	-P	√	10,2“ / 259mm	800x480	24MB	√	-
HMI 1010T-0-02/ ...03	-T	2 √	10,1“ / 257mm	1024x600	48MB	√	√
HMI 1560T-0-02/ ...03	-T	2 √	15,6“ / 397mm	1366x768	48MB	√	√

Accessories for S7-Panel-HMIs

There are available pin marked removable connectors either with lift arms or with bolt flanges to connect INSEVIS devices. This allows a explicit positioning of each pin to the signals and makes the wiring easier. The wire-contact is done by maintenance free cage-clamps for max. 1,5mm² cross sections without wire end sleeves.

A mounting set with grounding terminal is part of every delivery.

Figure of accessories	Accessories	Article-no.	MOQ (pcs)
Connectors   E-CON16 E-CONS16 (pin marked connectors for max. 1,5mm² cross sections)	**For CPU V:** Connector 2x8pin, lift arms Connector 2x8pin, bolt flanges	 E-CON16-00 E-CONS16-00	 1 1
  E-CON10 E-CONS10 (pin marked connectors for max. 1,5mm² cross sections)	**For CPU T:** Connector 2x5pin, lift arms Connector 2x5pin, bolt flanges	 E-CON10-00 E-CONS10-00	 1 1
External memory  **Hint:** S7-program runs without these cards, these parts are used for archiving / recipes / updating only	Micro SD-card 1GB (external memory) Micro SD-card 2GB (external memory) Micro SD-card 4GB (external memory) Micro SD-card 8GB (external memory)	E-MSD1-00 E-MSD2-00 E-MSD4-00 E-MSD8-00	1 1 1 1
Customized labeling **Hint:** [1] Single fix costs only, no run-time costs per single HMI	OEM- firmware with integrated customer logo Inserting stripes H with customer logo (rear)	SW-BS-OEM [1] E-LABH-00	1 100
Software **Hint:** [2] Company license, no run-time costs per single PC [3] Maintenance license due yearly, if new versions are required, otherwise only old versions do run Software available for free download at INSEVIS web sites	VisuStage ConfigStage RemoteStage ServiceStage VisuStage full version company license VisuStage full version maintenance license	- - - - SW-VS-2.0 [2] SW-VSW-2.0 [2] [3]	free download free download free download free download 1 1
Spare parts **Hint:** A mounting set with grounding terminal is part of every delivery	Additional mounting set with grounding terminal for 3,5“ and 4,3“-devices Additional mounting set with grounding terminal for 5,7“ and 7“-devices Additional mounting set with grounding terminal for 10,1“ and 10,2“-devices Additional mounting set with grounding terminal for 15,6““-devices	E-MNT35-00 E-MNT57-00 E-MNT100-00 E-MNT156-00	10 10 10 10
Part of every delivery	mounting set with grounding terminal technical data sheet	none	-

Stainless steel front plates, attached parts and customized designs on request.

Periphery

Periphery

INSEVIS Periphery – large steps with fine modules

Simplify your periphery by selecting the functionality as digital input or output bitwise by a mouse click. Assign the wiring of analog inputs as 2-, 3- or 4- wire configuration or increase the resolution from 12 to 16 bit by entering another integration time. This makes you faster and more flexible, provides more reserve I/Os and leads to a better customer satisfaction.

All INSEVIS- periphery and function modules can be used either onboard (in the periphery slots of Compact-PLCs or Panel-PLCs) or decentral (in the periphery slots of decentral periphery stations / -blocks. In every case there are 3, 7 or 11 free periphery slots to place any of these modules. The range of modules is under permanently extension by standard and custom designs.

The good viewable status LEDs, self-printable insertion stripes on metal housings are exemplary in that class. These provides a very high class impression of your product to your customer. But the best of all: the configuration software is so easy, that every configuration becomes a child´s play. Use INSEVIS external periphery like onboard periphery and do not mind about difficult addressing.

Product groups

Head stations

The easiest way to your decentral periphery
- DP303C
- DP307C
- DP311C

Digital modules

Flexible down to each bit - the compact digital modules
- PM-DI16
- PM-DIO16
- PM-DO4R
- PM-MIO84

Analog modules

Variable, precise and stable – but still enormous economic
- PM-AI4O4
- PM-AI8O2
- PM-RTD8O2

Function modules / Energy modules

Simple use of counters or energy sampling modules
- PM-DIO8Z
- PM-E-MESS-UI
- PM-E-DIFF

Fields of application

- Compact and economic decentral periphery for INSEVIS- or other external PLCs
- Modular adaption to every application by fine grades of I/Os
- Very easy configuration of decentral periphery
- Direct access to encoders, counters
- Direct accessing of energy data in the S7-process image
- Need extremely low price? Ask for your own customized designed as CAN-slave

Periphery

Communication to PLC

While onboard periphery has its access to INSEVIS S7-CPU by the integrated rear bus, the head stations of the decentral periphery communicate with the CPUS by a protocol, compatible to CANopen®. Because CAN is not so common in the S7-world, INSEVIS maps its decentral periphery only by inserting the CAN-node ID. All others is done automatically and no INSEVIS customer needs to know anything about CAN.

Periphery products, generally

Data valid for all periphery and function modules:

Property	Technical data
Operating temperature range Storing temperature range	-20°C ... +60°C (without condensation) -30°C ... +80°C
Dimension (W x H x D) Weight	20 x 108 x 70 mm ca. 150 g
Wire length unshielded (max.) shielded (max.)	 30 m 100 m
Connection technology	Cage clamp technology for cross section up to max. 1,5mm²

Hint:
More Product information to all modules are available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes

A pin marked 20-pin connector with lift arms or bolt flanges is available for every module (for PM-DO4-R only an 8pin connector)

Most important properties at a glance

High packing factor

By a module width of < 20mm lots of I/Os fit in a compact PLC or decentral head station.
A slim mounting depth of < 95mm and an angled connection layer towards the cable channel pre-assembled cable harness

Easy configurable head station

Assign decentral head stations by 2 node-IDs only.
Once directly at the head stations turn switches and once in the cost free configuration software.
That´s all.

High resolution

All analog INSEVIS-I/Os resolution is minimum 12Bit
If you allow a little more integration time to the inputs of AI4O4, you can increase this resolution up to 16Bit.
Of course without more costs. As always at INSEVIS.

Intelligent configuration

Selecting the functionality bitwise as digital input or output.
Assign the wiring of analog inputs as 2-, 3- or 4- wire configuration.
Choose between current or voltage an analog I/Os.
Do it all by a mouse click in the cost free configuration software.

Periphery

Decentral head stations

These head stations can support all INSEVIS- periphery and function modules. Either 3 or 7 or 11 free periphery slots are there for carry INSEVIS modules. The rear foils on the metal cover shows the color of the marked connector pushers to guarantee a perfect identification of signals and connector pins. This provides a very high quality impression. Every slot can be shown in customized labels.

figure shows onboard periphery (optionally)

Head stations with 3 free slots for modular onboard periphery

Dimensions: 82 x 116,5 x 92mm, Weight: ca. 400g
Range of operation temperature: -20°C...+60°C
with 3 free slots for INSEVIS periphery onboard:
- max. 48 digital inputs (24V) or 18 counter (5V/24V/RS422)
- max. 48 digital outputs (24V/0,5A) or 12 relays (230V/3A)
- max. 24 analog inputs (U/I/PT) or 12 analog outputs (U/I)
- max. 12 current- and 9 voltage measurements by E-Mess-UI

Voltage supply: 24 (11...30)V DC
Current consumption: 20 mA (typ.) ... 275 mA (max. with PMs)
Power dissipation: 0,5 W (typ.) ... 4,5 W (max. with PMs)
Sampling cycle time: 0,1 ... 0,250 ms (typ.)

figure shows onboard periphery (optionally)

Head stations with 7 free slots for modular onboard periphery

Dimensions: 162 x 116,5 x 98mm, Weight: ca. 600g
Range of operation temperature: -20°C...+60°C
with 7 free slots for INSEVIS periphery onboard:
- max. 112 digital inputs (24V) or 42 counter (5V/24V/RS422)
- max. 112 digital outputs (24V/0,5A) or 28 relays (230V/3A)
- max. 56 analog inputs (U/I/PT) or 28 analog outputs (U/I)
- max. 28 current- and 21 voltage measurements by E-Mess-UI

Voltage supply: 24 (11...30)V DC
Current consumption: 20 mA (typ.) ... 775 mA (max. with PMs)
Power dissipation: 0,5 W (typ.) ... 16,5 W (max. with PMs)
Sampling cycle time: 0,1 ... 0,250 ms (typ.)

figure shows onboard periphery (optionally)

Head stations with 11 free slots for modular onboard periphery

Dimensions: 240 x 116,5 x 98mm, Weight: ca. 800g
Range of operation temperature: -20°C...+60°C
with 11 free slots for INSEVIS periphery onboard:
- max. 176 digital inputs (24V) or 66 counter (5V/24V/RS422)
- max. 176 digital outputs (24V/0,5A) or 44 relays (230V/3A)
- max. 88 analog inputs (U/I/PT) or 44 analog outputs (U/I)
- max. 44 current- and 33 voltage measurements by E-Mess-UI

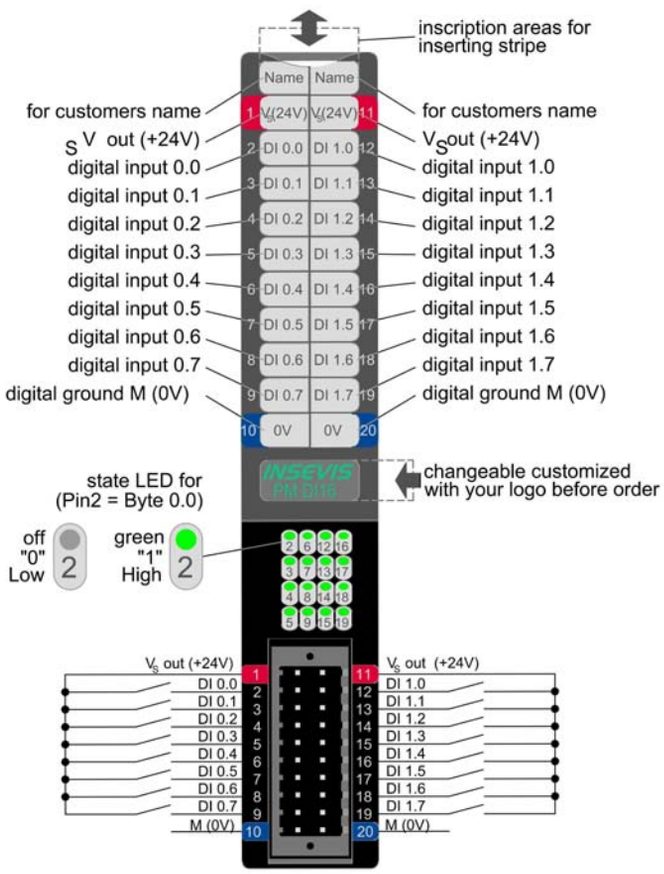
Voltage supply: 24 (11...30)V DC
Current consumption: 20 mA (typ.) ... 1275 mA (max. with PMs)
Power dissipation: 0,5 W (typ.) ... 28,5 W (max. with PMs)
Sampling cycle time: 0,1 ... 0,250 ms (typ.)

