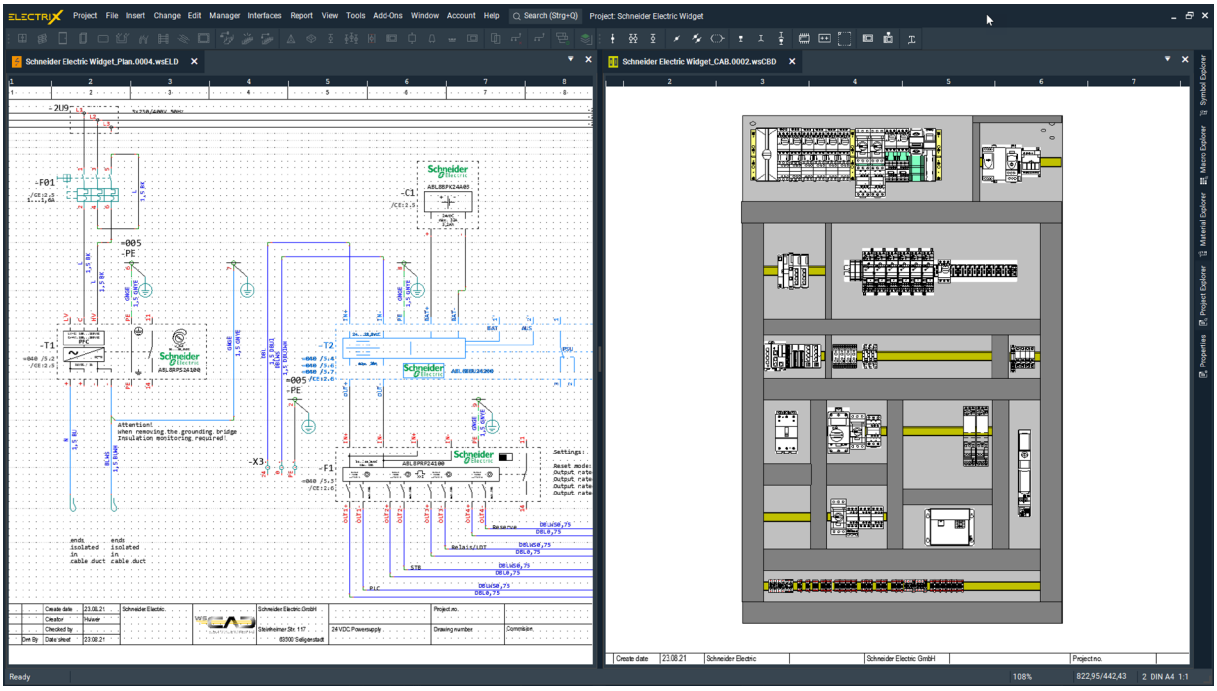
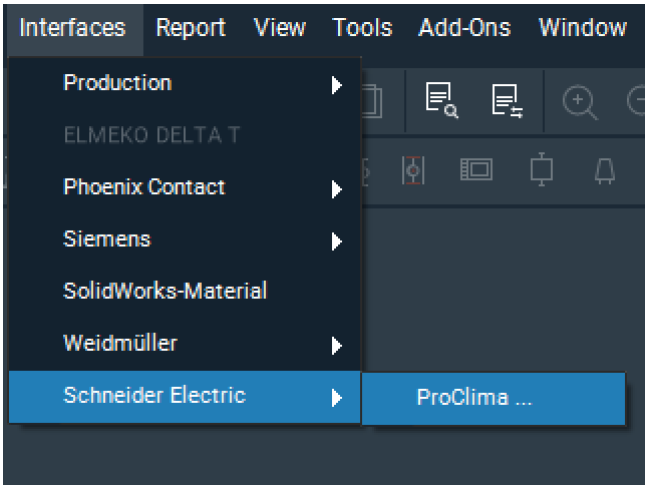
Control cabinet planning with ELECTRIX and Thermal analysis with ProClima from Schneider Electric

