

# **Series P50-002**



Application metal shear

# **Series P50-002** Modular 4 Axes- Position controller for Metal Shears

**General:** The ELGO P50-002 is a position controller for maximal four axes. Possible measuring systems are voltage (0 -10 V) and electricity (0 and 4 - 20 mA resp.) or incremental encoder signals (e.g. rotary encoder). The software of the version P50-002 is specially designed for the plate shears. To activate the motors three different drive signals (switch-mode-positioning) or an analogue voltage (PID controlled positioning) are available. Digital output signals are available as status signals for additional peripherals. In addition there are 16 inputs and outputs available for external devices. The allocation of the respective functions is freely configurable i. e. the user can select, out of a pool of functions, the necessary function and assign it to an arbitrary engage connector. A variety of teach-functions allows the easy upload of the common parameters for plate shears such as cutting angle and cutting gap. The teach-functions can be found in preset material specific parameter tables. No extra calculations are necessary. The values are calculated automatically from empirical values (interpolated) and are adapted optimally to the particular material. An adjustment of the menu to the different machine specific markings and different languages respectively is possible without a change of software.

#### **Features:**

- High resolution LCD-Monochrom-Display (320 x 240 Pixel)
- Masks programmable with CoDeSys
- All ELGO-CPU-Boards can be connect over RS232
- Free configurable in- and outputs
- Pictogram function
- Simple operator interface
- Integrated language switching
- Parameter in- and output through RS232 interface possible

#### **Application Metal Shear:**

- Backgauge
- Angle and Gap Control
- Counter
- PC-Communication
- Material table

#### Standard functions:

- Adjustable Position control outputs (3 speeds)
- Visualization of the current position and the programmed position
- Absolute or Relative positioning
- Reference and reference run mm / inch - Switching
- Pulse multiplication factor and edge triggering
- Tolerance window
- Software limit switches
- Backlash
- Up to 1000 programmable steps
- Impulse control
- Piece counter
- Manual Operating Mode
- Cutting length limit
- Retract Function
- Value memory

#### PLC - Programming

#### CoDeSys:

CoDeSys stands for Controller Development System and is a development tool for control systems.

CoDeSys allows the PLC programmer a simple introduction to the powerful resources of the language IEC1131 standard. The use of the editors and debugging features, the mature development tools of higher programming languages as a model (such as Visual C + +).

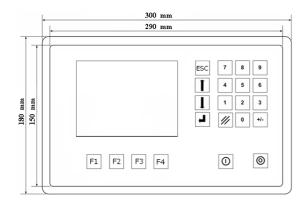
#### <u>Advantages:</u>

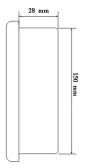
- Virtual commissioning through integrated simulation operation
- Real time debugging
- Short start-up times
- Detailed project planning and documentation
- Import of foreign projects
- Project comparison e.g. for the import of modules from other projects

#### **Technical Data:**

| LCD Point matrix with Background lighting  |  |
|--|--|
| 24 VDC   |  |
| 24 VCD, max. 130 mA  |  |
| D-SUB Connectors   |  |
| +/- 1 Increment  |  |
| E <sup>2</sup> Prom<br>Durability 10 <sup>5</sup> On– and Off cycles or 10 Years             |  |
| Open Emitter (PNP) Short circuit proof Output current: max. 80 mA Recovery diodes integrated |  |
| Blue LCD Point-Matrix 320 x 240 mm with white background lighting                            |  |
| High speed 16-Bit-Micro processor with 512<br>KByte Code und 16 KByte E <sup>2</sup> Prom    |  |
| 15 KHz (higher on request) accord to 0,1 mm<br>Resolution: 120 m/min. (2 m/s)                |  |
| 0° +45°C   |  |
| Dimensions   |  |
| Housing with fastening elements<br>195 x 315 x 35 (without connector)                        |  |
| 180 x 300  |  |
| 40 mm (without connector)<br>75 mm (without connector)                                       |  |
| 215 x 125 x 40 (without connector)   |  |
|  |  |

#### **Dimensions:**





#### Order designation:

For orders please use the following order code:

A Version

SPS Speicher Programmierbare Steuerung

LCT Low-Cost-Terminal

TSM Touch Screen Monochrom

**B** Version

000 ELGO Standard

002 Application Metal Shear

C Supply

**024** 24 VDC

## D Measuring system inputs for PLC

- X not equipped
- **O** A, B, (PNP) 24 VDC Supply encoder/ 24 VDC–20 KHz
- 1 A, B, O (PNP) 24 VDC Supply encoder/ 24 VDC-20KHz
- **2** A, A', B, B' 24 VDC Supply encoder/ 5V-TTL-100KHz
- **3** A, A′, B, B′,0, 0′24 VDC Supply encoder/ 5V-TTL-100KHz
- 4 one analog input (only for 2nd axis)
- 5 two analog inputs (only for 2nd axis)

### E Outputs (Drive signals per Axis for PLC)

- X not equipped
- **0** digital outputs (Transistor Outputs, PNP)
- 1 Analog Output PID
- 2 Analog Output +/- 10 V

#### Example:

P50 with SPS, Application Metal Shear, 24VDC Supply, 1 Measuring system input with A, B, 0 Signal and digital outputs (Transistor Outputs, PNP).

Your Order:

