

SIEMENS

MindSphere

MindApp
SINUMERIK Service Assistance

Readme

Introduction

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Valid for controls:
SINUMERIK ONE, SINUMERIK 840D sl / SINUMERIK
828D / SINUMERIK PL
SINUMERIK Service Assistance V2.5.0.4


03/2023


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Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

 DANGER
indicates that death or severe personal injury will result if proper precautions are not taken.

 WARNING
indicates that death or severe personal injury may result if proper precautions are not taken.

 CAUTION
indicates that minor personal injury can result if proper precautions are not taken.

NOTICE
indicates that property damage can result if proper precautions are not taken.


If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

 WARNING
Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Introduction

1.1 About SINUMERIK

From simple, standardized CNC machines to premium modular machine designs – the SINUMERIK CNCs offer the right solution for all machine concepts. Whether for individual parts or mass production, simple or complex workpieces – SINUMERIK is the highly dynamic automation solution, integrated for all areas of production. From prototype construction and tool design to mold making, all the way to large-scale series production.

Visit our website for more information SINUMERIK (<https://www.siemens.com/sinumerik>).

1.2 About this documentation

Content

This Readme describes additional information and restrictions of the MindSphere application **SINUMERIK Service Assistance (SSA)**.

Target group

This publication is intended for planners, project engineers, technologists, installation personnel, commissioning engineers, machine operators, programmers, service and maintenance personnel.

Standard scope

This documentation only describes the functionality of the standard version. This may differ from the scope of the functionality of the system that is actually supplied. Please refer to the ordering documentation only for the functionality of the supplied drive system.

It may be possible to execute other functions in the system which are not described in this documentation. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

For reasons of clarity, this documentation cannot include all of the detailed information on all product types. Further, this documentation cannot take into consideration every conceivable type of installation, operation and service/maintenance.

The machine manufacturer must document any additions or modifications they make to the product themselves.

Websites of third-party companies

This document may contain hyperlinks to third-party websites. Siemens is not responsible for and shall not be liable for these websites and their content. Siemens has no control over the information which appears on these websites and is not responsible for the content and information provided there. The user bears the risk for their use.

1.3 Documentation on the internet

Comprehensive documentation about the functions provided in SINUMERIK ONE Version 6.13 and higher is provided in the Documentation overview SINUMERIK ONE (<https://support.industry.siemens.com/cs/ww/en/view/109768483>).



You can display documents or download them in PDF and HTML5 format.

The documentation is divided into the following categories:

- User: Operating
- User: Programming
- Manufacturer/Service: Functions
- Manufacturer/Service: Hardware
- Manufacturer/Service: Configuration/Setup
- Manufacturer/Service: Safety Integrated
- Information and training
- Manufacturer/Service: SINAMICS

Comprehensive documentation about the functions provided in SINUMERIK 840D sl Version 4.8 SP4 and higher is provided in the Documentation overview SINUMERIK 840D sl (<https://support.industry.siemens.com/cs/ww/en/view/109766213>).



1.3 Documentation on the internet

You can display the documents or download them in PDF and HTML5 format.

The documentation is divided into the following categories:

- User: Operating
- User: Programming
- Manufacturer/Service: Functions
- Manufacturer/Service: Hardware
- Manufacturer/Service: Configuration/Setup
- Manufacturer/Service: Safety Integrated
- Manufacturer/Service: SINUMERIK Integrate/MindApp
- Information and training
- Manufacturer/Service: SINAMICS

Comprehensive documentation about the functions provided in SINUMERIK 828D Version 4.8 SP4 and higher is provided in the 828D documentation overview (<https://support.industry.siemens.com/cs/ww/en/view/109766724>).



You can display documents or download them in PDF and HTML5 format.

The documentation is divided into the following categories:

- User: Operating
- User: Programming
- Manufacturer/Service: Configuring
- Manufacturer/Service: Commissioning
- Manufacturer/Service: Functions
- Manufacturer/Service: Safety Integrated
- SINUMERIK Integrate/MindApp
- Info & Training

