

General conditions and function limitations, notes for configuration and operation

These notes take precedence over statements contained in other documents.

Because these notes contain important information for the installation and use of the software, please read them carefully.

SINAMICS S110 V4.3 SP1 incl. SSP for STARTER

ARTSPlusRQ	Brief description	Description	Possible work-around
SINAMICS_SW			
AP00894874	When commissioning a built-in motor with EnDat encoder, fault F07414 "Drive: Encoder serial number changed" cannot be acknowledged even after recopying the serial number.	When commissioning a built-in motor with EnDat encoder, fault F07414 "Drive: Encoder serial number changed" cannot be acknowledged even after recopying the serial number.	Remedy: Set P1990 "Determine encoder adjustment commutation angle offset" to 1 "Activated with acceptance" and then to 0 "Deactivated"; F07414 can then be acknowledged.
SINAMICS_SW - Axis control panel			
AP00821489	When using the sector-specific message frame p0922 = 220, the speed controller enable STW2 bit 9 must be specified by the controller to traverse the drive with the axis control panel.	When using the sector-specific message frame p0922 = 220, the speed controller enable STW2 bit 9 must be specified by the controller to traverse the drive with the axis control panel. This behavior occurs when p0856 "BI: Enable speed controller" is wired (as is the case per definition of message frame 220). In this case, traversing with the control panel requires that the interconnected signal is set to 1.	The speed controller enable STW2 bit 9 must be specified by the controller to traverse the drive with the axis control panel. Alternatively, p856 can also be rewired and temporarily set to 1 for control panel operation.
SINAMICS_SW - General			
AP00877562	The RDY LED on the drive unit flashes irregularly without the operator having carried out an action.	The RDY LED on the drive unit flashes irregularly without the operator having carried out an action. The CompactFlash Card is not accessed during this period, only the internal memory. The drive unit can therefore be switched off during this period.	None.
AP00880504	If bit r0899.13 "Close holding brake command" with inverter p0748 is used during the ramp-up of the drive module after a Power On, the digital output can output a high level for up to 4 s.	If bit r0899.13 "Close holding brake command" is inverted by means of p0748 and connected to a digital output of the drive module in order to control an external brake, then the digital output can output the command to open the brake for up to 4 s during the ramp-up of the drive module after a Power On.	In accordance with the parameter description of p1215, r0899.12 "Open holding brake" should be used for the control of an external holding brake, and not r0899.13.
AP00884942	The temperature is no longer measured via the encoder evaluation when the encoder is parked.	If the encoder is parked at high speeds through p1402 "Current control and motor model configuration" bit 1 "Park encoder at n_act > p1404" = 1, then the motor temperature sensor is also no longer evaluated via the relevant encoder. 200° C is displayed in parameter r0035 "CO: Motor temperature" and the motor temperature is derived from the motor model. The same behavior is displayed for parking via p0145 "Activate/deactivate encoder interface" = 0 or via the PROFIdrive process data STW2.7 "Parking axis selection" and GnSTW.14 "Request parking encoder".	Perform the temperature measurement via the power unit.
AP00904301	If a full SMI is used as a spare part instead of an empty SMI, it is possible that no data can be loaded after the SMI data has been deleted. After loading, alarm A01840 "SMI: Component found without motor data" and fault F31905 "Encoder 1: Parameterization error" with fault value 400/0 are displayed.	If a full SMI is used as a spare part instead of an empty SMI, it is possible that no data can be loaded after the SMI data has been deleted. After loading, alarm A01840 "SMI: Component found without motor data" and fault F31905 "Encoder 1: Parameterization error" with fault value 400/0 are displayed.	Use empty SMI as spare part.
SINAMICS_SW - Drive wizard			
AP00806539	A pulse frequency p1800 that is too large is not corrected to a smaller value after a download	After download of a project with small motor and large motor module, parameter p1800 "Pulse frequency setpoint" is set to a higher value and the error message F07085 "Drive: Parameter of the open/closed-loop control changed" is output with fault value 1800. After an upload, selection of a larger motor and renewed download, p1800 is not reduced again to the original value.	When selecting a larger motor, check and if required, correct p1800.
SINAMICS_SW - EPOS			
AP00734501	If the "Basic positioner" function module is used on the S110, the number of blocks that can be used is restricted when using the "Free function blocks" function module.	If the "Basic positioner" function module is used on the S110, the number of blocks that can be used is restricted when using the "Free function blocks" function module.	The following applies with external encoder evaluation via an SMCxx module: During simultaneous use of the "Basic positioner" and the "Free function blocks" function modules, 23 blocks (one of each block type) can be calculated in 16 ms. Approx. 23 blocks can be calculated in 4 ms when the "Basic positioner" function module is not activated. If a shorter sampling time is set, this reduces the remaining computation time, so that, e.g. only approx. 3 blocks can be calculated in 2 ms with "Basic positioner". The following applies with internal encoder evaluation (without an external SMCxx module): Approx. 23 blocks can be calculated in 16 ms when the "Basic positioner" function module is not activated. If the remaining computation time is not sufficient, fault F01054 "CU: System limit exceeded" is triggered.
AP00903077	If the current position is specified as target position for MDI absolute, then the status of p2683 bit 3 "EPOS status word 1 - Set position reached" remains unchanged. In particular, bit 3 remains at zero if the MDI absolute command is issued after ramp-up.	If the current position is specified as target position for MDI absolute, then the status of p2683 bit 3 "EPOS status word 1 - Set position reached" remains unchanged. In particular, bit 3 remains at zero if the MDI absolute command is issued after ramp-up.	None.

