SIEMENS

SINUMERIK

MindSphere application
Manage MyMachines,
Manage MyMachines /Spindle Monitor

Readme

Valid for control:
SINUMERIK 840D sl/ 840DE sl/ 828D
SINUMERIK ONE
Software
Manage MyMachines, version 02.01.00.00
Manage MyMachines /Spindle Monitor, version **02.01.00.00**

04/2020

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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Fundamental safety instructions

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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. ● 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. ● Protect the parameterization against unauthorized access. ● Handle possible malfunctions by taking suitable measures, e.g. emergency stop or emergency off.

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.

1.3 Security information

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

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 (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/industrialsecurity (https://new.siemens.com/global/en/products/services/cert.html#Subscriptions).

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.
- Protect the drive against unauthorized changes by activating the "Know-how protection" converter function.

System requirements

<div style="text-align: right; font-size: 2em;">2</div>

Hardware and operating software

SINUMERIK 840D sl

SINUMERIK Integrate Client software version	Operating software SINUMERIK Operate Version	Hardware version	Operating system
2.0.11 2.0.12 2.0.13	4.5 SP4, HF 1, 2, 3, 4, 4.5 SP6, HF 1, 3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	NCU 7x0.3 PN NCU 7x0.3B (PN)	Linux
2.0.14 2.0.16	4.5 SP5, HF 1, 3, 5 4.5 SP6, HF 2, 3, 5, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18	PCU 50.5	Windows XP Windows 7
3.0.11 3.0.12 3.0.13 3.0.14 3.0.16	4.7 SP2, HF 1, 3, 4 4.7 SP3, HF 1, 2, 3	NCU 7x0.3 PN NCU 7x0.3B (PN)	Linux
	4.7 SP4, HF 1, 4, 6 4.7 SP5, HF 1 4.7 SP6, HF 1, 3, 4, 5, 6, 7 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 5, 6	PCU 50.5 IPC 427	Windows 7 Windows 10
	4.7 SP4, HF 3, 5	NCU 7x0.3 PN NCU 7x0.3B (PN)	Linux
4.0.2	4.92 HF 3 4.93 HF 1	NCU 710.3B NCU 7x0.3B (PN)	Linux
		PCU 50.5	Windows 7 Windows 10
4.0.15	4.93 HF 2	NCU 710.3B NCU 7x0.3B (PN)	Linux
		PCU 50.5	Windows 7 Windows 10

SINUMERIK 828D

SINUMERIK Integrate Client software version	Operating software SINUMERIK Operate Version	Hardware version	Operating system
2.0.11 2.0.12 2.0.13 2.0.14 2.0.16	4.5 SP4 4.5 SP5, HF 1, 2 4.5 SP6, HF 1, 2, 3, 4	PPU 281.3 PPU 261.3 PPU 241.3	Linux
3.0.11 3.0.12 3.0.13 3.0.14 3.0.16	4.7 SP2, HF 1 4.7 SP3, HF 2 4.7 SP4, HF 1, 2 4.7 SP5 4.7 SP6, HF 1, 2 4.7 SP7 HF 1, 3	PPU 290.3 PPU 28x.3 PPU 26x.3 PPU 24x.3	
3.0.11 3.0.12 3.0.13 3.0.14	4.8 SP4, HF 1, 2, 3, 4, 5 4.8 SP5, HF 5	PPU 27x.4 PPU 29x.4	

SINUMERIK ONE

SINUMERIK Integrate Client software version	Operating software SINUMERIK Operate Version	Hardware version	Operating system
04.00.15 04.00.16	6.13 HF1, 2	NCU 1760 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

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Note

Parallel operation with SINUMERIK Integrate applications is not possible

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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 the following 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).

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
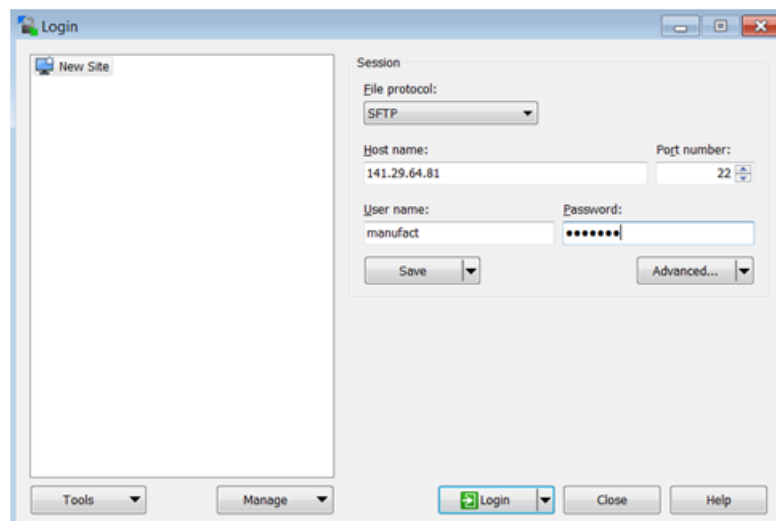
3

