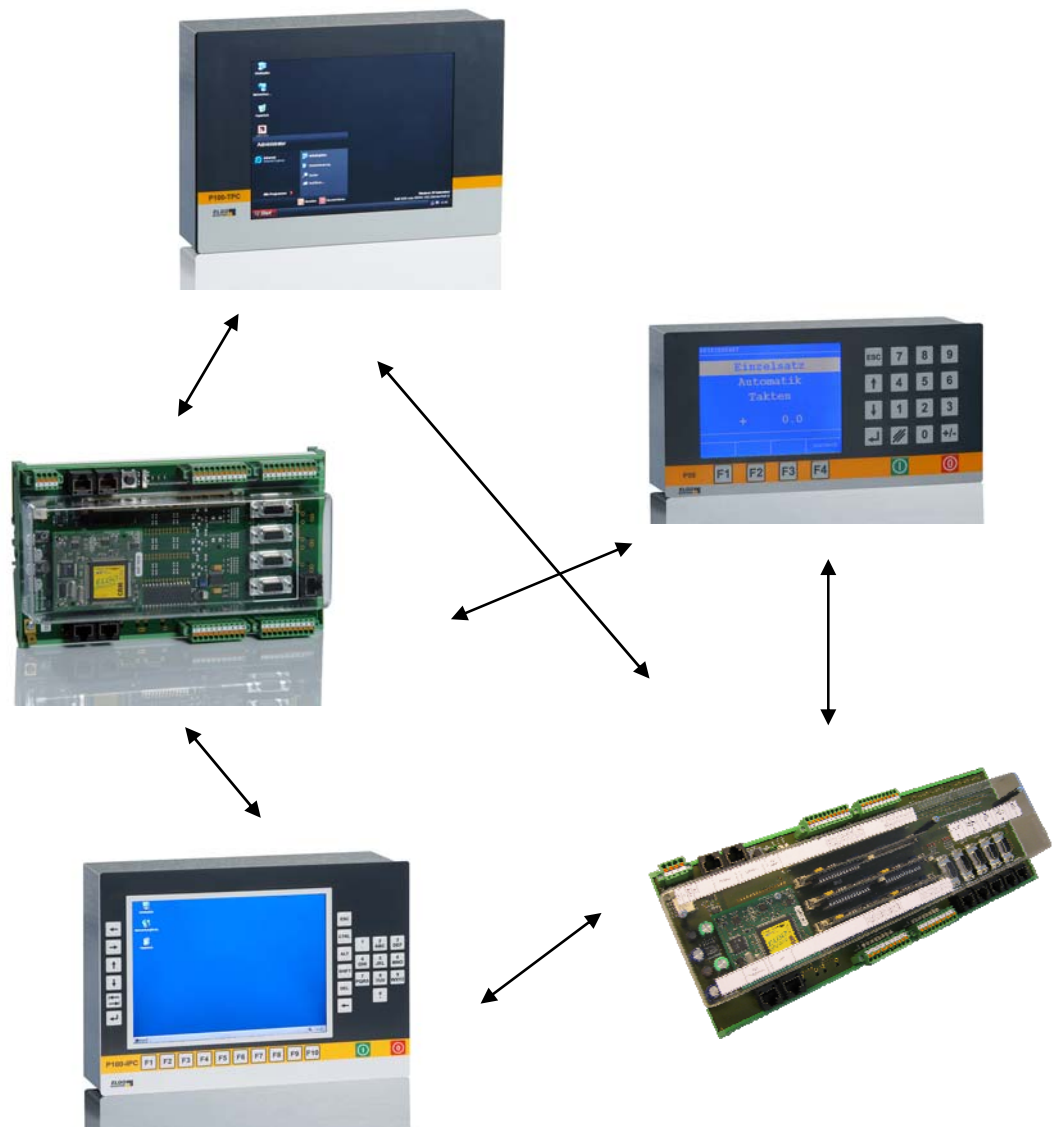


Series P50/P100



Modular positioning system up to 6 axes, with industry PC and programmable PLC

Series P50/P100 Modular Positioning System

General: To manage the complexity of machine performance, *ELGO* developed a modular position system with integrated PLC. The basic idea is that *ELGO* delivers a hardware that consists of terminal and PLC. Two variants are available. For the terminals you could select between an IPC with or without touch screen function or a low cost variant with monochrome display. The PLC peripherals can be divided into 1-4 and 1-6 axes. The customer can program his application by using the program language CoDeSys very simple. To measure the position every axis can read incremental or absolute encoder. The axes could be controlled by digital or PID outputs.