Article-name	Article-no.
Decentral head station DP303C	DP303C-02
Decentral head station DP307C	DP307C-02
Decentral head station DP311C	DP311C-02
Connector 2x5pin, lift arms	E-CON10-00
Connector 2x5pin, bolt flanges	E-CONS10-00

Periphery module DI16 (16 digital inputs 24V)

The periphery module PM-DI16 is a compact periphery module for 16 digital inputs 24V

PM-DI16



Property	Technical data
Sensor supply	short circuit proof output, current limited to 30 mA (typ.)
Load voltage L+	24V DC (11V ... 30V DC, is connected by device supply)
Digital inputs Diagnostic LEDs	16 16, green
Input voltage for signal 0 for signal 1	 0V ... +5 V +7,5V ... +30 V
Input current for signal 1	1 mA
Broken wire detection Potential separation to PLC Access of 2-wire-BERO	no no no
Input delay Output delay Sampling cycle time	90 µs (typ.) 1,4 ms (typ.) as onboard modul on the PLC = cycle synchronous

Hint:
More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes.

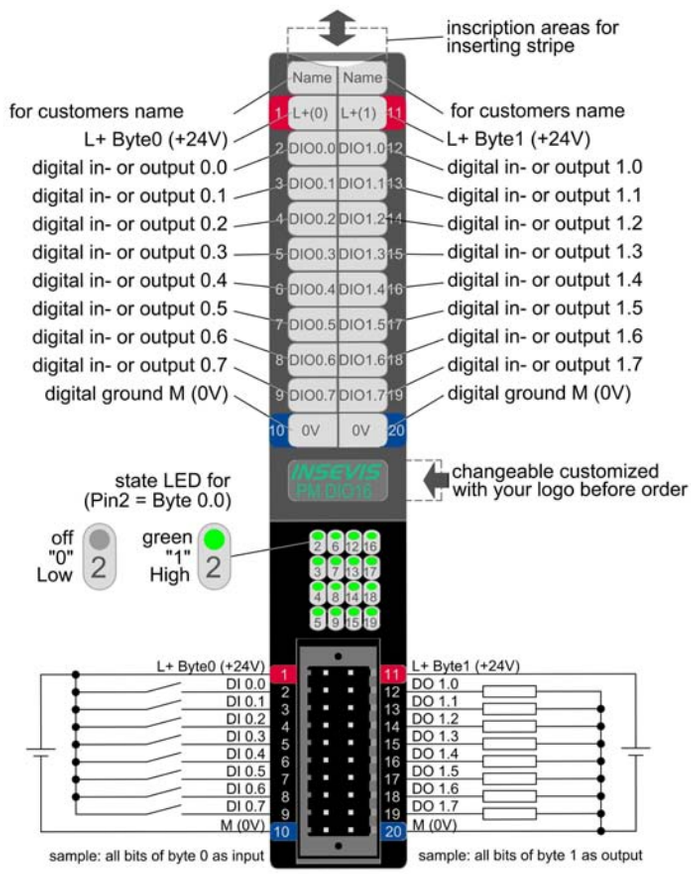
Order data	Article no.
Periphery module DI16	PM-DI16-02
Connector 2x10pin with lift arms or	E-CON20D-00
Connector 2x10pin with bolt flanges	E-CONS20D-00

Periphery

Periphery module DIO16 (16 digital in- or outputs 24V / 0,5A)

The periphery module PM-DIO16 is a compact I/O-board for 16 digital transistor outputs 24V / 0,5A, each with back-readable inputs. When the output is deselected, every bit can be used as input as well.

PM-DIO16



Property	Technical data
Load voltage L+	10 V ... 30 V DC
Current consumption Power dissipation	50 mA (max.) without load internal limited
Digital in-/ outputs	16 in- or outputs (adjustable by software) 16, green
Diagnostic LEDs	16, green

Outputs	Technical data
Output current for signal 0 for signal 1	 0,5 mA (max.) 0,5 A (max. to 60°C)
Cumulated curred per output-byte	3 A (max. to 60°C)
Signal level of outputs for signal 0 for signal 1	 1,0 V at 500 Ω (max.) L+ - 1,0 V / 0,5 A load (min.)
Input delay Output delay	50 µs (typ.) 30 µs (typ., without load)
Max. switching frequency with ohmic load	100 Hz

Intputs	Technical data
Input current for signal 1	1 mA (typ.)
Input voltage for signal 0 for signal 1	 0V ... +5 V +7,5V ... +30 V
Input delay Output delay Sampling cycle time	1,5 ms (typ.) 4,6 ms (typ.) synchronous to cycle
Broken wire detection Error diagnostic Potential separation to PLC	no no no

Hints:
Every Byte has an own voltage supply, what offers a switch-off of the whole byte.

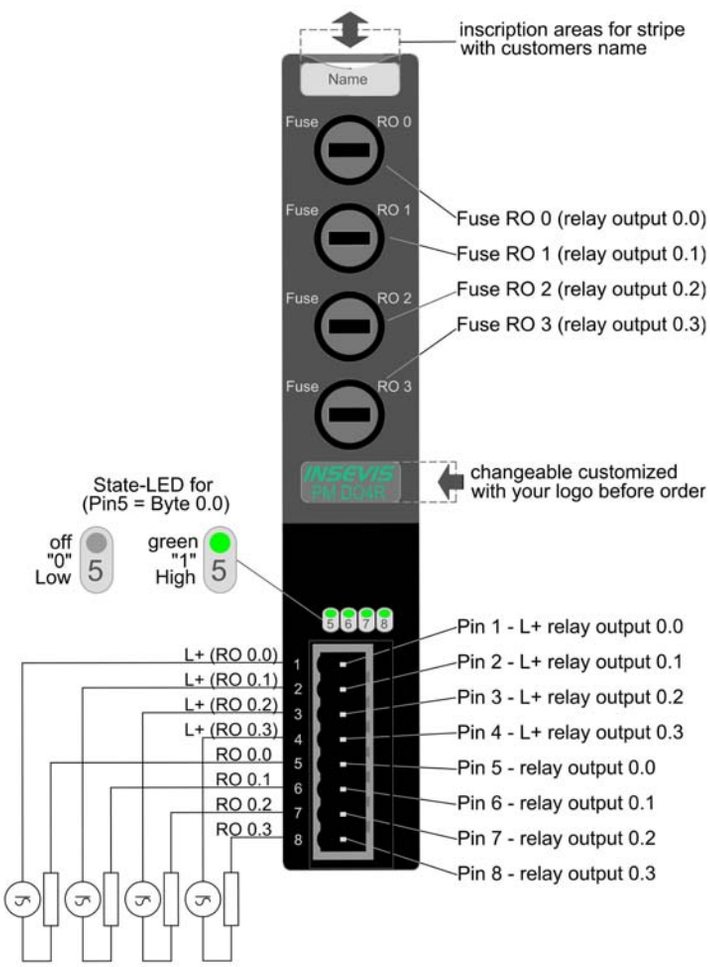
More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes

Order data	Article no.
Periphery module DIO16	PM-DIO16-02
Connector 2x10pin with lift arms or	E-CON20D-00
Connector 2x10pin with bolt flanges	E-CONS20D-00

Periphery module DO4R (4 relay outputs 230V) / 3A

This periphery module PM-DO4-R is a compact periphery module for 4 relay outputs 230V AC (4 potential separated contacts) with 4 glass bulb fuses 5x20mm (1 for each relay)

PM-DO4R



Property	Technical data
Load voltage L+	24 V (17 V ... 30 V, connected by device supply)
Load voltage L+ on the relay	30 V DC (max.), 250 V AC (max.)
Current consumption Power dissipation	45 mA from L+ (max.) 0,8 W at 24V (max.)
Digital outputs Diagnostic LEDs	4 4, green
Topography	4 potential separated contacts with fuse and RC (between Pins 1-5, 2-6, 3-7, 4-8)
Input delay	5 ms ... 10 ms (typ.)
Output delay	2 ms ... 5 ms (typ.)
Switching capacity of contacts at inductive load at ohmic load	 3A (max.) 3A (max.)
Max. switching frequency mechanical with load	 50 Hz 5 Hz
Typ. number of switching operations mechanical with 3A	 20Mio 100.000
Broken wire detection Error diagnostic Potential separation to PLC	no no yes
Short circuit proof	yes - melting fuse in glass bulbs 5x20mm (3A fast)

Hints:
Because of the fuses (must be accessible directly from the outside and need a prepared drill in the metal cover) a placement in the las 3 periphery slots is possible.

More product information to this module is available at INSEVIS-web sites in the Product / Periphery - area and contain more information for wiring and block schemes

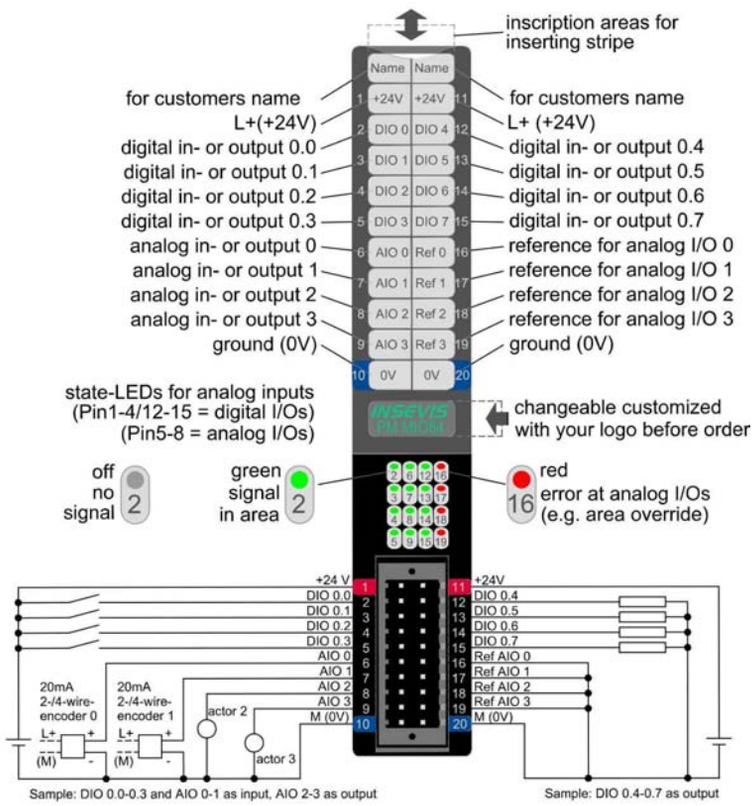
Order data	Article no.
Periphery module DO4-R	PM-DO4R-02
Connector 1x8 pin	E-CON08-00

Periphery

Periphery module MIO84 (8 digital- and 4 analog in- or outputs)

The periphery module PM-MIO84 is a compact module with mixed digital and analog inputs or outputs and counter function. It is designed for all those, who have to control. only a few digital and analog signals and maybe something to count. The I/O-configuration is done by ConfigStage-software, where the integration time is assigned (expands resolution from 12...16Bit).

