General Information

This update can be used exclusively for the **PSS®SINCAL Platform 22.5**, not for other product versions!

Procedure for Installation

- Close all running PSS SINCAL Platform applications.
- Decompress the Zip archive.
- Start the installation using AutoRun.exe or Sincal\SincalSetup.exe. The setup automatically detects the existing PSS SINCAL Platform installation and updates all components.

If you have any questions, please contact **PSS SINCAL Platform Support** (phone +43 699 12364435, e-mail sincal.support.it@siemens.com).

Additions/Corrections Update 6 (October 30, 2026)

This update includes all additions from previous updates, along with the following error corrections and new additions.

PSS SINCAL User Interface

- Highlight
  - Fixed an error where protection zone results displayed as highlights in the network view caused sections of the elements with buckle points to be rendered incorrectly.
  - Fixed an error that occurred when highlighting fault locations in the graphics editor from the fault location result view.

PSS SINCAL Electrical Networks

- Power Flow (PF, LP)
  - A bug was fixed in the processing of the PQ profile for the “P and cosφ” input format. Previously, the program would crash when P = 0.0.
  - Fixed an issue with determining the coincidence of loads when using operating points.
- Short Circuit (SC)
  Correction of an error in the calculation of short circuit currents according to IEC 60909 when a switch is placed between the generator and the transformer of a generator set.
- Protection Simulation (OC, SZ)
  - Fixed a bug in the result table that caused the values for protection devices that had not tripped to be displayed in the wrong columns.
  - Correction of an error in the simplified differential protection on lines around the transformer.
  - Correction of an error in the IT diagrams for OC devices. For deactivated ground tripping zones, the diagram was written for phase data.
  - Correction regarding the processing of current transformers: If the current transformer's ground was identical to the current transformer's phase, it was not considered.
  - The pickup data for individual settings (phase-ground) were not processed correctly. The

pickup input data had to be entered identically to achieve the desired behavior.
  - Correction of an error in the MiCOM P43x protection device. The directional final time t7 took effect even during faults in the opposite direction to the set direction, causing the device to trip after t7—for example, during reverse-direction faults—despite the forward-direction time setting.
  - Correction of an error in the reset delay time for protection elements that do not have a tripping time.
  - Fixed a bug that prevented fault observations on coupled lines from returning any results.

- Distance Protection Setting Calculation (DI)
  The device-specific non-directional and directional final times were not correctly considered in the distance protection setting calculation. This issue has been resolved.

- Feeder Tracing (FEEDER)
  Correction of an issue with determining adjacent feeders when the feeder was connected to the starting station via an open ring.

PSS SINCAL Pipe Networks

- Operating Series with Pressure-Dependent Consumption Decrease
  Fixed an error in the calculation of operating series, which caused operating points factors to be ignored for consumers with pressure-dependent consumption decreases.

PSS SINCAL Automation

- Automation of Calculation Methods
  An error that occurred when importing CIM ZIP files into a purely virtual database has been fixed. If a connection to the persisted database with “_files” directory was not established prior to the import, the ZIP file could not be extracted, and no data could be imported.

PSS NETOMAC

- Fixed a bug that could occur when processing the XMAC file.

Additions/Corrections Update 5 (September 30, 2026)

This update includes all additions from previous updates, along with the following error corrections and new additions.

PSS SINCAL User Interface

- Update Graphics
  An error that occurred when positioning nodes in geographical views has been fixed. This error prevented the status dialog box from closing and caused the GUI to freeze.

- Transformers
  Correction of an error when saving the neutral point selection values (Isolated) for two- and three-winding transformers.

- Heat Map
  Heat maps could not be created in version 22.5 for networks from older versions that used the

mode "Points". This mode no longer exists in version 22.5 and was not initialized correctly in the dialog box. The mode is not set correctly, and heat maps can be created again.

- Grading Diagrams
  Correction of a display error regarding the directional final time in the X(t) grading diagram. If the values for the last two zones were identical, the final time was not displayed.

