esitron®

MICROPOS MP100

Positioning controller for electric or hydraulic drives

- Digital position controller
- Separate programmable acceleration and deceleration ramps
- sin^2 acceleration possible
- 99 positions in internal memory
- Online RS 232 - interface
- Selection of operating mode through inputs
- Decoded text error diagnosis
- 1 ms regulating time
- External selection of up to 63 positions
- Absolute and relative positioning selectable per set

- Functions for hydraulic drives:
    - piston area compensation (parameter)
    - characteristic curve compensation (parameter)
    - Overlap compensation (parameter)
    - Pt1 - regulation (parameter)

Synchronous run
up to 4 axes

Special functions for
hydraulic drives

Incremental

SSI
SYNCHRON SERIELLES INTERFACE

Analogue

Transsonar
t

CE
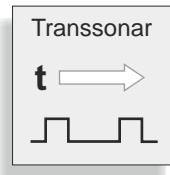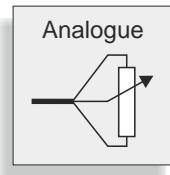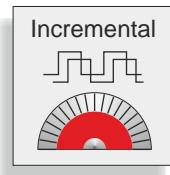
MICROPOS MP 100

The MP 100 is a positioning unit for universal applications featuring simple and comfortable operation.
A position and speed control is integrated. The use of latest technology renders the MP100 a very compact device.

The fast 16 bit microcontroller stands for high efficiency of the system and enables regulating times faster than 1 ms!

Programming

99 records (power fail safe)
 - position (absolute/relative)
 - verlocity
 - M-function
 - delay-time (between records)
Direct programming at the front panel
Programming through serial interface
Programming using a digi-switch

Program execution

Single execution (Auto-Single)
Continious execution (Auto-Cycle)
Automatic status reports:
 - Position reached
 - Programm end
 - Fault / ready
External selection of records (5 digital Inputs)
External handling through serial interface

Programming facilities

Frontpanel programming
with integrated keyboard
and decoded text display

Online-operation with PLC or PC.
Data interchange, commands
status and position report
through serial interface.

Direct programming

PLC

PROG

MP 100

Digi - switch

5 3 2 7 0   8 0

RS232

esitron   MP100

PC
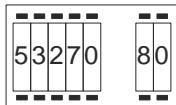
Programming of position
with a digi-switch connected
to the serial interface.
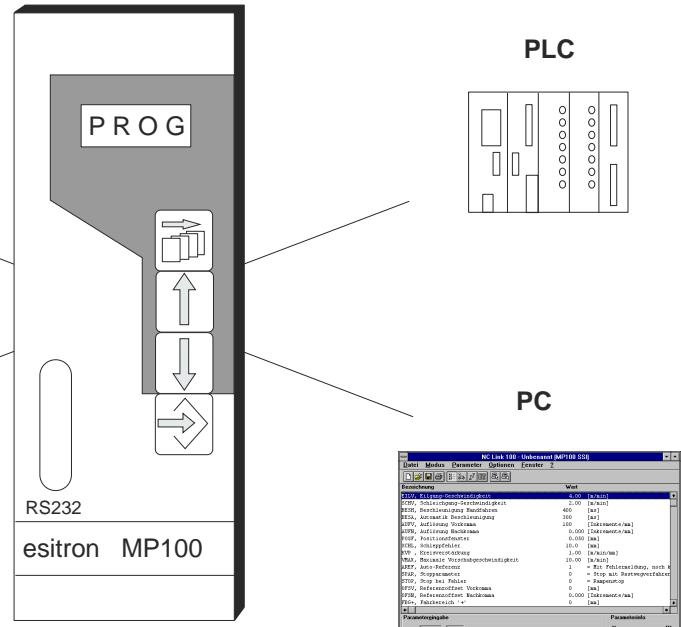
Programming on a PC.
Transmission of program and
parameters throught serial interface.
Option: Comfortable programming
software (NC-Link 100) with online
diagnosis running under Windows™.
Online positioning is possible.

Programming examples

Sinusoidal or linear ramp.
Change of speed with or without intermediate stop.
Separate acceleration and deceleration times.