1.4 Feedback on the technical documentation

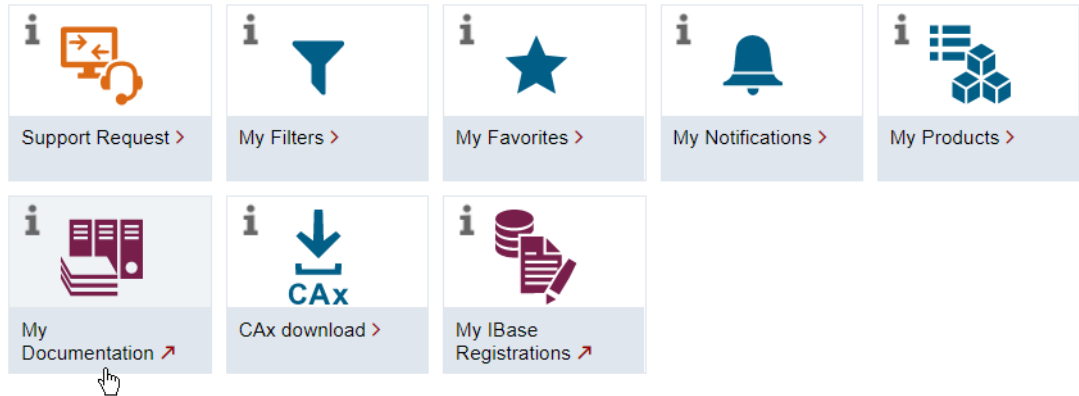
If you have any questions, suggestions or corrections regarding the technical documentation which is published in the Siemens Industry Online Support, use the link "Provide feedback" which appears at the end of the entry.

1.5 mySupport documentation

With the "mySupport documentation" web-based system you can compile your own individual documentation based on Siemens content, and adapt it for your own machine documentation.

To start the application, click on the "My Documentation" tile on the mySupport homepage (<https://support.industry.siemens.com/cs/ww/en/my>):

mySupport Links and Tools



The configured manual can be exported in RTF, PDF or XML format.

Note

Siemens content that supports the mySupport documentation application can be identified by the presence of the "Configure" link.

1.6 Service and Support

Product support

You can find more information about products on the internet:

Product support (<https://support.industry.siemens.com/cs/ww/en/>)

The following is provided at this address:

- Up-to-date product information (product announcements)
- FAQs
- Manuals
- Downloads
- Newsletters with the latest information about your products
- Global forum for information and best practice sharing between users and specialists
- Local contact persons via our Contacts at Siemens database (→ "Contact")
- Information about field services, repairs, spare parts, and much more (→ "Field Service")

Technical support

Country-specific telephone numbers for technical support are provided on the internet at address (<https://support.industry.siemens.com/cs/ww/en/sc/4868>) in the "Contact" area.

If you have any technical questions, please use the online form in the "Support Request" area.

Training

You can find information on SITRAIN at the following address (<https://www.siemens.com/sitrain>).

SITRAIN offers training courses for automation and drives products, systems and solutions from Siemens.

Siemens support on the go





With the award-winning "Siemens Industry Online Support" app, you can access more than 300,000 documents for Siemens Industry products – any time and from anywhere. The app can support you in areas including:

- Resolving problems when implementing a project
- Troubleshooting when faults develop
- Expanding a system or planning a new system

Furthermore, you have access to the Technical Forum and other articles from our experts:

- FAQs
- Application examples
- Manuals
- Certificates
- Product announcements and much more

The "Siemens Industry Online Support" app is available for Apple iOS and Android.

Data matrix code on the nameplate

The data matrix code on the nameplate contains the specific device data. This code can be read with a smartphone and technical information about the device displayed via the "Industry Online Support" mobile app.

1.7 OpenSSL

Using OpenSSL

This product can contain the following software:

- Software developed by the OpenSSL project for use in the OpenSSL toolkit
- Cryptographic software created by Eric Young.
- Software developed by Eric Young


You can find more information on the internet:


- OpenSSL (<https://www.openssl.org>)
- Cryptsoft (<https://www.cryptsoft.com>)

Safety notes

2.1 Fundamental safety instructions

2.1.1 General safety instructions

 WARNING
Danger to life if the safety instructions and residual risks are not observed
If the safety instructions and residual risks in the associated hardware documentation are not observed, accidents involving severe injuries or death can occur.
<ul style="list-style-type: none"> • Observe the safety instructions given in the hardware documentation. • Consider the residual risks for the risk evaluation.

 WARNING
Malfunctions of the machine as a result of incorrect or changed parameter settings
As a result of incorrect or changed parameterization, machines can malfunction, which in turn can lead to injuries or death.
<ul style="list-style-type: none"> • Protect the parameterization against unauthorized access. • Handle possible malfunctions by taking suitable measures, e.g. emergency stop or emergency off.

