1 Overview

This product information contains additional information about the following product:

Summary

This document contains information about

- ➢ The NCM COM 1430 TF configuration tool. This is required to install, start up and test a SINEC CP1430 TF.
- ➢ The following communications processors

order number: 6GK1143-0TA00 and 0TB00
6GK1143-0TA01 and 0TB01
6GK1143-0TA02

This product information supplements the manual. It therefore provides you with information about characteristics of the product that could not be taken into account when the product manual went to print.

The product information deals with the following aspects:

- ➢ The scope of the product
- ➢ The environment required to operate the COM (devices and operating system)
- ➢ Conditions required for installation
- ➢ Compatibility with existing SINEC COMs
- ➢ Installation of the NCM COM 1430 TF

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7 Released CP Functions

From software version V2.00B for the basic version and V3.00E for the extended version, the CP 1430 TF includes all the functions of Variable, Domain and PI services (identical to CP 143).

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➢ **Temporary overload**

With a large number of connections, a high bus load on the SINEC H1 cable and during connection establishment phases on the CP, a temporary overload can occur indicated by the CP with PAFE and the corresponding ANZW.

ANZW 0bx8 or 0Bx9 can occur.

Remedy:

In this case the job must be repeated by the user program.

➢ **Connection aborts with the CP 1430 BASIC -0TA00 or -0TA01 with more than 25 transport connections and overload**

With the CP 1430 BASIC version V 3.06B, 62 transport connections can be assigned. With more than 25 transport connections and when large data frames are being transferred (> 1 Kbyte) sporadic connection aborts may occur that are indicated by the CP with the corresponding ANZW.

ANZW XAXA can occur.

In this case the job must be repeated by the user program.

Remedy: Use the CP 1430 TF Extended or Basic variant -0TA02

➢ **PG functions with the CP 1430 TF EXTENDED (6GK1143-0TB01) version 3 FWV3.04E**

The PG interface (AS 511) of the CP 1430 can be impaired sporadically when the ”Read Clock” job with ANR 218 is started simultaneously on the PLC.

Remedy:

Upgrade the CP 1430 to FW V 3.06E.

➢ **Programming 5V memory flash modules with COM 1430 TF**

When programming the new 5V memory modules, you require STEP 5 V6.6.

➢ **PAFE = 81 for “SYNCHRON” on fast CPUs 946/947 or 948**

With ”SYNCHRON”, the CP 1430 immediately runs through a warm restart. If the CPU triggers a job on the CP interface while the CP 1430 is starting up, the job is acknowledged with PAFE = 81.

Remedy:

Include a counter loop in the startup OBs (20/221/22).

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➢ **TRACE test function**

If the test function “single status” or “TRACE” is started on a connection, job execution on this connection is delayed considerably to avoid losing messages for display by COM 1430.

– with functions via the bus, approximately 3 to 20 % of the throughput.

– with functions via the AS511 bus, approximately 2 % of the throughput

The other connections operate **without** a delay.

➢ **Behavior during connection establishment**

The CP 1430 acknowledges a connect request (CR) on the configured connection in the connect confirm (CC) directly using the parameter ”Credit = 1”, in other words, the CP is immediately ready to receive data.

➢ **Synchronizing SSNR 0 with CPU 945 version 1 does not work.**

Remedy:

Upgrade the CPU 945

➢ **Echo test response**

Complying with the standard, the CP 1430 responds to an echo test request with the parameter “Frame control = F3” in the echo test response. This response is not indicated by the protocol analyzer K1102 for the “standard echo test”.

➢ **Domain services**

When using the STEP 5 packages (V6.4 to V 6.6), the “download domain” does not work with the ”PG LOAD” program (shipped with COM 1430 TF).

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9 Addendum / Corrections to Release 01 of the Manual

9.1 Volume 1

Chapter 3.3 TIME services

The conflict “reading out the time (RECEIVE with ANR 218) triggered while synchronizing with the time synchronization frame“, is handled by the CP1430 as follows:

Situation 1. Read triggered (RECEIVE direct) at exactly the time when the internal clock is being synchronized. In this case, the ANZW is set to “not allowed 0C42”.

Situation 2. Read triggered (RECEIVE direct) before synchronization. In this case, the read function is stopped by the CP and this indicated to the user in the PAFE.

Both situations mean that the time must be read again in the next PLC cycle.

Chapter 7.3.1, Page 7-27 (test layer 4)

The following job types can be displayed in the job type field:

– WRITE A (SEND with Read/Write= yes)

– WRITE P (RECEIVE with Read/Write=yes)

– SEND

– RECEIVE

– FETCH A (fetch active)

– FETCH P (fetch passive)

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9.2 Volume 2

Chapter 5 PG Load

Please note the following restrictions:

1.

With host functions “LOAD” and “SAVE“ and large programs, the STEP 5 package stops after a certain time. This time varies depending on the STEP 5 version as follows:

➢ STEP 5, V 6.5: after 4 seconds

➢ STEP 5, V6.3: after 65 seconds

➢ STEP 5, V6.6: no stop

2.

The host functions “LOAD“ and “SAVE“ and the transfer functions “SEND“ and “FETCH“ cause an error if the remote station is not ready. PG Load temporarily rejects user input. After a monitoring time has elapsed, the host function is terminated and PG Load accepts user input again.

