

SIEMENS

SIMATIC HMI

WinCC/DowntimeMonitor Option 7.0 SP1 HF4

Release Notes

Release Notes

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Safety Guidelines

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

with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

Caution

without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

Notice

indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

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 device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by **qualified personnel**. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

Prescribed Usage

Note the following:



Warning

This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

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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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Release Notes

Content

These Release Notes contain important information.

The information in these Release Notes has priority over that in the manuals and online help with regard to legal validity.

Please read these Release Notes carefully since it contains information which may prove helpful.

Notes on operation

2.1 Notes on operation

General information

Avoiding loads from external applications

If several programs are run simultaneously on the same computer, the computer may be exposed to high load levels. To ensure trouble-free DowntimeMonitor operations do not run any other applications that can lead to a resource crunch on the PC. Therefore, close any unnecessary programs before starting DowntimeMonitor.

Use of virus scanners

Please, refer to Release notes of WinCC V7.0 SP1

2.2 Windows Operating System

Please, refer to Release notes of WinCC V7.0 SP1

2.3 Database System

Please, refer to Release notes of WinCC V7.0 SP1

2.4 Network Technology and USP

Please, refer to Release notes of WinCC V7.0 SP1

Notes on WinCC/DowntimeMonitor Option

3.1 System Requirements

Hardware

IMPORTANT: The *minimum* and *suggested* hardware requirements listed in this section have been provided as a general reference for common project configurations. However, **the usage of such hardware may not guarantee optimal performance for all kinds of project configurations.** In particular, more powerful hardware is recommended for projects demanding:

- High frequency of data acquisition
- High frequency of data retrieval and display
- Great numbers and/or high frequency of calculations to perform

System performance is affected by high database loads. When using Web Navigator with frequently updated screens, consider using more powerful hardware in order to avoid impairment of usability.

DowntimeMonitor Server on:

- WinCC Standalone
- WinCC Server Station
- WinCC Client with Project

	Minimum	Suggested
CPU	Intel Pentium IV, 3.2 GHz	Intel Xeon Dual Core, 2 GHz
RAM	2 GB	2 GB
Graphical Interface	16 MB	16 MB
Number of Colors	256	256
Resolution	1024x768	1280x960

DowntimeMonitor Client on WinCC Client:

	Minimum	Suggested
CPU	Intel Pentium IV, 2.8 GHz	Intel Xeon Dual Core, 2 GHz
RAM	2 GB	2 GB
Graphical Interface	16 MB	16 MB
Number of Colors	256	256
Resolution	1024x768	1280x960

Software

DowntimeMonitor Server or DowntimeMonitor Client:

Operating System	Configuration
Windows XP	XP Professional Service Pack 3
Windows Server 2003	SP2

Software
WinCC Base System V7.0 SP1 or WinCC V7.0 SP1ASIA (<i>for Simplified Chinese language support</i>)
SQL Server 2005 SP2
Internet Explorer (<i>for Web Navigator option</i>)

To read the Release Notes (and any other documentation) in PDF format, you must download Adobe® Acrobat Reader 9.0 from www.adobe.com.

3.2 Notes on WinCC/DowntimeMonitor Option

Supported configuration

Only one DowntimeMonitor option server can be installed in a WinCC network. It can be installed on a WinCC server or on a WinCC multi-client.

The DowntimeMonitor server cannot be configured as a redundant server pair, therefore if installing on a redundant WinCC server configuration, it must be installed on only one of the WinCC servers in the pairing.

Prerequisites

This hotfix includes the following previous hotfixes to WinCC/DowntimeMonitor:

- WinCC/DowntimeMonitor 7.0 SP1 Hotfix 1
- WinCC/DowntimeMonitor 7.0 SP1 Hotfix 2
- WinCC/DowntimeMonitor 7.0 SP1 Hotfix 3

Therefore, this hotfix can be installed on computers where at least WinCC/DowntimeMonitor 7.0 SP1 has been installed.

Additional WinCC Compatibility

WinCC/DowntimeMonitor 7.0 SP1 Hotfix 4 is also compatible with WinCC 7.0 SP2 systems.

