Home

406 986

Lenze

Global Drive

More than a servo controller –
the Servo-PLC

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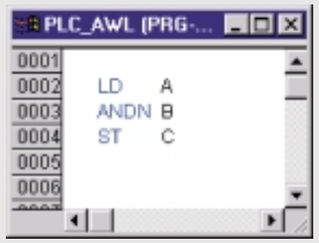
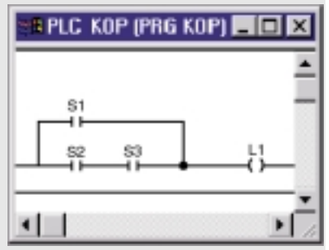
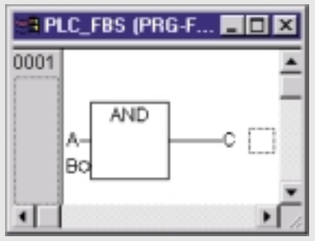


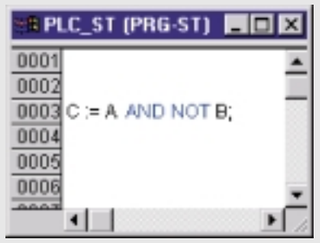
Instruction list



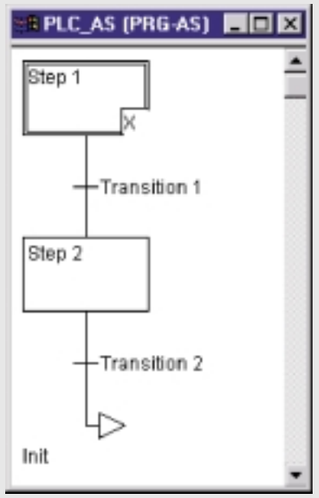
Ladder diagram



Function block diagram



Structured text



Sequential function chart

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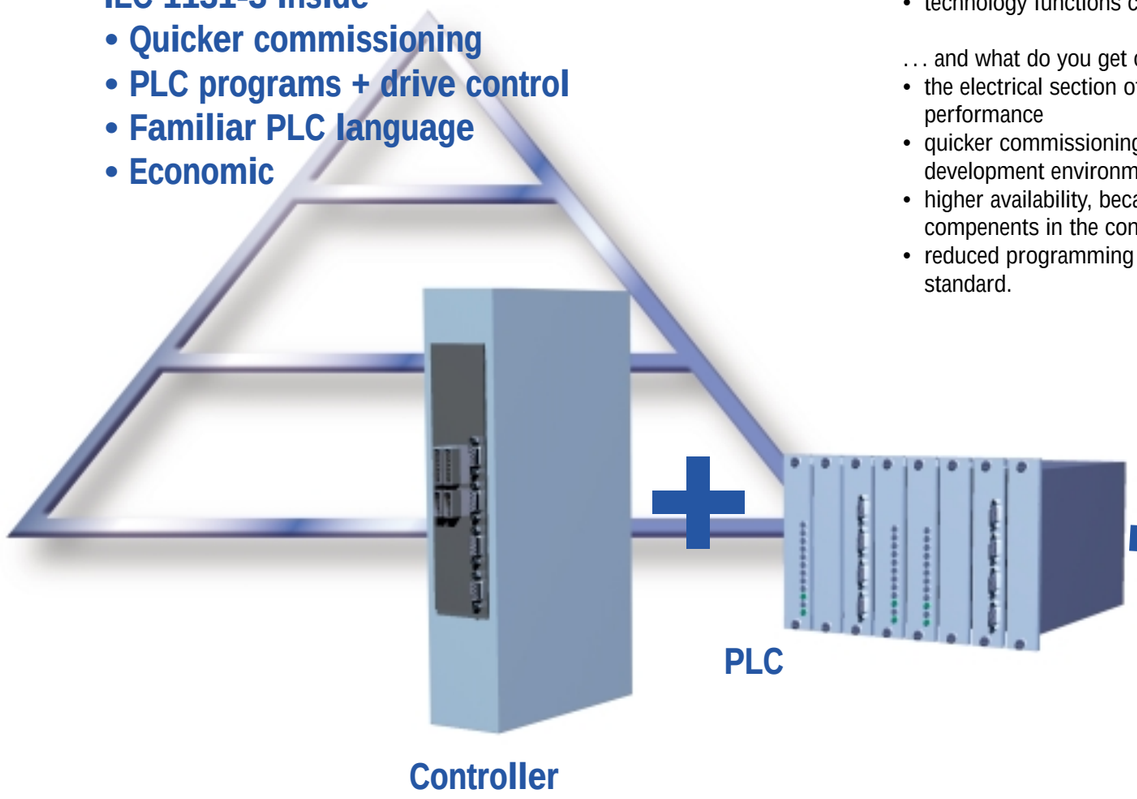
What's the difference between a PLC and a frequency inverter? Not much, these days!

