

# UI Component library

**D2000 Components** serve for fast and effective creation of visualization, basic overview of a status, values, process, devices, measurements, regulation, process status and provide basic pointers for a user/operator.

- Component is a scheme used for embedding design and functionality of a graphic object
- Easy repeated use
- Data binding is parameterized from the parent scheme
- Support of unlimited introduction of components
- Categorization of components

## Use of components

### Selection of the component object and insertion into the scheme

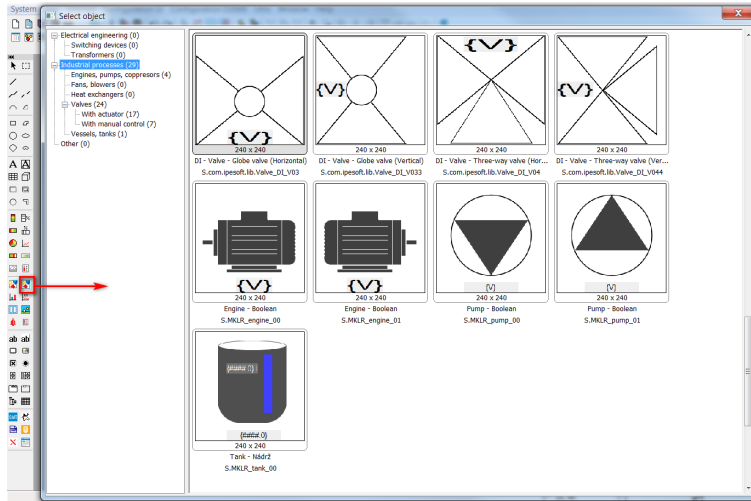