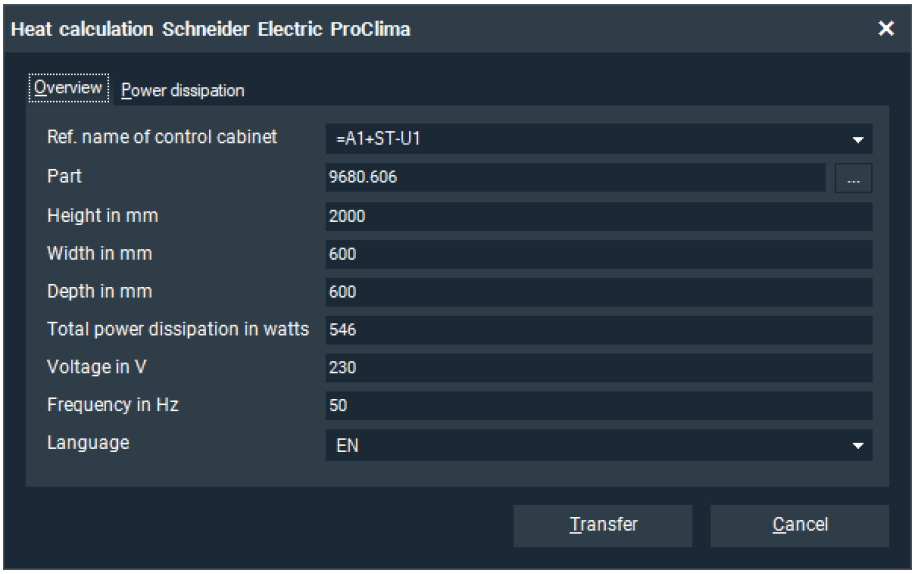
More and more components in the control cabinet, which are also constantly in operation, increase the power loss, which is reflected in the form of heat. Electronic components in particular react to this with a reduced lifetime and even failures. Humidity and condensation also have a negative impact on the reliability of the components. Proper air conditioning therefore helps to ensure operational reliability and increases the availability of the system as a whole. Therefore, planners are well advised to consider - and calculate - the heat balance in the control cabinet. ProClima from Schneider Electric offers a simple way to calculate and select thermal components used in control cabinets for electrical or electronic switching and control systems.
Schneider Electric's ProClima widget is now an integral part of ELECTRIX Professional. The technical data of the components assembled with the control cabinet layout in ELECTRIX are thereby transferred to the widget.



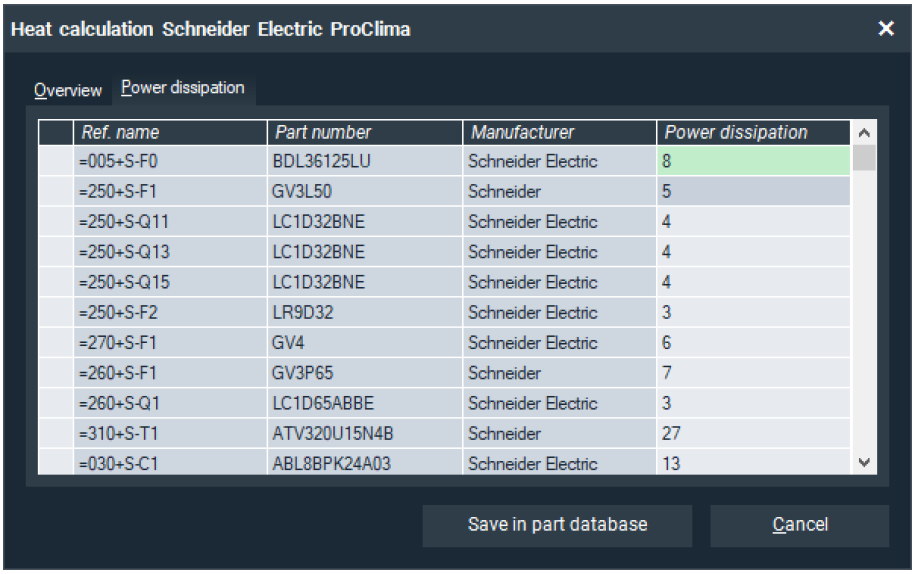
ProClima is called up via the menu **Interfaces** directly from the electrical planning software of WSCAD.