To upgrade your existing WinCC installation from version 7.0 SP1 to version 7.0 SP2, proceed as follows:

1. Export your WinCC/DowntimeMonitor project.
2. Uninstall WinCC/DowntimeMonitor 7.0 SP1.
3. Uninstall WinCC 7.0 SP1.
4. Install WinCC 7.0 SP2.
5. Install WinCC 7.0 SP2 Update 1.
6. Install WinCC/DowntimeMonitor 7.0 SP1.
7. Install WinCC/DowntimeMonitor 7.0 SP1 Hotfix 4.
8. Import your previously-exported WinCC/DowntimeMonitor project.

Unsupported SQL Server Versions

Microsoft SQL Server *Express Edition* is not supported by WinCC/DowntimeMonitor.

Unsupported Operating Systems

Microsoft Windows Vista is not supported by WinCC/DowntimeMonitor.

Disk Space Consumption

DowntimeMonitor does not provide automatic warnings on the rate of consumption of the disk space used for its data storage. As a consequence, archiving will not be possible whenever the amount of free space on disk is too low.

It is highly recommended to monitor the amount of free space on disk by retrieving system information via the WinCC System Info Driver. For details on how to do so, refer to WinCC documentation.

Time Zones

The time zone specified for the workstations where DowntimeMonitor is installed must be the same to the one configured for WinCC Servers.

Time Synchronization

You must make sure that all the systems involved in a Plant Intelligence scenario are synchronized. No time synchronization among different workstations (WinCC Server, WinCC MultiClient, PI Options Server, PI Options clients) may result in wrong calculations, overlapping/missing data in the databases, or data recovery problems.

Data Recovery

Since the DowntimeMonitor option cannot be configured as a redundant server pair, to retrieve lost data and ensure data consistency, data recovery is supported when:

- Data source is unavailable (e.g. due to network failure)

- The DowntimeMonitor data acquisition engine terminates abnormally (e.g. due to power supply failure)
- Data acquisition is suspended due either to a new "Current" configuration or user-requested maintenance

For details about the types of data that can be recovered and the required configuration settings, please refer to the on line documentation.

Important notes:

- Recovery is supported only for a limited time span, i.e. the time span specified for each DowntimeMonitor online database. Though recovery may work for greater time spans within the online database set, this approach is not recommended as it heavily affects overall performance.
- When validation functions with parametric threshold are used, the threshold is not recovered and the actual value is used.
- KPI computations which span the periods between recovery intervals are of bad quality. Moreover, a small drop in KPI computational performance may occur while the recovery process is running as certain internal caching mechanisms for fast data calculation are disabled in order to maintain KPI result consistency.

Note During recovery phases, some equipment state records may be generated which partially overlap the records acquired at Runtime (though this only occurs over the boundary between the last regularly acquired record at Runtime and the first recovered record, or between the last recovered record and the first regularly acquired record). Should this happen, the overlapping record can be identified by means of the WinCC_DTM_GanttView ActiveX and then removed via the WinCC_DTM_TableView ActiveX.

Data Recovery in Redundant Scenarios

Because DowntimeMonitor does not support redundancy natively, data recovery is used in redundant scenarios to prevent data loss.

Important To enable data recovery in redundant scenarios, all Tag Logging tags *must* be browsed through packages. For more details on the necessary configuration steps, please refer to the DowntimeMonitor Installation and Configuration Manual.

Recovery limitations with ProductID

Please note that if no backup point is specified for the ProductID source point, no recovery can be executed for all the data of the equipment unit (even if backup points have been specified for equipment status and counters).

If the data type of WinCC tag associated to ProductID attribute is text, no backup point can be selected (because text tags cannot be archived in WinCC archive), this means that in this case recovery cannot be supported for the equipment unit . If recovery support is needed, a WinCC tag with numeric data type must be selected for the ProductID attribute.

Starting from v7.0 Sp1, the engineering environment generates a proper warning for the user, in case no backup point is selected for the ProductID attribute.

Accessing Log File Viewer

The Log File viewer tool can no longer be accessed from the user interface. To start this tool, double-click the **LOGVIEWER.EXE** file in the %ICUBEPATH%\BIN folder, a subfolder of your WinCC installation (es. C:\Program Files\Siemens\WinCC\SIT\BIN).