3.1 Activating log files

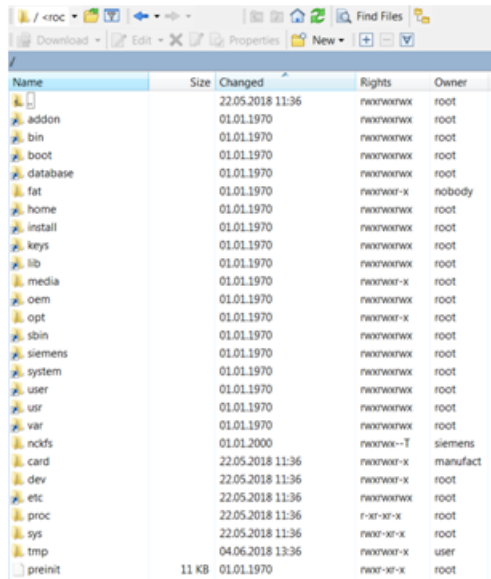### 3.1.1 Activating log files NCU

Procedure

1. Open the log files, e.g. WinSCP.
2. Enter the following information:
   – Host name
   – Port number
   – User name
   – Password

   Click the "Login" button.

3. The following window opens:

4. Open the following directory: /<root>/user/sinumerik/hmi/cfg.

5. Open file "ePSConfig.user.xml".

Editing parameters

You can edit the following parameters:

Parameter	Function	Default set-ting	Input	Maximum val-ue
`scriptLogPath`	Defines where the log files are to be saved.		Storage lo-cation	-
`scriptLogSeverity`	Indicates the system logging level.	2	2 to 8	8 (Debug3)
`uiScriptlogSeverity`			1	
`MaxScriptLogsize`	Indicates the maximum script log size.			10000
`separateScriptLog`			1	

Example:

```
<logging>
        <separateScriptLog active="1">1</separateScriptLog>
        <scriptLogPath active="1">/var/tmp/scriptLog</scriptLogPath>
        <scriptLogSeverity active="1">8</scriptLogSeverity>
        <uiScriptLogSeverity active="1">8</uiScriptLogSeverity>
        <maxScriptLogSize active="1">9999</maxScriptLogSize>
</logging>
```

Checking log files

There are 10 different types of log file:

- alarm_recording_script
- cyclic_recording_script
- dts_script.js
- machinemodel_script.js
- onchange_recording_script.js
- service_script.js
- startup_recording.js
- variabletrigger_recording_script.js
- boot_script.js
- fileupload_recording_script.js

Procedure

1. Open the following directory: /<root>/var/tmp/

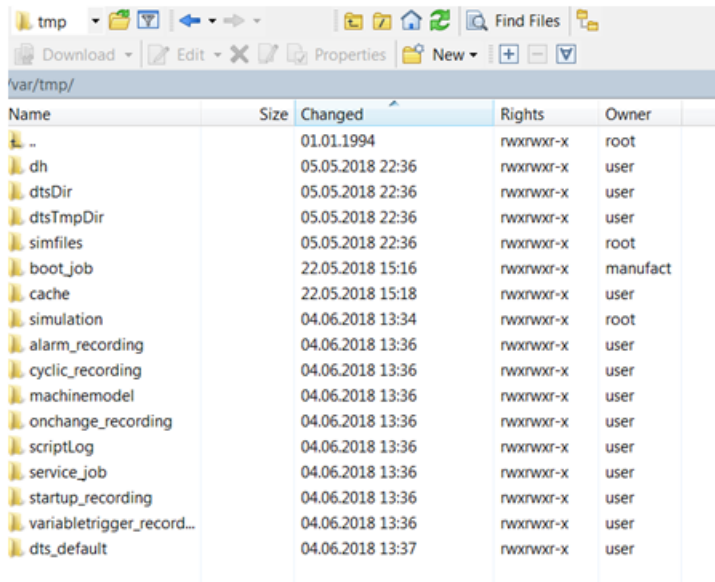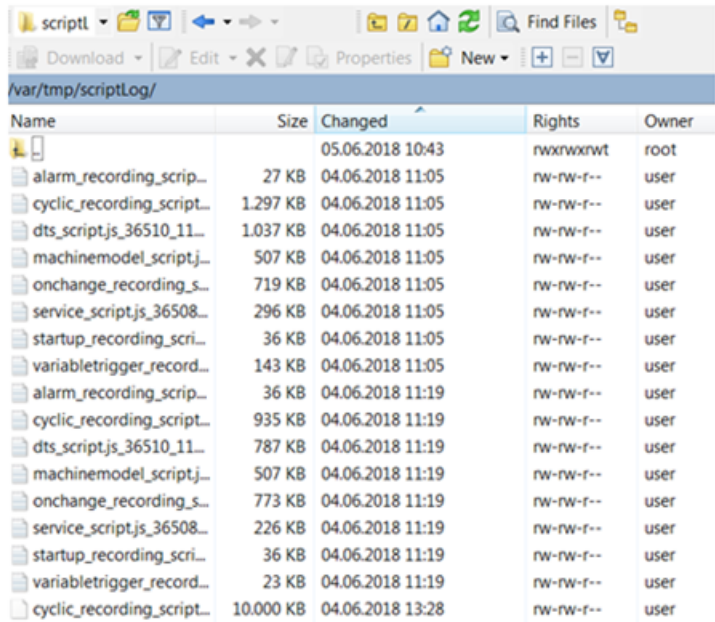| Name	Size	Changed	Rights	Owner
..		01.01.1994	rwxrwxr-x	root
dh		05.05.2018 22:36	rwxrwxr-x	user
dtsDir		05.05.2018 22:36	rwxrwxr-x	user
dtsTmpDir		05.05.2018 22:36	rwxrwxr-x	user
simfiles		05.05.2018 22:36	rwxrwxr-x	root
boot_job		22.05.2018 15:16	rwxrwxr-x	manufact
cache		22.05.2018 15:18	rwxrwxr-x	user
simulation		04.06.2018 13:34	rwxrwxr-x	root
alarm_recording		04.06.2018 13:36	rwxrwxr-x	user
cyclic_recording		04.06.2018 13:36	rwxrwxr-x	user
machinemodel		04.06.2018 13:36	rwxrwxr-x	user
onchange_recording		04.06.2018 13:36	rwxrwxr-x	user
scriptLog		04.06.2018 13:36	rwxrwxr-x	user
service_job		04.06.2018 13:36	rwxrwxr-x	user
startup_recording		04.06.2018 13:36	rwxrwxr-x	user
variabletrigger_record...		04.06.2018 13:36	rwxrwxr-x	user
dts_default		04.06.2018 13:37	rwxrwxr-x	user