That's because, in future our controllers will simply handle the work of the PLC as well. A new dimension for the modular design of plant and machines – controls decentralised as far as it goes – with the drive technology packed in as well.

Programming languages

You don't want to learn new programming languages? You want to be able to program innovative control systems with the programming knowledge that you already have? Then you'd better work on the basis of IEC 1131-3:

IEC 1131-3 inside
- Quicker commissioning
- PLC programs + drive control
- Familiar PLC language
- Economic



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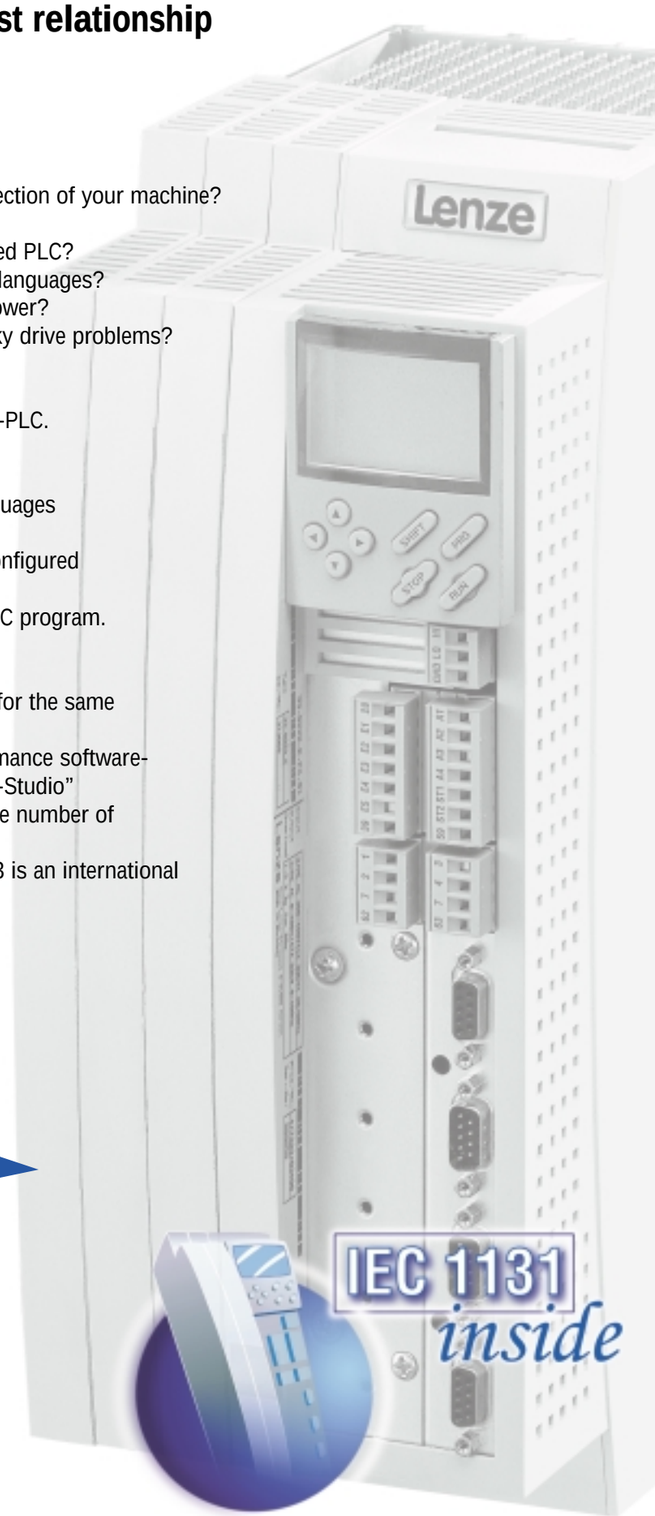
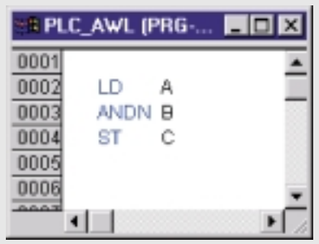
Servo-PLC, the PLC with the best relationship to the drive