2.1.2 Warranty and liability for application examples

Application examples are not binding and do not claim to be complete regarding configuration, equipment or any eventuality which may arise. Application examples do not represent specific customer solutions, but are only intended to provide support for typical tasks.

As the user you yourself are responsible for ensuring that the products described are operated correctly. Application examples do not relieve you of your responsibility for safe handling when using, installing, operating and maintaining the equipment.

2.1.3 Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

2.1 Fundamental safety instructions

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens’ products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit

<https://www.siemens.com/industrialsecurity>.

Siemens’ products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer’s exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under

<https://www.siemens.com/cert>.

Further information is provided on the Internet:

Industrial Security Configuration Manual (<https://support.industry.siemens.com/cs/ww/en/view/108862708>)

 **WARNING**

Unsafe operating states resulting from software manipulation

Software manipulations, e.g. viruses, Trojans, or worms, can cause unsafe operating states in your system that may lead to death, serious injury, and property damage.

- Keep the software up to date.
- Incorporate the automation and drive components into a holistic, state-of-the-art industrial security concept for the installation or machine.
- Make sure that you include all installed products into the holistic industrial security concept.
- Protect files stored on exchangeable storage media from malicious software by with suitable protection measures, e.g. virus scanners.
- On completion of commissioning, check all security-related settings.

2.2 Security notes

Security notes

NOTICE
Security standards for SINUMERIK controls connected to MindSphere
The connection of SINUMERIK controls to MindSphere via TLS 1.2 /https meets the highest security standards.
SINUMERIK versions that do not meet these standards are not part of the product. For these versions, additional security measures must be taken.
You are solely responsible for preventing unauthorized access to your plants, systems, machines and network. Systems, machines and components should only be connected to the company's network or the Internet if and to the extent necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.
The actions required in this regard are described in Configuration Manual Industrial Security (https://support.industry.siemens.com/cs/ww/en/view/108862708).

NOTICE
Data misuse due to an unprotected Internet connection
An unrestricted Internet connection can lead to data misuse, e.g. when transferring the asset data.
Before establishing a network connection, ensure your PC is exclusively connected to the Internet via a secure connection. Pay attention to the security-relevant notes.
Further information about communications security can be found in the Configuration Manual Industrial Security (https://support.industry.siemens.com/cs/ww/en/view/108862708).

Note**SINUMERIK control system security**

The necessary security measures (e.g. virus scanner, firewalls, operating system patching, etc.) must be implemented on the SINUMERIK controls.

Further information about communications security can be found in the Configuration Manual Industrial Security (<https://support.industry.siemens.com/cs/ww/en/view/108862708>).

Note**Operating PC security**

The necessary security measures (e. g. virus scanner, firewalls, operating system patching, etc.) must be implemented on the PCs that are used to visualize and configure MindSphere applications at the OEM or end user facility.

Further information about PCs in the industrial environment can be found in the Configuration Manual Industrial Security (<https://support.industry.siemens.com/cs/ww/en/view/108862708>).

System requirements

Hardware and operating software

Table 3-1 SINUMERIK 840D sl

SINUMERIK Integrate Client software version	Operating software SINUMERIK Operate version	Hardware version	Operating system
2.0.11	4.5 SP4, HF 1, 2, 3	NCU 730.3 PN	Linux
2.0.12	4.5 SP5, HF 1, 3, 5 4.5 SP6, HF 3, 5, 7, 8, 10, 11, 13 14, 15, 16, 17, 18	PCU 50.5	Windows 7
2.0.13			
2.0.14	4.5 SP4, HF 4	NCU 730.3 PN	Linux
	4.5 SP6, HF 1, 12		
	4.5 SP6, HF 2	PCU 50.5	Windows 7
3.0.11	4.7 SP2, HF 1, 3,	NCU 730.3 PN	Linux
3.0.12	4 4.7 SP3, HF 1, 2, 3,	PCU 50.5	Windows 7
3.0.13	4 4.7 SP4, HF 1, 4, 6		
3.0.14	4.7 SP5, HF 1		
	4.7 SP6, HF 1, 3, 4, 5, 6, 7		
	4.7 SP7, HF 1, 3, 4		
	4.8 SP1, HF 1, 2, 3		
	4.8 SP2, HF 1, 3		
	4.8 SP3, HF 1		
	4.8 SP4, HF 1, 3, 4, 6, 8		
	4.8 SP5, HF 2, 3, 4		
	4.7 SP4, HF 3, 5	NCU 730.3 PN	Linux
	4.7 SP7, HF 2		
	4.7 SP7, HF 5	PCU 50.5	Windows 7
4.0.0	4.91 HF 1	NCU 730.3 PN	Linux
4.0.1	4.92 HF 2, 3	PCU 50.5	Windows 7

