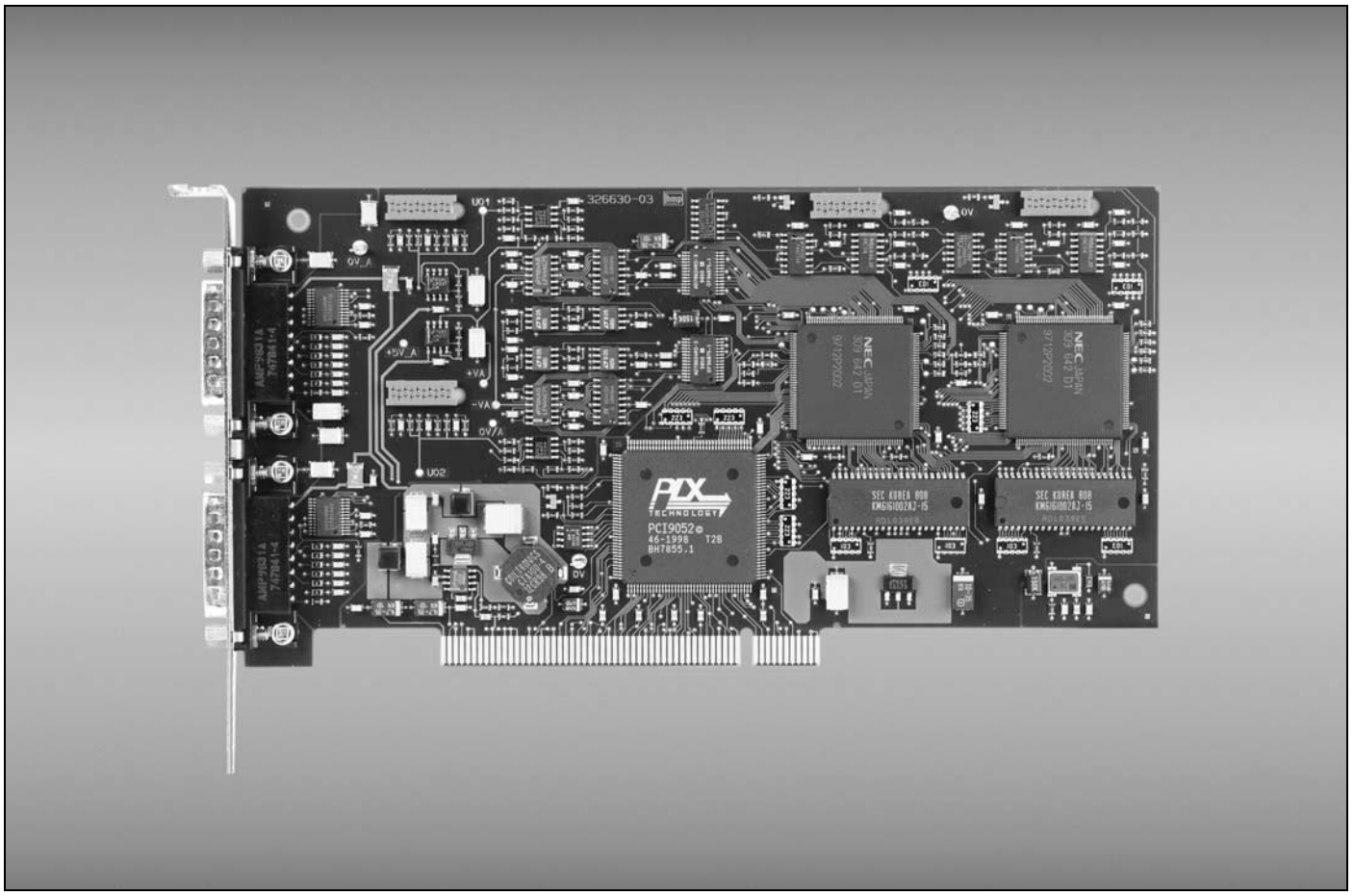
HEIDENHAIN

PC Counter Card

IK 220



The IK 220 is a counter card for linear and angular measurement with the aid of a personal computer. Two HEIDENHAIN encoders with sinusoidal current signals (~ **11 µA$_{PP}$**) or sinusoidal voltage signals (~ **1 V$_{PP}$**), and **EnDat interface** or **SSI interface** can be connected to the IK 220, which is inserted into a vacant PCI slot in the computer.

The IK 220 subdivides the periods of the sinusoidal encoder signals up to 4096 times. The input signals are called and stored either using external latch inputs or with software.

A total of up to 8192 measured values can be stored in the IK 220 buffer and downloaded in a single block.

The position values from the two encoders are processed in the PC using programs created by the operator.
To demonstrate the IK 220's capabilities, examples of such programs and a driver software for Windows NT/95/98 are supplied with the card.

The IK 220 is ideal for applications requiring high-resolution encoder signals and fast measured value acquisition.

