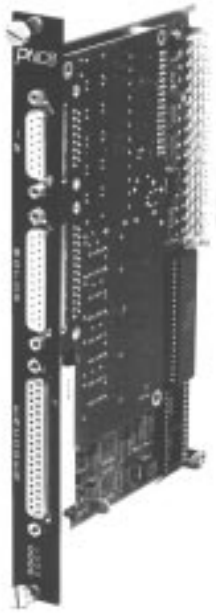

PNC8

- Fast Positioning Module for Positioning Applications
- Four Axes Control
- Counting Frequency Max. 400 kHz
- Counting Range 32 Bit
- Analog Output for Control of Servo Motors (±10 V, 12 Bit)
- Encoder Inputs are Optional Incremental or Absolute
- Event Counting (Eight Channels)

See section A8 "Positioning" as well

SLOTS

The PNC8 positioning module can be operated in the following slots of racks MULTI, MIDI and M264.

Rack	Slot	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
MULTI Base Rack		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MULTI Expansion Rack		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
MIDI		○	●	●	●	●	●	●	●								
M264		●	●	●	●	●	○	○	○	○	○	○					

● The module can be operated in this slot
○ The module **cannot** be operated in this slot

ORDER DATA

Positioning module for Positioning Applications, Four Axes, Four Binary 32 Bit Counters, Counting Frequency Max. 400 kHz at Four Fold Evaluation, For Direct Connection of Incremental Encoders or Absolute Encoders, 8 Event Counters, 12 Digital Inputs,	
With 16 digital transistor outputs	**ECPNC8-13**
With four analog outputs (±10 V, 12 Bit) for controlling servo motors, 4 relay outputs e.g. Controller Enable)	**ECPNC8-23**
D-type adapter from 37 pin D-type (F) to four 15 pin D-type (F)	**BRADPNC8E-0**

GENERAL INFORMATION

The PNC8 positioning module is available in two different versions. The PNC8-13 has 16 digital transistor outputs. Version PNC8-23 is equipped with four analog outputs for controlling servo motors. Both modules have four counter inputs for incremental encoders, four binary counters (32 bit), inputs for absolute encoders and 12 digital inputs.

TECHNICAL DATA	PNC8-13	PNC8-23
Signal Encoder Connection	37 pin D-type (F)	37 pin D-type (F)
Signal Encoder Inputs	5 to 24 V, Single and Differential, Not Galvanically Isolated, Input Filter 1 µsec or 10 µsec (Software Selectable)	5 to 24 V, Single and Differential, Not Galvanically Isolated, Input Filter 1 µsec or 10 µsec (Software Selectable)
Encoder Supply	5 to 24 V, External	5 to 24 V, External
Input Frequency	Max. 100 kHz	Max. 100 kHz
Counter Frequency At Four Fold Evaluation	Max. 400 kHz	Max. 400 kHz
Phase Shift Between Counter Channels A and B	90 ° ±45 °	90 ° ±45 °
Counter Operating Mode	32 Bit Binary Absolute, Incremental, Inc./Dec. Counter, Event Counter	32 Bit Binary Absolute, Incremental, Inc./Dec. Counter, Event Counter
Digital Inputs Input Voltage Switching Threshold Input Current Switching Delay	12, Galvanically Isolated 24 VDC Min. 7 V, typ. 10 V, Max. 14 V ca. 6 mA at 24 VDC ca. 10 msec	12, Galvanically Isolated 24 VDC Min. 7 V, typ. 10 V, Max. 14 V ca. 6 mA at 24 VDC ca. 10 msec
Analog Outputs Output Voltage Resolution		4 ±10 V 11 Bit + Sign
Digital Outputs Output Voltage Output Current	16 Transistor Outputs Nom. 24 VDC, Max. 30 VDC Max. 400 mA	4 Relay Outputs Nom. 24 VDC, Max. 30 VDC Max. 1.5 A
Power Consumption At +8 V At +15 V At -30 V	 3.9 W - -	 4.6 W 2.7 W -
Documentation German English	Positioning User's Manual MAPOSI-0 MAPOSI-E	

COUNTER OPERATION MODES

The following modes of operation can be switched between for each of the four channels:

- Incremental Encoder Signal Counting
- Absolute Encoder Signal Counting
- Incremental / Decremental Counter
- Event Counter

a. Incremental Encoder Signal Counting

This mode of operation is used for positioning applications with incremental actual position monitoring. The signal encoder puts out two square wave signals (A and B). The counter is either incremented or decremented respectively with each positive and negative edge of both signals. Both square wave signals are phase shifted by 90 degrees. The counting direction is determined in this way.