2. Select file "scriptLog".

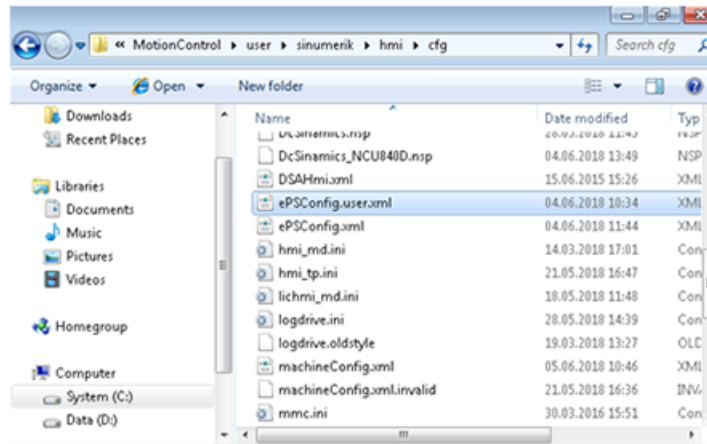| Name	Size	Changed	Rights	Owner
..		05.06.2018 10:43	rwxrwxrwt	root
alarm_recording_scrip...	27 KB	04.06.2018 11:05	rw-rw-r--	user
cyclic_recording_script...	1.297 KB	04.06.2018 11:05	rw-rw-r--	user
dts_script.js_36510_11...	1.037 KB	04.06.2018 11:05	rw-rw-r--	user
machinemodel_script.j...	507 KB	04.06.2018 11:05	rw-rw-r--	user
onchange_recording_s...	719 KB	04.06.2018 11:05	rw-rw-r--	user
service_script.js_36508...	296 KB	04.06.2018 11:05	rw-rw-r--	user
startup_recording_scri...	36 KB	04.06.2018 11:05	rw-rw-r--	user
variabletrigger_record...	143 KB	04.06.2018 11:05	rw-rw-r--	user
alarm_recording_scrip...	36 KB	04.06.2018 11:19	rw-rw-r--	user
cyclic_recording_script...	935 KB	04.06.2018 11:19	rw-rw-r--	user
dts_script.js_36510_11...	787 KB	04.06.2018 11:19	rw-rw-r--	user
machinemodel_script.j...	507 KB	04.06.2018 11:19	rw-rw-r--	user
onchange_recording_s...	773 KB	04.06.2018 11:19	rw-rw-r--	user
service_script.js_36508...	226 KB	04.06.2018 11:19	rw-rw-r--	user
startup_recording_scri...	36 KB	04.06.2018 11:19	rw-rw-r--	user
variabletrigger_record...	23 KB	04.06.2018 11:19	rw-rw-r--	user
cyclic_recording_script...	10.000 KB	04.06.2018 13:28	rw-rw-r--	user

3.1.2 Activating log files PCU

Procedure

1. Open the following directory: C:\ProgramData\Siemens\MotionControl\user\sinumerik\hmi \cfg

2. Open the file: ePSConfig.user.xml.

Editing parameters

You can edit the following parameters:

Parameter	Function	Default set-ting	Input	Maximum val-ue
scriptLogPath	Defines where the log files are to be saved.		Storage lo-cation	-
scriptLogSeverity	Indicates the system logging level.	2	2 to 8	8 (Debug3)
uiScriptlogSeveri ty			1	
MaxScriptLogsize	Indicates the maximum script log size.			10000
separateScriptLog			1	