PM-MIO84



Hints:
Connect Ref AIO 0..3 with ground (0V) always.

This module has an internal supply for the 2-wire encoders. So it is not necessary to care for external supply!

More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes and 3-/4 wire applications.

Order data	Article no.
Periphery module MIO84	PM-MIO84-02
Connector 2x10pin with lift arms or	E-CON20D-00
Connector 2x10pin with bolt flanges	E-CONS20D-00

Digital inputs or outputs

Property	Technical data
Load voltage L+	24V DC (17 V ... 30 V DC) connected by device suppl.
Analog inputs Input areas	4 (alternatively to outputs, what is SW-configurable) ±20 mA, 4...20 mA, 0..10 V
Diagnostic LEDs (no displaying broken wires and open inputs)	4, green: signal in valid area 4, red: override or saturation
Precision (typ.)	< 1%
Analog outputs Output areas	4 (alternatively to intputs, what is SW-configurable) 0...20mA , 4...20mA, ±10V
Diagnostic LEDs	4, green in valid area 4, red override or load error
Setting time /response time	τ =1,5 ms (typ)
Load resistance against A-GND	mA: 500 Ω (max.) V: 1 kΩ (min.)

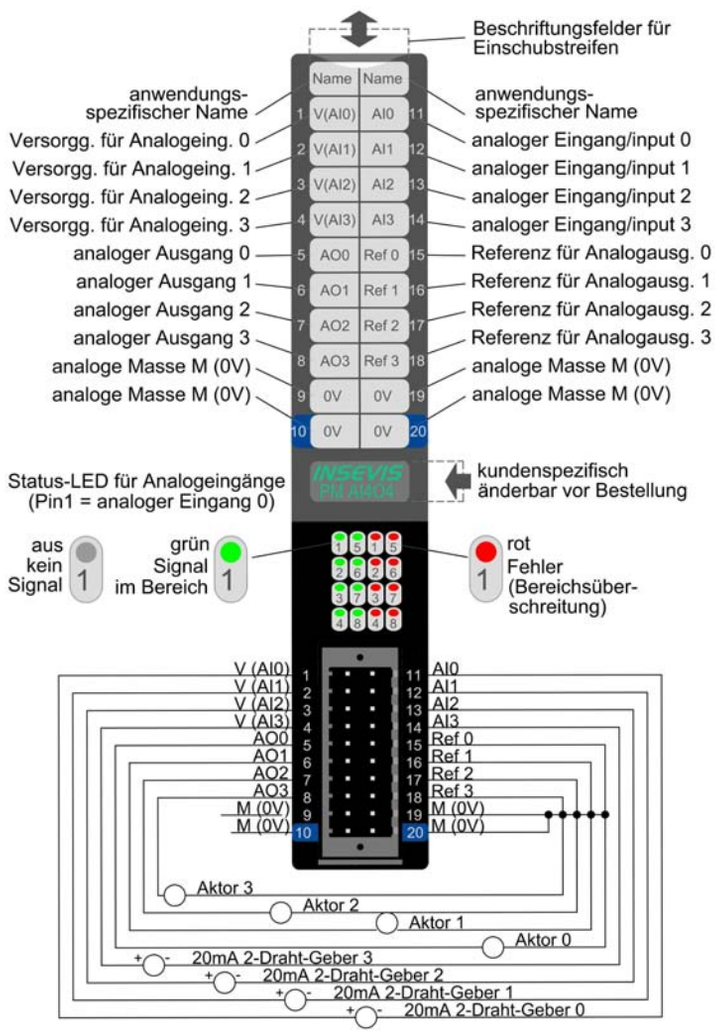
Analog inputs or outputs

Property	Technical data
Load voltage L+	24V DC (17 V ... 30 V DC) connected by device suppl.
Analog inputs Input areas	4 (alternatively to outputs, what is SW-configurable) ±20 mA, 4...20 mA, 0..10 V
Diagnostic LEDs (no displaying broken wires and open inputs)	4, green: signal in valid area 4, red: override or saturation
Specifity	< 1%
Analog outputs Output areas	4 (alternatively to intputs, what is SW-configurable) 0...20mA , 4...20mA, ±10V
Diagnostic LEDs	4, green in valid area 4, red override or load error
Setting time / response time	τ =1,5 ms (typ)
Load resistance against A-GND	mA: 500 Ω (max.) V: 1 kΩ (min.)
Resolution depending on integration time	Analog inputs: 12...16 Bit Analog outputs: 12 Bit
Precision (typ.)	< 1%

Periphery module AI4O4 (4 analog in- and 4 analog outputs)

The periphery module PM-AI4O4 is created for customers who need flexible analog I/Os. Every input and every output can assigned by ConfigStage to another value area. The resolution increases from 12 to 16 bit depending on assigned integration time.

PM-AI4O4



Hints:
This module has an internal supply for the 2-wire encoders. So it is not necessary to care for external supply!

More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes and 3-/4 wire applications.

Order data	Article no.
Periphery module AI4O4	PM-AI4O4-02
Connector 2x10pin with lift arms or	E-CON20A-00
Connector 2x10pin with bolt flanges	E-CONS20A-00

Analog inputs

Property	Technical data
Load voltage L+	24V DC (17V ... 30V DC, connected by device supply)
Current consumption Power dissipation	150 mA (max.) 4 W (max.)
Analog inputs Input area (nominal values)	4 (configurable by software) 0...20mA, 4...20mA ±10V ±5V ±2,5V 0..10V
Diagnostic LEDs (no displaying broken wires and open inputs)	4, green: signal in valid area 4, red: override or saturation
Valid voltage between inputs and A-GND (max.)	-15 V ... +24 V DC
Broken wire detection	by overrun / shortfall of metering area
Sampling cycle time = Integration time	adjustable 1ms ... 35767 ms default: 100 ms
Resolution depending on integration time	12...16 Bit
Precision (typ.)	< 1% (based on output area)

Analog outputs

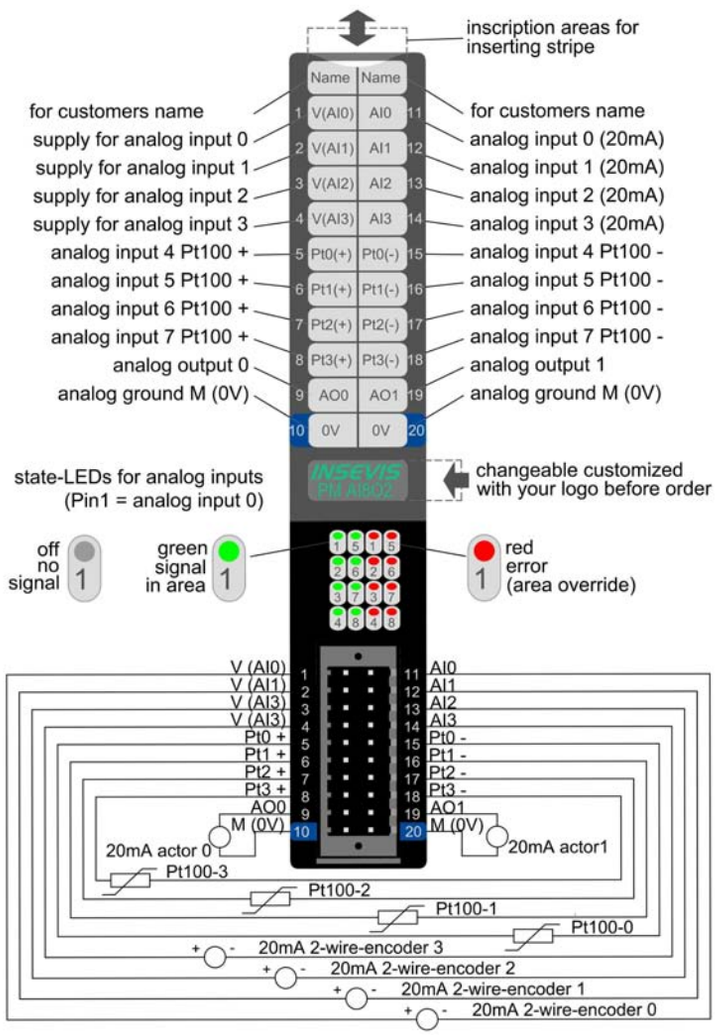
Property	Technical data
Analog outputs Output area (nominal values)	4 (configurable by software) ±20mA, 4...20mA, ±10V
Diagnostic LEDs green: Diagnostic LEDs red	4: green: signal in valid area 4 red: override(mA) / short circuit
Setting time / response time	τ =1,5 ms (typ)
Load resistance against A-GND	mA: 500 Ω (max.) V: 1 kΩ (min.)
Short cut protection	ja
Override area	20 ... 23 mA, -20 ... -23 mA 10 ... 11,3V, -10 ... -11,3V
Resolution	12 Bit
Precision (typ.)	< 1% (based on output area)

Periphery

Periphery module AI8O2 (8 analog in- and 2 analog outputs)

The compact periphery module PM-AI8O2 is a fix designed product without any software assignments. It is made as a low cost module for basic applications with PT100 and current inputs and current outputs.

PM-AI8O2



Analog inputs

Property	Technical data
Load voltage L+	24V DC (17V ... 30V DC, connected by device supply)
Current consumption Power dissipation	150 mA (max.) 2 W (max.)
Input area (nominal values)	AE 0....3: 4... 20 mA AE 4....7: PT100 metering range (80°C .. 300°C)
Override area	20 mA ... 23 mA
Diagnostic LEDs no displaying broken wires and open inputs	8 green: signal in valid area 8 rot: override (mA) or short circuit or temperature value below -50°C (PT100)
Input resistance (typ.)	150 Ω metering area 20 mA 500 Ω metering area PT100
Sampling cycle time = Integration time	adjustable 1ms ... 35767 ms default: 100 ms
Resolution	12 Bit
Precision (typ.)	< 1% (based on output area)

Analog outputs

Property	Technical data
Analog outputs	2
Output area (nominal values)	4 mA ... 20 mA
Override area	20 mA ... 23 mA
Analog outputs	2
Short cut protection	yes
Setting time	response time τ (typ) 5 ms
Resolution	12 Bit
Precision (typ.)	< 1% (based on output area)

Hints:
This module has an internal supply for the 2-wire encoders. So it is not necessary to care for external supply!

