General Information

This update can exclusively be used for the **PSS®SINCAL Platform 21.5**, 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** (fon +43 699 12364435, e-mail sincal.support.it@siemens.com).

Additions/Corrections Update 8 (October 30, 2026)

This update contains all the additions of the previous updates and on top of that the following error corrections and additions.

PSS SINCAL User Interface

- Graphic View
  - Fixed an error that occurred when copying element switching times.
  - Fixed an issue with resizing polylines.
- Graphics Layer Dialog Box
  Fixed an issue with renaming graphics layers.
- Tabular View
  Correction of an error in records for network elements with standard types in the tabular view.
- Diagrams
  - Automatically updates the open diagram view when creating diagrams for protection devices from the network graphic via the pop-up menu.
  - Fixed a program error that occurred when attempting to display the input data for a network element that had already been deleted.
- 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.
- 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.
- 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.

PSS SINCAL Electrical Networks

- Power Flow (PF)
  In modules performing multiple power flow calculations, error E 2910 could occur due to a problem with resetting the control system. This issue has been resolved.

- Short Circuit (SC)
  - The short-circuit contribution of the converter could not be deactivated when calculated according to "VDE 0102/2016 - IEC 60909/2016".
  - Correction of a problem with dynamic voltage support in the case of unbalanced faults. The contribution in the counter system was not considered correctly.

- Protection Simulation (OC/SZ)
  - Correction of a problem with the switch response time. If a switching time was specified and an impedance pickup without an end time, then the impedance pickup (6A) always tripped with the switching time.
  - Fixed an issue where reclosers did not always trip correctly.
  - The idle time is now correctly considered even in the case of ground faults.
  - Correction of a problem in determining the fault clearing time for parallel lines.
  - Fixed an issue where reclosers failed to trip in the presence of a ground loop when active phase settings were applied.
  - 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 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.

- Harmonics (OB)
  Current and voltage sources in a serial DC element were not considered.

- Resupply
  Correction of a bug when saving the resupply group results (not supplied consumers, not supplied power).

- Load Allocation
  In conjunction with the Newton-Raphson power flow calculation, this function could cause some connection points to incorrectly return no results because the power flow did not converge. This issue has been resolved.

- Dynamics (ST/EMT)
  - Fixed an issue when exporting DFIG input data (slip and stator power) to PSS NETOMAC.

PSS SINCAL Pipe Networks

- Pressure-Dependent Consumption Decrease
  - Improvement of pressure-dependent pressure consumption reduction in poorly converging networks.
  - 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 NETOMAC

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

Additions/Corrections Update 7 (December 22, 2025)

This update contains all the additions of the previous updates and on top of that the following error corrections and additions.

PSS SINCAL User Interface

- Include Networks
  Correction of an error when synchronizing results in open include network models, which could cause active evaluations to lead to a program crash.
- Network State
  An error when importing a network state XML file with MRID identification has been corrected. This caused network elements to be identified incorrectly and no data to be transferred.
- Evaluation
  Correction of an error in the resupply evaluation in combination with the highlight option. The colors were not correctly assigned to the resupply results.
- Tabular View
  - Correction of a captioning problem with some attributes in external databases (e.g., ResultElement_ID).
  - Correction of an error, which sometimes caused all fields to be displayed as read-only.
- Print
  Correction of an error when printing highlights. These were displayed in a reduced size in the upper left corner of the printout.
- PSS NETOMAC Log Result View
  Correction of a program crash when a line in the LOG exceeded the length of 256 characters.

PSS SINCAL Electrical Networks

- Network Stress Test (NST)
  Correction of an error when starting the calculation module.

- Thermal Destruction Analysis (TDA)
  Nodes with ipmax > 0.0 were included in the analysis, even if Ik"max was 0.0.
- Power Flow (PF)
  - Correction of an error when applying the coincidence factor to outflow-based areas.
  - Correction of an error when loading the network model for power flow, which resulted in the network model being loaded from the database without the substation model. When using coincidence (departure-based), incorrect or no factors for coincidence in the power flow were considered.
- Load Balancing (LB)
  An error in the calculation module has been corrected, which caused the PI equivalent circuits of network elements to be partially incorrect, which could lead to suboptimal results.
- Protection Routes
  Correction of an error in the display of zone details for multiple selections in the result browser. Previously, the tripping time of the zone from the first device was displayed. However, this can vary from device to device and should therefore not be displayed.
- Switch
  A problem with the processing of switching actions has been fixed. If switches with individual phases had switched off all phases, they could not be switched back on again. This could occur, for example, during contingency analysis or resupply.
- Resupply with Feeder Tracing
  The feeder tracing in the re-supply module is incorrect. Now, the calculation module determines the same feeders as in the user interface.
- Arc Flash (AFH)
  Fixed a bug that occurred when protection devices were installed directly on network elements such as serial reactors.

PSS NETOMAC

- Graphical Model Editor (GMB)
  Correction of incorrect help link when editing blocks in the Parameter dialog boxes.

Additions/Corrections Update 6 (October 30, 2025)

This update contains all the additions of the previous updates and on top of that the following error corrections and additions.

PSS SINCAL User Interface

- Network Browser
  An issue with pressing the ESC key has been fixed, which caused the network browser to no longer function correctly.
- Import Workspace
  An error when importing background images via the workspace file has been fixed. These images were not saved correctly in the network database.

- Database Manager
  Correction of an error when creating pipe networks via automation using the database manager. This always set the network type to "water".

PSS SINCAL Electrical Networks

- Transformer with isolated Neutral Point
  Correction of a problem with double-isolated neutral points.
- Power Flow (PF)
  - Correction in the power bilance results. Negative charges were not taken into account correctly.
  - Correction of a problem with converters with power prioritization in unbalanced networks. This caused convergence problems.
- Power Flow Results
  For loads, the data source was not always correctly displayed in the results.
- Grid Code Compliance Renewables (EEG)
  Correction of a problem with adjusting the transformer steps in the module. The start position incorrectly affected other calculations performed in the EEG module.
- Load Development and Economic Efficiency (LD, ECO)
  An error in preparing and saving the diagram data for load development with and without economic efficiency results has been corrected.
- Dynamics (ST, EMT)
  Correction of an issue when exporting the network model to NETOMAC with global models that were written to the incorrect section of the NET file.
- Protection Simulation (OC, SZ)
  - A bug in the recloser model has been fixed. Cycles were not correctly taken into account in the switching sequence.
  - In the results of the fault observations, it could happen that the fastest tripping time was not reported for the protection device.
- Protection Routes
  Fixed a problem where changing the pen width via the Options dialog box would update the existing highlight with a pen width that was too small.
- Graphical Model Builder (GMB)
  Fixed an issue with license verification.
- CYMDIST Export
  Correction of problems with CYMDIST export for networks with multiple views.
- CIM16/CGMES 2.4.15 Import
  Extension of CIM import when transferring zero-phase sequence data for a “ShuntCompensator” to SINCAL.

PSS SINCAL Pipe Networks

- Time series data interface for gas networks (TSDI)

Correction of an initialization problem with the TSDI data.

Additions/Corrections Update 5 (September 29, 2025)

This update contains all the additions of the previous updates and on top of that the following error corrections and additions.

PSS SINCAL User Interface

- Feeder
  Correction of an error in determining the longest distance of a feeder, whereby elements of the type "switch" with a length of 1 m were considered.
- Variant Comparison
  Correction of an error when creating scenario files from a variant comparison, which resulted in new network elements of the "switch" type not being exported correctly.
- Import Network State
  Fixed a bug when converting invalid date values, which could cause the program to crash.
- Diagrams
  Correction of an error when copying data series containing multiple characteristic curves (e.g., LFVoltageCurve for substations and feeders).
- Graphics Layer
  Correction of an error when saving graphics layers: If only the minimum zoom factor was changed, this was not recognized as "modified" and the new value was not saved.
- Undockable Windows
  Fixed a bug when closing a undocked network view that could cause the program to crash.

PSS SINCAL Electrical Networks

- Hosting Capacity (ICA)
  Correction of an error with parallel processing enabled. Renewable energies were not considered in the slow voltage change.
- Power Flow (PF)
  Correction of a convergence problem in converters in unbalanced networks.
- Contingency Analysis (CA)
  Fixed a bug in the SQLite definition of the external CA database that caused the filter function in the tabular view of the external DB (only for certain fields – ResultSummary – Base, s_end_Max, s_all_Max, Avg) to not work correctly.
- Optimal Branching (OT)
  Correction of an error that led to different optimization results being determined.
- Protection Simulation (OC)
  A bug in the recloser has been fixed. The parameter for selecting the ground was not being considered correctly.
- Protection Analysis (PSA)

Correction of an error in the output of currents when frequency protection is considered.

- CIM16/CGMES 2.4.15 Import
  - Import of SynchronousMachine.x"
  - Enable zero-phase sequence data for lines when r0/x0/c0 is present
  - Activate zero-phase sequence data for variable serial elements if data is available
  - Transfer of values directly without rounding for variable serial elements
  - Activation of zero-phase sequence data and calculation of ZABNL, ZBANL, and ZABSC (can be activated via CIMConfig.ini, Section Main: TRANSFORMER_ZERO_SEQ=1)

Additions/Corrections Update 4 (August 29, 2025)

This update contains all the additions of the previous updates and on top of that the following error corrections and additions.

PSS SINCAL User Interface

- Diagrams
  - Improved performance when creating/updating diagrams after opening the network model. Previously, all interactive diagrams were completely updated after opening the network model; now only the missing diagrams are generated.
  - Fixed a bug in the display of user-defined signals in diagrams, which meant that depending on the configuration, they were no longer displayed correctly.
- Feeder
  When selecting the longest path of a feeder, the last element was not selected if it was connected to a terminal. This problem has been corrected.