Figure 1 – Selection of the component object

### Use of components in the scheme and parameterization

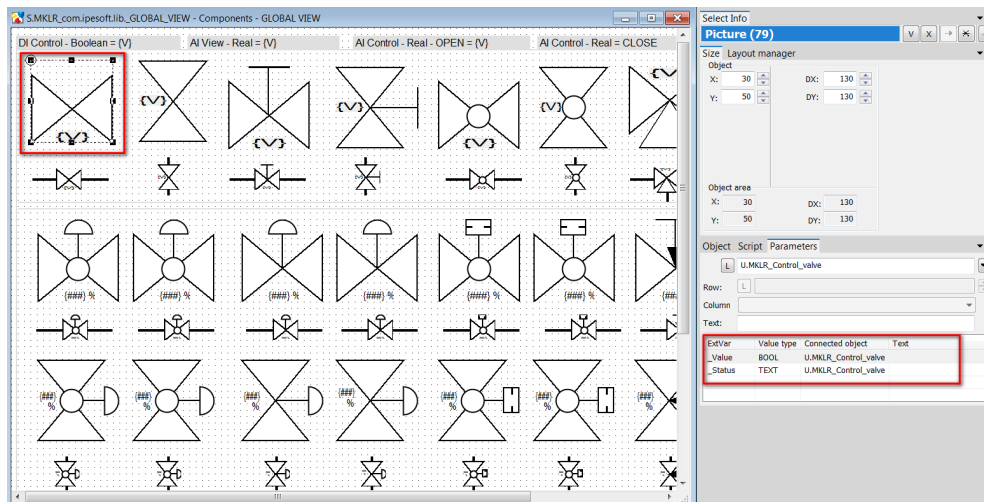


Figure 2 – Use of components in the scheme – Parameters ExtVar

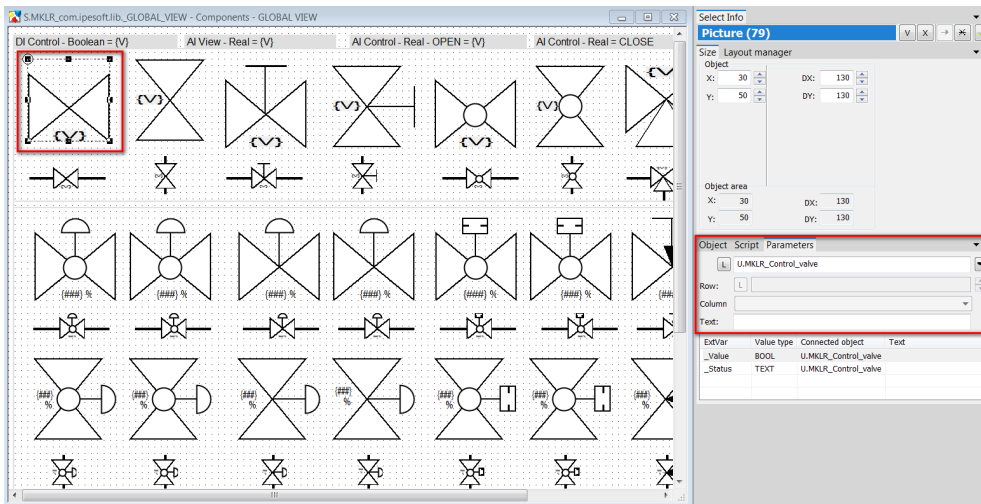


Figure 3 – Use of components in the scheme – Parameters ExtVar

#### Parameterization of local variables of the “EXTERNAL” type

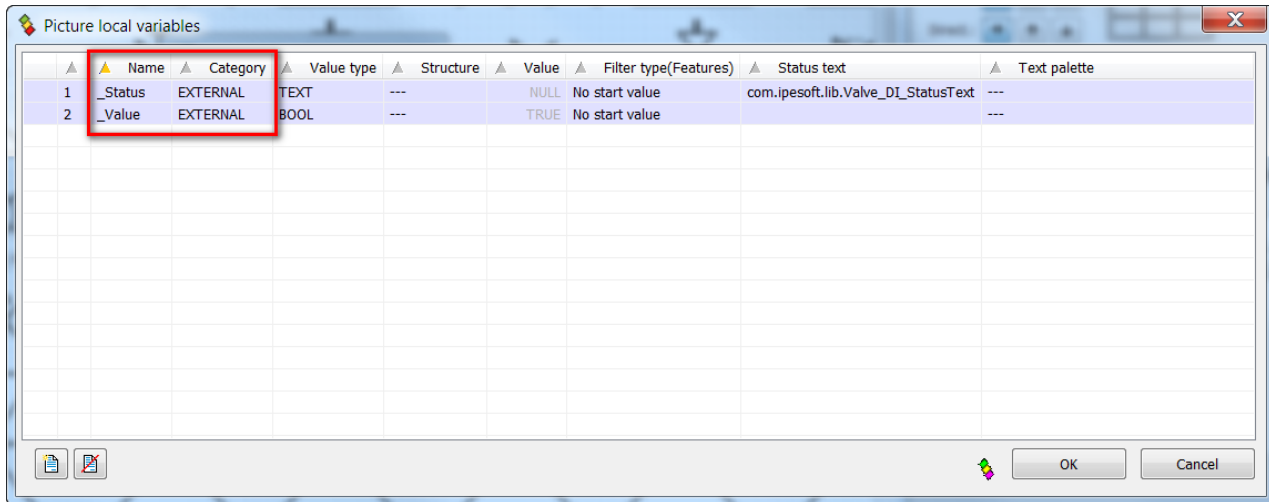


Figure 4 – Definitions of local variables of the EXTERNAL type

After inserting component scheme into parenting scheme, it is possible to bind external variables of the component to variables of the parenting scheme or to D2000 objects.