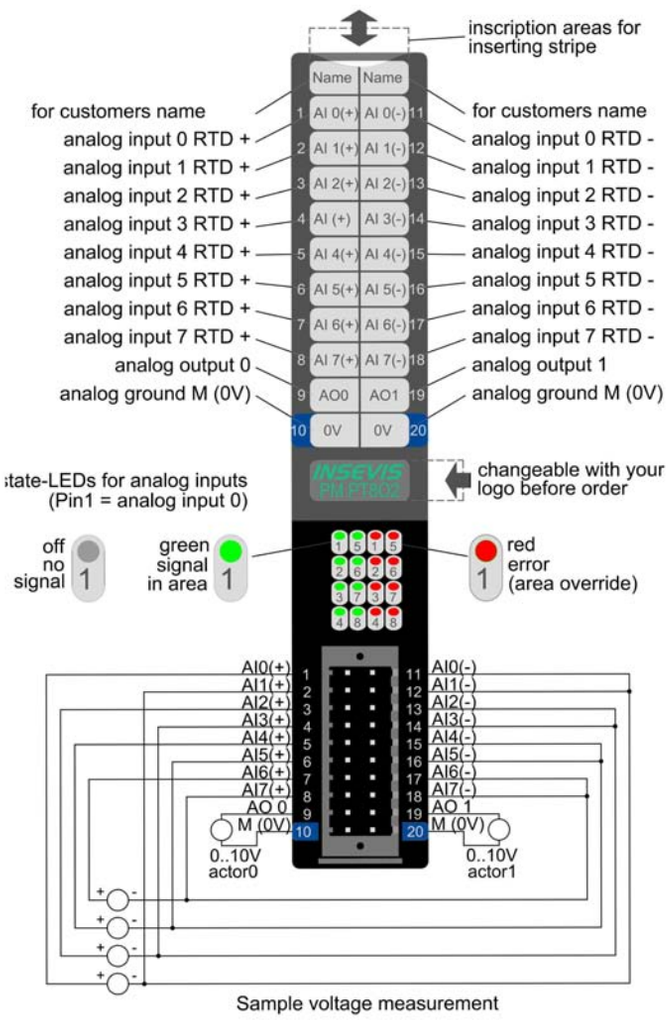
More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes and 3-/4 wire applications.

Order data	Article no.
Periphery module AI8O2	PM-AI8O2-02
Connector 2x10pin with lift arms or	E-CON20A-00
Connector 2x10pin with bolt flanges	E-CONS20A-00

Periphery module RTD8O2 (8 analog in- and 2 analog outputs)

The periphery module PM-RTD8O2 is a compact module designed for applications to measure resistances like PT100/1000, NI100/1000, KTY81 etc. There can be configured 2-, 3- and 4-wire connections, what makes this product very flexible. 2 voltage outputs are too.

PM-RTD8O2



Sample voltage measurement

Hint:

More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes and 3-/4 wire applications.

Order data	Article no.
Periphery module RTD8O2	PM-RTD8O2-02
Connector 2x10pin with lift arms or	E-CON20A-00
Connector 2x10pin with bolt flanges	E-CONS20A-00

Analog inputs

Property	Technical data
Load voltage L+	24V DC (17V ... 30V DC, connected by device supply)
Current consumption Power dissipation	50 mA (max.) 1,2 W (max.)
Analog inputs	8
Diagnostic LEDs	8 green: signal in valid area 8 red: short circuit, no displaying broken wires and open inputs
Input area (nominal values)	PT100: -50°C .. 600°C PT1000: -50°C .. 250°C Ni100: -50°C .. 250°C Ni1000: -50°C .. 150°C KTY81/1xx: -50°C .. 150°C 0 ... 300 Ω, 0... 2 kΩ
Input resistance	500 Ω (typ.) metering area PT100
Sampling cycle time = Integration time	adjustable 1ms ... 35767 ms default: 100 ms
Access of sensor	2- or 4- wire, symmetric
Broken wire detection	by overrun / shortfall of metering area
Resolution	12 Bit
Precision (typ.)	< 1% (based on input area)

Analog outputs

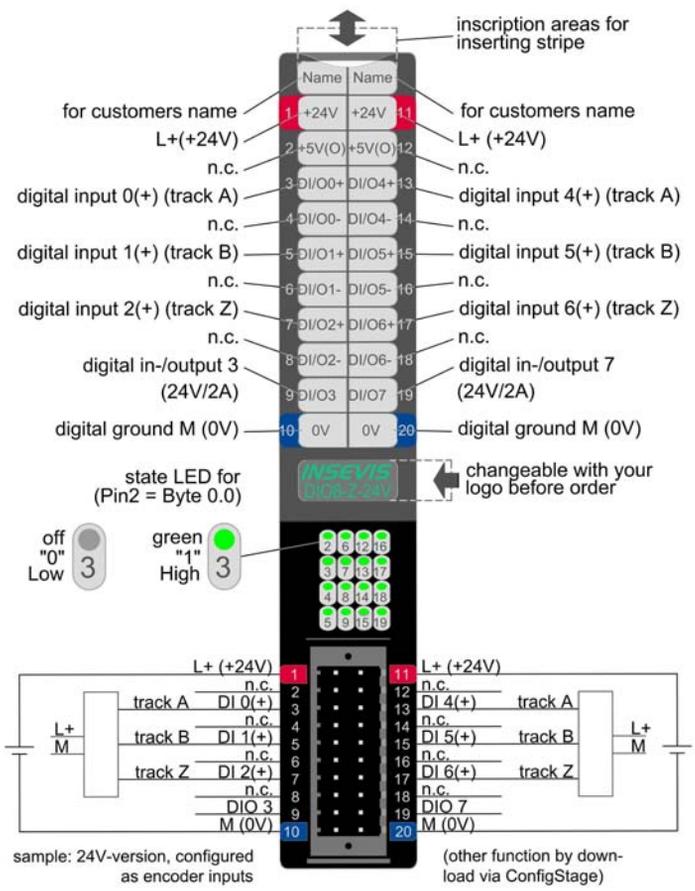
Property	Technical data
Analog outputs	2
Output area (nominal values)	0 … 10V
Override area	0 … 11V
Load resistance against A-GND	1kΩ (max.)
Short cut protection	yes
Short cut current (typ.)	32 mA
Setting time (typ)	response time τ 1,5 ms
Resolution	12 Bit
Precision (typ.)	< 1% (based on output area)

Periphery

Function module DIO8-Z (2 encoder channels and 2 digital in- or outputs)

The function module DIO8-Z is a compact counter module with 6 counter inputs. Therewith e.g. 2 encoder (A,B,Z) with 5V, 24V or 2 absolute encoder (RS422) can be connected. This module provides 2 digital inputs or outputs (2A) too.

PM-DIO8-Z



Counter inputs

Property	Technical data
Digitale inputs Diagnostic LEDs	6 inputs 6, green
Input voltage 5V and 24V	positive switching negative switching
Inputs ref. RS422	differential (ref. to RS422)
Broken wire detection Potential separation to PLC Access of 2-wire-BERO	no no no
Input delay Output delay	2 µs (typ.) 2 µs (typ.)
Max. counting frequency	125kHz (subject to change)

Digital inputs or outputs

Property	Technical data
Outputs Output signal level for signal 0 for signal 1	 1,0 V at 500Ω (max.) L+ -1,0V at 0,5A load (min.)
Output current for signal 0 for signal 1	 0,5mA (max.) 2 A (max. to 60°C) (subject to change)
Output delay	30 µs (typ., without load)
Max. switching frequency with ohmic load	100 Hz
Inputs Input signal level for signal 0 for signal 1	 0V ... +5V +7,5V ... +30V
Broken wire detection Error diagnostic Potential separation to PLC	no no no
Input delay	50 µs (typ.)

Hints:
More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and block schemes and other decoders.

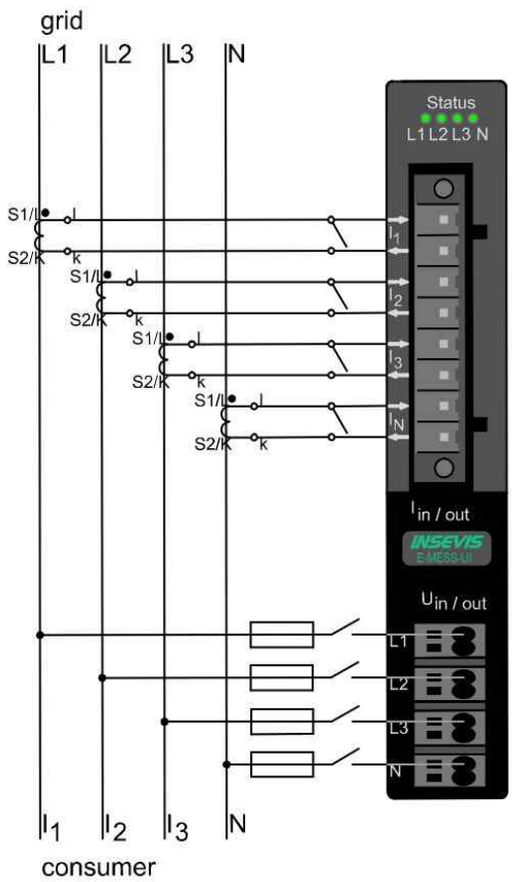
Select your functionality by freeware “ConfigStage” and download it into the DIO8Z. The S7-CPU will be informed automatically

Order data	Article no.
Function module DIO8-Z for 24V signals	PM-DIO8Z-24V-03
Function module DIO8-Z for 24V signals	PM-DIO8Z-5V-03
Function module DIO8-Z for RS422 signals	PM-DIO8Z-422-03
Connector 2x10pin with lift arms or	E-CON20D-00
Connector 2x10pin with bolt flanges	E-CONS20D-00

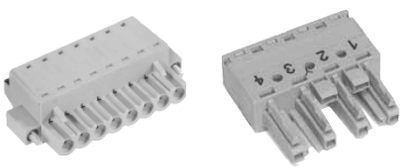
Function module E-Mess UI (3 voltage- and 4 current transformer inputs for L1-L3, N)

The function module E-Mess UI is a compact module with mixed voltage and current sampling inputs for energy measurement of a consumer in a 3 phase grid. This module samples current of 4 phases and voltage of 3 phases as well as the phase angle. An internal controller cares for the calculation of effective- and apparent power as well as -energy and power factor cos ϕ and offers all its values in the process image. Also the calculated energy sums are to find there.

PM-E-Mess UI



Both connectors for that module are part of the delivery.



Hints:

Both connectors for that module are part of the delivery. Because of its specific connectors these modules can be used on CC3xxV and DP3xxC only.

More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and data access in the periphery image.

Order data	Article no.
Periphery module E-Mess UI	PM-EMESS-UI-02

General

Property	Technical data
Use in lower and medium voltage grids	yes
Load voltage L+	Internal connected by device supply
Protection class	I
Degree of pollution	2
Power frequency	50 Hz, 60Hz switchable

Voltage measurement

Property	Technical data
3-Phase 4-Wire systems with rating voltage (L -N)	Up to 230V eff.
Overvoltage category	300V CAT III
Rated impulse voltage	4kV
Measurement range L-N	Up to max. 350V eff.
Impedance	1 MΩ / Phase
Resolution	0,1 V
Measurement precision (typ.)	0,5%
Sampling frequency	8 kHz
3-Phase 4-Wire systems with rating voltage (L -N)	Up to 230V eff.