Table 3-2 SINUMERIK 828D

SINUMERIK Integrate Client software version	Operating software SINUMERIK Operate version	Hardware version	Operating system
2.0.11	4.5 SP4	PPU 281.3	Linux
2.0.12	4.5 SP5, HF 1, 2	PPU 261.3	
2.0.13	4.5 SP6, HF 1, 2, 3, 4	PPU 241.4	
2.0.14			
3.0.11	4.7 SP2, HF1		
3.0.12	4.7 SP3, HF1		
3.0.13	4.7 SP4, HF1, 2		
3.0.14	4.7 SP5		
	4.7 SP6, HF1, 2		
	4.7 SP7 HF1, 3		
3.0.11	4.8 SP4, HF 1, 2, 3	PPU 271.4	
3.0.12	4.8 SP5, HF 3		
3.0.13			
3.0.14			

Table 3-3 SINUMERIK ONE

SINUMERIK Integrate Client software version	Operating software SINUMERIK Operate version	Hardware version	Operating system
04.00.15.00	V06.13 + HF 04	NCU 1750	Linux

Operating PC

Processor	1 GHz processor
RAM (GB)	4
Free hard disk capacity (GB)	1
Operating systems	Windows 7 SP1 (x64) Professional/Enterprise/Ultimate Windows 10 (x64) Pro/Enterprise
Screen resolution	At least 1980 x 1080 pixels

Web browser or tablet

You can use the following web browsers:

- Chrome Version from 65.0.3325.18 (64 bit) up to the current version
- Firefox Version 59.0.2 (64 bit) up to the current version
- Safari for tablets iOS and Android systems are supported for the current version and 10 inch tablet size

Note

Parallel operation with SINUMERIK Integrate applications is not possible.

BFC client

The BFC client for SINUMERIK is the only client that is directly installed on the machine control system.

The following tables provide an overview of the hardware and operating software required for SINUMERIK control systems. 02.14.00.00

Table 3-4 SINUMERIK 840D - HMI Advanced

BFC client	Operating software	Hardware	Operating system
02.14.00.00	6.1	PCU 50.1	Windows NT
	6.2	PCU 50.2	Windows XP
	6.3	PCU 50.3	
	6.4	PCU 50.5	
	7.1		
	7.2		
	7.3		
	7.5		
7.6			

Table 3-5 SINUMERIK 840D - HMI Advanced for retrofit

BFC client	Operating software	Hardware	Operating system
02.14.00.00	6.5 for retrofit 7.7 for retrofit	IPC427D	Windows 10

Table 3-6 SINUMERIK 840D - MMC103*

BFC client	Operating software	Hardware	Operating system
02.14.00.00	5.3	MMC103	Windows 95

*) No general release for MMC103 / Windows 95

Contact the hotline for additional information or project-specific solutions.

Table 3-7 SINUMERIK 840D - SINUMERIK Operate (PCU/TCU)*

BFC client	Operating software	Hardware	Operating system
02.14.00.00	2.6	PCU 50.3	Windows XP
	2.7	PCU 50.5	Windows 7
	4.5		Windows 10
	4.7		
	4.8		
4.9			

*) No general release for operation on an IPC

Contact the hotline for further information, other versions of the operating software, or project-specific solutions.

Table 3-8 SINUMERIK 840D - SINUMERIK Operate (NCU/TCU)

BFC client	Operating software	Hardware	Operating system
02.14.00.00	2.6	NCU7x0.2	Linux
	2.7	NCU7x0.3	
	4.5		
	4.7		
	4.8		
4.9			

Contact the hotline for further information, other versions of the operating software, or project-specific solutions.