For more information on this tool, refer to the Installation and Configuration Manual.

Importing Projects

When the "Import an existing project" option is selected to create a new Plant Intelligence project, the Plant Intelligence Server can also import the online and offline database sets into the new project if the users decides to do so.

Please note that:

- During the import phase the Plant Intelligence runtime system is stopped; therefore no data is collected and processed.
- Once the import phase ends, it is necessary to stop and restart WinCC Runtime to re-activate data acquisition.

Transferring Data Recovery Files

If you want to transfer a Plant Intelligence project from a source workstation to a destination workstation (for example, to upgrade the hardware of a Plant Intelligence server workstation), please note that data recovery information is not exported when you export the Plant Intelligence project. If you want to be able to trigger a recovery right after importing a previously exported project, proceed as follows:

On the source workstation

1. Stop WinCC if it is running.
2. Locate the P1xxxxxx.PLTDATA.LOG\GEN folder (x represents a digit) in the root directory of the drive where the WinCC project is stored, and make a backup copy of its contents.
3. Export the Plant Intelligence project, making sure you export the online database set as well.

On the destination workstation

1. Stop WinCC if it is running.
2. Import the Plant Intelligence project.
3. Copy the files you backed up from the source workstation to the P1xxxxxx.PLTDATA.LOG\GEN folder (x represents a digit) in the root directory of the drive where the WinCC project is stored.
4. You can now start WinCC and run the imported project.

Important remarks

- The Plant Intelligence project must be exported right before the computer upgrade and must include the online database set.
- If you import an old project (for example a project created with a previous version) the procedure may fail due to version discrepancies.

- If a software upgrade must be performed on the same workstation, you don't need to make a backup copy of data recovery files, because no project export/import operation is necessary (a project update is sufficient).

Offline Engineering

A specific procedure must be followed in order to be able to perform engineering operations under the following conditions:

- WinCC Plant Intelligence Server is installed on a WinCC Multi-Client running a Client project.
- A WinCC project package is downloaded from a WinCC Server to the Multi-Client
- The WinCC Multi-Client workstation is disconnected from the server and it is necessary to perform Plant Intelligence engineering operations while offline.

If all these conditions apply to your scenario, carry out the following procedure on the WinCC Multi-Client where WinCC Plant Intelligence is installed:

1. Stop WinCC Runtime (and thus WinCC Plant Intelligence Server).
2. Change the type of the WinCC project to **Multi-User Project**.
3. Close WinCC as requested.
4. Navigate to the root folder of your WinCC Project and delete the <project-name>.dcf file manually.
5. Start the WinCC project, WinCC should automatically re-create the .dcf project file.
6. Change WinCC Project type again back to **Client Project**.
7. Close and open the WinCC Project as requested.
8. It should now be possible to browse the Tag Logging and Tag Management sources as normal from Plant Intelligence Server

Note This procedure must be followed on Plant Intelligence Configuration Clients as well, if applicable.

Relation between DowntimeMonitor and WinCC projects

The DowntimeMonitor project is created by means of a tool provided in the WinCC explorer tree and is then associated automatically to the WinCC project on which the WinCC project Explorer is currently logged. The following chapters describe the folder structure of DowntimeMonitor projects as well as the main differences with respect to WinCC Project management.

Project folder structure

When a DowntimeMonitor project is created a folder is generated directly in the root of the physical drive where the associated WinCC project is located. All project files are located in this folder (in subfolder structure) except for the PIOption databases, which are created by default in the SQL Server standard database path.

Support of manual project copy

A DowntimeMonitor project can neither be copied manually, nor will it be copied during a manual copy procedure of the WinCC project to which it is associated.

Therefore whenever any WinCC project with a DowntimeMonitor project associated to it is copied manually to another computer, its association to the DowntimeMonitor project will be lost.

Support of WinCC Project Duplicator

A DowntimeMonitor project cannot be duplicated along with its associated WinCC project. It is therefore necessary to perform the following procedure before duplicating a WinCC project:

- 1) Export the DowntimeMonitor project;
- 2) Delete the DowntimeMonitor project;
- 3) Disable the PIOption on **Administrative Tools > Options**.