Example:

```
<logging>
<separateScriptLog active="1">1</separateScriptLog>
<scriptLogPath active="1">C:\temp\scriptLog\</scriptLogPath>
<scriptLogSeverity active="1">8</scriptLogSeverity>
<uiScriptLogSeverity active="1">8</uiScriptLogSeverity>
<maxScriptLogSize active="1">10000</maxScriptLogSize>
<maxLogLifeTimeDays active="1">30</maxLogLifeTimeDays>
</logging>
```
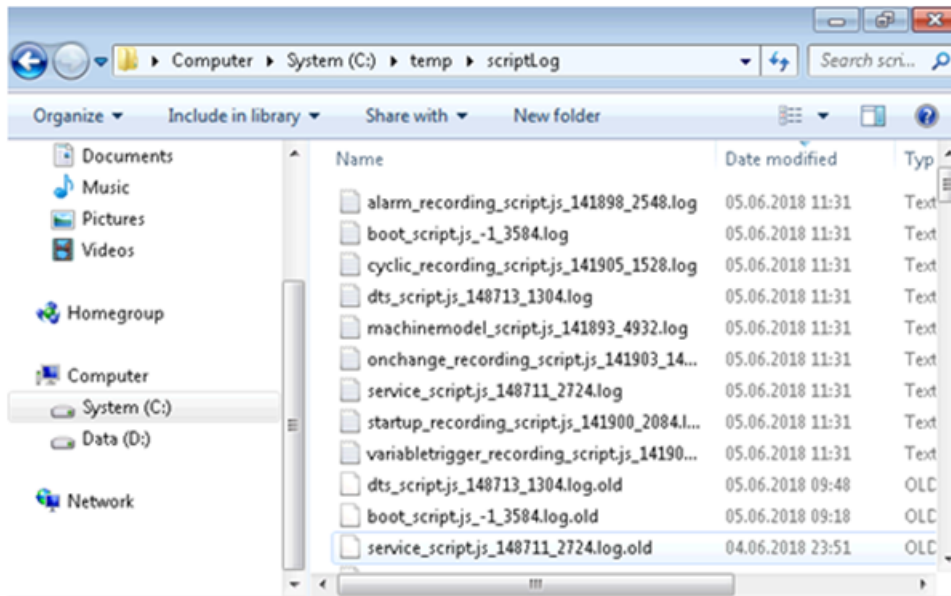
Checking log files

   1. Open the following directory: C:\temp\scriptLog

   2. Check the corresponding log files.

3.2 File upload - restrictions

General restrictions for the file upload

The following restrictions apply to the file upload:

- You have the capability of loading 5 files or directories simultaneously.

- You define a name for the file or the directory.
  Once you have defined a directory, 5 files are loaded from this directory. The files are selected according to the change date, the latest 5 files are loaded.

- To distinguish between a file and a directory, directories must end with a "/" or "\".

- Subdirectories in the selected directory are not taken into account.

- The time limitation of the SINUMERIK controller must be set to 200 milliseconds.
  The following applies on account of the MindSphere restrictions:

  – Special characters are not supported for the file upload.
    Do not use the following characters: ?, : , *, &, ", $, |, `,<,>.+!

  – If the files are larger than 8 MB, the total path length cannot contain more than 60 characters.

- The file size is limited to 100 MB.
  Files that are larger than 100 MB are not transferred. The information is transferred with an error message to MindSphere. The error message is output in English.

- The size of the directory is limited to 100 MB. If, for example, the first three files in the directory amount to more than 100 MB, the fourth file is not transferred. The information is conveyed with an error message. The error message is output in English.

Restrictions for preventing erroneous transfers

To prevent loss of data, Manage MyMachines creates a "temp" directory into which the data is transferred if the transfer to MindSphere does not take place.

Note the following:

- The maximum size of the directory cannot exceed 500 MB.

- Prevent manipulation of the file upload directory that is located in the "temp" directory of the SINUMERIK controller ("<temp>/fileupload" and "<temp>/fileupload/recoveryfiles"), the failover uses these directories.

- If file transfers fail, additional transfer attempts are started within a 1-hour cycle.

- To prevent simultaneous multiple changes, a debounce time is added on the side of the SINUMERIK controller after the configuration. The files are sent to MindSphere after no later than 5 minutes.

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.

Directories

The file upload supports the following directories:

- /card/user/sinumerik/hmi/appl/

- /card/oem/sinumerik/hmi/appl/

- /card/oem/sinumerik/hmi/OMATIVE_ACM/data

- C:\ProgramData\Siemens\MotionControl\oem\sinumerik\hmi\appl\

- C:\ProgramData\Siemens\MotionControl\user\sinumerik\hmi\appl\

- /card/user/sinumerik/hmi/cfg

- /card/oem/sinumerik/hmi/cfg

- /card/user/sinumerik/hmi/log

- /card/oem/sinumerik/data/archive

- /card/system/tmp

- f:\oem\

- f:\user\

- f:\mmc2\

- f:\hmisl\oem\sinumerik\hmi\OMATIVE_ACM\data

- \<temp>\
  You have the option of creating several subdirectories in this directory.