Record 1	X1:	300.5	;Length (mm)
	V1:	8.0	;Velocity (m/min)
	T1:	500	;Delay time (ms)

Record 2	X2:	200.3	;Length (mm)
	V2:	5.0	;Velocity (m/min)
	T2:	0	;Delay time (ms)
	M2	1	;M-Funktion 1 set

Satz 1	X1:	250.5	;Length (mm)
	V1:	8.0	;Velocity (m/min)
	T1:	0	;Delay time (ms)

Satz2	X2:	240.3	;Length (mm)
	V2:	5.0	;Velocity (m/min)
	T2:	0	;Delay time (ms)
	M2	1	;M-Funktion 1 set
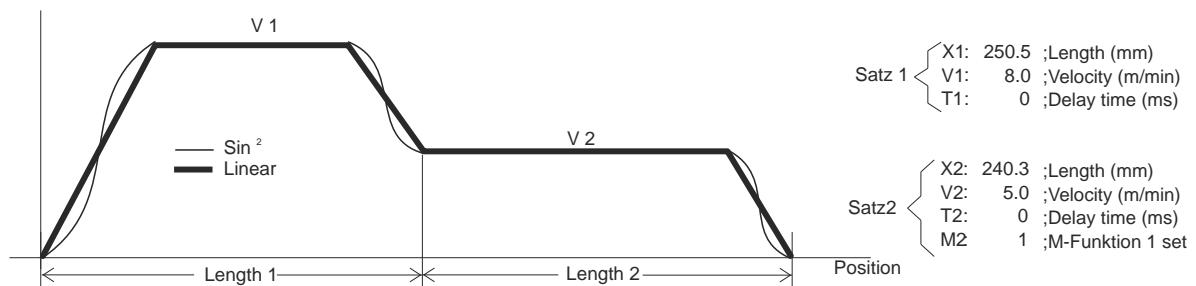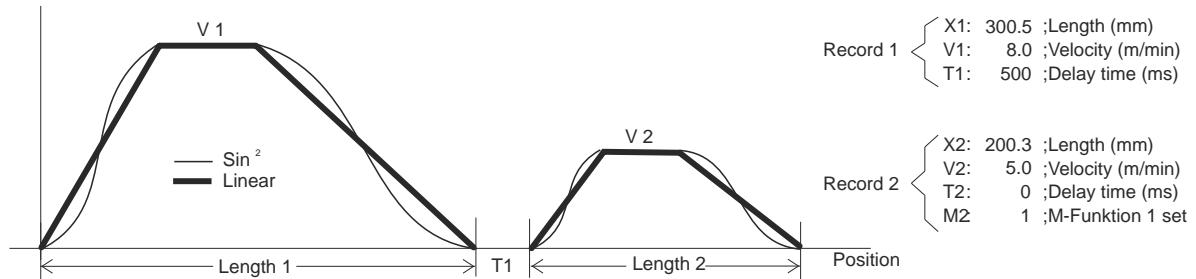
Connecting diagram
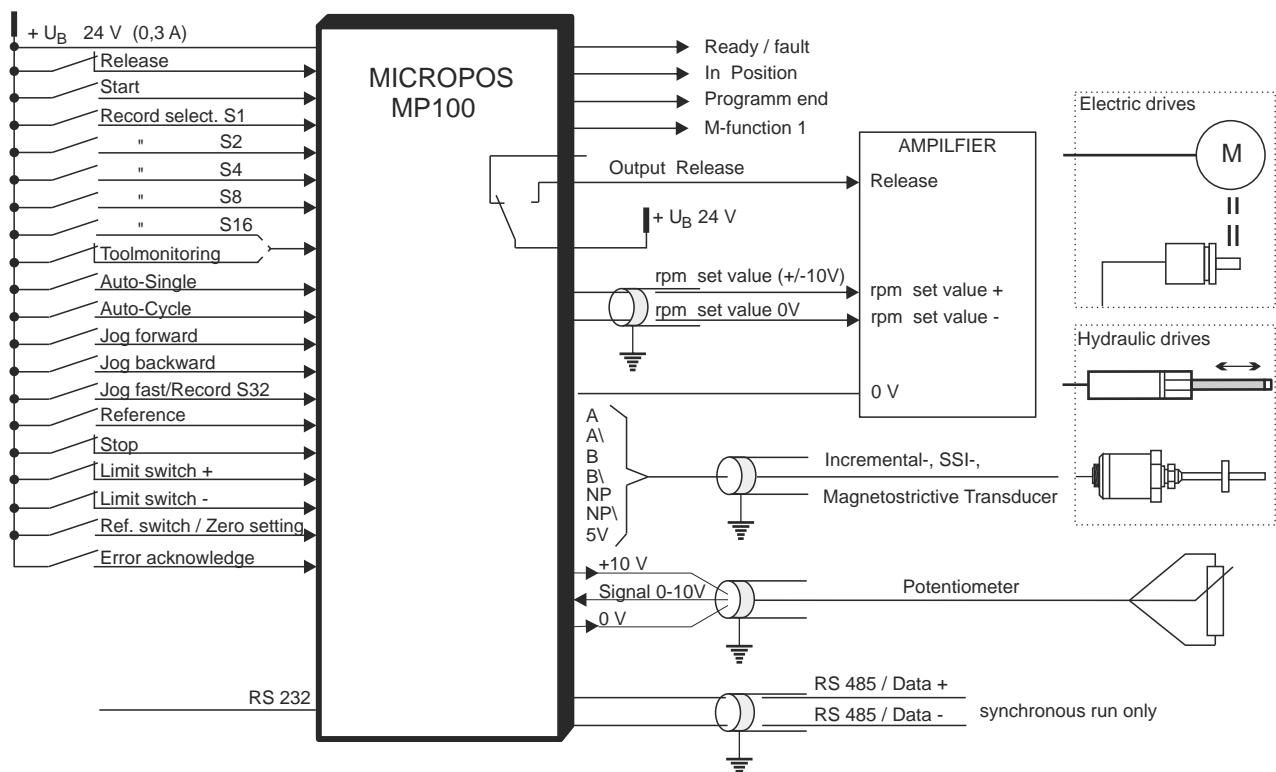
Technical data MICROPOS MP 100

