DATA SHEET

GENIOR

PCI card for tool, process and machine condition monitoring

- **Monitoring system for open machine control systems or standard PC systems**
- **1 or 2 Profibus connections**
- **8 monitoring channels per card**
- **4 Genior cards usable**
- **Evaluation of the internal drive unit data (no installation of sensors required)**
- **Idling compensation increases the reliability of the monitoring process**
- **Support for the optimum monitoring setting by means of graphical representations of the measurement results**
- **Easy user guidance with graphical setting**
- **Automatic parameter adaptation**
- **Scalable range of functions**
- **PLC data viewer**

Application

System for monitoring chip-forming tools for wear, breakage, overload, machining depth, and missing tool.

Operational use

The GENIOR system is primarily suitable for the purpose of monitoring processes in large-scale and small-scale production facilities. The system can be used to monitor up to eight machining processes simultaneously and independently.

Function

The GENIOR monitoring system is mainly integrated into open NC systems. The system analyses the process data. In the case of deviations from the underlying data, alarm signals are set and the signal curves are displayed at the same time on the monitor of the machine control system. The process data is gained in the form of torque values from the drive unit controllers for spindles and feed axles. Depending on the control system, the data is scanned in a compile cycle, in a PLC module or in a synchronous action.

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Characteristic features of GENIOR (Version 5.6.23.x)

- Integration into Siemens control systems 840D power line (pl) solution (sl) and operator panels OP012 with PCU50/70
- 1 or 2 Profibus connections per GENIOR card
- Up to 8 channels on one GENIOR card
- Up to 4 GENIOR cards in one control system (32 channels)
- Communication GENIOR ↔ GUI XML-based (i.e. for customer-dependent clients, e.g. process control station or production data acquisition unit)
- Saving the available process recordings to the hard disk of the control system
- Database-based
- Offline recorder
  - parameter history
  - process history
  - alarm history
  - saving alarm sections to a PC
  - storage of as many processes as you like (depending on hard disk)
  - Usable on a station-related basis
  - Filter functions

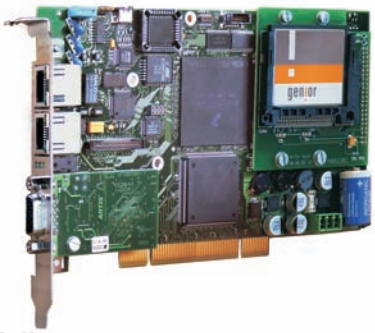
System requirements

- PC with sufficient, unassigned PCI slots for the provided GENIOR cards.
- Computer capacity ≥ 1 GHz, RAM ≥ 256 MB
- Windows XP (SP1) operating system
- Available memory capacity on hard disk ≥ 50 MB

Technical data GENIOR

Card	Euro-format **PCI** card approx. 100 x 160 mm
Weight	approx. 280 g
Current consumption	approx. 1 A (5 V DC), short-time starting current up to 3.5 A
Temperature range	0 to 50°C
Monitoring channels	2;4;8 channels (activation)
Memory size	flash disk with 256 MB
Interfaces	- Profibus - Ethernet (service)
Software	**GENIOR** new visualisation concept

- Up to 10.000 processes storable (expandable to practically any extent by means of data backup on hard disk)
- All workpiece-specific settings are stored on the GENIOR card
- Parameter-dependent online help
- Automatic image storage (JPEG) in the event of an alarm
- DTA
  - Processing of the digital torque data from the control system (activation)
- Strategies
  - Breakage limit (activation)
  - "missing" (activation)
  - Wear (activation / only in connection with service programme)
- PLC debug display
  Machine → Card → Machine
  - with card-related address areas
  - all addresses can be changed by user
  - various output formats (hexadecimal, binary, decimal)
- Automatic adaptation to process variations by means of multiple learning
  - learning curve is created using several processes
  - compensation of process, material and tool variations
  - relearning after n steps adjustable → sharp tools
- Platform for future monitoring strategies



Scope of delivery

- GENIOR card
- CD with manuals
- Software on CD
- ELF file
- GSD (device data) files
- Integration examples

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