Values for the power dissipation of the planned components and the dimensions of the control cabinet are taken from the manufacturer-independent article database of WSCAD via ELECTRIX and form the basis of the thermal calculation in ProClima.



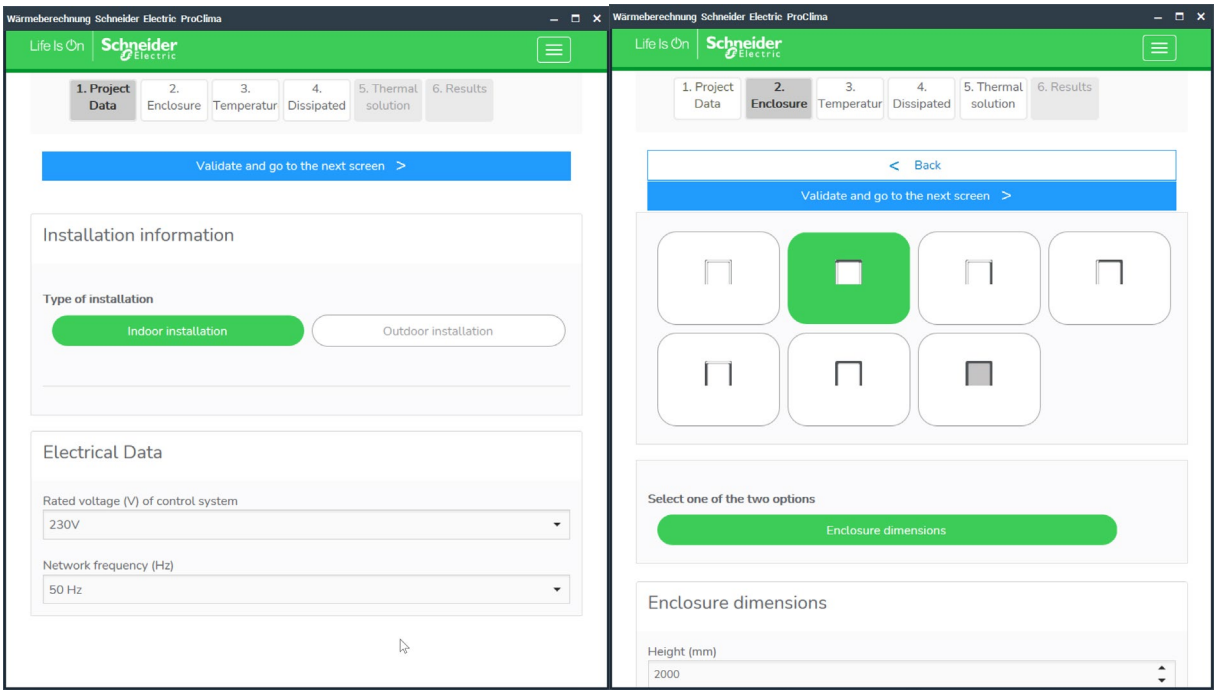
Missing values can be added manually and saved in the WSCAD article database for future projects. This helps with article maintenance and saves time.



The thermal balance is calculated in six steps. ProClima takes into account the temperature specifications and the climatic conditions at the installation site.