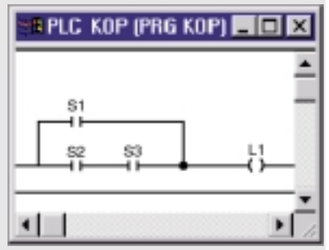
Would you like to:
- create a more rational design for the electrical section of your machine?
- have PLC programs with a clearer layout?
- take the load off your bus system by an integrated PLC?
- not have to keep on learning new programming languages?
- achieve the maximum utilization of your drive power?
- build on tried and trusted solutions to solve tricky drive problems?
- process actuators/sensors in the controller?

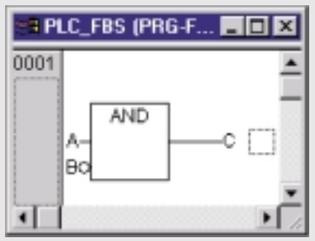
. . . then you should take a closer look at the Servo-PLC.
The Servo-PLC offers:
- the PLC inside the servo controller
- programming in five different programming languages according to IEC 1131-3
- complex drive technology implemented by preconfigured technology functions
- technology functions can be inserted into the PLC program.

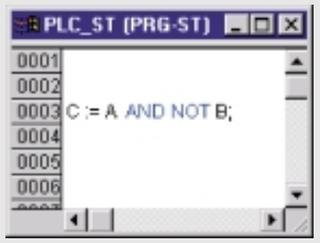
. . . and what do you get out of it?
- the electrical section of the machine is cheaper, for the same performance
- quicker commissioning through the high-performance software-development environment "Drive-PLC-Developer-Studio"
- higher availability, because of the reduction in the number of compenents in the controls
- reduced programming training, since IEC 1131-3 is an international standard.