ARTSPlusRQ	Brief description	Description	Possible work-around
SINAMICS_SW - CAN communication			
AP00875674	If a CAN partial storage (Store Com. or Store Appl. parameter) is triggered without having previously performed a total storage at least once, then the relevant ACX files (CCxxxxx.ACX and Cxxxxxx.ACX) are present at /USER/SINAMICS/DATA/*, but are not read in at a restart and therefore have no effect. The files are also not stored on an inserted memory card.	If a CAN partial storage (Store Com. or Store Appl. parameter) is triggered without having previously performed a total storage at least once, then the relevant ACX files (CCxxxxx.ACX and Cxxxxxx.ACX) are present at /USER/SINAMICS/DATA/*, but are not read in at a restart and therefore have no effect. The files are also not stored on an inserted memory card.	Execute p0977 "Save all parameters" = 1.
SINAMICS_SW - PROFIBUS communication			
AP00334540	Diagnostics display for message frame 110 incomplete.	PZD MDI_vel and MDI_decc are missing in the diagnostics display for PROFIBUS message frame 110.	---
AP00909775	For applications with isochronous PROFIBUS/PROFINET not equal to 1 ms, the system load r9976 "System utilization" is displayed approx. 3% too low directly after the download. The correct value is displayed after a Power On reset. The result is that for projects with a system load greater than 97%, fault F01054 "CU: System limit exceeded" is not output until after the Power On reset instead of after the download.	For applications with isochronous PROFIBUS/PROFINET not equal to 1 ms, the system load r9976 "System utilization" is displayed approx. 3% too low directly after the download. The correct value is displayed after a Power On reset. The result is that for projects with a system load greater than 97%, fault F01054 "CU: System limit exceeded" is not output until after the Power On reset instead of after the download.	- Do not connect the isochronous PROFIBUS/PROFINET master already during the commissioning - Always switch the unit off and on again after the project download (Power On reset) in order to display r9976 correctly.
SINAMICS_SW - USS communications:			
AP00900457	USS communications: For the CU, no more than five process data are permitted in the receive direction. If more are parameterized, the error message F01000 "Software error internal" is triggered.	USS communications: For the CU, no more than five process data are permitted in the receive direction. If more are parameterized, the error message F01000 "Software error internal" is triggered.	None
SINAMICS_SW - Quantity structure			
AP00909795	If alarm F1054 "System limit exceeded" is present immediately after switching on the CU305, a download can no longer be performed and the factory settings can no longer be restored; the communication is interrupted.	If alarm F1054 "System limit exceeded" is present immediately after switching on the CU305, a download can no longer be performed and the factory settings can no longer be restored; the communication is interrupted.	1. During ramp-up of the Control Unit (BOP displays Run-up on the screen and the RDY LED is permanently lit orange), switch the Control Unit power supply off. Perform this operation three times. When the Control Unit is switched on again, the drive automatically restores the factory settings and fault F01018 "Ramp-up aborted several times" is output. An executable project can then be downloaded again to the drive. 2. If an executable parameterization is stored on the MMC, switch the Control Unit off, insert the MMC and connect the power supply again. The parameterization stored on the MMC is then loaded. This can then be saved to the flash via RAM2ROM. The project on the MMC may not be created in STARTER through "Load to file system".
SINAMICS_SW - Closed-loop control			
AP00516843	When parameterizing a gearbox in p0432/p0433, this is not included in the position calculation.	If a gearbox is parameterized in p0432/p0433, this is only included in the speed, but not the position calculation.	A recalculation of the position can be achieved by activating the position tracking in p0411.0.
SINAMICS_SW - Safety Integrated			
AP00892479	Changes to parameters p9587 to p9589 only take effect after Power Off/On. However, alarm A01693 requesting the Power Off/On does not appear.	Changes to the following parameters only take effect after Power Off/On. However, alarm A01693 "SI motion CU: Safety parameterization changed, restart / POWER ON required" does not appear: p9587 "SI motion encoderless actual value acquisition filter time (control unit)", p9588 "SI motion minimum current encoderless actual value acquisition (control unit)", p9589 "SI motion voltage tolerance, acceleration (control unit)"	Power Off/On
AP00896426	If on a CU305 with isochronous PROFIBUS and Safety Integrated Extended Functions via PROFIsafe, the PROFIBUS cable is disconnected and connected again or not connected until after power up, the errors that cannot be acknowledged are output after acknowledgement of the error messages.	If on a CU305 with isochronous PROFIBUS and Safety Integrated Extended Functions via PROFIsafe, the PROFIBUS cable is disconnected and connected again or not connected until after power up, the errors that cannot be acknowledged are output after acknowledgement of the error messages: C01711(1012) "SI Motion CU: Defect in a monitoring channel" C01701 "SI Motion CU: STOP B triggered" C01700 "SI Motion CU: STOP A triggered" C30700 "SI Motion MM: STOP A triggered"	Power Off/On.
AP00897310	If during encoderless safety operation the SI motion monitoring cycles in parameters p9500/p9300 are not set to an integer multiple of 1 ms, the fault code F30665 "SI MM: System is defective" is issued with fault value 2hex. It cannot be acknowledged. The drive cannot be traversed.	If during encoderless safety operation the SI motion monitoring cycles in parameters p9500/p9300 are not set to an integer multiple of 1 ms, the fault code F30665 "SI MM: System is defective" is issued with fault value 2hex. It cannot be acknowledged. The drive cannot be traversed.	Set integer multiple of 1 ms in p9500/p9300.

