

SIEMENS DATA ITEMS

DataXchange Machine Monitoring Data Items

Scytec DataXchange utilizes Siemens OPC UA connectivity to acquire data items for DataXchange machine monitoring as well as Scytec DXIQ analytics and Vericut CNC Machine Connect. Below you can find the specific data items that can be collected from the **Siemens 840D Solution Line** with **SINUMERIK Operate** and **SINUMERIK ONE** controls. Data can then be visualized into useful manufacturing dashboards and charts, used with analytics, or by Vericut CNC Machine Connect.

Data Items Collected

Active Tool
Alarm Code
Alarm Status
Axis Feed Rate
Capture Alarms
Connect Time
Connected Time
Coolant
Current Executing Block
Cycle Status
Dry Run
Emergency Status
Feed Hold Status
Feed Rate Override
Mode Selection
Rapid Override
Part Count
Program File Name
Program Stop (M0)
Rapid Override
Single Block Status
Spindle Load Meter Percent
Spindle Override
Spindle Speed

Data Items Description

Returns the tool position of the active tool
Returns the alarm code without the description
Whether or not an alarm is active
Feed rate information for the specified path and axis number
Captures all alarms including those that go off simultaneously
The connect time for the most recent poll
Returns time in seconds since a successful connection
Whether or not coolant is enabled
The currently active program block, with/without line number
Whether or not machine is cycling
Whether the dry run setting is on or off
Whether a machine is in an e-stop or not
Whether a machine is in feed hold or not
The current feed rate override represented as a percentage
The currently selected controller mode
The current rapid override as a percentage
Returns the current part count from the Siemens part counter
Returns the actual file name of the program
Returns true if the program has stopped due to an M0 code
Returns the percentage of the rapid traverse override
Whether single block mode is currently on or off
Spindle load as a percent for the specified spindle
The active spindle override as a percentage
Returns the speed of the specified spindle

Scytec DXIQ and Vericut CNC Machine Connect

Specific data points are pulled from your shop floor equipment by DataXchange for use with Scytec DXIQ analytics and **Vericut CNC Machine Connect**. Below you will find the specific continuous data and the on-demand data that can be collected through the Precheck, CNC Machine Monitoring and Postcheck process in Vericut CNC Machine Connect.

Continuous Data

- Active Alarms**
- Axis Feedrates**
- Axis Positions**
- Block Skip**
- Controller Mode**
- Coolant On/Off**
- Cycle Status**
- Dry Run**
- E-Stop State**
- Feed Rate Override Value**
- Line**
- Line Number**
- Main Number**
- Optional/Program Stop**
- Rapid Override**
- Single Block**
- Spindle Directions**
- Spindle Load**
- Spindle Overrides**
- Spindle Speeds**
- Sub Program**
- Tool ID**
- Tool Offsets**
- Work Offsets**

On-Demand Data

- Axis Positions**
- Main CNC Program**
- System Information**
- Tool Offsets**
- Work Offsets**