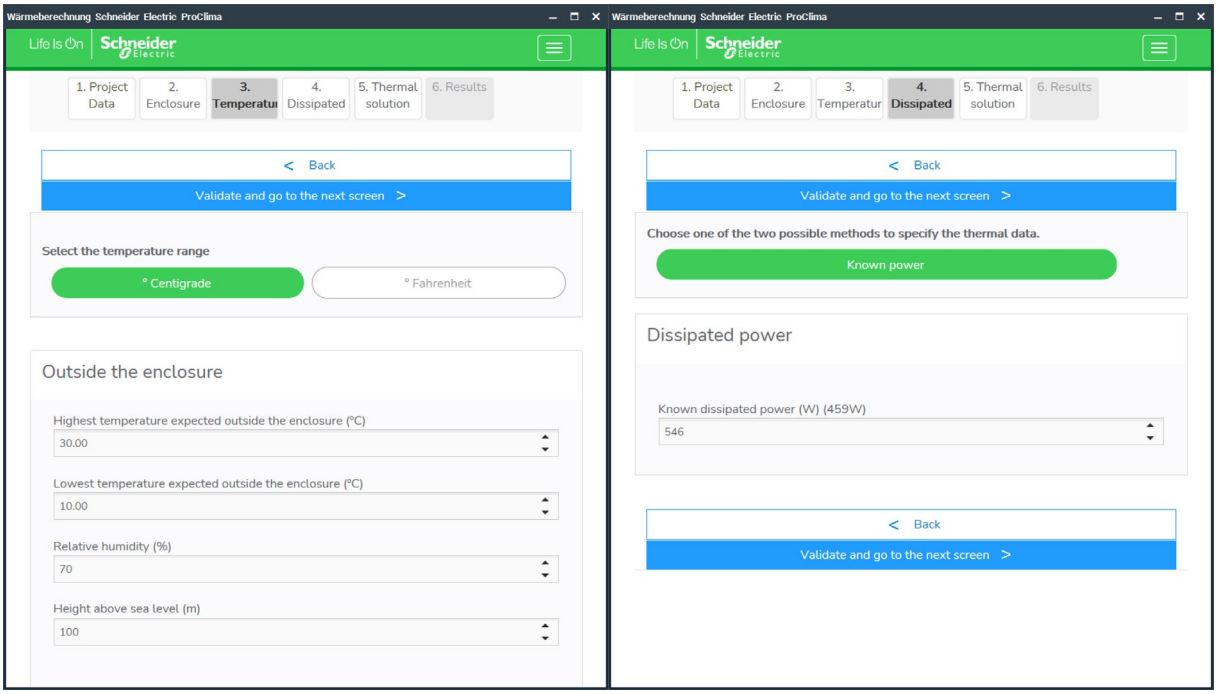
In the first step, the project data is transferred from ELECTRIX.

The second step is the type of installation. The dimensions of the control cabinet are automatically transferred from ELECTRIX to the widget. The widget automatically queries any missing values.