Current measurement

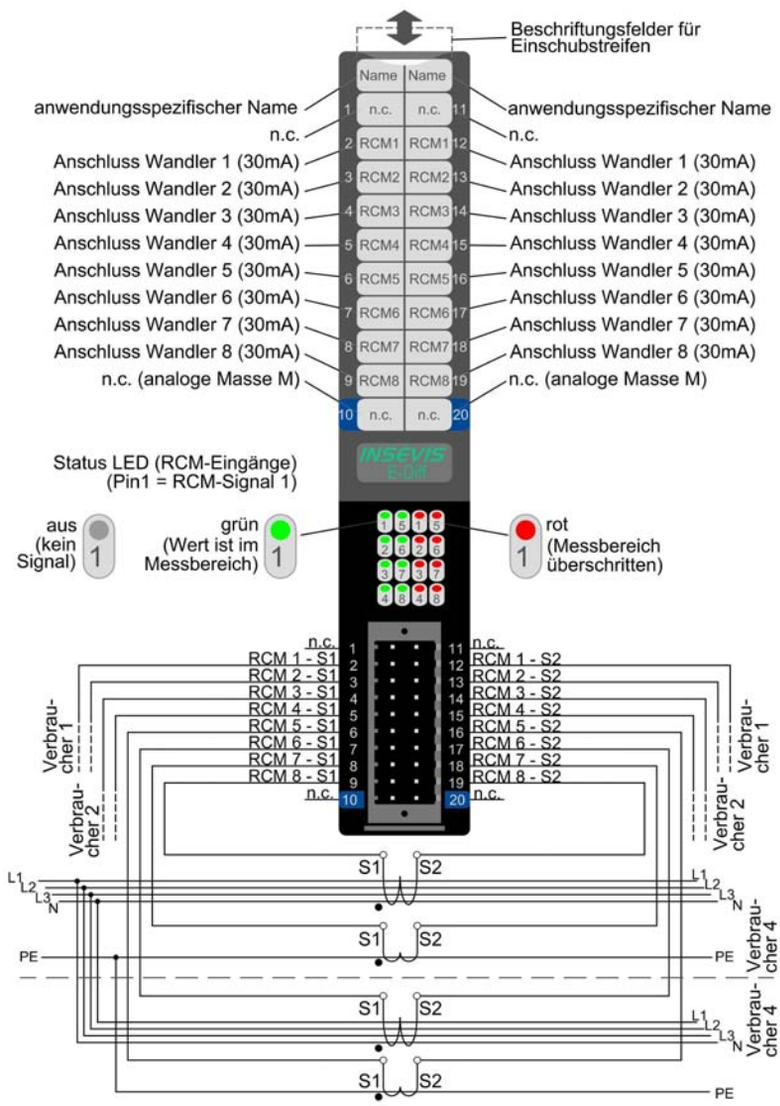
Property	Technical data
Rated current	1 / 5 A
Measurement range	0 - 6 A eff.
Impedance	14 mΩ
Resolution	0,1 A
Measurement precision (typ.)	0,5%
Sampling frequency	8 kHz

Periphery

Function module E-Diff (8 current transformer inputs)

The function module E-Diff is made for the use as residual current measurement (RCM), to monitor alternating currents, direct currents as well as pulsing direct currents. Thereby residual currents against PE can be discovered, what was possible until now only with very expensive modules out of the S7-language area. With this module now every S7-programmer can realize this solution easily with his basic knowledge.

PM-E-Diff



Property	Technical data
Use in lower and medium voltage grids	yes
Measurement range	30mA (RMS) (40mA max.)
Measurement with / without DC component	adjustable per channel
Resolution	14µA
Measurement precision	0,5% (typ.)
Adjustable current transformer ratio	1:1 … 1:1000 (individually per channel)
Sampling frequency	4kHz
Input frequency range	0..1kHz
Sampling method	Effective value sampling (true RMS)
Potential separation to PLC	none
Potential separation between sampling inputs	none (current transformers may not be grounded)

Hint:

More product information to this module is available at INSEVIS web sites in the Product / Periphery - area and contain more information for wiring and data access in the periphery image.

Order data	Article no.
Periphery module E-Diff	PM-EDIFF-02
Connector 2x10pin with lift arms or	E-CON20A-00
Connector 2x10pin with bolt flanges	E-CONS20A-00

Accessories for periphery

There are available pin marked removable connectors either with lift arms or with bolt flanges to connect INSEVIS- devices. This allows a explicit positioning of each pin to the signals and makes the wiring easier. The wire-contact is done by maintenance free cage-clamps for max. 1,5mm² cross sections without wire end sleeves.

A grounding terminal is part of every delivery of head stations. Every periphery module contains the referring rear foil, standard inserting and signal stripes.

Figure of accessories	accessories	Article-no.	OQ (pcs)
Connectors   E-CON10 lift arms E-CONS10 bolt flanges (pin marked connectors for max. 1,5mm² cross sections)	**For head stations** Connector 2x5pin, lift arms Connector 2x5pin, bolt flanges	 E-CON10-00 E-CONS10-00	 1 1
  E-CON20D lift arms E-CONS20D bolt flanges (pin marked connectors for max. 1,5mm² cross sections)	**For digital and mixed modules** Connector 2x10pin, lift arms Connector 2x10pin, bolt flanges	 E-CON20D-00 E-CONS20D-00	 1 1
  E-CON20A lift arms E-CONS20A bolt flanges (pin marked connectors for max. 1,5mm² cross sections)	**For analog modules** Connector 2x10pin, lift arms Connector 2x10pin, bolt flanges	 E-CON20A-00 E-CONS20A-00	 1 1
 E-CON08 (connector for max. 1,5mm² cross sections)	**For relay module DO4R** Connector 1x8pin	E-CON08	1
Customized labeling	Inserting stripes V with customer logo (rear)	E-LABV-00	100
Software	ConfigStage	-	free download
Spare parts **Hint:** grounding terminal is part of every delivery	Additional grounding terminals	E-MNT00-00	10

Attached parts and customized designs on request.

Notes

Software

Software

Solve complex tasks in the almost easiest way

You do not need 2 monitors or a super computer to run INSEVIS software. Be sure to get right along after months doing other jobs. And protect your intellectual property. Your know-how that it stays yours. It is easy with INSEVIS software. licenses? Not necessary for standard software.

INSEVIS software stands for the solution of complex tasks in an easy and intuitively logical way. No gadgets, no vanilla, just simple ways to create innovative automation without studying miles of manuals. No matter, if you work in the office or with you lap top to place your machine into operation. Installed in a few minutes, nearly no hardware requirements and always to run on small monitors as well.

All functions are explained in manuals or directly in embedded tool tips. Program lines for INSEVIS-SFCs are integrated in the manuals. Every panel is delivered with a sample visualization, what is explained in detail in the manuals and available as source file at INSEVIS web sites.

Products

Configuration tool

Parametrize of periphery, communication and CPU
- ConfigStage

Visualization tool

Creating, simulating, debugging of extensive visualizations
- VisuStage Lean-Version
- VisuStage Full-Version

Remote access tool

Portable software for remote visualization and data upload
- RemoteStage

Service tool

Simple tool for diagnostic, maintenance, know-how-protection
- ServiceStage

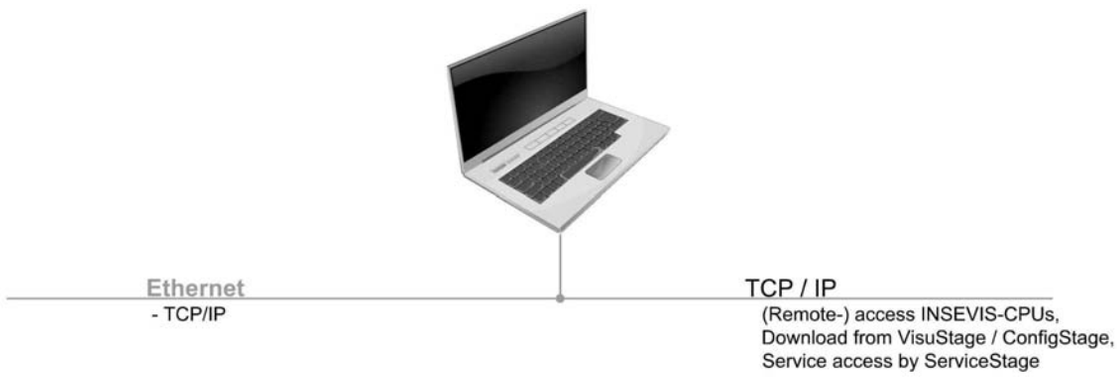
Fields of application

- Configuration and addressing of INSEVIS periphery,
- Mapping of external periphery by CAN or Modbus,
- Configuration of S7-CPU alternatively to SIMATIC®-Manager or TIA-Portal®,
- Creation of a high-class visualization including archives,
- Remote visualization and operation like at a 2nd panel,
- Display and save archives (also in a batch process),
- Diagnostic, backup, restore and update PLCs,
- Activation of the know-how protection

Software

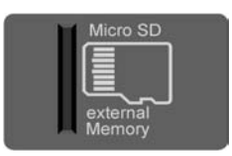
Communication between PLC and panel

INSEVIS software communicates to the INSEVIS PLC and Panel-HMI by TCP/IP. The software finds network partner automatically and can indicate it by a blink test.



External memory card

If new functions in the S7-program or visualization need an firmware update of PLC/HMI, this can be done by an Micro-SD-card in the standard FAT32-format. Also this card is needed for archiving or updating only, not to run the S7-program. Use this card only for archiving of message data, of data from DBs, of trend data as well as of data of the recipe management and for backup/restore. While updating the PLC- firmware by this card, the S7-data will kept untouched - as they were before.



Most important properties at a glance

Data archiving

Save and archive process data to the Micro-SD-card and read it back to the PLC after updating S7-program. Completely without programming device - by using INSEVIS-SFCs and SFBs. To satisfy the customers for lots of years.

Backup & Restore

Save all data easily; user program, process data, visualization and archives - protected by password as a binary file for using in an equal equipped device, what will proceed with all data from the old PLC

Unlimited languages

INSEVIS supports all languages, what are installed on the PC, where the visualization is designed. No limitation of the number of used languages in the visualization-run-time. Always Unicode16-able. Always be at home in every language of the world.

Free remote account

Use your PC-screen as 2nd panel to display and control your application remote. Import and save archive and recipe data as txt- or csv- files. Do it in a multi-instanceable way in your PC, like in a master display of a control room.

