Record measured values on machine tools

ibaPDA-Interface-SINUMERIK-Xplorer

**ibaPDA**
Xplorer interface for accessing
SINUMERIK CNC control systems

**Areas of application**
- Online monitoring and visualization
- Make the machine IoT-capable
- Benchmarking
- Commissioning support
- Calculate characteristics
SINUMERIK-Xplorer interface makes it possible to access machine tool data

Using the ibaPDA-Interface-SINUMERIK-Xplorer interface, data can be recorded directly from Siemens SINUMERIK CNC control systems. The connection and signal selection is as easy as it is with all Xplorer interfaces.

At a glance:
- Measured value acquisition directly from the NCK and Integrated Sinamics component of SINUMERIK CNC control systems
- Connection via standard interfaces without additional hardware
- No intervention in the control system necessary
- Convenient selection of the signals with the symbol browser
- Change or expansion of the signals to be measured without programming and without stopping the machine
- Evaluation with ibaAnalyzer included

The interface of the Xplorer series makes it possible to access data from SINUMERIK CNC control systems. In this way, iba is expanding the connectivity of the Xplorer interfaces from the connection of pure PLC systems to the world of machine tools. SINUMERIK CNC control systems are making the start.

Access without additional hardware and programming
As is standard with Xplorer interfaces, the SINUMERIK systems are accessed via standard network interfaces of the system - without additional hardware for measured value acquisition. It is not necessary to change the configuration of the control system or to program it.

Access to NCK component of a SINUMERIK control system
With the SINUMERIK-Xplorer, signals can be acquired from the NCK part of the SINUMERIK control systems as well as parameters from the Integrated Sinamics part of the control systems. In this way, important data, such as axis, tool and drive data, is available for online monitoring and for further processing or analyses.

If symbols and operands from the PLC part of the SINUMERIK control system are required, these can be acquired with the S7-Xplorer.

Free selection of symbols
The signals can be easily and conveniently selected in the integrated symbol browser by clicking with the mouse. Depending on the requirement, the signal selection can be flexibly changed - without changing the CNC program.

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Monitoring machine parameters online
In ibaPDA clients, the signal trend is visualized online and displayed in real-time. The operating personnel is therefore always able to monitor the current status of the machine, axes, spindles and drives.

IoT-capable with ibaDAQ-C
The measured values can also be acquired with the compact standalone device ibaDAQ-C. Characteristic values are calculated directly in the device and provided to superordinate systems. Machine tools can easily be connected to the IoT using the edge-device ibaDAQ-C.

Free analysis included
The free analysis tool ibaAnalyzer can be used to further process and analyze the acquired data subsequently. Since data acquisition and analysis are separated from each other, the analysis can take place already during the acquisition phase or at a later point in time, for example by experts away from the system.

IbaAnalyzer can run on several computers so that several users can analyze the data individually according to viewpoints of interest to them. The data can be centrally stored on a server or sent by e-mail.

Once the requirements for the evaluation have been set, these can be saved as an analysis rule and reused at any time. An analysis can be started and executed automatically.

Licensing
The prerequisite for using ibaPDA-Interface-SINUMERIK-Xplorer is an ibaPDA basic license.

The SINUMERIK-Xplorer license allows the measured value acquisition from up to 16 SINUMERIK control systems. If more connections are required, extension licenses are available for 16 additional connections.

Supported SINUMERIK control systems:
- SINUMERIK 828D sl
- SINUMERIK 840D sl
- SINUMERIK 840D pl

System prerequisites:
- Windows 7 (32/64 Bit), 8 (32/64 Bit), 8.1 (32/64 Bit), 10 (32/64 Bit), Windows Server 2008 (32 Bit), 2008 R2 (64 Bit), 2012 (64 Bit), 2012 R2 (64 Bit), 2016 (64 Bit), 2019 (64 Bit)
- PC, Multicore CPU 2 GHz, 4 GB RAM, 100 GB HDD

ibaDAQ-C at a glance:
- Standalone device for measured value acquisition via Ethernet, including:
  - ibaPDA and ibaPLC-Xplorer interfaces
  - OPC UA Server
  - Connection to MindSphere and MQTT

Connection to the IoT with ibaDAQ-C
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<thead>
<tr>
<th>Order No.</th>
<th>Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>31.000033</td>
<td>ibaPDA-Interface-SINUMERIK-Xplorer</td>
<td>Extension license for an ibaPDA system adding the data interface SINUMERIK-Xplorer (interface to for up to 16 SINUMERIK NCUs)</td>
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<tr>
<td>31.100033</td>
<td>one-step-up-interface-SINUMERIK-Xplorer</td>
<td>Extension license for additional 16 SINUMERIK NCUs [max. 15]</td>
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<td>30.770064</td>
<td>ibaPDA-V7-64</td>
<td>Base package server/client bundle for 64 signals</td>
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<tr>
<td>31.000001</td>
<td>ibaPDA-Interface-S7-Xplorer</td>
<td>Xplorer interface for Simatic S7-200/300/400/1200/1500/WinAC/Logo!</td>
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<tr>
<td>10.170002</td>
<td>ibaDAQ-C</td>
<td>Compact device for standalone data acquisition Installed as an ibaPDA server with PLC-Xplorer interfaces, OPC-UA server, Siemens MindSphere connection and MQTT</td>
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