Modes of operation:	Reference run Jog forward/backward/fast Automatic Single/Cycle

Program input:	99 records, power fail safe through non volatile EEPROM. In each set:
	    - absolute or relative position (-9999.999 ... +9999.999) i.e. mm
	    - velocity (0.01 - 320 m/min)
	    - machine function (set / clear)
	    - delay time (0 ... 9999 ms)

External record selection:	Through RS232: all 99 positions, through digital inputs: up to 31/63 positions selectable (electric/hydraulic drives)
Parameter input:	Data specific to machine and motor, password protected
Tool correction:	correction value (-9999.999 ... +9999.999) i.e. mm or degree
Signal-inputs:	18 inputs: 24 V, R_i = 15 kOhm
Signal-outputs:	4 outputs: 24 V, 1 A
Set value output:	-10 V ... +10 V (12 bit resolution)
Release for amp:	Floating contact (changer), current max. 1 A
Position feedback:	Incremental: Level according to RS 422, 250 kHz, internal fourfold (1 MHz), Power supply output 5 V / 300 mA for encoder Absolute: SSI-Interface, dataformat 8 - 31 bit, Gray-/Binary code Absolute: direct processing of magnetosrictive transducers or Absolute: Analog with 14 bit resolution with power supply for potentiometer
Data interface:	Online RS 232 C, Baudrate: 300 - 19200 Baud
Error diagnosis:	Decoded text error messages Monitoring of external and internal status Monitoring of power supply voltage
Power supply voltage:	24 V DC ±20 %, approx. 0,3 A
Dimensions:	Plug-in PCB 100 mm x 160 mm Frontpanel 3 U x 10 HP (129 mm x 50 mm)
Connector:	48 way male multi-point connector strip DIN 41612 (type F)
Ambient temperature:	0 - 50 °C (32 ... 122°F)
Special applications:	Synchronous run with up to 4 MP100

Ordering data

MP1☐0.☐ 5 1.☐ — SY - Version for synchronous run systems

        7 - for digital measurement system (incremental, SSI, magnetostrictive transducer)
        8 - for analog measurement system (potentiometer)

    0 - Plug-in PCB 100 mm x 160 mm
    1 - Rack mount unit with connectors

Accessories:

	COM-DP	Communication modul profibus <> MP100
	701.01006-0	Card holder with plug-in connector block
	DEK.0500	Digi-switch for RS 232C
	611.01011-2	Programming set NC-Link 100