Trend management

4 time based trends with 16 channels each can be started, stopped and continued manually or by variables. Display and archive it as you want it to do. Or display x;y-value couples from DBs in function graphs

Multistructured recipes

Create up to 64 recipes with up to 256 different variables (elements), what result up to 256 data records per recipe. Export, edit it at the PC and er-import recipes, records and elements by Ethernet and via the Micro-SD-card.

Fault indicating system

Display, indicate and archive up to 1024 alarms and 128 events in all your project languages, as blinking text line or symbol, as single- or multi-line message viewer and -archive. Export this data automatically as csv-file to any network drive.

User management

Manage up to 9 user levers by run-time editable PINs. Define user based target screens and change screens depending on user level. Allow or deny access to „hot keys“ as you want to.

Integrated simulation

Compile your new visualization, get the detailed, linked failure report to debug it fast. Simulate your visualization immediately and stimulate variables, alarms and events. Make your screen shots in jpg-format for your documentation.

Import & export functionality

Import S7-variables including symbols from your SIMATIC®-Manager and TIA-portal. Export your texts for an external translation as simple csv-file and read it back into the project.

Software

ConfigStage

This cost free tool equalizes the difference between INSEVIS devices and Siemens-configuration, so that you can address INSEVIS periphery and use INSEVIS communication interfaces with SIMATIC®- Manager or TIA-Portal®. All the configurations of additional functions will be done here too and are permanently checked for addressing errors by the program itself.

The whole configuration is done intuitively in a graphic way. Periphery modules were placed on their slots by drag´n drop, decentral peripheries to the CAN-interface of the CPU. Than it will configured and parametrized and the whole configuration will be compiled into a binary file. This binary will downloaded by Ethernet into the PLC hardware system blocks. The programming by SIMATIC®- Manager or TIA-Portal® will be not affected by this procedure.

The mapping of CAN-specific data to S7-area allows a very clear and simple integration of external periphery by using the comfortable EDS (ElectronicDataSheet of CAN-slaves) -import function. This makes the „ConfigStage“ to one of the finest examples of an practical, smart and simple integration of external CANopen®-slaves into the S7-world.

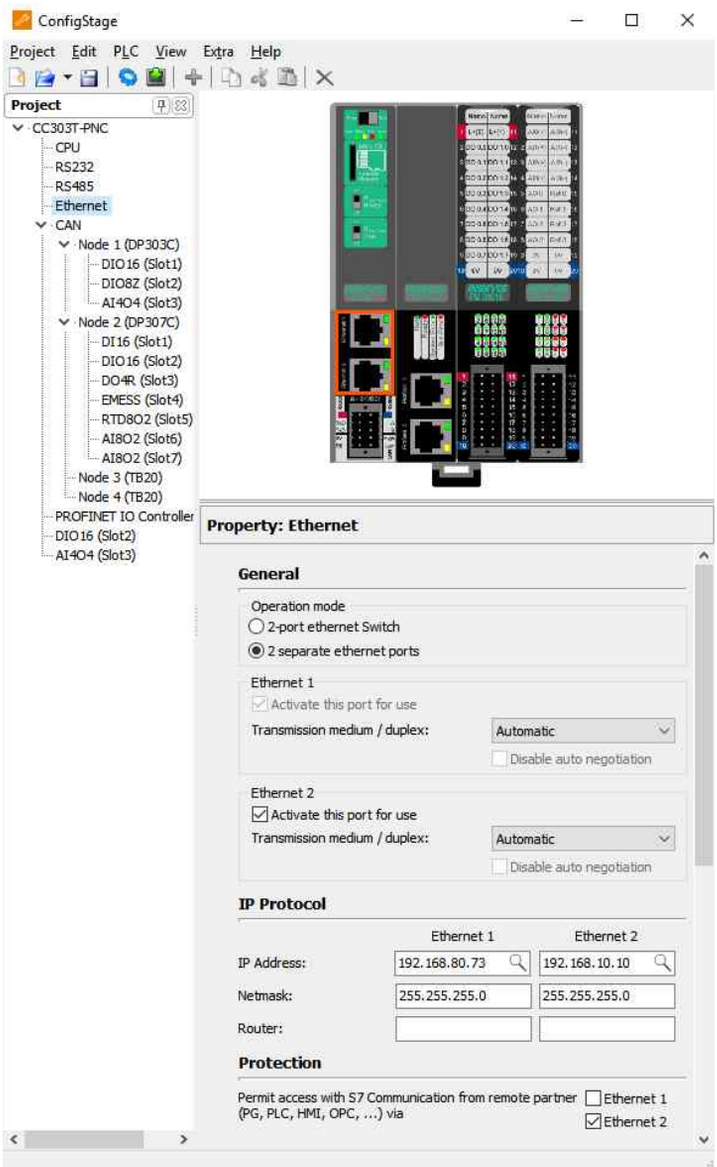


Image: Configuration of separated IP-address areas

Hint: free download of the latest version at the INSEVIS web sites in the field products → software

Property	Technical data
Operating system	Windows XP Pro Windows 7 Pro, Windows 10 Pro
Hardware requirements	Min. 5MB free disc space Monitor min. SVGA (800x480)
Installation time	< 1 minute
Operating languages	German and English
Monitoring of address conflicts	Automatically permanently (in the background)
Data formats	csproj (source file) csbin (binary file)
Configurable S7-control parameter of the S7-CPU	Startup behavior Password protection Cycle time monitoring Retentive memory Time-Of-Day interrupt Cyclic interrupt
Configurable interfaces	RS232: free ASCII RS485: free ASCII ModbusRTU Ethernet: RFC1006 (S7-communication) TCP, UDP, Modbus-TCP, Panel-HMI CAN: CANopen® (EDS-import)

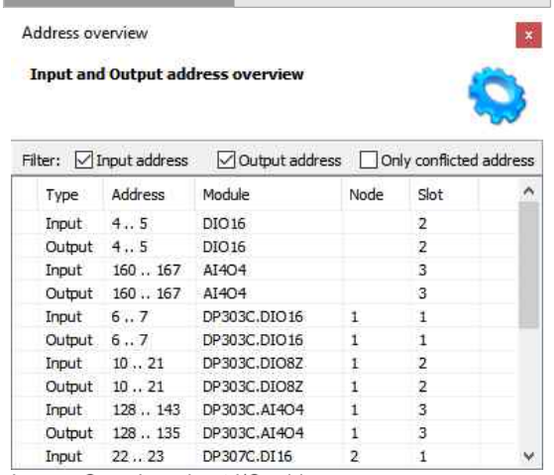


Image: Overview about I/O address areas

Ordering data	Article-no.
Software tool „ConfigStage“	None / free download

VisuStage

With the PC-visualization tool „VisuStage“ it is a simple thing to create and simulate modern high-class visualizations for beginners too. S7-variables including symbols will be imported from DBs of the SIMATIC®- Manager or TIA-Porta with a few mouse clicks including names/ symbols. Export- and import functions of texts support a professional external translating.

The handling of this software is comparable to WinCCflex® from Siemens, but easier and not so complex. It is installed in a few minutes, able to operate with one screen only and does not need special hardware. So final changes can be done right beside the machine startup.

There is a cost free version with all functions and one language only, what is enough for a simple visualization. Those, who need more languages pay a very low company license for endless number of installations in their company. After first installation the „VisuStage“ runs 30 days in full language-mode and than works on as cost-free single-language version. A yearly company maintenance license secures that always the latest version with the newest features can be used in the whole company. Those, who do not like maintenance, work on with the last installed version of their company or with the free license.

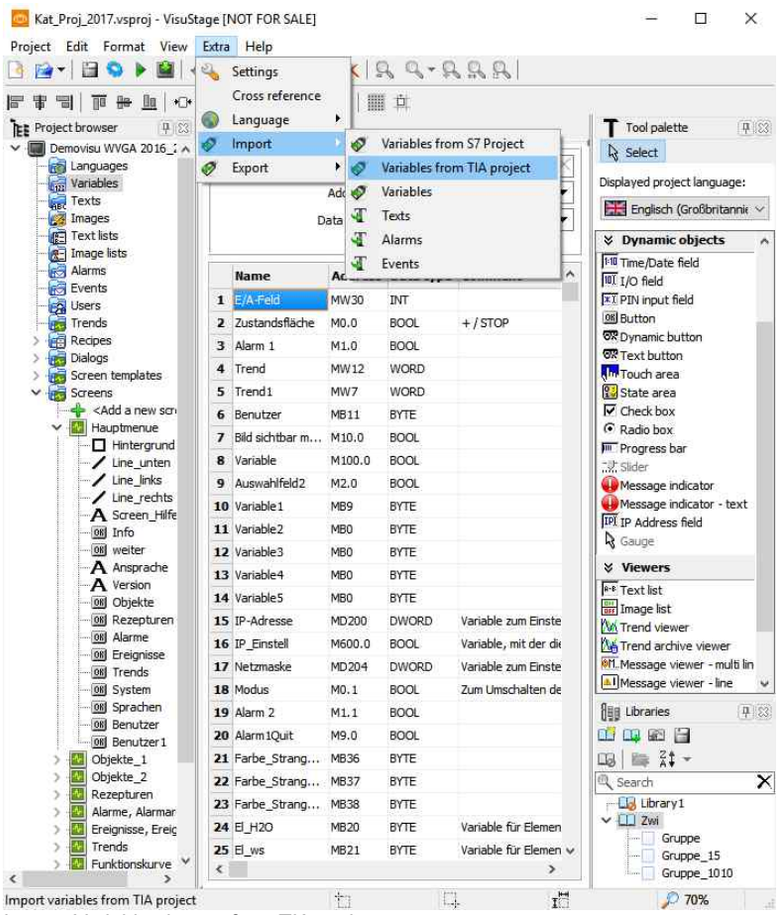


Image: Variables import from TIA-project

Property	Technical data
Operating system	Windows XP Pro Windows 7 Pro, Windows 10 Pro
Hardware requirements	Min. 20MB free disc space Monitor min. SVGA (800x480)
Installation time	< 3 minutes
Operating languages	German and English
Data formats	vsproj (source file) vsres (resource) vsbin (binary file)
Number of languages	Unlimited (Full version*) 1 language (Lean version) * (all languages, what are installed on the VisuStage-PC)
Export- / Import-functions	For Variables, common tests and message texts and for images (bmp, jpg, png)
Error message system	Max. 1024 alarms, (archivable) Max. 128 events, (archivable)
Trends	4 trends with 16 Channels each
Recipe management	Max. 64 recipes with max. 256 elements in max. 256 data records
User management	9 layers PIN-identification
Screen functions	Screen saver, dim and switch off backlight
Buzzer	Warn and click tone
Library function	Integrated
Simulation	Integrated, with stimulating of variables, message simulation and screen shot function

Hint: free download of the latest version at the INSEVIS web sites in the field products → software

Ordering data	Article-no.
Software tool „VisuStage“	None / free download
Company license full version „VisuStage“	SW-VS-02
Maintenance license full version „VisuStage“	SW-VSW-02

Software

RemoteStage

With the cost free software tool „RemoteStage“ can be realized remote visualizations out of the binary of an existing visualization for free. It works like a 2nd panel and is connected to the PLC by Ethernet S7-communication. This allows a very low data transfer, because only process data will be transferred. There can work more instances at one PC, what allows a master display functionality for free.

