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SINUMERIK Operate 04.05.06.00 (internal version 04.05.06.00.010) for PCU 50.5

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A PCU 50.5 with pre-installed PCU base software WinXP from V1.3 or a PCU 50.5 with pre-installed PCU base software Win7 V1.0 is required in order to install this software::
- PCU 50.5-C/XP 6FC5210-0DF52-2AA0 with PCU base software from V1.3
- PCU 50.5-P/XP 6FC5210-0DF53-2AA0 with PCU base software from V1.3
- PCU 50.5-C/W7 6FC5210-0DF52-3AA0 with PCU base software from V1.0
- PCU 50.5-P/W7 6FC5210-0DF53-3AA0 with PCU base software from V1.0

The Commissioning Guide for SINUMERIK Operate Operate 4.5 SP2, PCU base software V1.3 or Win7 V1.0, the Operator Components Manual and the Operating Manual SINUMERIK Operate 4.5 SP2 apply.
Furthermore, the supplementary conditions published for CNC Software 4.5 SP6 must be taken into account.

Before using SINUMERIK Integrate for Production (SIP), please read the notes provided in the Annex "SINUMERIK_Integrate_liesmich_Operate_4.5.6.pdf".

SINUMERIK Operate comprises all texts in German, English, French, Italian, Spanish and "Chinese simplified". In general, the help for setting and machine data is only provided in German and English. The V2.7.1 additional languages for SINUMERIK Operate can be used.

SINUMERIK Operate 4.5 SP6 has only been released for operating
- an 840D sl NCU7x0 with CNC Software 4.5 SP6 or for a
- SIMATIC-CPU 317 / 319 in combination with HMI Pro sl.
To do this, the PCU 50 must be integrated in the plant / system network. By default, the SINUMERIK Operate is connected to the NCU address 192.168.214.1. The NCU address can be set in the "NCU connection" screen under Commissioning / HMI.
Note for laboratory operation: When connecting the PCU 50 to the X130 of the NCU, the simulation cannot be executed.

The SINUMERIK Operate for PCU 50 does not include any technological cycles or measuring and ISO cycles. These are available on the CF card of the NCU and are automatically installed during the NCU startup – see also the relevant information provided in the Upgrade Instructions for the CNC Software 4.5 SP6.

User texts must always be downloaded into the system in the UTF-8 format.

SINUMERIK Operate for PCU 50 does not have general access to the CF card of the NCU. This means that option "user memory on CF card of the NCU" cannot be used.
The "Local drive" in SINUMERIK Operate for PCU 50 WinXP is located on the hard disk under F:\hmisl\user\sinumerik\data, for PCU 50 Win7 under C:\ProgramData\siemens\MotionControl\user\sinumerik\data and is always available without option.

STEP7 5.5 for SINUMERIK PCU 50 can also be integrated for SINUMERIK Operate. The desktop function "Step7 authorization" is used for this purpose.

Important note for operation on PCU 50.5 Windows 7:
Before deactivating the power supply of the PCU 50.5, shut down the system via the Operate softkey EXIT resp. Windows shutdown, analogously to a PC with Windows 7. You can use a UPS to protect the system against unexpected power cuts.
The EXIT softkey can be made accessible to all operators by setting the display MD 9110 = 7.

Installation

DF MC R&D 5

Upgrade Instructions
SINUMERIK Operate 4.5 SP6 for PCU 50.5

<u>Important:</u> If a version <= 4.5 SP3 of SINUMERIK Operate for PCU 50 has already been installed, it must first be uninstalled under Control Panel / Add or Remove Programs or Programs and Features.
SINUMERIK Operate for PCU 50 is installed by calling the file Setup_HMIsl_......exe from the Windows desktop of the PCU 50. To do this, establish either a network connection to a PC using the DVD supplied or copy the software from the DVD supplied to a USB data medium that can then be directly connected to the PCU 50.3.
The installation directory is permanently specified as F:\hmisl resp. C:\Program Files (x86).
The installation version is requested during the installation:
- Operation on a SINUMERIK NCU (default)
- Operation on a SIMATIC-CPU 317 / 319
- Integration of .NET-Framework for OEM applications

Functional improvements in Operate SW 4.5 SP6 compared to SW 4.5 SP5 HF5:

PR-Nummer	299094	299370	322470	339010	360558
360583	361656	363278	372803	375180	381296
381305	383795	388564	389701	395906	396445
397037	397145	397810	397966	400529	401097
401671	401728	402313	405389	405809	405819
406038	406215	406238	406457	408580	410119
411594	414983	415201	416135	420484	420585
424217	424507	424540	425000	425249	425359
426333	426349	426393	426707	426793	428798
431381	433103	434937	435295	437757	437980
439613	440061	441023	441160	441236	442396
452263	435897				

Functional improvements in Operate SW 4.5 SP5 HF5 compared to SW 4.5 SP5 HF4:

PR/RQ number:	433001	436908	438918	439491	439837
439840					

Note regarding PR 433001:
The following settings are required in /oem/.../Systemconfiguration.ini:
     [miscellaneous]
     DoNotHandleSvcAdapter="ReadAD"
For multiple EXEs: DoNotHandleSvcAdapter="ReadAD, SetAccessLevel"
The EXEs which use the SVC adapter must be entered here, so execute GetObj()/releaseObj.