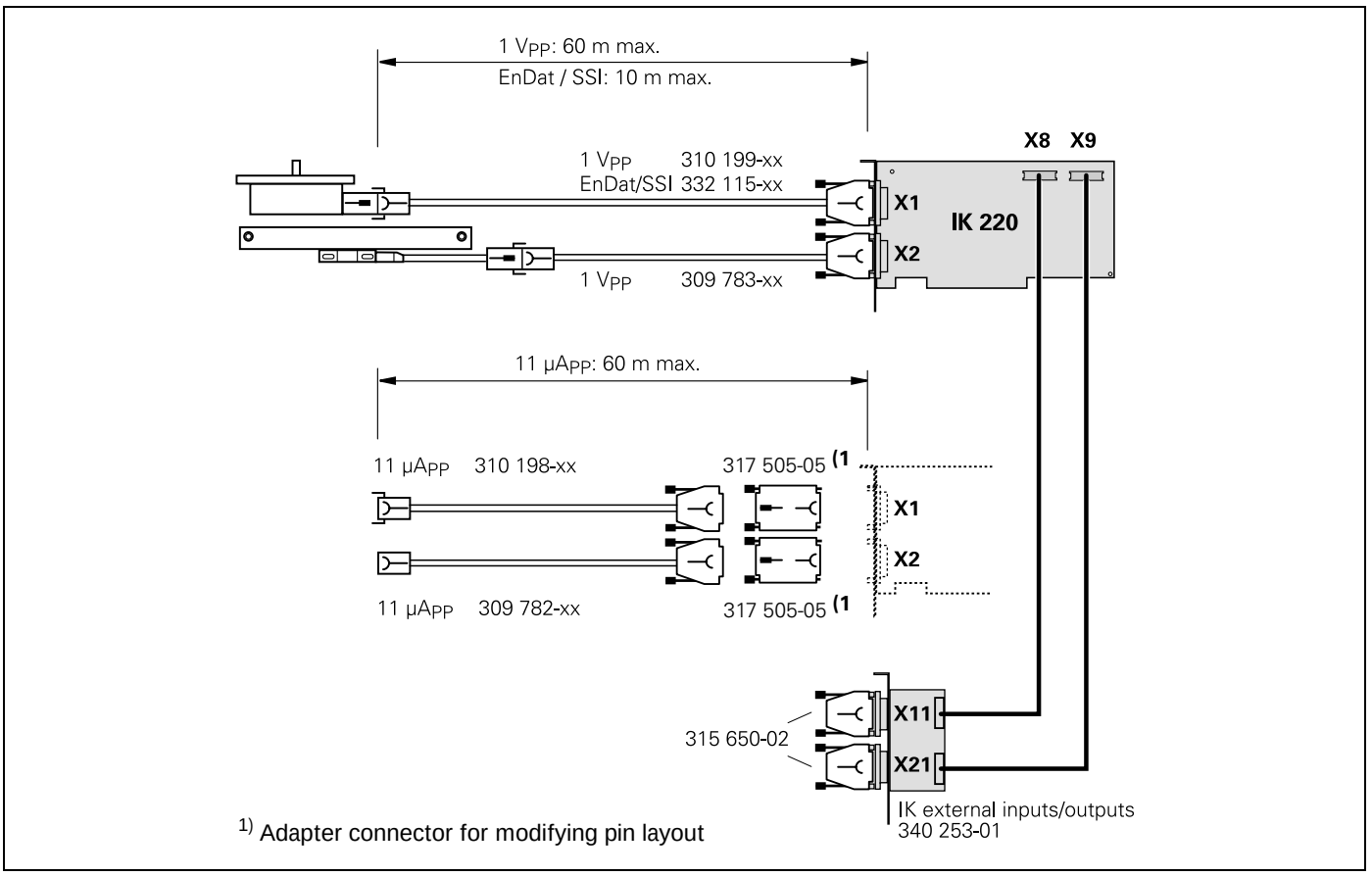
March 2002

Mechanical data	IK 220
Dimensions	Approx. 190 mm x 100 mm
Operating temperature **Storage temperature**	0° C to 55° C –30° C to 70° C

Electrical data	IK 220
Encoder inputs	Two D-sub connections (15-pin, male) Switchable: • ∿ **11 µA$_{PP}$:** Sinusoidal current signals Input frequency: max. 33 kHz Cable length: max. 60 m Adapter connector 317 505-05 required • ∿ **1 V$_{PP}$:** Sinusoidal voltage signals Input frequency: max. 500 kHz Cable length: max. 60 m • **EnDat** Cable length: max. 10 m • **SSI** Cable length: max 10 m
External latch signals (option) 2 inputs 1 output	Assembly with two D-sub connections (9-pin, male) TTL levels TTL levels
Encoder outputs	Sinusoidal current signals (11 µA$_{PP}$) via PCB connector on the IK (10-pin, female)
Signal interpolation	4096-fold
Adjustment of encoder signals	Adjustment of offset, phase and amplitude through software
Data register for measured values	48 bits, 44 bits used for the measured value
Interface	PCI bus (plug and play)
Internal buffer	For 8192 position values
Power consumption	Approx. 3.5 W, without encoders

Software	IK 220
Driver software and demonstration program	For Windows NT/95/98 in Visual C++, Visual Basic and Borland Delphi

Cables and Connectors



[1] Adapter connector for modifying pin layout

Basic Circuit Diagram