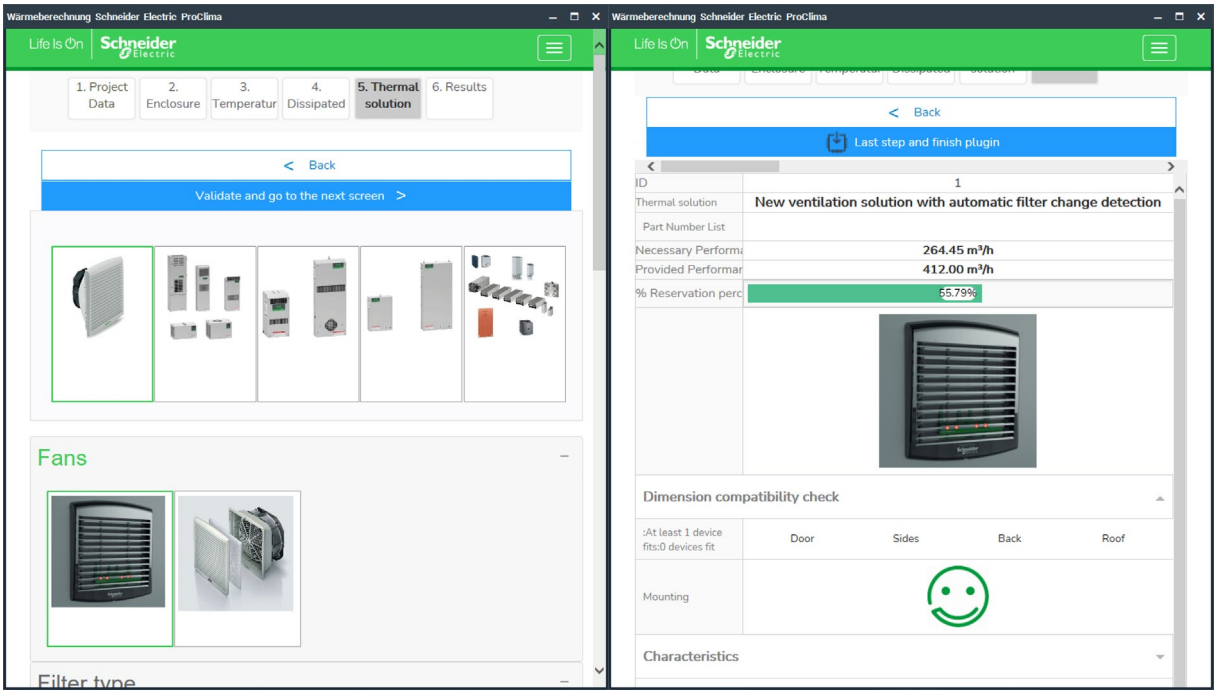


Then, in step 3, the climatic conditions at the installation site and the allowed temperature range for the components in the control cabinet are recorded.

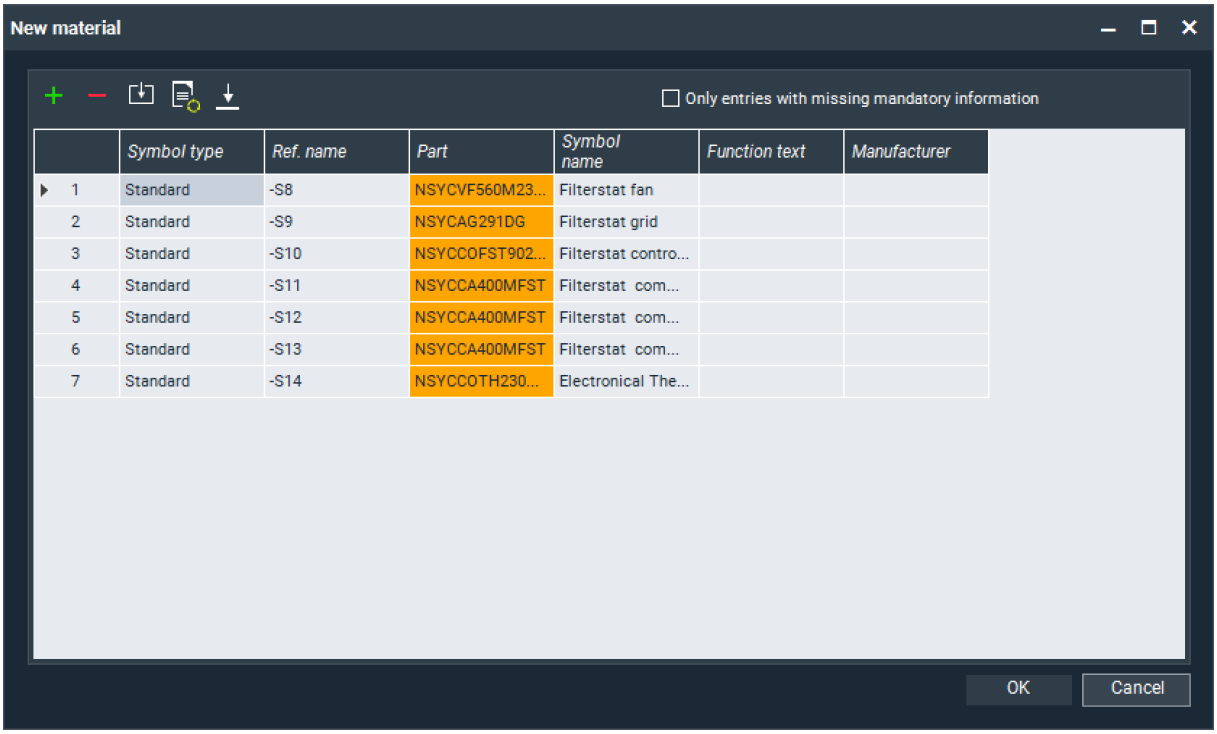
In the fourth step, the power loss is displayed. This value is calculated on the basis of the article data and can still be adjusted at this point if necessary.