ARTSPlusRQ	Brief description	Description	Possible work-around
SINAMICS_SW - Safety Integrated			
AP00897883	Contrary to the documentation, bit 0 in p9601 and p9801 (Enable STO via terminals) takes effect immediately.	For the parameters: p9601 SI enable, functions integrated in the drive (control unit), p9801 SI enable, functions integrated in the drive (motor module) a change of bit 0 "Enable STO (SH) via terminals" takes effect immediately. Alarm A01693 "SI motion CU: Safety parameterization changed, restart / POWER ON required" is not output. Changes to the other bits only take effect after Power Off/On, as in the documentation for the whole parameter. A01693 is output.	None
AP00898685	For a drive with DRIVE-CLiQ motor and DQI encoder, alarms "F30711/1023 Fault during effectiveness test in the DRIVE-CLiQ encoder" and "F1711/0 Fault in the other monitoring channel" can occur after completion of the safety commissioning when only parameters that take effect immediately have been changed.	For a drive with DRIVE-CLiQ motor and DQI encoder, alarms "F30711/1023 Fault during effectiveness test in the DRIVE-CLiQ encoder" and "F1711/0 Fault in the other monitoring channel" can occur after completion of the safety commissioning when only parameters that take effect immediately have been changed.	Perform Power Off/On after changing the safety encoder parameters even when there is no prompt ("F1693/30693 Safety parameterization changed, warm restart / Power On required).
AP00906029	No remedy in the help for safety message C01711/1043, C30711/1043 "Too many acceleration actions".	When safety messages C01711 "SI Motion CU: Defect in a monitoring channel" message value 1043 "Too many acceleration actions" and C30711 "SI Motion MM: Defect in a monitoring channel" message value 1043 "Too many acceleration actions" occur, there is no reference to parameter p9589/p9389 "SI Motion acceleration voltage tolerance" in the help.	The value in parameter p9589/p9389 "SI Motion acceleration voltage tolerance" must be increased when C1711/C30711 with message value 1043 "Too many acceleration actions" occurs.
SINAMICS_SW - Topology			
AP00897692	If a component is parked via "Parking axis" (STW2.7 = 1, p0897) and then the DRIVE-CLiQ link is removed, the wrong message is displayed: "A01315 - Drive object cannot be run".	If a component is parked via "Parking axis" (STW2.7 = 1, p0897) and then the DRIVE-CLiQ link is removed, the wrong message is displayed: "A01315 - Drive object cannot be run".	Ignore message
SINAMICS_SW - Upload/Download			
AP00893231	Projects saved via the STARTER function "Loading to file system" on the MMC card cannot be run on the CU305.	Projects saved via the STARTER function "Loading to file system" on the MMC card cannot be run on the CU305.	Execute a project download directly into the device.
LH1 Listenh S120/S150 - Safety Integrated			
AP00892486	In the safety message C01711 "SI Motion CU: Defect in a monitoring channel", the description of the message values 1041, 1042 and 1043 is missing in the documentation.	In the safety message C01711 "SI Motion CU: Defect in a monitoring channel", the description of the message values 1041, 1042 and 1043 is missing in the documentation.	Message value = 1041: - Reduce p9588. Message value = 1042: - Increase ramp-function generator ramp-up/ramp-down time (p1120/p1121). - Check that the current/speed control is set correctly (no oscillations in the torque/field-generating current and in the actual speed value). - Reduce the dynamic response of the setpoint. - Increase p9588. Message value = 1043: - Increase p9589. - Increase ramp-function generator ramp-up/ramp-down time (p1120/p1121). - Check that the current/speed control is set correctly (no oscillations in the torque/field-generating current and in the actual speed value). - Reduce the dynamic response of the setpoint.