

systron® S 200 - S 250 - S 250c

CPU systron® S 200 - S 250 - S 250c

- ✓ 45 mm width
- ✓ Flexible and expandable
- ✓ Easy to use software
- ✓ for bus connection (S 250/ S 250c)



CPU to the process modules

With these CPUs, the system works as a small modular PLC. With its programming interface RS 232 the PLC is programmable with all PCs without need of a special interface. Programming is done according to IEC 1131-3 with instruction list, function diagram or ladder diagram. Program modules including counters, timers, PID loop controllers and many more are integrated in the operating system.

Stand-alone PLC

With S 200, the system works as a small, modular PLC. Expandable with I/O modules, systron® PM is the solution for PLC applications where small mechanical size is critical.

Decentral intelligence at the fieldbus

Combining a bus module with a CPU S 250 or S 250c results in a fieldbus station with its own intelligence.

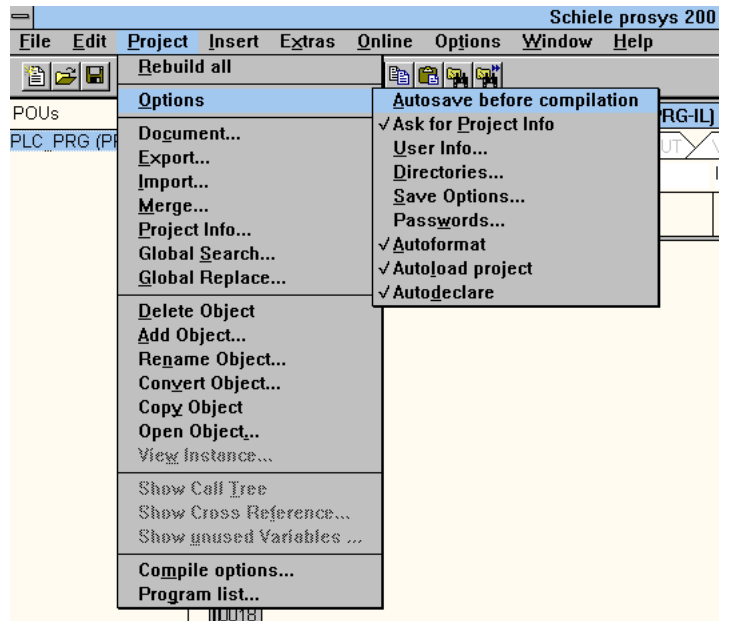
It is a slave at the bus, but able to process a separate program. It is possible to preprocess data, to execute function parts, or to enable processes in case of bus failures.

Both CPUs can be used as stand-alone PLCs - for processes that require more complex performance.

S 250 and S 250c offer memory of 2 k instructions. S 250c additionally has indirect, retentive memory of over 6100 flag words - ideal in cases where a large data memory is needed.

S 250c additionally contains a real-time clock as a program module in its operating system.

Easy to use software according to IEC 1131-3



Programmable logic controller systron® S 200



- Integrated EEPROM memory for 2048 instructions
- Expandable with up to 12 expansion modules systron® PM
- Programming interface RS 232
- High-speed counter input (max. 10 kHz)
- Electrical isolation between external supply, processor, programming interface and high-speed counter

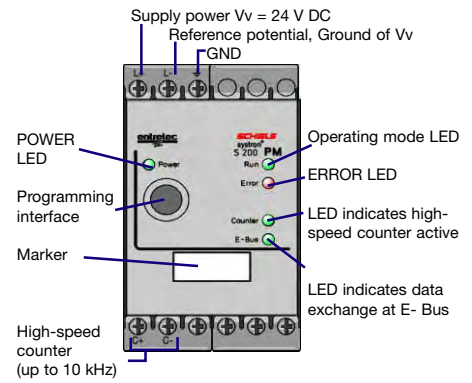
Operation

The S 200 is the CPU for process modules. Per application requirements, connect I/O modules and intelligent modules by a flat ribbon cable.

S 200 contains an operating memory (EEPROM) for 2k instructions and a full range of programming commands. The programming system is compatible with the WINDOWS operating system and complies with IEC 1131-3.

■ Approvals:

Design



Micro PLCs	P/N:
systron® S 200	2 423 410 00
Accessories	P/N:
Connection cable S 200 - PC	2 423 419 00
Programming software prosys200 acc. to IEC 1131-3	
German	2 423 405 50
English	2 423 405 51
French	2 423 405 52
System Manual systron® S 200/ S 250	
German	2 423 402 50
English	2 423 402 51
French	2 423 402 52

Maximum configuration

- ⇒ 12 Expansion modules total
- ⇒ max. 6 of each type
- ⇒ internal supply for expansion modules 400 mA max.