- C:\temp\datatransfer
  On the PCU WIN NT

- C:\ProgramData\Siemens\MotionControl\oem\sinumerik\hmi\OMATIVE_ACM\data

- var\tmp\datatransfer
  On the PCU WIN XP

- var\tmp\datatransfer
  For Linux

- /user/sinumerik/hmi/data/version/

It is not possible to load files from other directories.

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 for files

File extensions

Only the following file extensions are allowed for the file upload:

- .xml
- .txt
- .log
- .png
- .jpg
- *.ini
- *.csv:
- *.json
- *.sav

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: !, +, ?, :, *, &, ", $, /, `, <, >

3.3   Supplementary conditions

"boot_job" folder

If the "boot_job" folder is not generated automatically, restart the control, and create the directory manually under: /var/tmp, or C:\temp for PCU.

An online script update during ongoing operation can result in loss of data

Error description:

During the update of scripts that contain the execution logic on the control, it cannot be guaranteed that the data will be recorded continuously over the stopping and restarting period of the scripts.

Remedy:

No remedy possible.

Variables of the type "STRING" are not visualized in the aspect view

Error description:

When freely configuring variables, defined variables of the data type "STRING" are not displayed in one aspect. The display shows "No Data available".

Remedy:

No remedy possible.

Crash of SINUMERIK Operate caused by update of the application logic

Error description:

Updating the application logic by means of an update of the system at the server end can very occasionally cause SINUMERIK Operate to crash.

Remedy:

Restart SINUMERIK Operate.

Display of the "operational performance monitors"

Error description:

An additional license is required for recording the axis-specific operational performance monitors: path length evaluation, 6FC5800-0AM53-0YB0.

Remedy:

Contact your sales representative to obtain the additional license.

Data buffering when no Internet connection is available

Information:

If your control has no Internet connection or if MindSphere is not accessible (e.g. due to an Internet failure), the data is buffered on the controller.

The size of this buffer is limited to 50 MB.

The length of period during which data can be buffered without loss of data depends on the number and type of variables, frequency of changes, and the recording rhythms.

Occurrence of sporadic faulty behavior on the user interface

Error description:

After the MindSphere or one of the components in the user interface has been updated, the user interface may behave incorrectly.

Remedy:

Delete your browser cache, e.g. with the key combination <Shift> + <F5>.

Changing the "ePSConfig.user.xml" file

Information:

Changes to the file "ePSConfig.user.xml" may only be performed after consultation with the Hotline, Service, Development, or PM.

No 1:n connections released for the SINUMERIK Integrate client

Information:

The SINUMERIK Integrate client does not support any 1:n connections. That is to say, no access to a further control is possible via the SINUMERIK Integrate client.

The Asset Manager only supports German and English

Error description:

If a language other than German or English is set, the Asset Manager pages will not be fully loaded.

Remedy:

Use only English or German as the browser language.

It is not possible to delete aspects and variables

Error description:

Deleting aspects via the user interface is no longer possible due to a current error in MindSphere.

Remedy:

Delete aspects and variables via the web service interface of MindSphere.

Connection to MindSphere must be established via TLS 1.2

Error description:

For security reasons, MindSphere requests a connection that satisfies the TLS 1.2 standard. For the versions of SINUMERIK Integrate client that do not support TLS 1.2, a reverse proxy that supports TLS 1.2 is required.

The connection of SINUMERIK controls to MindSphere and "Manage MyMachines" must meet 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.

Customers are solely responsible for preventing unauthorized access to their plants, systems, machines and networks. 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.

Remedy:

The machines can be integrated with the aid of a reverse proxy between the company network and the Internet.

You can read about further actions in the application examples: Manage MyMachines – Installation in existing control environments.

System crash when etc/host file is changed

Error description:

Use of the SINUMERIK Integrate client with a changed etc/host file leads to unexpected system crashes.

Remedy:

No remedy possible.

Display problems on tablet devices

Error description:

The display in portrait format is not supported for tablets. Display problems can also occur when the landscape format is used.

Remedy:

Use the display in landscape format on your tablet device if problems occur with the portrait format display. If problems also occur in the landscape format, use your PC browser for this operating step.

Blank e-mail entries are not validated

Error description:

When the user selects the option "Send email" and leaves the email address field blank, there is no check as to whether or not the email is entered.

Remedy:

Enter a valid email address.

Incorrect asset storage location on the card

Error description:

The storage location of an asset is not correctly displayed on the card.

Remedy:

If the asset storage location on the card appears to be incorrect, change the storage location directly in the "Fleet Manager". Click on the "Edit" icon and specify the correct storage location.

There must be sufficient memory for the buffering of data

Error description:

If there is not sufficient memory space on the CF card, the data will no longer be written to the CF card and the entire data recording process will be stopped.

Remedy:

Ensure that there is sufficient memory space. If this problem arises, delete the buffer on the 2nd level.

Aspects and variables cannot be deleted

Error description:

Due to an error in MindSphere, components can no longer be deleted via the user interface.

Remedy:

Delete the components and variables via the service interface of MindSphere.

The machine cannot be reconnected using the "cert.key" file

Error description:

The machine can no longer establish a connection if you again attempt to connect the machine to MindSphere using the existing "cert.key" file.