Table 3-9 SINUMERIK 828D - SINUMERIK Operate (PPU)

BFC client	Operating software	Hardware	Operating system
02.14.00.00	4.5	PPU2xx3	Linux
	4.7	PPU2xx4	
	4.8		

Table 3-10 SINUMERIK ONE - SINUMERIK Operate (IPC)

BFC client	Operating software	Hardware	Operating system
02.14.00.00	4.93	IPC627D	Windows 10
		IPC627E	

Note

1:n connections

Using the BFC client on control systems equipped with several NCUs has not been released. Contact the hotline for additional information or project-specific solutions.

Table 3-11 SINUMERIK ONE - SINUMERIK Operate (NCU/TCU)

BFC client	Operating software	Hardware	Operating system
02.14.00.00	4.93	NCU1760	Linux

Delivery form

The updates and further information on the applications and products are stored on PridaNet and can be downloaded directly from there.

- OR - You can contact your machine manufacturer.
- OR - You contact Siemens Service and Support.

Product information / technical update

4.1 Activating log files

4.1.1 Activating log files NCU

The necessary information for activating log files for NCU are already described in the readme file for MMM. For additional information, please visit Readme MMM (https://documentation.mindsphere.io/resources/pdf/MMM-R_readme_0320.pdf).

4.1.2 Activating log files PCU

The necessary information for activating log files for PCU are already described in the readme file for MMM. For additional information, please visit Readme MMM (https://documentation.mindsphere.io/resources/pdf/MMM-R_readme_0320.pdf).

4.2 File upload - restrictions

The necessary information on general restrictions for file upload are already described in the readme file for MMM. For additional information, please visit Readme MMM (https://documentation.mindsphere.io/resources/pdf/MMM-R_readme_0320.pdf).

Supported directories and folders

Note

The uploading of confidential files is not permitted

Permitted file extensions and directories have been generated to comply with the security guidelines and to prevent the uploading of confidential files. The sending and loading of the correct files into the corresponding directories is the responsibility of the users.

To ensure secure file upload, a positive list is defined, which limits the configured path of a file upload item. A file upload item's path must follow the limitation rules, which are presented below:

Directories for BFC Gateway

Below directory list is supported for file upload operation and SSA. You cannot upload files from other directories and use it in SSA:

- C:\temp\files\
On the PCU
- C:\temp\datatransfer\
On the PCU
- /var/temp/datatransfer/
On the NCU
- /var/tmp/
On the NCU
- /user/sinumerik/hmi/data/version/
On the NCU

Directories for MMM

All MMM directories are supported by SSA.

The special directory <temp>

To allow greater flexibility for the file upload, the "epsConfig temp" directory has been added to the permitted list.

Example:

"epsconfig.xml" - the associated temp file is: C:\temp\

<temp>\ file is C:\temp\files\

Restrictions

File extensions

Only .xml file extensions are allowed for the file upload.

File Limitations

Asset with more than 15 identSNAPSHOT files, Machine Transparency may not work properly.
The maximum file size is 100 MB.

File names

An asset cannot save a file if the name contains certain special characters.

The following characters must not be used in file names: !, +, ?, :, *, &, ", \$, /, `, <, >

The name of identSNAPSHOT must be like one of these below:

<filename>_config.xml i.e: SPG2019052401933_config.xml

or

<file_name>_config_<DD-MM-YYYY_HH-MM-SS-SSS>.xml

i.e:000060161897FC000014_config_01-04-2020_21-39-58-101.xml

Defining custom aspect

To visualize the non-SSA aspect in the process data, an aspect name should start with "CSM" (e. g: CSM_custom_aspect).

- These aspects may cause slowness of the application. It is not recommended to use these kind of aspects.
- Please do not use the same variable name on different aspects.

Application definitions and limitations

Maximum number of alarms on current alarm page should be less than or equal to 10. In case of having more than 10 current alarms, SSA Error Analyses functionality may not work properly.

If 6 users simultaneously visit Error Analysis main page for an asset having 10 active alarms and 10 historical alarms, Current Alarm, Alarm History and Triggering Alarms for disturbances sub pages may not work properly.

These aspects below have to be initially configured from "Asset Manager" for running the application services:

- AgentOnlineStatus
- Alarms
- CH1_BasicConfig
- CH1_MachineStatus
- connectivityStatus
- CSM_AX01

4.2 File upload - restrictions

- CSM_AX02
- CSM_AX03
- CSM_AX04
- CSM_AX05
- CSM_General_Info
- CSM_SP01
- MachineModel
- SINUMERIK_CSALARMREACTION
- SINUMERIK_CSMACHINESTATUS
- SINUMERIK_CSRAW
- SINUMERIK_CSRESULTS
- SINUMERIK_TRIGGERINGALARMS
- Startup
- status

The asset from asset selection table must be selected before choosing one of the main services of the application.

