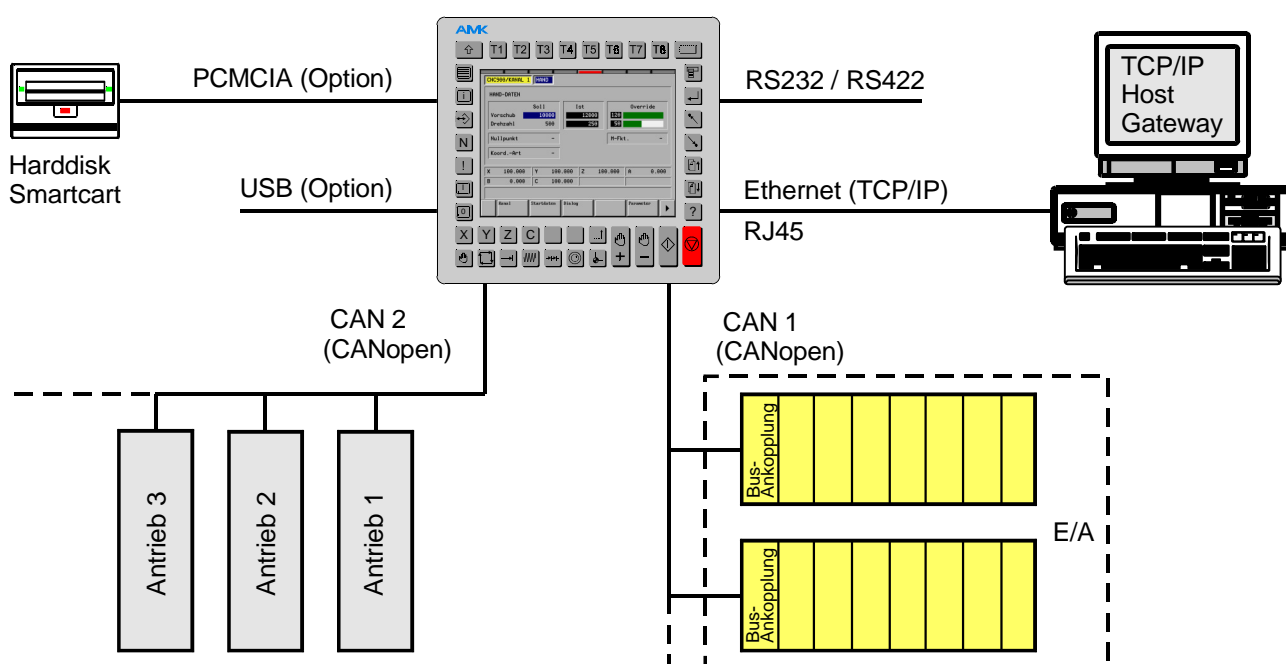


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1 Compact controls CNC 903 / CNC 905

1.1 Introduction

The compact controls CNC 903 / CNC 905 are conceived for the application with CAN Bus. Communicate to they over the CAN Bus with the drives and the I/O bus. The CNC Control actual in the operating panel integrates. The operating panels have fully graphicable color LC displays and foil keyes with mechanical pressure point.



Interfaces

CAN Bus	1000kbit for CANopen Drives
CAN Bus	500kbit for I/O box bus system according to CANopen Specification
Ethernet	(TCP/CIp) RJ45
Serially	RS232, RS422
PCMCIA	e.g. for external hard disk (CNC 905 option)
USB	(CNC 905 option)

1.2 Characteristics and functions

Functions of the control

- Operating system BWO real-time kernel
- Logs TCP/IP stack, CANopen stack
- Soft PLC
- Construction of a simple CNC controller in connection with soft PLC and soft NC
- BWO file server
- Programming of the control surface also PROMA
- Block-by-block reloading with larger programs
- Graphic cycle programming
- Free DLL for the implementation of own programs

CPU data

Static RAM	512kB
Run-time memory DRAM	16MB
Flash-disk-memory	8MB
for operating system and control surface	
Flag memory	60kB
NC memory	193kB
Remanent flags	4096
Parameter	20000

Programmable box bus coupler

I/O knot for input/outputs	5
with in each case digital inputs	64
digital outputs	64
analog inputs	2 x16bit
analog outputs	2 x16bit

1.2 Characteristics and functions

Versions	CNC 903	CNC 905
NC channel	1	1
Axes / Spindles	4	8
Spindle in C axes operation	1	1
Linear interpolation (Axes)	3	3
Circular interpolation (Axes)	2	3
Screw interpolation (Axes)	2+1	2+1
Spline interpolation	-	•
Polynomial interpolation	-	•
Polar transformation	-	•
Scara transformation	-	•

Symbols: • Functions are possible
- Functions are not possible

CNC Characteristics and functions

- Tangential axis
- Axes couple, reflect and exchange
- Restarting after abort
- Feed, corners, circle and outline dynamics
- Electronic gears and Handwheel
- Polar coordinates system
- Axes simulation
- Coordinates turn, reflect and shift
- Measuring and processing cycles
- Interpolation plane selection
- Tool radius path correction
- Automatic selection of linear and circular interpol.
- Zero points / zero shift
- Outline path short programming
- Parameter calculation
- Diagnostic functions
- Graphic cycle programming
- Graphic simulation

1.2 Characteristics and functions

Operating panel data

LCD display in TFT version.