Remedy:

If you want to connect the machine to MindSphere, delete the existing "cert.key" file and insert a new "onboard.key" file.

The file name "onboard.key" should not contain any numbers

Error description:

If the user downloads the file multiple times during a download process, the browser provides them with successive incremental numbers. The name of the copied "onboard.key" file under the machine (/var/tmp/boot_job) should not contain any numbers. For example: The file name should not be "onboard (1).key".

Remedy:

Make sure that an "onboard.key" file copied under the machine (/var/tmp/boot_job) does not contain any numbers. Ensure that the file name is "onboard.key".

Internet Explorer is only partially supported.

Error description:

Internet Explorer is only partially supported.

Remedy:

Use the latest version of the Chrome or Firefox browser.

An update of the time zone is not automatically visible in the alarm time

Error description:

If the time zone is changed (UTC or +X), this is not automatically visible in the alarm time.

Remedy:

Reload the file. After this, the updated time values for the new time zone are displayed on the page.

Variables of the type "BOOLEAN" are not displayed in the component expansion

Error description:

If variables are freely configured, defined variables of the data type "BOOLEAN" are not displayed in a component. The message "No data available" is displayed.

Remedy:

No remedy possible

Disconnection is only possible after deleting the cert.key file

Error description:

The existing "cert.key" file cannot be used to disconnect the machine from MindSphere.

Remedy:

Delete the cert.key file from the <TempDir>/boot_job-directory folder.

Only one rule is available

Error description:

If the threshold value was exceeded, then the number of rules for trigger notifications is limited to "1".

Remedy:

The "Fleet Manager" rules can be upgraded for a fee.

Newly created aspects are not displayed.

Error description:

Aspects newly created in MindSphere are not immediately displayed. This involves the export of variables, the display of values for newly configured variables as well as variable-triggered data transfer into "Manage MyMachines".

Remedy:

The data is available in MindSphere after approximately 1 hour.

Events cannot be deleted in "Manage MyMachines"

Error description:

You cannot delete events. The status of the events cannot be changed.

It is only permissible to assign aspect names once

Error description:

When using identical aspect names, an error message is not displayed. However, assigning identical aspect names results in errors.

Remedy:

The aspect name for a tenant may be assigned once for all assets irrespective of the asset type.

Under "Asset Manager" > "Aspects", search for the names that were already assigned to other aspects. Only use names that were not assigned for other aspects.

If the names are used a multiple number of times, then you must delete the aspect.

onboard.key cannot be downloaded in Mozilla Firefox

Error description:

If, in Mozilla Firefox, you click on "Connect SINUMERIK with MindSphere" under "MTA Asset Config" to establish a connection, then the "onboard.key" file is not downloaded.

Remedy:

After you have clicked on "Connect SINUMERIK with MindSphere", a text appears in the browser window that starts with "privateKey".

Copy the complete text to the clipboard (Ctrl+C). Then insert this into a text editor, and save the file under the "onboard.key" name. You can now use the "onboard.key" file to establish a connection.

Alternatively, you can use Google Chrome to download the "onboard.key" file. You can then use Mozilla Firefox again for "Manage MyMachines".

Using the OPC UA server with "Manage MyMachines"

You need an OPC UA server to connect your device to MindSphere via MindConnect Nano. By default, OPC UA does not provide alarms, does not verify the accessibility of the machine, and does not determine the online status of the MMM Dashboard.

Information on the commissioning of OPC UA can be found in your device documentation.

Controls connected via SINUMERIK Integrate

Information:

"Online status" and "Machine model" are not transferred into assets which are connected to the control via SINUMERIK Integrate.

In the hierarchical representation, the overview page does not show the correct asset list

Error description:

MindSphere does not send the correct asset list when the hierarchical asset view is selected. Therefore, the correct asset list does not appear on the "Manage MyMachines" overview page.

Remedy:

No remedy possible.

Switch from the on-board MindSphere computer to the SINUMERIK Integrate server

Error description:

SINUMERIK can no longer be connected to an Integrate server after being connected to MindSphere.

Remedy:

To enable the connection, delete the following files from the cache memory:

- /user/sinumerik/hmi/cfg/machineConfig.xml
- /user/sinumerik/hmi/cfg/machineConfig_backup.bak

The Gateway asset "Activate the payment function" is not shown in the Asset Manager

Error description:

The Gateway asset "Activate the payment function" is not shown in the Asset Manager.

Remedy:

No remedy possible.

Deleted Gateway Assets cannot be restored.

Error description:

MindSphere does not have a function to restore deleted assets.

Remedy:

Do not delete any Gateway assets because they cannot be restored.

Restriction on path length for file uploads in MindSphere

Error description:

Files larger than 8 MB with a path longer than 60 characters cannot be loaded with MindSphere.

Remedy:

If files are larger than 8 MB, ensure that the total number of characters of the file name and the file path is less than 40 characters. 20 characters is the storage length of the time stamp name of the file.

Special characters are not supported in MindSphere

Error description:

MindSphere does not currently support any special characters in path names.

Remedy:

Do not use the following characters: ?, :, *, &, ", $, |, ', <, >, +, !