With this information, the software now determines possible measures and suggests temperature control components for balancing the environment and the devices installed in the switchgear.

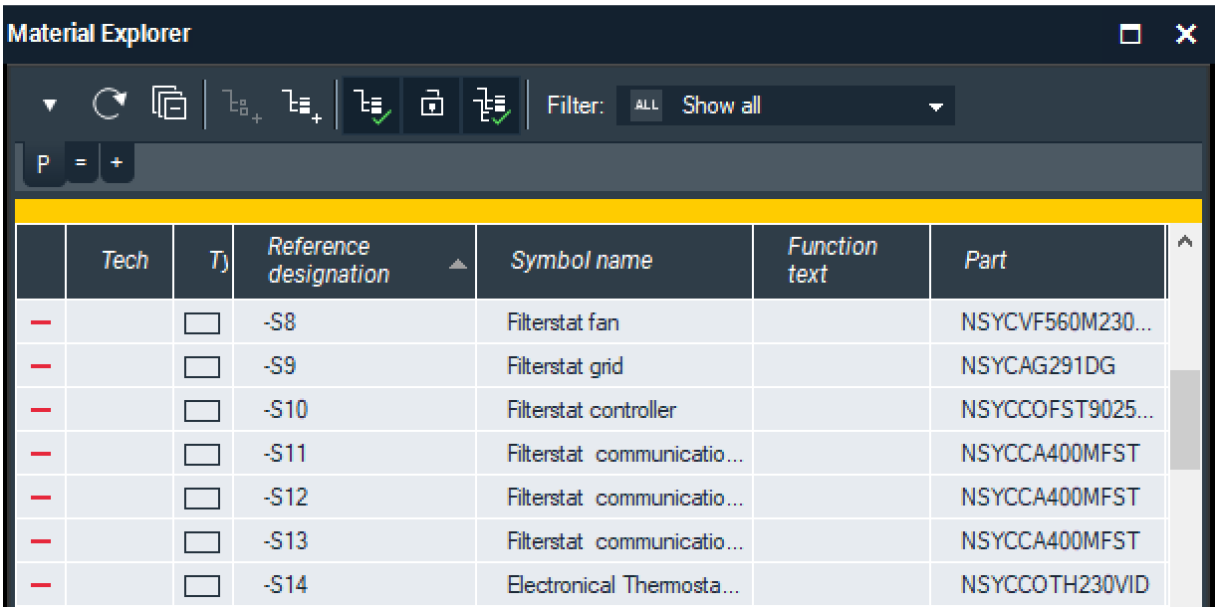


Based on the selected air conditioning solution, in the last step the article data of the components are transferred from ProClima to the Electrical-CAD software ELECTRIX and proposed as "new material" for transfer to the project.



	Symbol type	Ref. name	Part	Symbol name	Function text	Manufacturer
1	Standard	-S8	NSYCVF560M23...	Filterstat fan		
2	Standard	-S9	NSYCAG291DG	Filterstat grid		
3	Standard	-S10	NSYCCOFST902...	Filterstat contro...		
4	Standard	-S11	NSYCCA400MFST	Filterstat com...		
5	Standard	-S12	NSYCCA400MFST	Filterstat com...		
6	Standard	-S13	NSYCCA400MFST	Filterstat com...		
7	Standard	-S14	NSYCCOTH230...	Electronical The...		

If the selection is confirmed, the component data are transferred to ELECTRIX. The components can now be added to the WSCAD project via the Material Explorer.



With the integration of ProClima in ELECTRIX, users simply and quickly take advantage of Schneider Electric's experience and knowledge already during project planning. The otherwise time-consuming manual data collection as a basis for thermal caculation is eliminated and the project planning time is significantly reduced. In addition, the automatic selection of the correct and coordinated components by the widget provides security for configuring a reliable control cabinet.