If the aforementioned procedure is not followed (i.e. the DowntimeMonitor project is not deleted or its association is retained), the duplicated WinCC project will not be correctly associated to the DowntimeMonitor project.

Copying a WinCC project along with its associated DowntimeMonitor project

To copy a WinCC Project along with its associated DowntimeMonitor project the following procedures (depending on how the WinCC project is being copied) must be followed:

- **MANUAL COPYING**
 - 1) Export the DowntimeMonitor project ;
 - 2) Delete the DowntimeMonitor project;
 - 3) Copy the WinCC project manually;
 - 4) Import the DowntimeMonitor project on the copied WinCC project
- **DUPLICATION**
 - 1) Export the DowntimeMonitor project;
 - 2) Delete the DowntimeMonitor project;
 - 3) Disable the PIOption on **Administrative Tools > Options**;
 - 4) Duplicate the WinCC project;
 - 5) Import the DowntimeMonitor project on the duplicated WinCC project.

For further details, refer to the **Transferring Plant Intelligence projects** topic in the online help.

Managing DowntimeMonitor project subfolders

By default the DowntimeMonitor project folder is created directly under the root of the physical drive where the associated WinCC project is located. If, due to access restriction policy a subfolder cannot be created automatically under the ROOT of the physical drive, you can create the project folder under a subfolder manually outside WinCC environment. To configure it properly, specify its name (from WinCC Explorer select the node **PIOPtion >, Options**).

Note this option is subject to the restrictions described in chapter **5.1.3: Configure PI Option Folder** of the “*DowntimeMonitor Installation and Configuration Manual*”.

Exporting and Importing Shift Calendars

Shift Calendar data always refers to the time zone configured on the computer where Downtime Monitor server is running, therefore if you import Shift Calendars (using the Shift Calendar import/export functions or when importing the whole DowntimeMonitor project) into a computer with a different time zone, it will not be possible to reuse Shift Calendar data because it will no longer match the original Shift Calendar configuration.

Example:

A shift configured to start at 08:00 (Rome) will start at a different time on computers using another time zone:

Time Zone	Rome	Beijing	New York
Start Time	08:00 AM	04:00 PM	02:00 AM

If you must import the DowntimeMonitor project into a computer configured with a different time zone:

1. Delete all Shift Calendar configuration data (Working Times, Shift Templates, Factory Calendars, Rules, etc.) before exporting the project.
2. Export the project.
3. Import the project into the new computer.
4. Recreate all Shift Calendar configuration data and regenerate all the necessary Shift Calendars.

After importing the project, you must recreate all the Shift Calendars with the same names used in the source project, or you will have to manually reconfigure all the associations between Shift Calendars and Equipment.

Remarks:

- The time zone must not be changed while WinCC or DowntimeMonitor Server is running.
- If you export a project containing Shift Calendars using PI Options 7.0 SP1 and then you import it into a computer using a different time zone, you will be asked if you want to:
 - Import the project with Shift Calendars, even if their configuration will conflict with generated data.
 - Import the project without Shift Calendars.
- If you export a project containing Shift Calendars using PI Options 1.0 or 1.0.SP1, you must set the right time zone before importing the project, otherwise the import will fail.

Shift Calendar Objects Descriptions

When importing a DowntimeMonitor project created for DowntimeMonitor 1.0, the descriptions specified for the Shift Calendar engineering objects are not imported. This is due to a different description format introduced in the product as of version 1.0 SP1.

"AuthorInformation" tool information fields

The CCAuthorinformation application contains some information about the WinCC and DowntimeMonitor licenses which need to be activated in order for full support of the current configuration. The DowntimeMonitor license's **comment** field is empty, therefore no information is displayed regarding the number of objects currently configured.

Float and Double Tag Naming

In any DowntimeMonitor environment (configuration and run-time) WinCC tags of type "Float" and "double" are named according to the following standards:

- Floating point number 32 bit IEEE 754-> float
- Floating point number 64 bit IEEE 754-> double

Acquiring design speeds *on data change*

If you want to acquire design speed values "on data change", please make sure that the time span specified for online databases is greater than the expected maximum time elapsed between each design speed value change, otherwise design speed values will not be acquired correctly.