If you press the ESC key before PG Load is ready to accept user input, a PG error occurs that can only be eliminated by exiting the COM package and changing the interface in the S5 settings from H1 to AS511 and back again.

3.

Chapter 7 TF Variable Services

In the description of the TF service ”read and write variable with formatted address“ on page 7-37, the type description should read: Type spec. length of the octet string in **bytes** instead of words.

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Chapter 8 Domain and PI Services

1.

When the PLC is in the STOP mode, the CP1430 rejects a load or save domain function with the TF error number 51C1.

2.

The block list of the SIMATIC_S5 default domain is deleted by the CP1430 during a cold CP restart if no user domains were loaded at this time.

3.

The load and save domain functions are only possible:

➢ When no CP test functions are active on the CP.

➢ When no path is established to the CPU via the CP.

The test of the predefined application association (ANR 205/206) and file server associations is also not possible when load functions are active.

4.

After conversion, a CP143 domain file must be changed to a program file (....S5D file) with F6 in the Transfer Functions dialog. Enter the first 6 characters of the domain file and press F6.

The same procedure is necessary when no program file exists but variables or type definitions have been created.

Chapter 9 Supplementary Services

1.

Error in the VMD Status table on page 9-17 for ”no AS 511 master connector and no PG functions via the dual-port RAM“:

When the PLC and the CP are in the RUN mode, the physical status is described as ”operational”. this should read ”partially operational”.

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Appendix C, TF Error numbers

The table should be extended as follows:

Error number	Service group	Meaning
0x24H	VAR	Error converting variable formats from S5 type to S5 type and vice versa.
30C0	VAR	Error on the CLIENT side: TF–PDU size too small.
82C0	VAR	Error on the server side: TF–PDU size too small.
08711H	DOM	The ”swing cable” is not plugged in or test functions are active on another PG via H1 or the path PG/H1–>CP1430–>CPU to the CPU is already established
08712H	DOM	Identical blocks exist in other domains.
08713H	DOM	No domain variables.
08714H	DOM	Not enough memory to store the DOM variables in the buffered RAM of the CP.
08715H	DOM	The block header is incorrect.
08716H	DOM	The transfer of the block via AS511 was aborted.
08717H	DOM	Error initializing the DOM variables.
08718H	DOM	Error compressing the PLC.
08719H	DOM	Upload: The block marked in the block library does not exist on the PLC.
0871AH	DOM	Error writing block.

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Error number	Service group	Meaning
08720H	DOM	Upload: Error checking the variables.
08721H	DOM	Upload: Error creating the variables.
08722H	DOM	Upload: Error linking the variables.
08723H	DOM	Upload: Error checking the variable types.
08724H	DOM	Upload: Error linking the variable types.

Appendix G Volume 1 and Volume 2

In contrast to the CP 143, the CP 1430 sends the parameter “credit=1” in the “connect confirm”. Both responses comply with the standard.

Appendix G Volume 2

Multiplexing layer 7 connections on layer 4 is no longer supported by the CP 1430 TF.

Remedy: Reconfigure the application associations.

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Notes on the CE Approval of SINEC Products

Product Name

CP 1430 TF order number 6GK1143-0TA00 and 0TB00
6GK1143-0TA01 and 0TB01
6GK1143-0TA02

EU EMC Directive 89/336/EEC

The SINEC products listed above meet the requirements of the EU Directive 89/336/EEC ”Electromagnetic Compatibility.
The EU conformity certificates are kept for the authorities responsible according to the EU directives listed above at the following address:

CE

Siemens Aktiengesellschaft
Bereich Automatisierungstechnik
Industrielle Kommunikation SINEC (AUT93)
Postfach 4848D-90327 Nürnberg
Federal Republic of Germany

Area of Application EMC

The products meet the following requirements:

Area of application	Requirements Emission	 Immunity
Industry	EN 50081-2 : 1993	EN 50082–2 : 1995

The products can also be used in a residential environment (residential, commercial and light industry).

Area of application	Requirements Emission	 Immunity
Residential	Individual approval	EN 50082–1 : 1992

An individual approval must be obtained from the appropriate national authority or testing body.

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Installation Guidelines

This product meets the requirements providing you adhere to the installation guidelines

1. SINEC H1, Manual for Triaxial networks
2. SINEC, Manual Industrial Twisted Pair
3. System Manual AG S5-135U/155U; Manual for S5-115U/H/F

Installation of the Equipment

Programmable logic controllers of the SIMATIC S5-135U/155U/H series must be installed in metal cabinets according to these guidelines. Programmable logic controllers of the SIMATIC S5-115U/H/F series must be installed in grounded, closed, metal cabinets (for example, switchgear cubicles)

Working in Cabinets

To protect the module from electrostatic discharge, make sure that you neutralize any electrostatic charge on your body before opening the cabinet.

Notes for the Manufacturers of Machines

The product is not a machine in the sense of the EU directive. There is therefore no conformity certificate for the EU directive 89/392 for machines. If the product is part of the electrical equipment of a machine, the manufacturer of the machine must include the product in the conformity certificate procedure for the machine.

❑

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