The descriptions of asset, connection and configuration status are shown below:

Table 4-1 Asset Status




Symbol	Meaning
	A Warning has occurred when there is an organizational disturbance or the controller is used in a user (service) or service (commissioning engineer) access level
	An Error has occurred when there is a technical disturbance or the controller is used in a manufacturer (development) or Siemens access level.
	Everything is okay when there is no disturbance and the controller is used in a key-switch access level.
—	If CH1_MachineStatus/ SINUMERIK_CSPROTECTIONLEVEL is not configured, this symbol appears.

Table 4-2 Connection Status






Symbol	Meaning
	Controller is connected
	Controller is disconnected
—	If AgentOnlineStatus is not configured, this symbol appears.

Table 4-3 Configuration Status

Symbol	Meaning
	Upload date of the last acknowledged IdentSNAPSHOT file
	Acknowledged IdentSNAPSHOT file in New Asset Selection page
	Symbolizes a change of the configuration
—	No configuration

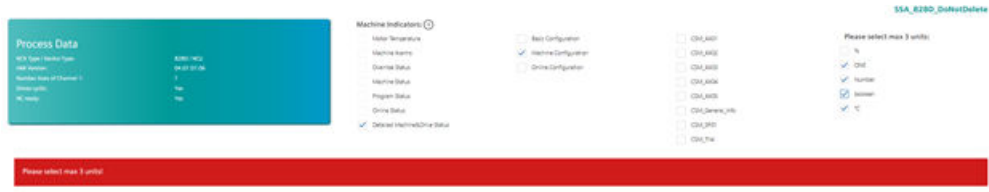
SINUMERIK ONE support

Due to connectivity restrictions, information of NCK Type is not provided on user interface for SINUMERIK ONE.

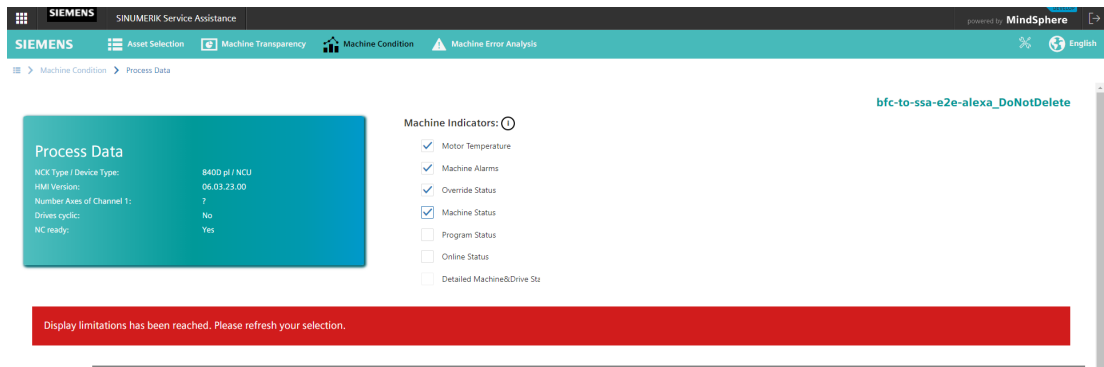
Machine Condition limitations

Process data

- Please note, that if you select 30 days as time range, there will be a note to use a smaller date range (max. 7 days).
- Max 3 units. (Detailed Machine&Drive Status)

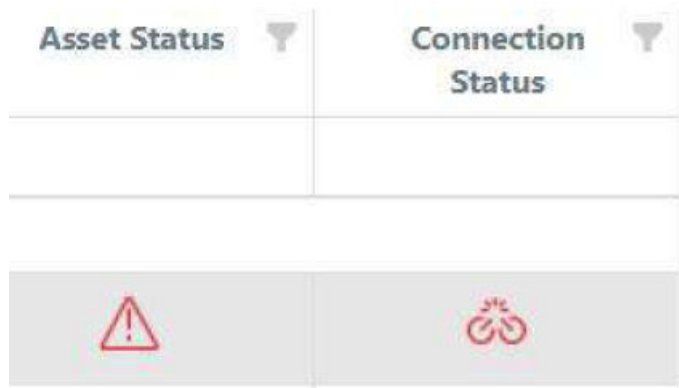


- Maximum 3 or 4 indicators can be chosen (depending on units of indicators).