Example: If your design speed is expected to change once every two days, you should configure your online databases to store data for more than two days.

Design speed value changes and audit trail

When design speed values are stored in the database, they are normalized according to a common unit of measure (units/second). If audit trail is enabled, value changes will be stored using normalized values, regardless of the unit of measure set by the user.

To determine the non-normalized value, multiply the normalized value by the number of seconds corresponding to the time unit used in the desired unit of measure, e.g. if the unit of measure is units/hour, the value must be multiplied by 3600.

ONE-SHOT Computation and Write-back Configuration

When configuring write-back TM tags in a one-shot calculation, the user must select a tag of type "string" to write the time stamp so that the date value associated to the clusters will be written as a string according to Windows regional settings and related formats.

These settings are meaningful provided that the aggregation criteria is time-based (e.g.: ctByMinutes, ctByHours, etc.).

The **Return Value** TM tag of type "integer" is mandatory. In case of success it is a positive value corresponding to the time (Unix time convention) at which the computation terminates; in the event of an error it will assume a negative value.

Configuring the **Label** TM tag point with a default value is equivalent to defining a sticky label; However if the user wants to display the point aggregation value in the Label TM Tag, the default value must be left empty.

Equipment Display Name

The Equipment attribute "Description" has been renamed into "Display Name". Please note that the "Display Name" is the name that, if not empty, is displayed at run-time for the equipment. Therefore, the Display Name must be unique as well as the Equipment name. Starting from v7.0 SP1, the system checks if the Display Name is assigned already to another equipment unit and if so generates an error.

As in previous versions the Description was not unique, it might happen (only for projects created with previous versions) that more than one equipment unit has the same Display Name. This situation does not have any consequence on the system functionality. However, it is suggested to manually change the equipment Display Name in order to guarantee uniqueness.

Please note that if no Display name is assigned to an equipment unit, the equipment name is used as display name by default.

Display Name modification

Starting from this v7.0 Sp1, the equipment display name can be modified also for equipment units whose attributes have been already set (without the need of deleting the attributes by means of the "Reset attributes" command).

Write-back and *ctByEquipmentIDs* cluster

With the ctByEquipmentIDs cluster specified in a calculation configured for data write-back, you must set the write-back point key to the Display Name of the equipment unit.

Note As of version 7.0 SP1, if the user does not specify any Display Name when creating a new Equipment Unit, the Display Name will be set automatically to the value entered for the Equipment Name.

The above also applies for nested equipment units. For example, suppose that:

- An equipment unit has been given the Name *EqRoot* and the Display Name *DN_Root*
- Another equipment unit named *EqX* (with no Display Name) is created within *EqRoot*.

To set *EqX* as the key for a write-back point value, it is necessary to specify its full path as *DN_Root\EqX*.

Important As of version 7.0 SP1, Display Name values must be unique.

Calculations and Time-based clusters

If more than one time-based cluster is specified for a calculation, only the shortest interval will be considered; e.g. if a “30 seconds” and a “3 minutes” clusters are specified, only the “30 seconds” one will be applied.

Chinese Languages

Only Simplified Chinese is supported by DowntimeMonitor.

Chinese Documentation

Only Run Time documentation is available in Simplified Chinese.

3.3 DowntimeMonitor Runtime

Project switching from configuration to the Runtime environment

Immediately after switching a project from configuration to RT, the DowntimeMonitor graphical controls may generate an error message stating that the currently logged user is unable to perform such action. The user need only repeat the aborted action which will be executed without any further error messages.

Change of user configuration

Modifications to the user configuration are not automatically propagated to the instance of the graphic controls currently loaded by WinCC pages. The updated configuration is automatically loaded at the first change of the graphic page.

Accessing Archives

Archives can be loaded at run time to view archived data. **Please note that such archived data is loaded in read-only mode and cannot be modified** even if only online archives have been selected.

Notes on Runtime Controls (DTM Viewer, KPI Viewer, Gantt Viewer)

During the configuration of engineering objects such as algorithms, equipment units, counters and machine states, the user must provide a Name and optional Display Name (sometimes called Description), which supports Unicode characters.