Functional improvements in Operate SW 4.5 SP5 HF4 compared to SW 4.5 SP5 HF3:

PR number:	426393				

Functional improvements in Operate SW 4.5 SP5 HF3 compared to SW 4.5 SP5 HF2:

PR number:	424217	426349			

Functional improvements in Operate SW 4.5 SP5 HF2 compared to SW 4.5 SP5 HF1:

PR number:	404475	405534	408062	410914	417387
417723	RQ 416542				

If Operate crashes, .dmp files are stored in addition to the crash logs and allow a better analysis.

Functional improvements in Operate SW 4.5 SP5 HF1 compared to SW 4.5 SP5:

PR number:	322713	337082	353659	368374	390815
396445	399991	400490	408701		

Functional improvements in Operate SW 4.5 SP5 compared to SW 4.5 SP4 HF3:

PR number	224752	225192	225985	226090	226309

Upgrade Instructions
SINUMERIK Operate 4.5 SP6 for PCU 50.5

298153	298291	299066	300402	304816	306459
307083	307351	309324	310138	311804	314240
318491	320750	324767	328091	328360	328753
330457	330831	332800	332998	333034	333544
333583	334072	334331	335187	336851	337082
337474	338537	339408	339444	339453	340344
340651	344908	345367	345426	345621	345709
347249	347629	347918	349107	349308	350129
350201	350617	350906	352355	352597	352628
352667	352675	352904	353004	353163	353531
353604	353691	353721	354616	355426	356095
356266	356357	357362	357902	358092	358210
358904	359055	359206	359281	359288	359290
360403	360998	361217	361546	362217	363677
363724	364038	364238	364963	365162	366126
366705	366930	368327	368806	368916	368958
369099	369484	370361	370560	371351	371357
372477	372809	372813	372835	373487	373557
373742	374229	375424	375787	375794	376538
376966	377095	377115	377593	377808	378142
378372	378446	378694	379569	379874	379893
380434	380460	380670	381831	381964	382114
382397	383158	383578	384438	385251	386383
386625	386642	387371	387465	387473	388054
388181	388186	392850			

Functional improvements in Operate SW 4.5 SP4 HF3 compared to SW 4.5 SP4 HF2:

PR number	350607	351311	340405		

Functional improvements in Operate SW 4.5 SP4 HF2 compared to SW 4.5 SP4 HF1:

PR number	288130	298506	348292	350203	

Note:
The following information has to be entered into the file /card/user/sinumerik/hmi/cfg/slguiconfig.ini or
/card/oem/sinumerik/hmi/cfg/slguiconfig.ini in order to solve the issue 288130 or 298506:
[Keyboard]
IgnoreSoftkeyRepeatings = false

Functional improvements in Operate SW 4.5 SP4 HF1 compared to SW 4.5 SP4:

PR number	225752	312510	317793	334382	335925
334673	341129	344489			

Functional improvements in Operate SW 4.5 SP4 compared to SW 4.5 SP3 HF2:

PR number	225037	225435	226003	226012	226103
226161	226185	226266	226269	226302	226332
226360	226373	226375	226396	298159	298576
305097	306625	308384	308405	308568	308617
308950	309189	309309	310320	310366	310428
310433	310753	310992	310996	311533	311772
311806	312013	312119	312128	312281	312383
312731	312866	313240	314713	314895	315964
315977	315983	316835	316841	317161	317351
317511	318224	318227	318269	321235	321320

Upgrade Instructions
SINUMERIK Operate 4.5 SP6 for PCU 50.5

321817	322470	322622	322728	322894	322966
323045	323051	323629	323734	323755	324073
325048	325106	325267	325521	325726	325768
325837	325844	326040	326471	326549	326956
327032	327676	327927	328179	328587	328688
329486	329793	329810	330322	330334	331116
331375	331613	331990	332018	332331	332598
333785	333828	334403	334613	334816	334930
334970	334983	336582	300998	328717	

Function improvements in Operate SW 4.5 SP3 HF2 compared to SW 4.5 SP3 HF1:

PR number	298305	298309	298791	309190	306250

Functional improvements in Operate SW 4.5 SP3 HF1 compared to SW 4.5 SP3:

PR number:	AP01600629	AP01600418	298306	298304	298290
298173					

Functional improvements in Operate SW 4.5 SP3 compared to SW 4.5 SP2 HF4:

PR number:	AP01346367	AP01391082	AP01420102	AP01480648	AP01481109
AP01490353	AP01497696	AP01499269	AP01504646	AP01505147	AP01508971
AP01514499	AP01515592	AP01522116	AP01522651	AP01522858	AP01523166
AP01524335	AP01526932	AP01527942	AP01530542	AP01531894	AP01532925
AP01537486	AP01540703	AP01541443	AP01541724	AP01542532	AP01545702
AP01545746	AP01545955	AP01546093	AP01548921	AP01549206	AP01550296
AP01554790	AP01555581	AP01556010	AP01556150	AP01556379	AP01556747
AP01557835	AP01558129	AP01560162	AP01561224	AP01563018	AP01563236
AP01564804	AP01568067	AP01569241	AP01570136	AP01570396	AP01571221
AP01573010	AP01573603	AP01573677	AP01574302	AP01574754	AP01574882
AP01575754	AP01575855	AP01576692	AP01577258	AP01577739	AP01577880
AP01579353	AP01579878	AP01580389	AP01580604	AP01580796	AP01580879
AP01581342	AP01581929	AP01582228	AP01582393	AP01582526	AP01582751
AP01583052	AP01584985	AP01585041	AP01585860	AP01587126	AP01588294
AP01589476	AP01589524	AP01589615	AP01589966	AP01590460	AP01590715
AP01592058	AP01594397	AP01594591	AP01595100	AP01595394	AP01596303
AP01597712	AP01598853				

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Compatibility
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- SINUMERIK Operate 4.5 SP6 can be combined with 840D sl NCU 7x0.3 with CNC SW 4.5 SP6.
- The help system is based on the documentation for the CNC SW 4.5 SP2.
- The NC alarm texts are based on the CNC SW 4.5 SP2.
- STEP7 for SINUMERIK PCU 50 from V5.5 can be integrated in SINUMERIK Operate 4.5 SPx where it can run.
- OEM applications which are based on the SINUMERIK Operate Programming Package 4.5 can run when using generally released interfaces.
- The available additional languages V4.5.2 for SINUMERIK Operate can be used.

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Notes

Upgrade Instructions
SINUMERIK Operate 4.5 SP6 for PCU 50.5

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System:

- If, in conjunction with STEP7 on PCU 50 WinXP, no communication is established between the HMI and the NCU, please check the settings made under Control Panel / Set PG/PC Interface. In addition to S7ONLINE, an Access Point
  SINUMERIK_CP (SINUMERIK 7xx) -> TCP/IP -> VIA Rhine III Fast Eth. ..<Board 2>
  must be included. If necessary, configure this Access Point as indicated.
- Editor: The key combination Shift+Insert must be used to edit cycle calls directly in the DIN code. At present, this is not provided on all SINUMERIK OPs. Remedy: Use an external PC keyboard.
- To operate the simulation, the NC-MD $MC_FRAME_ACS_SET must be set to 1.
- To operate a PCU50 with an external monitor, you can set the screen size of the Operate in the file
  … \user\sinumerik\hmi\cfg\slrs.ini with the entry
  [Global]
  Resolution =   ; permissible values: 640x480, 800x600, 1024x768, 1280x1024
- As standard, in the Machine area, the "Retract" softkey is no longer available. It can be reactivated by creating the slmaconfig.xml in /oem/sinumerik/hmi/cfg file with the following content:
  <?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
  <CONFIGURATION>
  <Settings>
  <ShowRetractSoftkey type="bool" value="true" />
  </Settings></CONFIGURATION>
- Subsequently enter Autostart of Operate for a (another) user on PCU 50.5-Win7:
  On the desktop, start menu "All Programs", select Startup. Right-click on "Open". An Explorer is then opened. In the right-hand window of Explorer, right click on "New" create " Shortcut".
  Then using "Browse ...", enter the "C:\Program Files(x86)\Siemens\MotionControl \siemens\sinumerik\hmi\ autostart\slstartup.exe" file.
- The "AppSight-Blackbox" is available in Operate (resource to analyze the causes of application crashes) and is active as standard. It can be deactivated using an entry in the run_hmi.ini file:
  [AppSight]
  ; enabled could be set to true or false. Default: true
  enabled=true
  The log file generated by AppSight-Blackbox in the case of a fault is called:
  …/user/sinumerik/hmi/log/hmi/blackbox_run_hmi.asl
  It is written to when exiting Operate. It may be necessary to explicitly exit processes that are running. Together with the HMI crash or, this log file must be sent to the SINUMERIK hotline.
- When writing to a NodeID of the PLC via OPC-UA (e.g. "/Random/Plc/DB123.DBB0"), the value must not be transferred as a variant/string or string. This results in a false value being written. The value first has to be converted to a proper data type, e.g. Variant/Int32 or Int32.