But not only remote visualization and controlling is possible, this tool uploads all archived data and trend to show it on the remote PC and can save it as csv-file as well. Recipes can by modified at the PC and downloaded to the remote device, what helps for a simple handling.

This program is available as portable version only, it is not to install. That is necessary to integrate the remotestage.exe into a batch process, what e.g. collects all archived date from the PLC and saves it to any network drive you assign in the batch file.

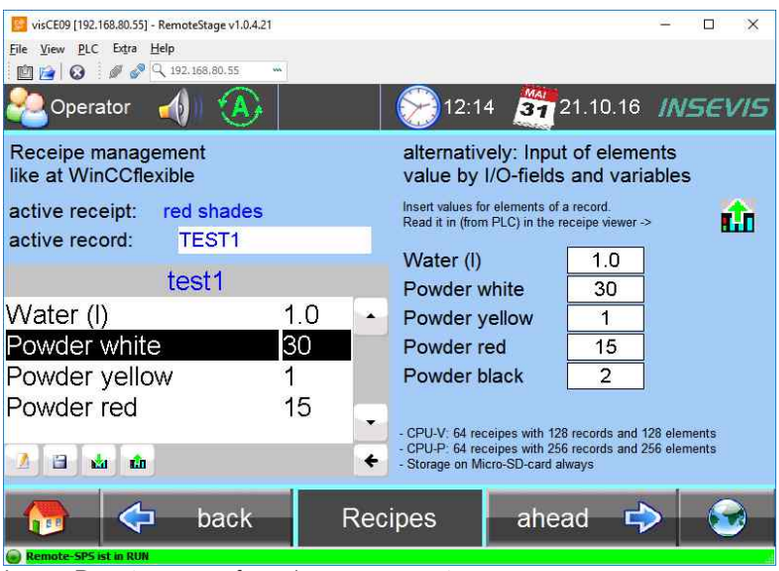


Image: Remote screen of a recipe management

Property	Technical data
Operating system	Windows XP Pro Windows 7 Pro, Windows 10 Pro
Hardware requirements	Min. 2MB free disc space Monitor min. SVGA (800x480)
Installation time	None, it is an execute file
Operating languages	German and English
Remote visualization of following archives at Panel-PLC and Panel-HMI	1024 alarm archives, 128 event archives, 4 trends with up to 16 channels each, 256 recipe data records with up to 256 elements, Data (DB) -archives (Panel-PLC only)
Remote visualization of following archives at Compact-PLC	Data (DB) -archives
Format of the saved archive files	csv- format
Batch processable	yes
Multi instanceable	yes

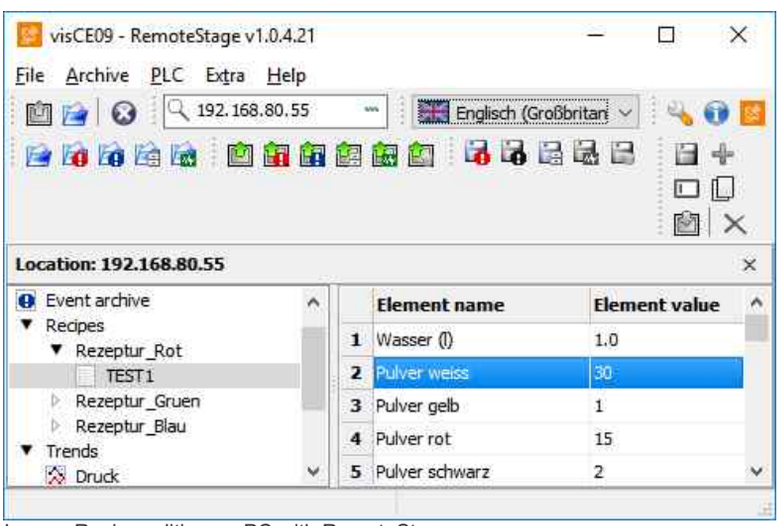


Image: Recipe editing on PC with RemoteStage

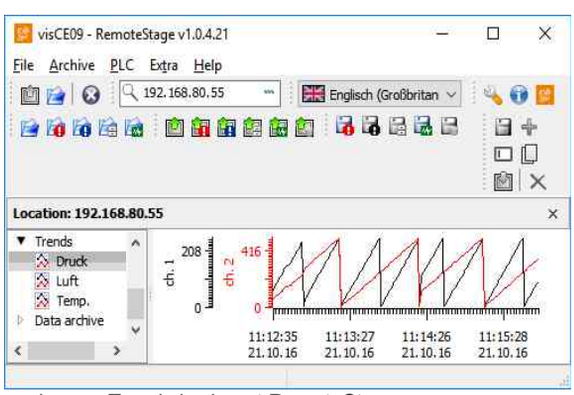


Image: Trend viewing at RemoteStage

Hint: free download of the latest version at the INSEVIS web sites in the field products → software

Ordering data	Article-no.
Software tool „RemoteStage“	None / free download

ServiceStage

The cost free software tool „ServiceStage“ is developed for the maintenance crew, what need to make diagnostics and updates on existing controllers. For that not expensive hard- and software is need, only this „ServiceStage“. The controller can be found and indicated by Ethernet easily.

There is no risk af illegal data loss, because this software uses no source files, it downloads WLD-file (S7-program) and binaries (visualization and configuration) to the PLC. And another security option worth to think over: uncrackable read or read/write protections. No password, only deletable by downloading an unprotected program, what only the real owner has.

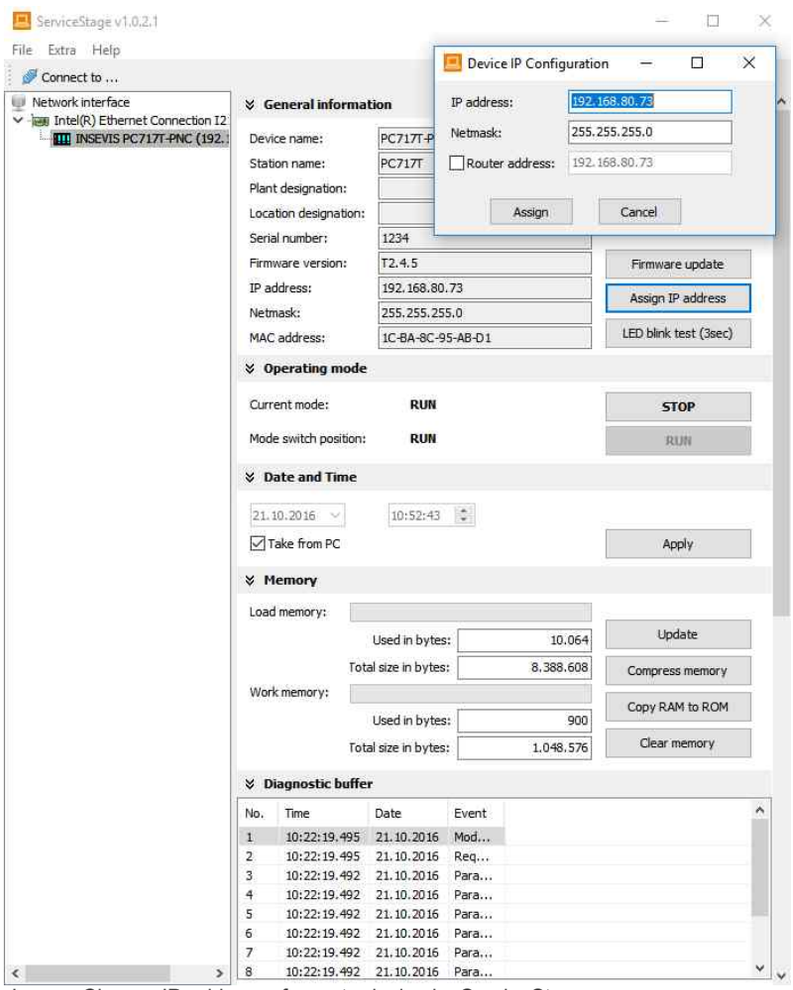


Image: Change IP-address of remote device by ServiceStage

Property	Technical data
Operating system	Windows XP Pro Windows 7 Pro, Windows 10 Pro
Hardware requirements	Min. 5MB free disc space Monitor min. SVGA (800x480)
Installation time	< 1 minute
Operating languages	German and English
Service functions	Firmware update (CPU-T)
	Identification of the target device in the network
	Read device specific data (Ser.-no., firmware version, IP-address (editable), MAC-address, etc.),
	Change of the operating mode RUN ↔ STOP,
	Set and synchronize date and time
	Memory diagnostics and -compression
	Read and save diagnostic buffer of the CPU
	Download of the S7-programs, of the visualization and configuration binaries
	Automatic creation of Backup data files
	Set know-how-protections Read / Read/Write

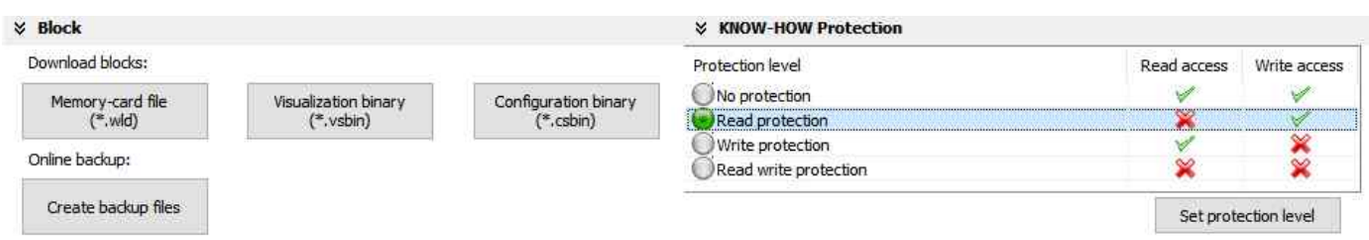


Image: Block download, backup file creation and Know-how protection

Hint: free download of the latest version at the INSEVIS web sites in the field products → software

Ordering data	Article-no.
Software tool „ServiceStage“	None / free download

Notes

Energy management

Energy management

INSEVIS S7-energy management – simple to create and to expand – always

INSEVIS products stand out of the multitude of energy meters: By an EMB-safe metal cover, by its simple programming and by its expansive visualization. It was never that easy to sample energy data and to integrate these data into the S7-automation environment. Forget about mounting black boxes for metering every consumer – collect it all in one PLC, display it remote at the head offices PC and provide all required data directly to the OPC by S7-protocol.

Equal if it is used for sampling voltage or current, for calculating power or energy data by E-MESS UI or for continuous controlling of residual currents with E-Diff or for an intelligent reduction of power peaks to optimize the energy contract situation; these products offer multiple benefits for every S7-programmer. With these products every S7-programmer can realize this solution easily with his basic knowledge now.