Note that if the Display Name is defined, it will be used as the name of the object in all runtime controls.

DTM Viewer

In the **WinCC_DTM_TableView** control, only the current page is sorted, not the entire query-data result.

As of version 7.0 SP1, if Audit Trail is not enabled and a user modifies a record without entering any comment, a default "Record modified" comment is saved. In this way it is immediately noticeable that a record has been modified, because the icon showing the presence of a comment is displayed.

Please note that the icon is also displayed if the record was only commented (not modified), so it cannot be used to identify only the modified records.

KPI Viewer

The gap between the lines of the graph's vertical scale can be configured. If the scaling is automatic, the gap value is normalized to the minimum value which can be displayed, while if the scaling is manual, no normalization is performed.

Note Manual scaling is not recommended as the vertical bars go out of bounds if a value smaller than their height is specified, and this may cause the control to stop responding.

In case of multi-calculations with different units of measure and scale, the first unit of measure and the first scale will be displayed in the WinCC_DTM_KPIView graph.

Additionally, in case of multi-calculations with different units of measure, for example when mixing percentage with time values, scales are not correct.

Gantt Viewer

The Gantt Viewer control may generate graphical patterns which do not correspond to the real distribution of the status changes when the number of loaded status changes is much higher than the screen resolution (typically 2000 or more). Such graphical pattern depends on the ratio between the number of status changes and the number of pixels available for graphical rendering.

Customize Toolbar Dialog

The "Help" button in the Customize Toolbar dialog of DowntimeMonitor ActiveX controls does not currently perform any action.

Notes on DowntimeMonitor sample graphic pages

Sample graphic pages are not available in Chinese and therefore cannot be opened properly in the WinCC Graphic Designer if the WinCC graphic designer has been configured for the Chinese language.

NOTE: Sample graphic pages must be opened and stored at least once before switching to run time.

Licenses

4.1 Siemens License Conditions

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2.2 Floating License

The Licensee shall be granted the non-exclusive right, transferable in accordance with Clause 5.3 and valid for an unlimited period of time, to install the SW on any desired number of the Licensee's hardware devices. The number of persons permitted to utilize the SW at the same time ("Users") can be derived from the Order Data or CoL (see "Type of Use").

2.3 Rental License

The Licensee shall be granted the non-exclusive right, transferable in accordance with Clause 5.3 and limited in time as stipulated in the Order Data or CoL (see "Type of Use"), to install the SW on one (1) hardware device and to use it. If the period of use is specified in hours, the usage decisive for the calculation of the time limit commences with the software start-up and finishes with its shut-down. If the period of usage is specified in days, weeks or months, the specified period, which commences in conjunction with the first SW start-up, shall apply independently of the actual time of usage.

2.4 Trial License

The Licensee shall be granted the non-exclusive and non-transferable right to install the SW on one (1) hardware device and to use it for validation purposes in the manner specified in the Order Data or CoL (see "Type of Use"). The period of usage is limited to 14 days and commences with the SW start-up, unless a different period of usage is specified in the Order Data or CoL.

2.5 Factory License

The Licensee shall be granted the non-exclusive right, transferable in accordance with Clause 5.3 and valid for an unlimited period of time, to install the SW at one (1) permanent establishment and to use it. The number of hardware devices on which it is permitted to install and utilize the SW at this permanent establishment at the same time can be derived from the Order Data or CoL (see "Type of Use"). A permanent establishment is defined by its address. Permanent establishments with different addresses are different permanent establishments in the context of these General License Conditions, except when otherwise stipulated in the Order Data or CoL. The Licensee shall be entitled to install the SW at a different permanent establishment for permanent use, provided that it uninstalls the SW from all hardware devices of the previous permanent establishment and discontinues the use of the SW at the previous permanent establishment in total.

3. Software Type

If the Software Type is not specified in the Order Data or CoL, the rights specified in Clause 3.2 (Runtime Software) shall apply to the SW.