Terminals: P100 Industrie-PC



- Alpha numeric keys

P100 Industry-PC with Touch



- Touch Screen

P50 Low-Cost-Terminal



- High-resolution monochrome LCD
- Masks programmable via CODESYS
- Interface RS232

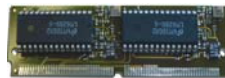
- STPC-atlas architecture 133 MHz clock frequency
- 64 MB or 128 MB compact-flash-disc
- 32 MB RAM
- 4 serial COM's (RS232, min. 56 K Bit/sec transmission rate at 7,5 m length, when using separate screened interfaces wires/Kat 5)
- 2 USB-interfaces (option)
- External PS2-keyboard link with cover within the front area
- 8,4" TFT - colour monitor
- Optional Ethernet connector (e. g. Intel 82559ER, alternative Davicom DM9102)
- Internal keyboard controller
- Connection for mouse
- Optional CAN-interface
- Parallel interface for printer

CPU/SPS-Sub systems: P50-CPU



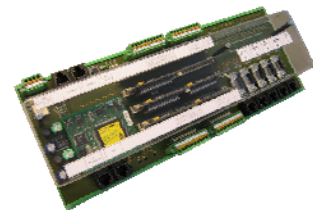
- High speed 16 bits CPU(INFINEON SAB C 167CR)
- Clock frequency 40 MHz
- 2 x RS-232 (expandable around 2 further RS-232 and/or RS-485), 1 x CAN
- International electrical commission 61131-3 programmable
- Stand alone capable
- 256 KBytes application code memory & data memory
- Cycle time 2 ms to 1000 commands
- 16 digitally inputs
- 16 digitally outputs, PNP-500 mA, Diag LED (overcurrent display)
- Positioning and output driver cards can be plugged in
- Additional ones of 16 outputs to the 4 resp. 6-axes digital positioning (thus as SPS of auxiliary exits usable)
- 1...4 resp. 6 motor feedback inputs incremental or absolute measuring systems RS422 and A/B inputs on one connector)

Positioning module (2 axis PID)



- Can be plugged in 72 pole. Simm Socket)
- 2 axes for each plug-in card
- Worked satisfactorily construction units
- Analog output short circuit proof
- up to 250 kHz counting frequency

P100-CPU



For both systems (*P50* and *P100*) the same basis was used, because of that the terminals and PLC-boards can be combined arbitrarily!

CAN-I/O - Modul

Expansion modul



- 16 digital inputs
- 16 digital 500 mA outputs, PNP (short-circuit proofed) or 16 x 50 mA PNP/push-pull (short-circuit proofed)
- Diagnosis LED overcurrent indication
- Connection to the PLC over Patch cable PLC (no more cable confection necessary)
- Max. 32 Can I/O modules (384 inputs and outputs for addressing)
- DIP SWITCHes to the I/O configuration
- Additional power supply for output drivers

I/O Modul



- can be plugged in (72 pole. Simm Socket)
- 16 outputs
- 50 mA by outputs
- Push-Pull or 500 mA (PNP open collector)

DC - Servo controller motor



- Connection to transformer (max. 140 VAC/200 VDC)
- +/- 10V input
- Speed and torque regulation
- Static and dynamic current limit
- Enable logic
- Fast stop
- Power failure braking
- Temperature monitoring for motor and derovo control

Possible types of regulation:

1. Armature voltage regulation
2. Encoder- feedback
3. Direct DC-Tacho



All system connections from the CPU/PLC sub-system to the components are made by patch cables plug-in.

Assembly of the modules:

Plastic - housing for snap in
Into DIN norm rails



SPS - computer language

CoDeSys:

CoDeSys stands for CONTROLLER development system and is a development environment for controls. CoDeSys makes a simple entrance for the SPS programmer possible into the powerful language means of the International Electrotechnical Commission. The use of the editors and the debugging functions has the matured development environments of higher programming languages to the model (as for instance Visual C++).

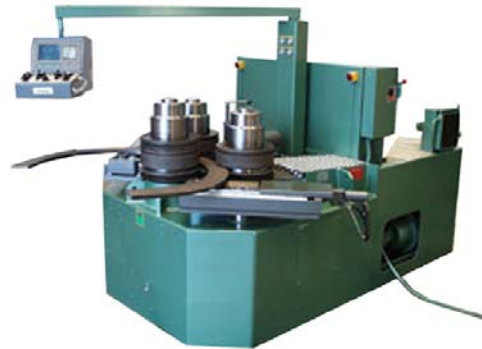
Advantages:

- Virtual start-up by integrated simulation mode
- Real time debugging
- Cut of the turn-around times
- Detailed project planning and documentation
- Importing external projects
- Project comparison e. g. to the assumption of modules from other projects

Plate shears



Profile bending machines



Sawing machines



Press braking machines