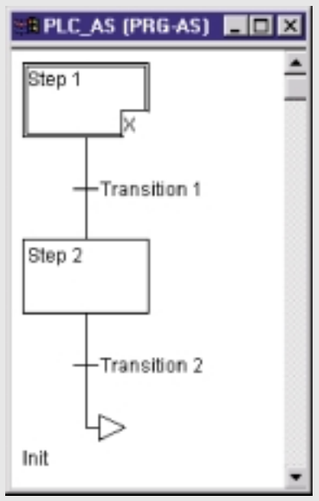












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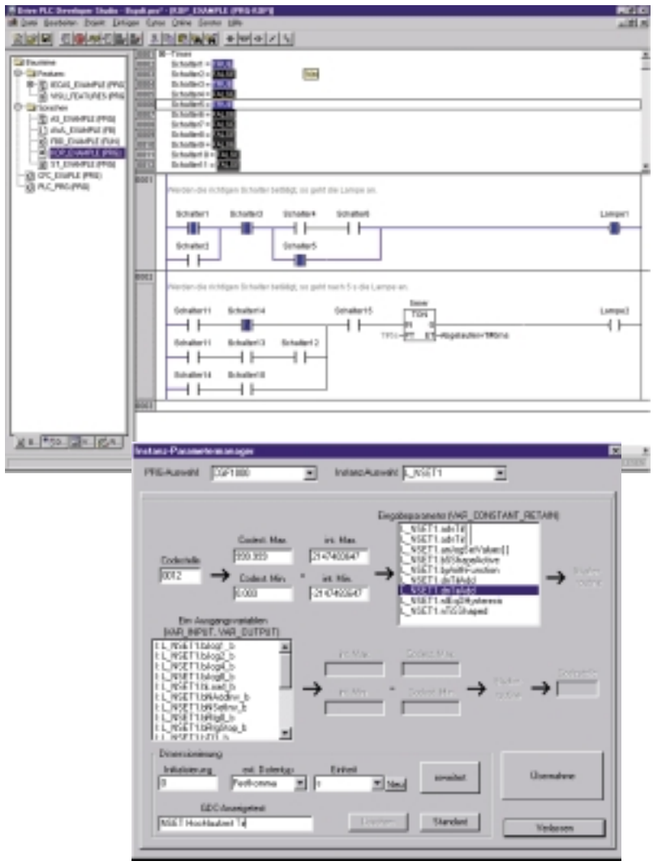
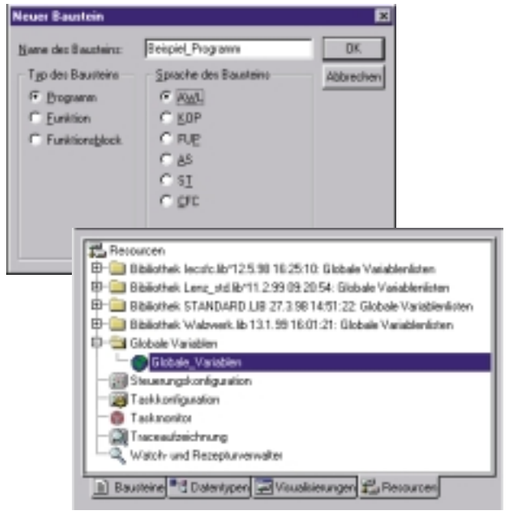
PLC-Developer-Studio

Both the inverter and the PLC are programmed in a high-performance software-development environment, which offers the experienced PLC-programmer everything. As well as the five different IEC 1131-3 programming languages, other functions are available, such as visualisation, simulation, debugging and monitoring.

- **Quicker commissioning**
- **Easier care and maintenance of your software**
- **Reduced costs**





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The following advantages of the 9300 servo PLC form the foundations of an intelligent, decentralized control and drive system:

- familiar programming through the IEC 1131-3 standard
- programming in the most suitable language (from the five IEC 1131-3 languages)
- programming languages may be mixed
- select between time-controlled, event-controlled, and cyclical tasks
- existing PLC programs can be imported
- bus-cycle times eliminated between the PLC and the controller => improved control/regulation characteristics
- sharply reduced load on the bus system between the PLC and the inverter
- reduced loading of the central PLC, and partial elimination of the small, local controls
- comfortable diagnostics

- **Programming**
- **Visualisation**
- **Simulation**
- **Monitoring**
- **Debugging**

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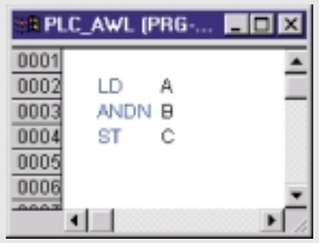
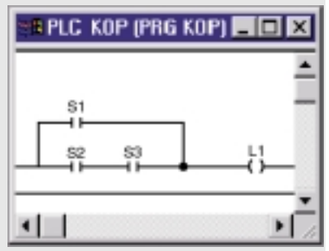
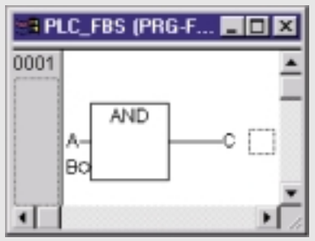
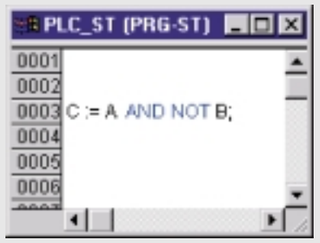
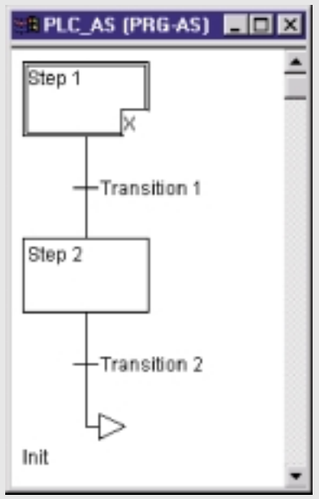