SI gateway limitations

- In the Asset Selection page "Asset Status" and "Connection status" will be displayed as shown in the image below:



- There will be no data on Process Data page for "Device Type" and "HMI Version".
- There will be no data for the whole operating time functionality of Machine Condition.
- Boot Monitoring page will not provide data for cases of "PLC stop" and "PO Reset".
- In order to utilize functionality of Machine Transparency, you should upload the identSHNAPSHOT file from Fleet Manager.

Asset Selection / Activation page limitations

- A maximum of 4 asset or 12 services (MT,MC,EA) should be activated at the same time.

If the following attributes of an asset are changed, you will be see these changes in the Asset Selection/Activation page, after the job has processed the asset (imax 2 hours).

Attributes:

- Asset Name
- Description
- City
- Hierarchy (From subtenant to other subtenant OR from main tenant to subtenant)

Alarms limitations for asset with ClosedAlarms Aspect

Information on number of alarms within last 7 days

- For the better performance, the number of alarms within the last 7 days is counted by "Mindsphere Aggregative Service" for Closed Alarms aspect. Aggregative Service aggregates the closed alarms data of the current day after midnight (UTC+0). Therefore information on number of alarms within last 7 days is less than the actual one.

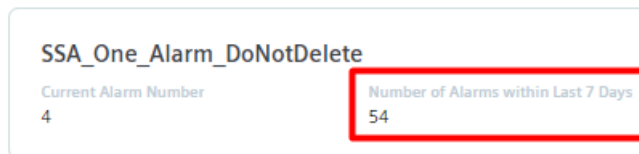


Figure 4-1 Number of alarms within last 7 days

Alarm time stamps show wrong hour (subtract machine time zone) for some controllers

- Whatever SINUMERIK time zone is selected, alarms are shown as UTC+0 in some controllers. Therefore alarms are shown in the SSA user interface as "UTC Minus (-) Machine Time Zone".

Note

If machine time zone will be set as UTC+0, this problem won't be seen.

Missing closed alarms

- Some of the closed alarms can be lost during process. This defect is very rare.

4.2 File upload - restrictions

Restrictions for best usage for asset which has ClosedAlarms Aspect

Please consider the following restrictions, in order to work with Machine Error Analysis with high quality:

- There should be max 400 active alarms.
- There should be max 100000 closed alarms.
- There should be max 1000 multi day alarms.

Active alarms:

- It is started but not finished.

Closed alarms:

- It is started and resolved at the same day. (UTC+0)

Multi day alarms:

- It is started and resolved at a different day. (UTC+0)

Alarms limitations for asset which does not have ClosedAlarms Aspect

Sometimes alarms can repeat themselves:

From	To	Duration (Seconds)	Alarm No.	Text	Pris	Class Info	Source	Number Range	From (Client)
Sep 16, 2021, 12:54:27 PM	Sep 16, 2021, 12:55:27 PM	00:10:00	149001	No boot script available	100	HAR	JAPS	NCK General Alarms	Sep 16, 2021, 3:02:49 PM
Sep 16, 2021, 12:56:32 PM	Sep 16, 2021, 1:57:01 PM	01:41:09	149001	No boot script available	100	HAR	JAPS	NCK General Alarms	Sep 16, 2021, 3:14:14 PM
Sep 16, 2021, 1:57:01 PM	Sep 16, 2021, 1:58:21 PM	00:00:20	25022	Axis M01 encoder 1 warning 0	100	CANCEL	JACK	NCK Axis/Spinhub Alarms	Sep 16, 2021, 4:54:55 PM
Sep 16, 2021, 1:58:21 PM		0:01:07	25022	Axis M01 encoder 1 warning 0	100	CANCEL	JACK	NCK Axis/Spinhub Alarms	Sep 16, 2021, 4:54:55 PM
Sep 16, 2021, 1:58:21 PM		0:01:07	149001	No boot script available	100	HAR	JAPS	NCK General Alarms	Sep 16, 2021, 4:55:40 PM

Figure 4-2 Repetition of alarms

Restrictions for best usage for asset which does not have ClosedAlarms Aspect

Please consider the following restrictions, in order to work with Machine Error Analysis with high quality:

- There should be max 10 current alarms.
- There should be max 1000 alarms in alarm history.