Imprecise information in the log file "File Upload error.log"

Error description:

As MindSphere does not contain all the information about potential errors when uploading a file, the log file "File Upload error.log" does not show the precise reason for the error.

Remedy:

No remedy possible.

Machine model not connected to the SINUMERIK Gateway

Error description:

The "online" status of machines connected to the SINUMERIK Gateway is not associated with the machine model.

Remedy:

No remedy possible.

Error message when displaying data from the functional gateway

Error description:

The following error can be displayed if data is transferred from the AMC server to "Manage MyMachines" using the "Gateway" functionality: "No data for the selected time period".

Remedy:

Data is correctly displayed if you split up the time period into smaller units.

White border when square images are loaded

Error description:

As MindSphere does not have any scaling options, there are blank white spaces at the left and right margins when square images are uploaded.

Remedy:

No remedy possible.

An image cannot be uploaded multiple times

Error description:

If you try to upload an image that has already been uploaded, MindSphere generates an error message and the image is not uploaded.

Remedy:

Ensure that the image has not already been uploaded before trying to upload an image to MindSphere.

Alarm descriptions in Korean are not displayed correctly on the MMM Dashboard.

Error description:

Because of certain aspects in SINUMERIK Integrate client, alarm messages cannot be correctly displayed in Korean.

Remedy:

No remedy possible.

GUD variables are not displayed in MindSphere

Error description:

The current connection cannot support GUD variables, and GUD variables are therefore not loaded into MindSphere.

Remedy:

No remedy possible.

Error message after double-clicking the "Save" button.

Information:

If you double-click the "Save" button, the error message "Item cannot be saved" appears, although the item will be successfully saved.

Displaying the assets in the overview

Error description:

Only 8 assets are displayed in the overview.

Remedy:

Scroll down to load all assets.

Displaying graphs on the Aspects page

Error description:

If "date/time" is changed on the Aspects page, the graphs are closed.

Remedy:

Reopen the display.

Displaying the alarms

Error description:

All the MindSphere alarms are displayed in one line on the Aspects page.

Remedy:

No remedy possible.

Displaying graphs on the MindSphere Aspects page

Error description:

The units are not displayed graphically on the MindSphere aspect page.

Remedy:

No remedy possible.

Zoom on the Aspect page

Error description:

The Zoom icon is missing from the Aspect page.

Remedy:

Pressing the "Ctrl" key and the Scroll keys enables zooming.

Installation with the 3rdPartyController

Requirement

Uninstall the previous Fanuc version before making an installation with the 3rdPartyController.

Available users in MindSphere Alibaba

Information:

In MindSphere Alibaba, only the following users are available:

- Standard users
  - mmmdashboard.user
- Administrator
  - mmmdashboard.admin

The "mmmalarms.user", "mmmoverview.user", "mmmalarms.admin" and "mmmoverview.admin" users are not supported.

MindSphere Alibaba does not support any spindles with Sensor Module SMI24

MindSphere Alibaba does not support the display of spindles with Sensor Modul SMI24

Remedy:

No remedy possible.

Determining the address of a spindle with Sensor Module SMI24

You can read off the position of the spindle in the SINAMICS topology on the title bar of the drive parameter.

The information is displayed as follows:

<number of machine axis>:<name of machine axis>/<identifier of machine axis>

The <identifier of machine axis> comprises:

<character string>_**<bus number>.<slave number>**:<DO number>

1. Note down the "Bus number" and "Slave number" of the spindle.

2. In the "SINUMERIK presets" window of the Asset Manager, you require both of these values as well as the drive number from the "Machine Configuration" list.

Additional information to address the spindle using the SMI24 Sensor Module is provided in:

Function Manual MindSphere Application Manage MyMachines, Manage MyMachines / Spindle Monitor

Configuring the spindle with the Sensor Module SMI24-variable

Make the following configuration, if you wish to capture the data of an SMI24 module with SINUMERIK Integrate Gateway in MindSphere:

1. Create a variable monitor with the name "SpindleMonitorConfig".
   You can find additional information on "Aspects" in:
   Function Manual MindSphere Application Manage MyMachines, Manage MyMachines / Spindle Monitor

2. For example, take the following variables and a time-based trigger, which sends data to MindSphere at a rate of 1 minute.
   Address 14,4,3 changes as a function of the machine configuration.

Variable name	Address	Data source	AMC data type	Mind-Sphere data type	Mind-Sphere unit
ActualClampingTimeWithoutTool	5049[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
ClampingTime	5049[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
FaultKTY2TempExcNum	5061[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
FaultKTY2TempLastTime	5063[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
FaultKTY2TempTotTime	5062[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
FaultMotorTempExcNum	5061[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
FaultMotorTempLastTime	5063[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
FaultMotorTempTotTime	5062[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_0	5088[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_1	5088[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_10	5088[10],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_11	5088[11],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_12	5088[12],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_13	5088[13],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_14	5088[14],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_15	5088[15],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_16	5088[16],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s