Resolution 640 x 480, 256 off 4096 colours

display size with CNC 903 / CNC 905 10.4"

Touch screen with resolution of 1024 x1024

42 function keys, of it 15 freely shapable,

PLC keys with display on LCD display,

Operating voltage 24V

Battery buffer for the clock

Connections

CNC 903 / CNC 905 on separate machine operating panel

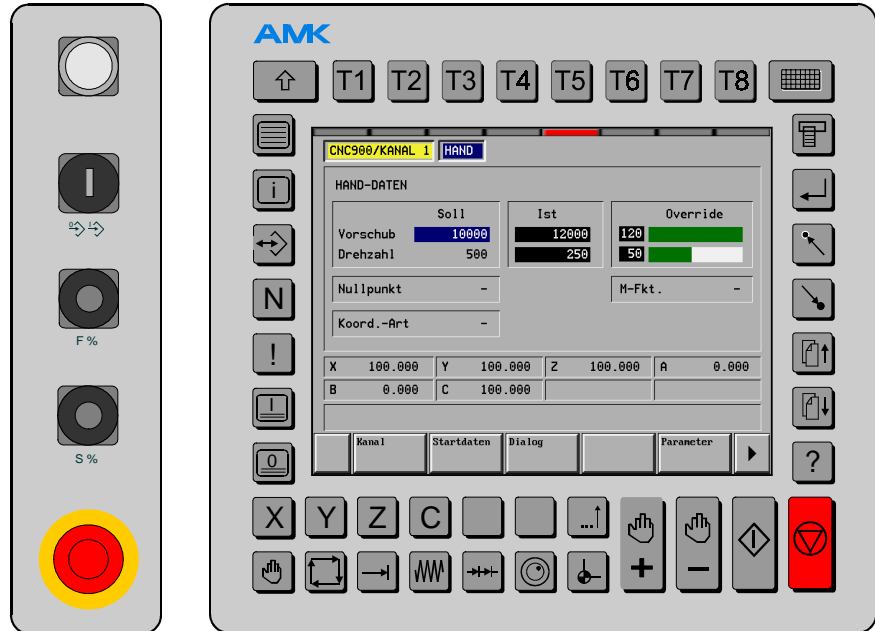
4 Override Potentiometer

1 Handwheel (TTL level cable length 1m, +5V)

1 Key-operated switch

1 Joystick (in place of 3 override Potentis)

1.2 Characteristics and functions



Compact controls CNC 903 / CNC 905 with additional machine operating panel

Dimensions (B x H in mm)	328 x 310
Machine operating panel (option)	80 x 310

1.3 Software

Programming software XPLC

XPLC actual a programming software for the compact controls CNC 903 / CNC 905. The software actual on PC executably.

With XPLC all functions of the control with stored program (PLC) with the compact controls can be taken in operation.

Details in addition in this manual paragraph 4. and 5.

Standard interface for CNC

The standard adaption contains a list of the free, pre-allocated and reserved flag areas.

Details in addition in this manual paragraph 6.

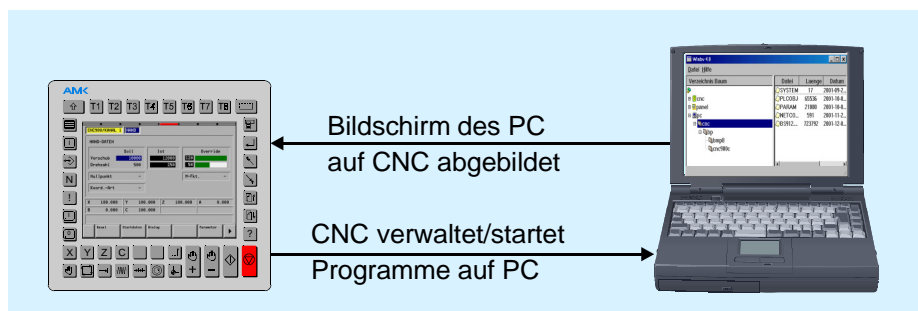
Programming software NC

With the programming software can NC programs with the available functions in the compact controls be created. Details in addition in the NC manual.

1.3 Software

Operating system management program WINBV

Software on a PC to controlling of the CNC.



The display of the CNC is illustrated on a PC. The control can be served then from the PC.

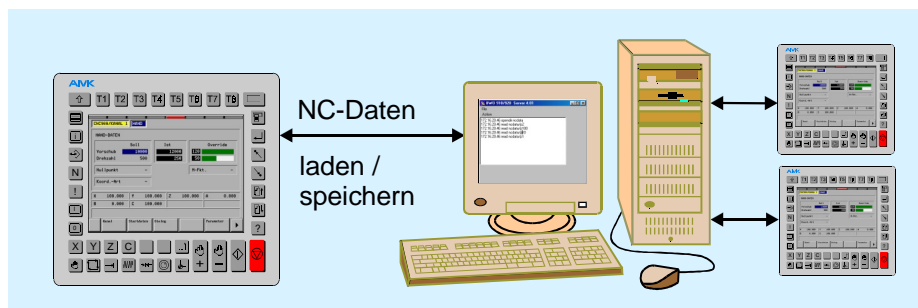
Thus can be implemented:

- Diagnosis locally
- On-line remote diagnostics
- Operating system care
- Data administration
- Data protection
- NC archiving

Details in addition in this manual paragraph 7.

Data transfer on one SERVER

Software on a PC for data transfer with the CNC.



By the CNC can be accessed the drive assemblies of a server. Several controls can be connected at a server and load NC data from the server or save on the server.