PSS SINCAL Electrical Networks

- Power Flow (PF)
  Fixed a bug that caused the data source for the results to be determined incorrectly.
- Feeder Tracing (FEEDER)
  - Correction of an error in determining voltage levels in auto-detected substations (based on node types).
  - Three-winding transformers at auto-detected substations were incorrectly identified as transformers located outside the substation. This was reported to the user as a warning.
  - Correction of an error when determining and assigning the originating busbar for feeders located downstream of a three-winding transformer.
- Operating Points (OP)
  An error in solving the operating points for the network element has been corrected. If the operating point was not available, calculations were performed using the value zero (e.g., P = 0.0 and Q = 0.0) instead of the input data.
- Time Series Data Interface (TSDI)
  An error that occurred during the initialization of values without a current calculation time has been corrected. Since no TSDI value could be retrieved, the message “W 2773 Power Equal To Zero” was displayed.
- Protection Simulation (OC, SZ)
  If the earth fault detection was set to the “Detect” mode and a time was specified, it did not function correctly. This issue has been resolved.
- Dynamic Parameter Variation (ST, EMT)
  - An error has been corrected when exporting the network model to NETOMAC: If parameter variation was used in a fault observation but was disabled (STATE = OFF), the variables were still written to the NET file.
  - An error was fixed when exporting the switching delay for the element switching time (ShuntSwitchTime) if both time delays for the additional phases were identical.

Additions/Corrections Update 4 (August 28, 2026)

This update includes all additions from previous updates, along with the following error corrections and new additions.

PSS SINCAL User Interface

- Evaluation Feeder Tracing
  Limit the evaluation of feeders to the departure station only.

- Converter
  The converter considers the “S and cosφ” input format for the following functions:
  - Determine Data - Load Data
  - Evaluation - Energization for Island Operation - Start Element
  - Feeder Tracing - Start Element when checking the energization of the feeder nodes
- Excel Import
  - Fixed an error that occurred when updating Master Resources using the Excel import.
  - Fixed an error that occurred when importing Master Resources into pipe networks.
  - Fixed an error that occurred when processing graphics data during an Excel import if no points were specified for the graphic element.
  - Fixed an error that occurred when importing or updating master resources. The “RowType” column was not processed correctly, which prevented the import of MRIDs for additional tables (protection devices, measuring devices, etc.).

PSS SINCAL Electrical Networks

- Load
  - Correction of an error in the conversion of load power from kW to MW in the "Pi and Qi" input format.
  - Fixed a bug that caused the incorrect sum of connected element values in the node results when loads were configured with "Power Flow Type := Z-constant".
- Unbalanced Power Flow Phase Data (PF)
  Corrected an error where the transformer tap data on side 2 was applied using an inverse ratio, leading to incorrect phase results.
- Load Assignment (LA)
  - Correction of an error during the allocation of power values for participating loads in the iterative mode.
  - Correction in the handling of feed-in elements during allocation of power values.
- Protection Simulation (OC, SZ)
  - Fixed an issue where reclosers failed to trip in the presence of a ground loop when active phase settings were applied.
  - Fixed an issue where protection devices that should trip during a loop but whose mechanical response time delayed tripping until a subsequent loop, were not correctly considered in the simulation.
- Protection Analysis (PSA)
  - Correction of an error in the calculation module where, during clearing time calculations without voltage protection, the global tripping time was incorrectly added to the clearing time.
  - Correction of an error in the design of protection routes using three-winding transformers.
- CIM Import/Export
  - Fixed an error that occurred when importing zero-phase sequence data for transformers with a YNYN vector group.
  - Fixed an issue when exporting the SV file. The power flow results were not exported using CGMES 3.0.

- Correction of an error that prevented the CIM export when 2-phase converters were present in the network model.
- Fixed an issue that prevented the proper import and export of boundary sets using CGMES 3.0.
- Fixed a bug that prevented dynamic data from being generated during CIM export.

Additions/Corrections Update 3 (July 30, 2026)

PSS SINCAL User Interface

- Application Examples
  Fixed a bug that caused the help to be unavailable or inaccessible for some examples.
- Variants
  Fixed a bug that occurred when defining a new base variant using the Variants dialog box. The subvariants were not deleted even though the option was enabled.
- Update Graphics
  Fixed a bug that occurred when updating the topology display in the network browser. The issue occurred when only network elements without graphical information were displayed and nodes had been dragged into the network view.
- Lines
  Fixed an issue where warnings generated during the update of line data from line segments were incorrectly treated as errors, preventing the update from being completed. Line data can now be updated even when warnings are present.

