



Power Supply

The right choice for a sustainable supply

A great deal of detail work is demanded if you want to dimension your 24 V power supply to optimum effect: For all the automation components supplied, you must not only determine the rated current, for example, but also take the inrush current into account. This means, for example, time-consuming searches by hand through catalogs or data sheets. To meet precisely this demand, it has now been made possible to design a power supply unit in the Totally Integrated Automation (TIA) selection tool. This means that, in just a few steps and clicks, you quickly find your way to the suitable power supply for your needs.

The profit is in the detail

The increasing level of industrial automation demands not only efficiency, but also a reliable 24 V supply to automation components during operation and in the event of a fault. The solution is the use of a reliable power supply. Meanwhile, there is also the painstaking manual task of collecting and logically processing figures. Here too, the level of

complexity soon pushes users to their limits. This is because an optimally dimensioned power supply on the one hand offers you the security that it reliably delivers sufficient current under all operating conditions and, on the other hand, is not over-dimensioned, which would have a negative impact in terms of price and space requirements in the control cabinet. The TIA Selection Tool is designed to help you get things right when selecting a power supply, even at the planning stage. The TIA Selection Tool not only enables suitable

devices to be selected for Totally Integrated Automation, but also configures them so that they are ready to be ordered easily through the Siemens Industry Mall.

In comparison with conventional tools, this tool not only manages to combine the configuration of different automation products, but can achieve far more benefits for the user.

Convenient selection via the device family view

Selection of the "device family" in the TIA Selection Tool provides a choice of different automation components such as controllers, I/O systems, HMI devices, industrial PCs, drive systems, switchgear, software, communication components, power supply units, and industrial identification systems. In addition, a Profibus and Profinet network can be selected on the basis of associated cables and connectors. (Fig. 1). Under the "power supply" heading, all 24 V power supply units of the Sitop compact, LOGO!Power, Sitop lite, Sitop smart and Sitop modular product lines are listed. The UPS1600 uninterruptible power supply can also be selected by means of the TIA Selection Tool. When selecting this, additional parameters such as load current, buffer time or ambient temperature can be defined. The user has the further option of selecting the Siplus versions and the PSU8600 power supply system (Fig. 2). In addition, a matching power supply in the Simatic design can be implemented in the respective product catalog of the controller.

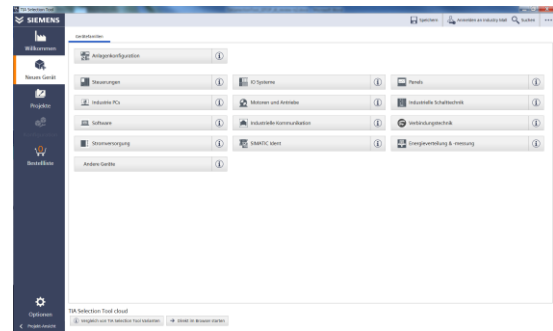


Fig. 1: Simple selection of a power supply using the device family view

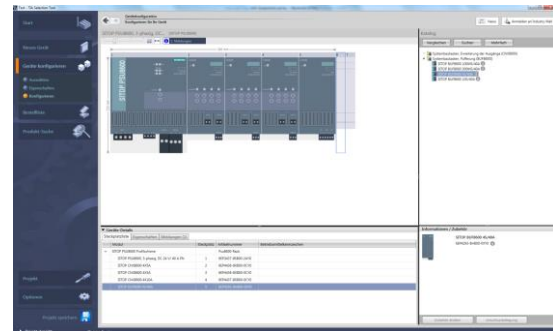


Fig. 2: Possible configuration of the intelligent PSU8600 power supply system

After choosing the appropriate automation components, you are automatically guided to the selection wizard. It is also possible for a product to be selected on the basis of technical features via a hardware catalog. In addition, this view offers a comparison component, so that with a simple click several power supply product lines can be compared directly with one another. For expansion of the selected power supply, it is also possible to select a matching redundancy and/or selectivity module (Fig. 3). These can be added by simply clicking on the accessory for the selected power supply. From this product selection in the catalog, the TIA Selection Tool defines a complete list of orders. The list of orders can then be transferred directly to the shopping cart in the Siemens Industry Mall and the product list can be exported in various formats, for example Excel. In addition, you can also request relevant CAX data via the CAX Download Manager.