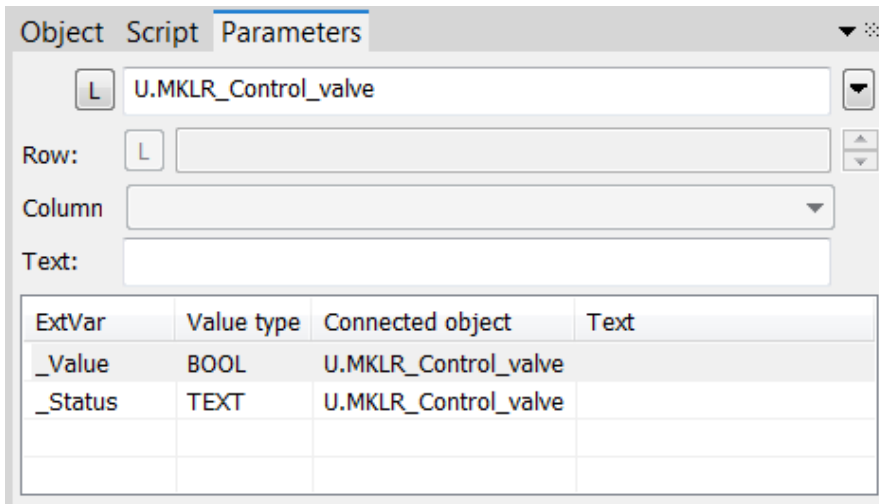


Figure 5 – Binding of external variables of the component

### Categorization of components

In scheme parameters, it is possible to edit component groups and put the scheme into a component group.

It is possible to create component groups, to rename and delete them by selecting an item from the context menu, which is opened by a right-click.

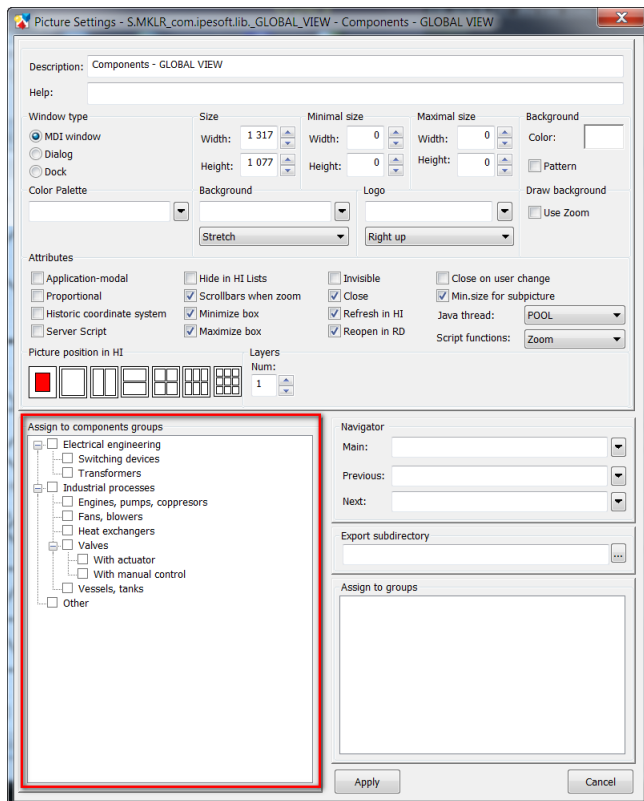


Figure 6 – Categorization of components

### Sharing and distribution of components

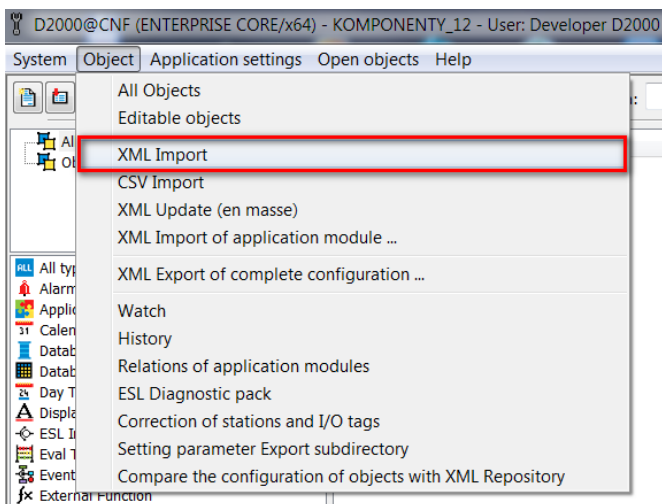
It is possible to move component schemes, same as other D2000 objects, among applications using D2000 XML export/import.

We recommend to choose such name convention for components as to prevent conflicts of names with potential existing schemes and other objects. Components supplied by the IPESoft company have the prefix com.ipsoft.lib in their name.