PSS SINCAL Electrical Networks

- Protection Analysis (PSA)
  Correction of an error that occurred when creating protection routes if the protection device on the transformer is intended to protect a busbar but the terminal is open.
- CIM Export (CGMES 2.4.15, CGMES 3.0)
  Fixed a bug in the export of the sin: extensions, which caused the information to be exported to all files rather than just the main file of the cim: object.
- Protection Simulation (OC, SZ)
  The calculation of impedance for SIPROTEC-5 devices in the input data has been corrected. As a result, the impedance pickup is now calculated based on the correct values.

PSS NETOMAC

- XMAC Models
  Improved support for large XMAC models.

PSS SINCAL Automation

- Database Manager
  Fixed an issue with setting parameters via the API in the Database Manager.

Additions/Corrections Update 2 (June 30, 2026)

This update includes all additions from previous updates, along with the following error corrections and new additions.

PSS SINCAL User Interface

- Network Browser – Feeder
  Additional check for incorrect or incomplete data regarding the feeder if it could not be assigned to a starting station.
- Dialog Protection Device – Pickup
  Correction of the available selection options in the “Pickup” tab for SIPROTEC 5 protection devices.
- Multi-User Master Database
  Fixed a bug related to deleting users.

PSS SINCAL Electrical Networks

- Power Flow (PF)
  Power Limit: Correction of the sign convention to ensure the correct assignment of inductive and capacitive behavior.
- Short Circuit (SC)
  - In specific unbalanced network configurations involving converters, short-circuit current calculations yielded values that were too high at all nodes. Calculations performed for a single node, however, were correct.
  - Correction of an error in considering dynamic voltage support during a short circuit. This error could have caused the current of the elements participating in voltage support to be insufficiently reduced according to the network voltage.
- Time Series Calculation (LP)
  Correction of an error causing the shunt reactor tap position to be overwritten during time series calculations.
- Load Balancing (LB)
  - Correction of an error in the network tracing process when identifying unbalanced feeders. In certain network configurations, not all feeders were taken into account.
  - Correction of an error in the unbalanced (RST) power flow method when used with single-phase loads. Calculations could only be performed using the unbalanced (MGN) method.
- Resupply
  Correction of a bug when saving the resupply group results (not supplied consumers, not supplied power).
- Protection Simulation (OC, SZ)
  An error in the calculation of the tripping time has been fixed. The idle time is now correctly considered even in the case of ground faults.
- CIM Export
  Correction of the sign when exporting P/Q data from converters.

Additions/Corrections Update 1 (May 29, 2026)

This update includes the following error corrections and new additions.

PSS SINCAL User Interface

- Updating the Switch Symbols
  Fixed an issue where the switch symbols (open/closed) in the network view failed to update when multiple views were used.
- Create Graphics
  A problem with the "Create Graphics" function in the network browser has been fixed. Missing graphic elements were not generated when the "Create Missing Nodes" option was enabled.

PSS SINCAL Electrical Networks

- CIM Import
  Fixed an error that occurred when processing the OperationalLimits of the line (Ith) if it had a different number of limits per terminal.
- Multiple Calculation
  An error related to defining multiple calculations in conjunction with the protection simulation has been corrected. The parameters for initiating the calculation method had not been set correctly.
- Resupply
  With the updates to the feeder tracing algorithm in version 22.5, switches originating from auto-detected substations (bus-branch approach) are no longer available for Resupply when operating in "Feeder Based" mode.
- Protection Simulation (OC, SZ)
  - Correction of a tripping error that occurs when two separate distance protection settings (for phase and ground) have been assigned to a protection device.
  - A bug related to differential protection on transformers connected directly to switches or connections has been fixed. The bug caused the differential protection to trip every time.
- Protection Device REL670
  Correction of the impedance pickup. The rotation of the load cut out based on the type of error was not implemented correctly.
- Load Container
  Load containers with unbalanced customer data were not always considered correctly.
- Fault Ride-Through (FRT)
  Fixed an issue with selecting the start element in the FRT start dialog box that prevented network elements from being displayed in the browser dialog box.

PSS SINCAL Application Examples

- Example NMM
  The SINX network models included in this example have been updated to reflect all adjustments made in version 22.5.

- Example CA
  Auto-detected stations have been removed from this example to support the correct behavior of the Resupply module in **"Feeder Based"** mode.