

# Step controller IT116 Flash

Single axis controller



Figure:  
IT 116 Flash front



Figure:  
IT 116 Flash back side

## Features

- Final output stage  
48 V DC / 4.2 A peak  
for 2-phase stepper motors
- max. 25,600 microsteps/turn
- Mains voltage:  
115V AC/230V AC, 50...60 Hz
- Automatic current sink at  
50% phase current at  
motor speed < 1 rpm
- Motor current/microstep resolution  
variable with DIP switch
- Integrated 32-bit RISC processor  
(Embedded controller) with Flash  
memory for firmware and  
PAL PC user program
- RS-232 interface (front) for  
coupling with PC/notebook  
(program download)
- Control signals:  
Program start/stop, reset on  
controller back side
- 4 optically isolated signal inputs  
(Signal voltage: 24 V DC)
- 4 relay outputs (24 V DC, 300 mA)
- Motor brake controller (24 V DC)
- Remote plug on rear of controller  
for external EMERGENCY SHUT-  
DOWN (2-channel), ext. power on
- Euro cooling rib casing
- Programming with PAL-PC 2.1  
for Win2000, XP, Vista, 7
- Dimensions  
W 105 × H 111 × D 320 mm

## General

The **IT 116 Flash step controller** is a freely programmable compact controller for a linear or circular axis with 2-phase stepper motor. The step controller comprises an intelligent step motor stage, a processor core with Flash memory for downloading/storing the PAL-PC user program and the clocking/direction signal generation for the final stage of the motor, the necessary power supply units, a safety circuit (Stop category 0 to EN 60204) and a casing with mains input filter and control elements.

The integrated operating system in the Flash memory of the processor core supports both

- DNC controller mode: PC/laptop connected permanently with the step controller via the serial interface
- and the
- CNC controller mode: the step controller works independently, without PC coupling of the stored user program (standalone).

## Ordering information

IT 116 Flash step controller (115V AC, 60 Hz) Part no.: **381016 0115 \***  
IT 116 Flash step controller (230V AC, 50 Hz) Part no.: **381016 \***

\* including PAL-PC

## Accessories

Motor lead  
M23 12-pin socket - SubD 9-pin Pin  
Part no.: **392755 0500** (5m)

Motor lead  
SubD 9-pin socket - plug 1:1  
Part no.: **392781 0500**

Other lengths on request.

Technical specifications subject to change.

## Scope of delivery

- Controller in cassette casing
- Mating plug (I/O, pulse, remote)
- Serial interface lead (SubD9 - RJ 45)
- 230V AC mains lead
- PAL-PC software CD
- Operating instructions
- Programming instructions

# PAL-PC

## Process automation software for Windows



### General

PAL-PC enables rapid, easy and low-cost implementation of automation projects such as handling systems, drilling machines, clocking devices, test and measurement systems, machines for individual and serial processing and much more....

PAL-PC is a modern program development environment for CNC step motor controllers and CNC machines

PAL-PC uses **memory operation** (CNC mode) for the target controller. PAL-PC produces automation solutions in which the controller works in standalone mode, i.e. independent of a control computer.

PAL-PC runs with Windows 2000, XP and Vista operating systems.

### Features

- Path commands for relative and absolute positioning
- Carry out movement until event occurs at an input
- Teach-in-programming (linear)
- Linear 2D interpolation, switchable to 3D interpolation
- Circular interpolation
- Input signal analysis for process control
- Loops for repeating of instruction blocks
- Unconditional and conditional branches
- Analysis of the program selection unit
- Output of messages to a display
- Sending and receiving synchronisation marks
- Additional aids for automated processing of typical tasks

### Ordering information

Part no.: **Z11-331810**

PAL-PC - software for CAN-CNC controllers (Windows)

### Features

- compatible with previous versions (PAL-PC programs, which were produced with an earlier release of PAL-PC, can be used without adaptation)
- Programming to isel-PAL or DIN66025: In addition to the PAL format, users who know programming to DIN66025, can also produce their PAL-PC applications with corresponding G-code commands.
- Integrated editor: fast and convenient editing of source texts, editor features such as "Search", "Replace", "Copy" and "Insert" automated code generation, multiple Undo/Redo for efficient programming
- PAL-PC can (depending of the type of controller used) control controllers with up to 4 axes
- Terminal for direct communication with the controller
- Downloading of externally generated CNC programs
- Automatic calculation of type and data transfer rate of the connected controller
- Display of compiler errors and navigating to an error in the source code
- Command rapid overview with optional insertion into the program
- Teach-in-programming with keyboard or mouse
- Acceptance in the editor of target positions as formatted source code
- Live status display at the inputs
- Setting outputs during program generation
- available in German and English