- A prefix in names of components/D2000 objects
- **S.com.ipesoft.lib.Valve**
  - **com.ipesoft.lib.Valve\_Coloring.PAL**
  - **com.ipesoft.lib.Valve\_StatusText**
- A prefix as a root of the category hierarchy of components
  - A simple XML import of components

| Meno objektu                                      | Popis objektu  |
|---|--|
| com.ipesoft.lib.Valve_AI_Coloring.PAL             | AI - Valve - Coloring  |
| com.ipesoft.lib.Valve_DI_Coloring.PAL             | DI - Valve - Coloring  |
| com.ipesoft.lib.Valve_DI_StatusText               | DI - Valve - Status Text   |
| com.ipesoft.lib.Valve_DI_TW_Coloring_P01.PAL      | DI - Valve - Coloring - Three-way valve P01  |
| com.ipesoft.lib.Valve_DI_TW_Coloring_P02.PAL      | DI - Valve - Coloring - Three-way valve P02  |
| com.ipesoft.lib.Valve_DI_TW_Coloring_P03.PAL      | DI - Valve - Coloring - Three-way valve P03  |
| com.ipesoft.lib.Valve_DI_TW_Horizontal_StatusText | DI - Valve - Status Text - Horizontal Three-way valve                                  |
| com.ipesoft.lib.Valve_DI_TW_Vertical_StatusText   | DI - Valve - Status Text - Vertical Three-way valve                                    |
| S.com.ipesoft.lib.Valve_AI_V01                    | AI - Valve - Control valve with manual actuator (Horizontal left input)                |
| S.com.ipesoft.lib.Valve_AI_V011                   | AI - Valve - Control valve with manual actuator (Horizontal right input)               |
| S.com.ipesoft.lib.Valve_AI_V0111                  | AI - Valve - Control valve with manual actuator (Vertical up input)                    |
| S.com.ipesoft.lib.Valve_AI_V01111                 | AI - Valve - Control valve with manual actuator (Vertical down input)                  |
| S.com.ipesoft.lib.Valve_AI_V02                    | AI - Valve - Ball valve with pneumatic actuator (Horizontal left input)                |
| S.com.ipesoft.lib.Valve_AI_V022                   | AI - Valve - Ball valve with pneumatic actuator (Horizontal right input)               |
| S.com.ipesoft.lib.Valve_AI_V0222                  | AI - Valve - Ball valve with pneumatic actuator (Vertical up input)                    |
| S.com.ipesoft.lib.Valve_AI_V02222                 | AI - Valve - Ball valve with pneumatic actuator (Vertical down input)                  |
| S.com.ipesoft.lib.Valve_AI_V03                    | AI - Valve - Ball valve with single acting pneumatic actuator (Horizontal left input)  |
| S.com.ipesoft.lib.Valve_AI_V033                   | AI - Valve - Ball valve with single acting pneumatic actuator (Horizontal right input) |
| S.com.ipesoft.lib.Valve_AI_V0333                  | AI - Valve - Ball valve with single acting pneumatic actuator (Vertical up input)      |
| S.com.ipesoft.lib.Valve_AI_V03333                 | AI - Valve - Ball valve with single acting pneumatic actuator (Vertical down input)    |
| S.com.ipesoft.lib.Valve_AI_V04                    | AI - Valve - Gate valve with pneumatic membrane actuator (Horizontal left input)       |
| S.com.ipesoft.lib.Valve_AI_V044                   | AI - Valve - Gate valve with pneumatic membrane actuator (Horizontal right input)      |
| S.com.ipesoft.lib.Valve_AI_V0444                  | AI - Valve - Gate valve with pneumatic membrane actuator (Vertical up input)           |
| S.com.ipesoft.lib.Valve_AI_V04444                 | AI - Valve - Gate valve with pneumatic membrane actuator (Vertical down input)         |
| S.com.ipesoft.lib.Valve_DI_V01                    | DI - Valve - Gate valve (Horizontal)   |
| S.com.ipesoft.lib.Valve_DI_V011                   | DI - Valve - Gate valve (Vertical)   |
| S.com.ipesoft.lib.Valve_DI_V02                    | DI - Valve - Gate valve with manual actuator (Horizontal)                              |
| S.com.ipesoft.lib.Valve_DI_V022                   | DI - Valve - Gate valve with manual actuator (Vertical)                                |
| S.com.ipesoft.lib.Valve_DI_V03                    | DI - Valve - Globe valve (Horizontal)  |
| S.com.ipesoft.lib.Valve_DI_V033                   | DI - Valve - Globe valve (Vertical)  |
| S.com.ipesoft.lib.Valve_DI_V04                    | DI - Valve - Three-way valve (Horizontal left input)                                   |
| S.com.ipesoft.lib.Valve_DI_V044                   | DI - Valve - Three-way valve (Vertical down input)                                     |