Variable name	Address	Data source	AMC data type	Mind-Sphere data type	Mind-Sphere unit
MatrixOpsHours_17	5088[17],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_18	5088[18],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_19	5088[19],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_2	5088[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_20	5088[20],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_21	5088[21],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_22	5088[22],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_23	5088[23],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_24	5088[24],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_25	5088[25],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_26	5088[26],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_27	5088[27],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_28	5088[28],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_29	5088[29],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_3	5088[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_30	5088[30],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_31	5088[31],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_32	5088[32],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_33	5088[33],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_34	5088[34],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_35	5088[35],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_4	5088[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_5	5088[5],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s

Variable name	Address	Data source	AMC data type	Mind-Sphere data type	Mind-Sphere unit
MatrixOpsHours_6	5088[6],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_7	5088[7],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_8	5088[8],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixOpsHours_9	5088[9],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
MatrixSpeedThreshold-Number	5082,14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_0	5084[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_1	5084[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_2	5084[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_3	5084[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_4	5084[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_5	5084[5],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_6	5084[6],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_7	5084[7],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixSpeedThrs_8	5084[8],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixTorqueThreshold-Number	5083,14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
MatrixTorqueThrs_0	5085[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
MatrixTorqueThrs_1	5085[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
MatrixTorqueThrs_2	5085[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
MatrixTorqueThrs_3	5085[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
MatrixTorqueThrs_4	5085[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
MatrixTorqueThrs_5	5085[5],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
MatrixTorqueThrs_6	5085[6],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
MatrixTorqueThrs_7	5085[7],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm

Variable name	Address	Data source	AMC data type	Mind-Sphere data type	Mind-Sphere unit
MatrixTorqueThrs_8	5085[8],14,4,3	Sinamics Drive	FLOAT	DOUBLE	nm
Motor_temp	35,14,4,3	Sinamics Drive	FLOAT	DOUBLE	°C
NumOfClamping	5045[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
NumOfClampingOpsOutOf-Tol	5045[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
NumOfClampingOpsWith-Tol	5045[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
NumOfFaultClamping	5045[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OpHoursControl	5052,14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
OpHoursSpeed	5051,14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
OrderNumber_0	5021[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_1	5021[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_10	5021[10],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_11	5021[11],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_12	5021[12],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_13	5021[13],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_14	5021[14],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_15	5021[15],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_16	5021[16],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_17	5021[17],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_2	5021[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_3	5021[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_4	5021[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_5	5021[5],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_6	5021[6],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-

Variable name	Address	Data source	AMC data type	Mind-Sphere data type	Mind-Sphere unit
OrderNumber_7	5021[7],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_8	5021[8],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
OrderNumber_9	5021[9],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
ProdDate	5023,14,4,3	Sinamics Drive		STRING	-
PTCMotorTempExcNum	5061[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
PTCMotorTempLastTime	5063[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
PTCMotorTempTotTime	5062[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s
RefClampingTimeAvg	5046[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
RefClampingTimeMax	5046[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
RefClampingTimeMin	5046[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
ReferenceClampingTime-WithoutTool	5042[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
SerialNumber_0	5022[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
SerialNumber_1	5022[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
SerialNumber_2	5022[2],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
SerialNumber_3	5022[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
SpindleSuppTemp	4105,14,4,3	Sinamics Drive	FLOAT	DOUBLE	°C
SuppTempLabel	4107[0],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
TrendClampingTime24	5046[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
TrendClampingTime240	5046[4],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
TrendClampingTime2400	5046[5],14,4,3	Sinamics Drive	FLOAT	DOUBLE	ms
WarningKTY2TempExc-Num	5061[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
WarningKTY2TempLast-Time	5063[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
WarningKTY2TempTot-Time	5062[3],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s

Variable name	Address	Data source	AMC data type	Mind-Sphere data type	Mind-Sphere unit
WarningMotorTempExc-Num	5061[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
WarningMotorTempLast-Time	5063[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	-
WarningMotorTempTot-Time	5062[1],14,4,3	Sinamics Drive	FLOAT	DOUBLE	s

Gantt chart display on the machine dashboard

Error description:

If different states are sent to the machine dashboard at 15-second intervals, they can no longer be displayed in the Gantt chart as soon as the maximum of 1 600 data points is attained.

Remedy:

No remedy possible.

"Cross-Tenancy" function

You have the option of releasing assets for other tenants using the "Cross Tenancy" function.

Note

Data and configuration visible in shared assets

In your role as "Tenant-Admin", when using function "Cross-Tenancy", it is especially important that you take note of the description in the appropriate MindSphere Manual.

If the "Manage MyMachines" application is used with function "Cross-Tenancy", then data and configurations can also be read-accessed in those tenants whose assets have been shared.

Carefully check to what extent the criticality of the data and configurations, which are used by you or the users of the received tenant, allows sharing such as this to be made possible.

The following options are not possible using the "Cross-Tenancy" function:

- Upload files
- Insert machine image
- Display location

"Machine off" status

Error description:

"Machine off" status is not displayed in window "Machine aspects", but is calculated on the "Manage MyMachines" interface during the runtime and is displayed in window "Machine dashboard" under tab "Machine status".

Remedy:

No remedy possible.