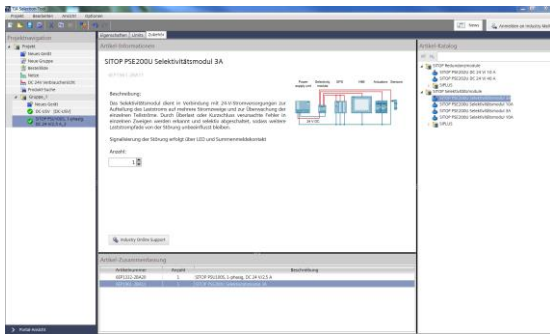


Fig. 3: Selection of accessories such as a selectivity module for a power supply is possible at any time

New intelligent 24 V load view in the TIA Selection Tool

Although you can determine power supply units for automation applications with comparatively few parameters, users have sometimes asked: "What is the current demand during operation?" or "What is the inrush current?". Until now, it was only possible to determine a demand-compliant power supply for automation components with considerable effort. Users who wanted to determine this demand first required a variety of technical data of the individual components, which usually involved a great deal of effort. This should, however, actually be easier to select and determine; ideally, with a suggestion for an appropriate power supply for the specified or selected 24 V load. The TIA Selection Tool also promises assistance in this area.

The easy way to find the right power supply

With the 24 V load view, the appropriate Sitop power supply unit can already be determined for selected automation products. The power requirement of the 24 V loads is calculated automatically and is taken into consideration as soon as the power supply unit is selected. The overview page of the 24 V load view of the TIA Selection Tool displays the automation components previously

selected by the user. With one click, any power supply unit that has not yet been specified can quickly be added (Figs. 4 and 5). To this end, an additional screen provides instructions on adding a power supply unit. By simply dragging and dropping, the loads can then be connected with one or more power supply units. In doing so, the tool automatically determines the total of the rated and peak currents. The user, however, is free to decide which loads are to be included in this circuit.

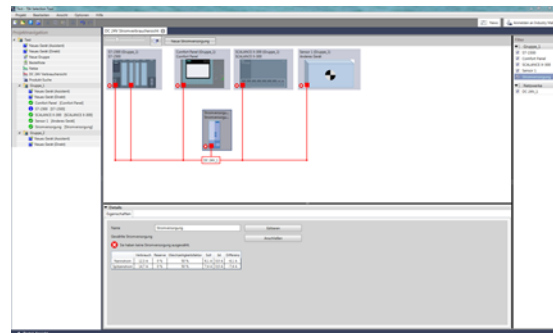


Fig. 4: Configuration of automation components with a power supply in the 24 V load view

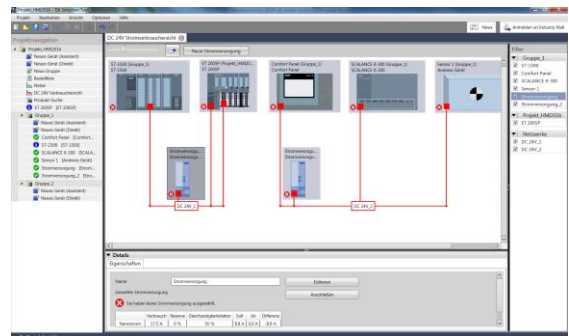


Fig. 5: Configuration of two power supplies that supply different loads

Using the "Edit" function, the selection wizard for the appropriate power supply unit can be started. Only power supply units that deliver the total power required by the loads to be supplied are available for selection. Further parameters can also be defined. Apart from the input voltage (phase selection) and a specific preferred series of products, it is also

possible to specify a spare capacity for further loads or future expansions as a percentage. Furthermore, the specification of a rated coincidence factor takes into consideration the fact that the devices in a plant are never all activated simultaneously at full power (Fig. 6).

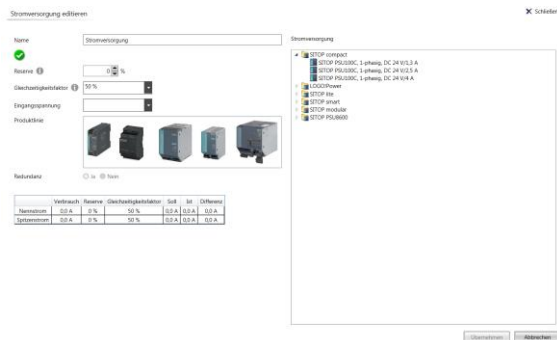


Fig. 6: Intuitive selection of technical data such as power reserve, coincidence factor, input voltage, product line, etc.

Lastly, there is the possibility of setting up the power supply on a redundant basis. On confirmation of this function, the appropriate redundancy module is offered.

Flexibility is an essential component of planning

Furthermore, the tool offers two versions of the configuration at present. On the one hand, the TIA Selection Tool can be downloaded and installed on Windows computers. In addition, there is the option of using the Cloud version of the tool. This can be started directly in the browser of mobile devices. The use of web browsers such as Safari, Chrome and Firefox is recommended for this purpose. The advantage of projects stored in the Cloud is that you can work on them using a tablet when you are traveling or from your PC at home.

In order to be able to exploit the full functionality, it is recommended in both cases that an account be set up in the Siemens Industry Mall. In this way, after creating a bill of materials or ordering list, the user can immediately order the products through the Siemens Industry Mall.