3.1 Engineering Software (hereinafter referred to as "E-SW")

In the event that the Licensee uses E-SW to generate its own programs or data containing parts of the E-SW, the Licensee shall have the right, without having to pay any license fee, to copy and to use these parts of the E-SW as a part of its own programs or data, or to supply them to third parties for use. In the event that such parts are supplied to third parties for use, these parties shall be bound in writing to comply with stipulations corresponding to those in Clauses 5.1 and 5.2 with respect to the above parts of the E-SW.

3.2 Runtime Software (hereinafter referred to as "R-SW")

If the Licensee incorporates R-SW or any parts thereof into its own programs or data, it shall purchase a license with respect to the R-SW each time it installs or copies - depending on what is done first - its own programs or data containing R-SW or parts thereof, in accordance with the relevant intended Type of Use and on the basis of the Siemens catalog valid at that time. In the event that the Licensee supplies the specified programs or data to third parties for their use, these parties shall be bound in writing to adhere to stipulations corresponding to those in Section 5, with respect to the R-SW parts contained therein. The aforesaid shall not affect the Licensee's obligation to purchase a license for the R-SW if the R-SW original is copied. If the R-SW contains tools for parameterization/configuration and extended rights have been granted in this regard, this will be detailed in the readme file of the R-SW.

4. Upgrade and PowerPack

If it is apparent from the Order Data or CoL, e.g. by the addition "PowerPack" or "Upgrade" after the SW product name, that the SW is an upgrade for another software item (hereinafter referred to as "Source License"), the Licensee shall also have the rights to use the SW

granted to it with respect to the Source License as soon as this has been upgraded with the Upgrade/PowerPack. The rights originally granted to the Licensee to use the Source License end in conjunction with the upgrade measure. However, the Licensee is entitled to undo the upgrading (downgrading) - if this is intended from a technical point of view - and to exercise the rights to use the SW granted to it with respect to the Source Version in accordance with Clause 1.5.

5. Further Rights and Duties of the Licensee

5.1 Unless a stipulation to the contrary relating to a specific number of copies is contained on the data medium or in the readme file of the SW, the Licensee may generate an appropriate number of copies of every item of SW which it is authorized to use in accordance with these General License Conditions, where such copies shall be used exclusively for data backup purposes. Furthermore the Licensee may only copy the SW if and insofar as it has been granted copying rights by us in writing.

5.2 The Licensee shall not be entitled to modify, decompile or reverse engineer the SW. Nor may it extract any individual parts unless this is permitted by mandatory copyright law. Furthermore, the Licensee shall not be entitled to remove any alphanumeric identifiers, trademarks or copyright notices from the SW or the data medium and, insofar as it is entitled to make copies of the SW, shall copy them without alteration. The aforementioned regulation shall apply accordingly to the Documentation supplied in accordance with Section 1.

5.3 The Licensee shall be entitled to transfer the right to use the SW granted to it to a third party, provided that it concludes a written agreement with the third party in conformance with all of the conditions contained in this Section 5 and on the proviso that it does not retain any copies of the SW. If the Licensee has received a License Key for the SW, this key shall be supplied to the third party together with the SW. Furthermore, the third party shall be submitted the CoL together with these General License Conditions. The Licensee shall submit the CoL received for the SW to us at any time, if requested.

5.4 If the SW is a PowerPack or an Upgrade, the Licensee shall keep the Certificate of License or Software Product Sheet of the Source License and submit it to us at any time, if requested, together with the CoL for the SW. In the event that the Licensee transfers its right to use the PowerPack SW or Upgrade SW in accordance with Clause 5.3, it shall also submit the Certificate of License or Software Product Sheet of the Source License to the third party.

5.5 If the Licensee receives a data medium which, in addition to the SW, contains further software products which are released for use, then it shall have the right to use these released software products exclusively for validation purposes, for a limited period of time and free of charge. The period of use shall be limited to 14 days, commencing with the first start-up of the relevant software program unless a different period is specified e.g. in the readme file of the relevant software product. These software products supplied exclusively for validation purposes shall be governed, mutatis mutandis, by the stipulations contained in these General License Conditions. The Licensee shall not be authorized to pass on these software products separately, i.e. without the SW, to a third party.

In other respects, the terms of the purchase contract shall apply, unless below explicitly stated otherwise for Open Source Software.