Products

Energy sampling by E-Mess

Sampling of current and voltage values for L1, L2, L3 and N with:
- all PLC with CPU-V
- all DP3xxC
- PM-E-Mess-UI

Reduction of power peaks by E-Max

Optimizing of Load times by switching off consumers with:
- all PLC
- all DP3xxC
- PM-DIO16

Detection of residual current by E-Diff

Continuous RCM- control for early warnings with:
- all PLCs
- PM-E-Diff

Fields of application

- Integration of energy metering directly into the S7-PLC of each application,
- providing energy data directly to OPC by S7-protocol,
- Energy monitoring ref. to EN ISO 50 001 / DIN EN 16 247,
- Optimize power peaks to optimize the energy contract situation,
- continuous measurement of residual currents as fire precautions in buildings

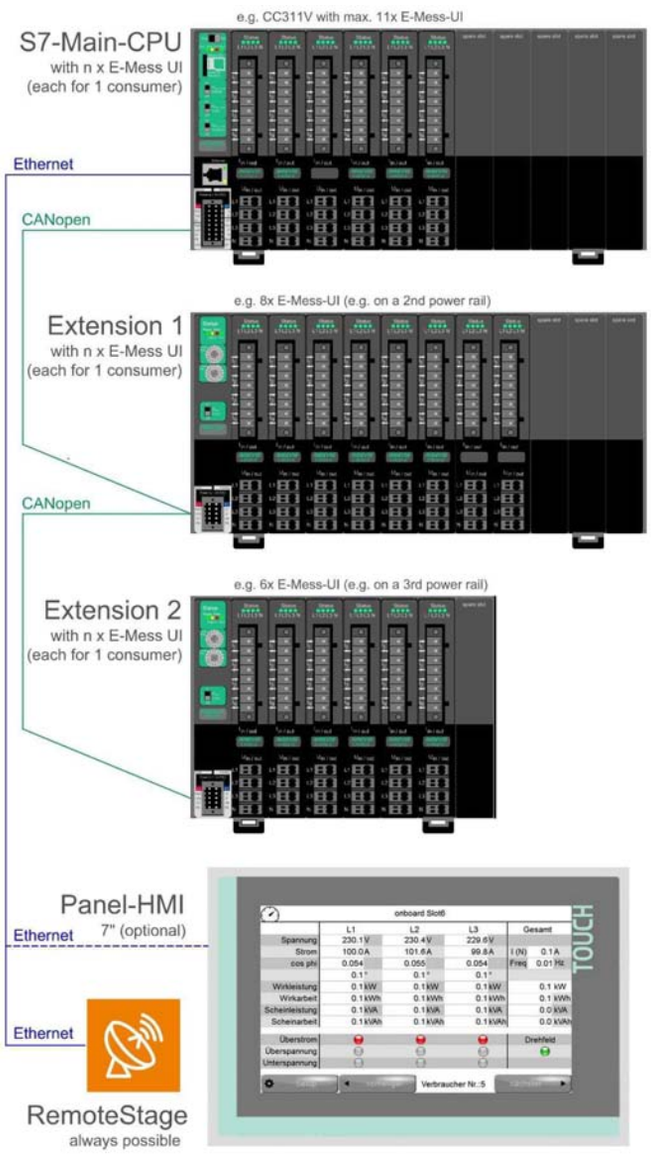
System topologies – exclusive solutions for power metering or load management

There are separated applications for energy metering by E-Mess UI- periphery modules and load management for selected consumers.

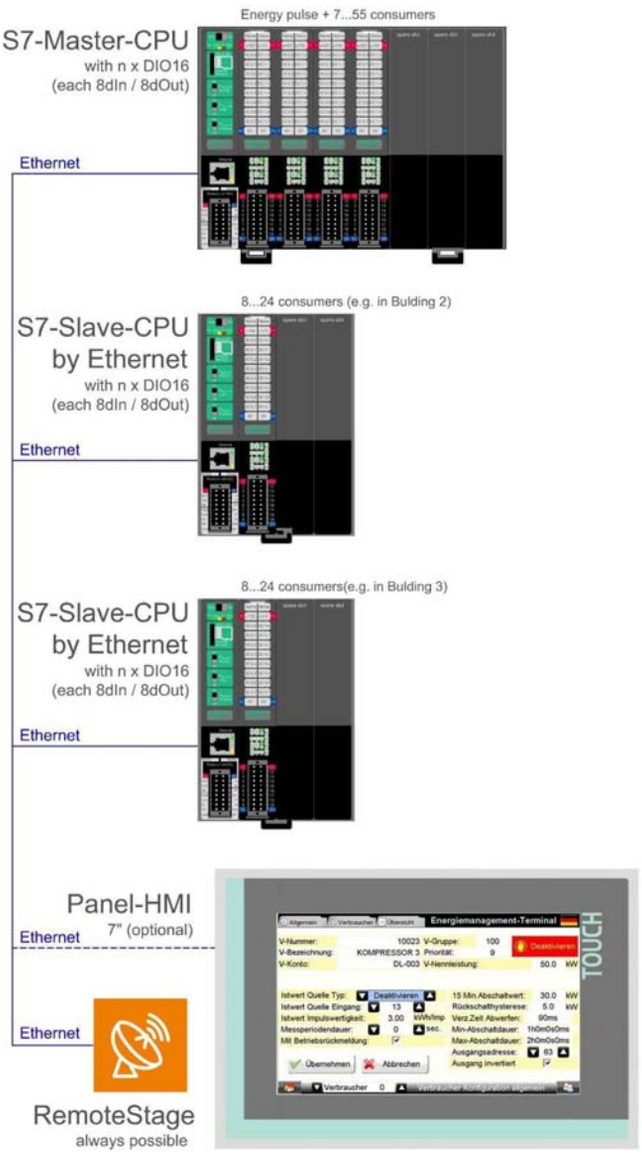
Instead of using multiple energy meters as single devices and to cut out multiple holes for that it much is easier to realize this solution by multiple periphery modules in one PLC or expand it on decentral periphery blocks with more E-Mess beside the PLC in the main power distributing cabinet, All the sampled and calculated data can be transferred by S7-protocol directly to OPC – with the basic knowledge of each S7-programmer.

For the load management is an Ethernet-based connection very important, because there can be connected subsidiaries far away easily. They receive their energy data by digital pulses or from other energy meter by Modbus (serial/RTU or Ethernet/TCP). The expansive consumer configuration (priority, minimum Off/on-times, groups, etc is done once remote).

E-Mess topology
(exclusive energy metering)



E-Max topology
(exclusive load management)



These both topologies are shown as samples of the respectively exclusive application for

- **energy metering** (measurement with adding and storing as energy balance ref. DIN EN ISO 50 001)
  OR as
- **intelligent load management** (with receiving power data from external data by digital signal or Modbus RTU / TCP).

Therefore are available free sample programs and visualizations at the download area of INSEVIS web sites.

Alternatively exist expansive S7-programs and visualizations as complete solution as license, containing consultancy of qualified programmers on request. You will be assisted by certified distributors of INSEVIS, who all service from provide methods of solutions, offer, delivery and finally implementing and bringing into operation as well.

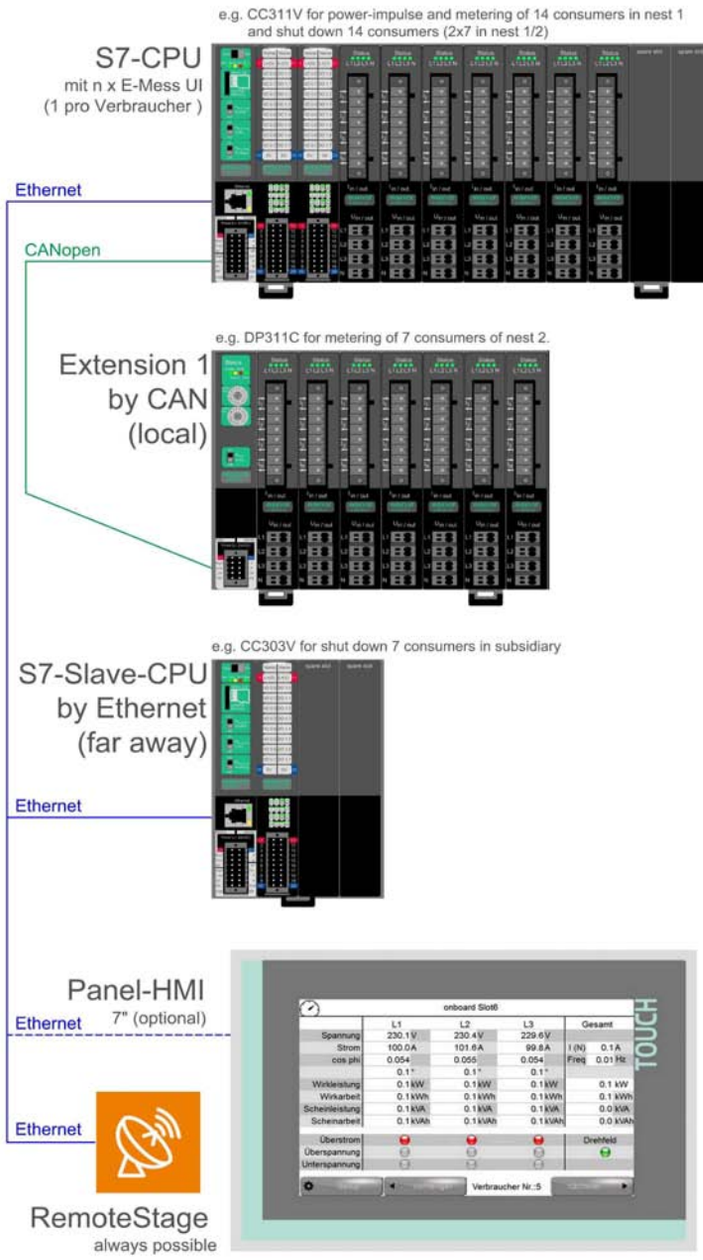
Energy management

System topologies – mixed solutions for power metering and load management

In the most applications both solutions were needed in a single system (e.g. energy metering by E-Mess UI- periphery modules and just with these data load management for selected consumer by a periphery module DIO16). Additionally residual currents can be controlled continuously with a periphery module E-Diff (up to 8 currents with a single module) and can be processed by an individual S7-program made with common S7-knowledge. With only a single periphery module E-Mess UI a solution can (beside its designate us of machine controller) provide its energy balance to the superior control system (OPC).

E-Mess- / E-Max topology

(mixed energy metering and load management)



This topology shows a sample of the respectively exclusive application for

- **energy metering** (measurement with adding and storing as energy balance ref. DIN EN ISO 50 001)
  AND as
- **intelligent load management** (with receiving power data from external data by digital signal or Modbus RTU / TCP).

Therefore are available free sample program and visualization at the download area of INSEVIS web sites.

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INSEVIS

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