Technical data

Supply voltage	20...30 V DC	
Power consumption	60...320 mA at 24 V, depending on configuration	
Residual ripple	< 10%	
Reverse polarity protection	diode	
Supply for expansion modules	500 mA up to 45 °C 400 mA up to 55 °C	
Built-in memory	4 KByte EEPROM/2048 Instructions	
Maximum configuration		
Inputs digital	48	
Inputs analog	24	
Outputs digital	Transistor	48
	Relay	24
Outputs analog	24	
Timers	32	
Counters	32	
High-speed counter	1, 10 kHz	
Instructions	2 K	
Flags bit	512	
Flags word	256	
Retentive flag words	16	
Cycle time	Bit/Word	2.4 ms/ K 4 ms/ K
Programming interface	RS 232, electrically isolated Socket, 8-pin, Mini-DIN	
Display of operating status		
POWER	green LED	
ERROR	red LED	
Expansion bus (E-Bus)	green LED	
High-speed counter (Counter)	green LED	
RUN	green LED	
Dielectric withstand		
External connections against internal connections	acc. to VDE 0160, 500 V AC	
Vibration and shock acc. to IEC 68-2-6	10...57 Hz constant amplitude 0.15 mm 57...150 Hz constant acceleration 2 G	
Noise immunity	acc. to IEC 801-2 acc. to IEC 801-4	
Operating temperature	0 ... +55 °C	
Storage temperature	- 25 ... +75 °C	
Terminals, screw	max. 2 x 14 AWG (2 x 2.5 mm ²)	
Weight	0.44 lb (200 g)	
Dimensions (W x H x D)	45 x 82.5 x 100 mm	

Max. no. of expansion modules per S 200

- 48 digital inputs with 6 PMI modules
- 48 digital outputs with 6 PMO transistor modules
- or
- mixed configuration with PMO Relay, but 6 PMO modules maximum
- 24 digital outputs with 6 PMO Relay modules
- 24 analog inputs with 6 PMAI
- 24 analog outputs with 6 PMAO
- 4 high-speed counters PMC
- 8 BALLUFF linear displacement transducers with 2 PMT
- 24 potentiometers with 6 potentiometer modules PMP
- 24 values with 6 measuring and monitoring relays PMM

Integrated functions

- max. 48 inputs / 48 outputs digital
- max. 24 inputs/ 24 outputs analog
- 512 bit- and 256 word flags
- 32 timers, 32 counters
- cycle time 2.4 ms for 1024 binary instructions
- arithmetics and PID controller integrated in the operating system

systron® S 250 and S 250c - Intelligence at the bus



CANopen

DeviceNet™

MODBUS

RS 232

RS 485



- ⇒ Data pre-processing for bus communication
- ⇒ Continues processing if bus fails
- ⇒ Powerful PLC single station



S 250:

- ⇒ 4 k instructions
- ⇒ up to 12 expansion modules to be connected for use with or without fieldbus module

S 250c:

- Also includes
- ⇒ real-time clock integrated as program module
 - ⇒ high-capacitive retentive data storage
 - ⇒ 10 years buffer time without external supply voltage

Starter kit S 200 - IEC 1131-3



The automation kit ...

PLC S 200 provides:

- Simplicity of operation
- Minimum learning curve
- Low cost

The set contains...

Basic combination with the modular PLC systron® S 200 includes

- CPU S 200,
- one digital input module PMI with 8 inputs 24 V DC,
- one digital output module PMO with 8 transistor outputs,
- programming software according to IEC 1131-3,
- connection cable PC - S 200,
- operating manuals for PLC and software.

Required is an IBM compatible PC and a 24 V DC power supply. No special interfaces or plug-in cards are needed.

Programming is simple and easy to use; format can be an instruction list or ladder diagram.

	P/N:
Starter kit S 200 English	2 423 410 71
Starter kit S 200 German	2 423 410 70
Starter kit S 200 French	2 423 410 72

Programming

S 200, S 250 and S 250c offer a programming interface RS 232 and can be programmed with every PC (DOS/ WINDOWS).

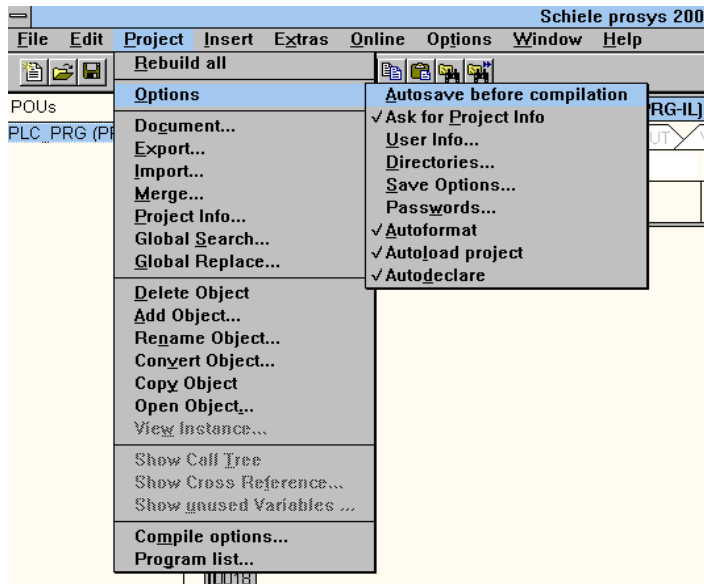
2 programming sets are available:

sh400

sh400 has easy to use software that runs directly under DOS. It offers programming in instruction list or ladder diagram.