PSS SINCAL Electrical Networks

- Protection Devices
  When copying a DI setting via the dialog box, the pickup data was not copied.
- Optimal Branching (OT)
  Improvement in the algorithm for unbalanced networks in "voltage-based" mode. The maximum voltage is still used for comparison, but the smallest total current (of all phases) is also considered.
- Protection Analysis (PSA)
  During the pickup security check, recloser zones that are not actually active were considered.
- Arc Flash (AFH)
  Correction to the display of results in the network graphic. The worst-case results were not always shown.
- Voltage Curve Diagrams
  Correction of an error that caused incorrect nodes to be included in the route diagram that were not actually part of the route.

Additions/Corrections Update 3 (July 29, 2025)

This update contains all the additions of the previous updates and on top of that the following error corrections and additions.

PSS SINCAL User Interface

- Network Browser
  Fixed a problem with updating the pop-up menu when switching between electrical and pipe networks.
- Copy Add-Symbols
  Correction of an error when copying and pasting additional symbols (protection devices, fault observations, etc.) from other views, where an incorrect graphic layer and object type were stored in the database.

PSS SINCAL Electrical Networks

- Protection Coordination (OC)
  Corrected a problem with the consideration of the data for pickup phase/ground when entered separately. Now it is possible to specify a pickup in phase for "DI Settings Phase" and a pickup in ground for "DI Settings Ground".
- Protection Routes
  An error when creating the protection route highlighting has been corrected. This caused several highlights to be assigned the same result ID, meaning that they could no longer be displayed correctly or made visible/invisible.
- Optimal Branching (OT)
  Extension of the implementation so that supply sources are also possible in the switch area.
- Feeder Tracing (FEEDER)
  Correction of an error in feeder tracing in unbalanced networks.
- Operating Point and Time Series Calculation (LP)
  Asynchronous machines and variable shunt elements did not always behave correctly during time series and operating point calculations. Errors occurred when changing the power.
- Resupply
  An error in the algorithm has been corrected that caused the calculation to run in an endless loop and had to be aborted.
- Arc Flash Calculation (AFH)
  Correction of a problem with calculations using the DGUV standard, whereby the entered limitation of the clearing time was not taken into account.
- Verify Connection Conditions (EEG)
  For the variation P/Pmax, the sign was not correctly taken into account for cosphi.

Additions/Corrections Update 2 (June 26, 2025)

This update contains all the additions of the previous updates and on top of that the following error

corrections and additions.

PSS SINCAL User Interface

- Formatting Diagrams
  In the Format dialog, the user-defined signals can now also be moved to the area with the predefined signals.
- Heat-Map
  The visualization types "Power Flow V/Vn" and "Power Flow Deviation V/Vn" were only available if branch results were available in the network model. However, these visualizations only require node results.
- TSDI Result View
  Fixed a bug when disabling highlighting via the dropdown button in the result view, which did not delete the highlighting in the network diagram.

PSS SINCAL Electrical Networks

- Short Circuit (SC)
  The algorithms for dynamic voltage support have been improved so that they continue to function even when only a small amount of short-circuit power is available in the network and the voltage is supported by many converters.
- Verify Connection Conditions (EEG)
  Fixed a bug in the automation of the calculation when the directory for the result database in the network model ("xxx_files\DES") did not exist.
- Operating Point Calculation (LP)
  Corrected an error when creating diagram pages for voltage profile diagrams when operating points were calculated.
- CIM Import/Export
  - Corrections when processing dynamic data from CGMES 2.4.15:
    CIM export: Duplicate controller values
  - CIM import: User-defined controllers were not assigned to the machine
  - CIM Export Geographical (GL-profile)
    Correction converting coordinates to Lat/Long when exporting from CIM16 using a background map.

Additions/Corrections Update 1 (May 30, 2025)

This update contains the following error corrections and additions.

PSS SINCAL User Interface

- Supplementary graphics object Line
  Correction of an error in drawing the arrowheads.
- Highlight
  - Improved activation/deactivation of temporary result highlighting.

  - Hosting capacity: Fixed a bug when using the "Element Contour" option. Only the first terminal of the network elements was taken into account.
  - Fixed a bug when saving highlights in variants.

- Feeder Evaluation
  The entries in the Evaluations and Filters dialog box are now sorted alphabetically for all feeder evaluations.

PSS SINCAL Electrical Networks

- Load
  Correction of an issue when updating the base load data from customer data for Pi and Qi.
- Limits with Characteristic curves
  Limits with a voltage greater than 100% were not limited correctly.
- Protection Documentation
  - Corrected a program crash when displaying the pop-up menu in the protection documentation.
  - In the network graphic display of the protection documentation, additional elements for harmonics (frequency characteristics) are no longer displayed.

PSS SINCAL Automation

- Automation of the User Interface
  Automatic updating of drop-down lists in the toolbar when calling the automation function Reload() for graphic layers, object types, network levels, etc.
- Automation of the Calculation Modules
  An error has been corrected that occurred when switching multiple times between the physical and virtual databases.