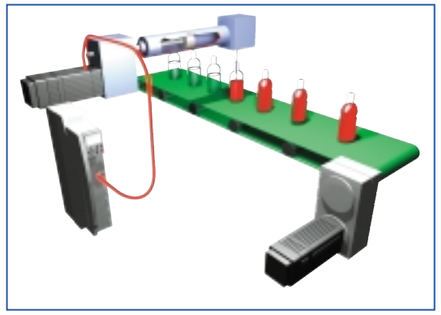


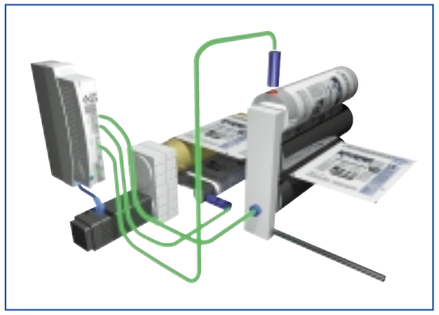


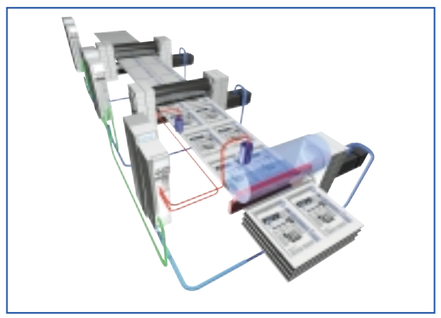


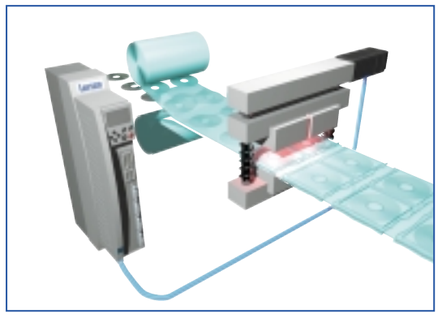
Global Drive

Application examples









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Technical data

Controller / Type	9321	9322	9323	9324	9325	9326	9327	9328	9329	9330	9331	9332
Program storage	600 K ≈ 150 K instructions											
Data storage	8 K words											
E^2prom buffered memory	7 K											
Task-types	1 cyclical task 8 time-controlled / event-controlled tasks (optionally)											
Processing time 1-bit operation	0.7 µs											
No. of markers No. of counters No. of timers	freely selectable (to IEC 1131)											
Digital intputs	6 = 1 controller enable + 3 interruptable inputs + 2 free inputs											
expandable by	max. 64*											
Digital outputs	4											
expandable by	max. 64*											
Analog intputs	2 (11 bit + sign) -10 to +10 V or -20mA to +20 mA											
Analog outputs	2 (9 bit + sign) -10 to +10 V max. 2 mA											
Dig. frequency input	0–500 kHz											
Dig. frequency output	0–500 kHz											
Encoder connection	Incremental encoder or sin/cos-encoder											
Interfaces	System bus (CAN) RS232 / 485** or PROFIBUS** or INTERBUS**											
Rated motor power [kW]	0.37	0.75	1.5	3.0	5.5	11.0	15.0	22.0	30.0	45.0	55.0	75.0
Rated output current 8kHz [A]	1.5	2.5	3.9	7.0	13.0	23.5	32.0	47.0	59.0	89.0	110.0	145.0
max. output current 8kHz [A]	150 % x I_r											
Output power [kVA]	1.0	1.7	2.7	4.8	9.0	16.3	22.2	32.6	40.9	58.2	76.2	103.9
Supply voltage [V]	320...528 ± 0 %; 45...65 Hz ± 0 %											
Dimensions (H x W x D) [mm]	350 x 78 x 250		350 x 97 x 250		350 x 135 x 250		350 x 350 x 250			591 x 340 x 285	680 x 440 x 285	
Weight [kg]	3.5		5.0		7.5		12.5			36.5	59.0	

* up to 8 system bus modules can be connected, each with 8 configurable input/output
** Option