IEC 1131-3-Software prosys200

IEC-Software prosys200 runs under MS-WINDOWS and offers programming in the format of instruction list, function list, or ladder diagram.



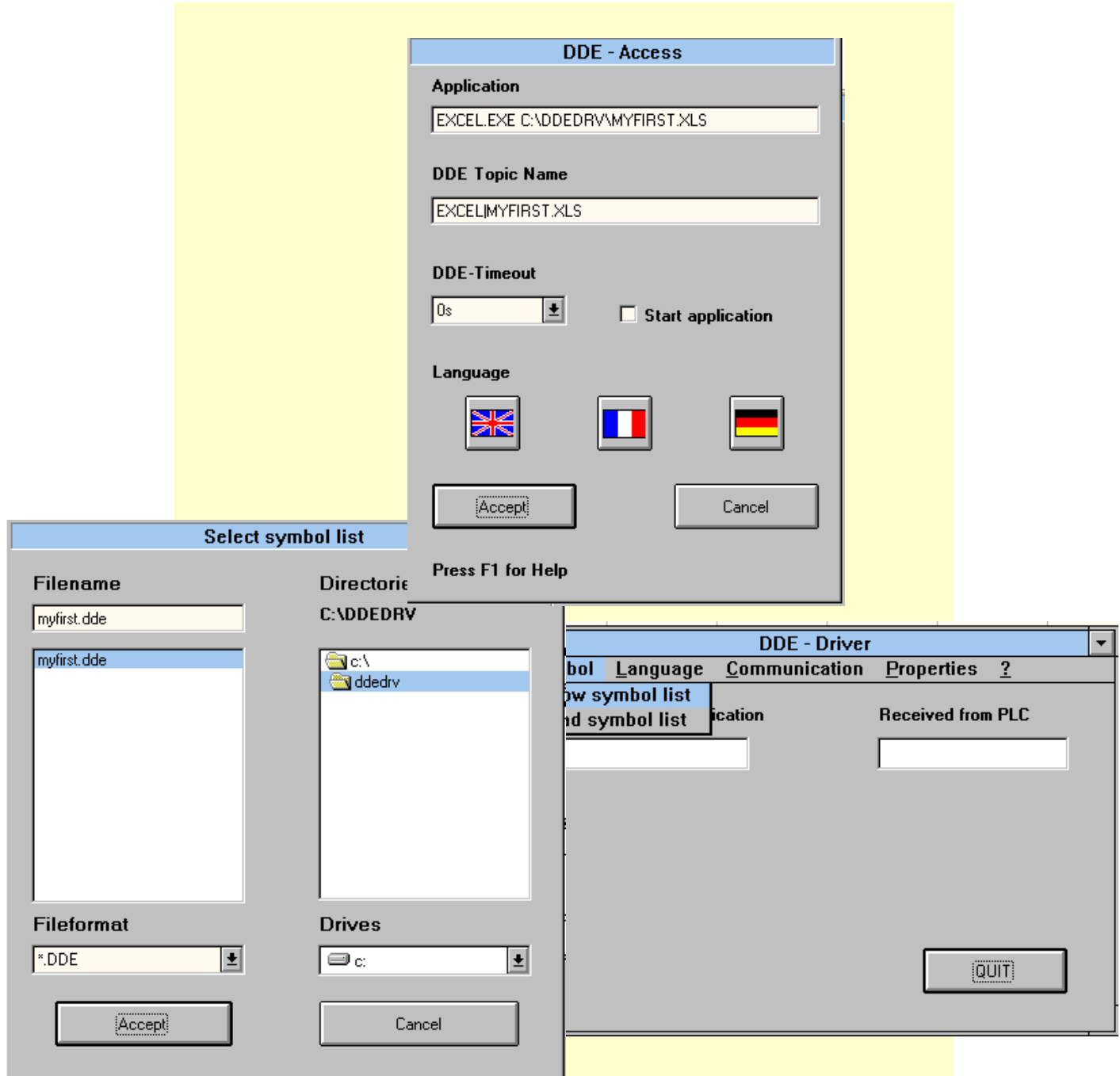
Software

prosys 200 acc. to IEC 1131-3	English	2 423 405 51
	German	2 423 405 50
	French	2 423 405 52
prosys 200 demo version also available on internet: www.entrelec.com	English	2 423 405 71
	German	2 423 405 70
	French	2 423 405 72
sh400	English	2 408 804 30
	German	2 408 804 10

Communication between PC/ WINDOWS and PLC

DDE driver for WINDOWS applications

The DDE driver enables communication between the PLCs S 200/S 250(c) or S 400 and WINDOWS applications supporting DDE functions, e. g. EXCEL. It runs under Windows 3.1, '95, '98, and NT. The connection is done with serial interface RS 232. The software is in three languages; you can change the language while operating.



DDE driver for WINDOWS (English, German and French)
 3 disks and three-language user manual 2 423 406 50