Figure 7 – A prefix of components' names



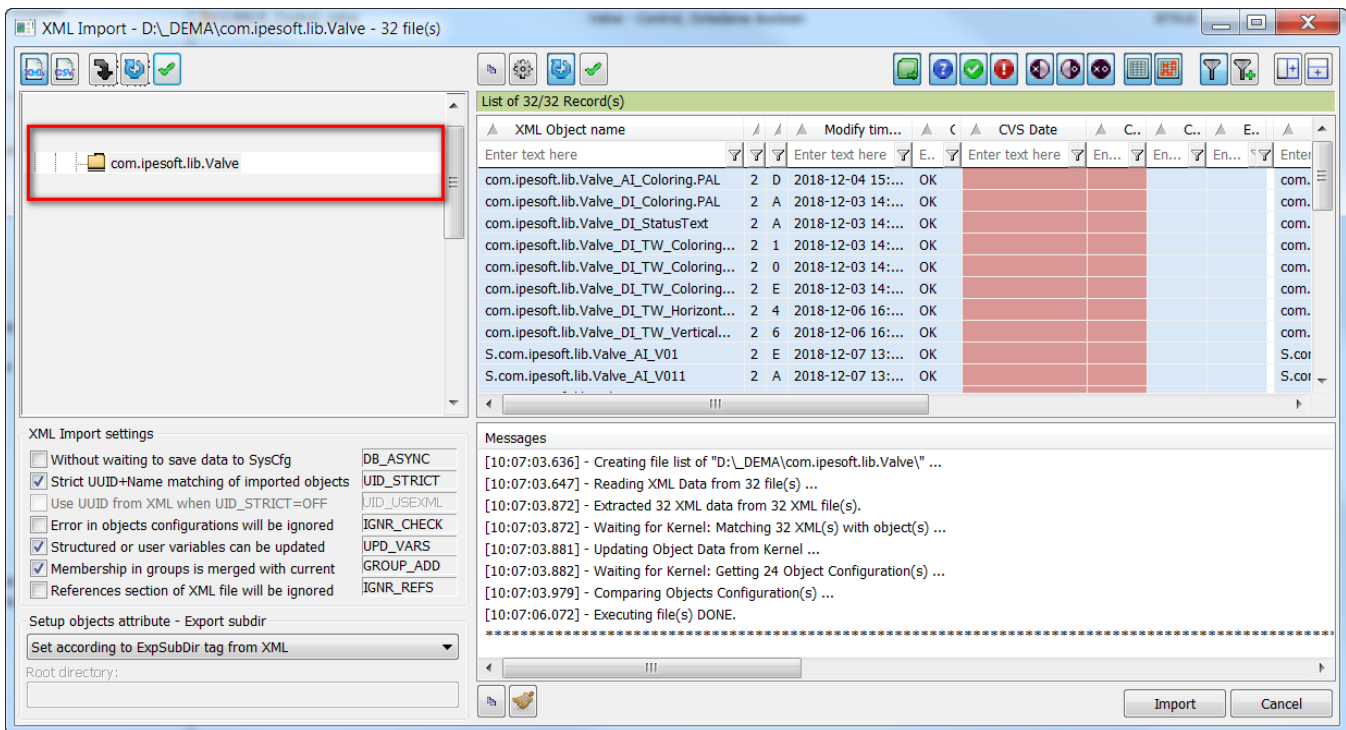


Figure 8 – (CNF) XML Import of components

**Process of a component import supplied by the IPESOFT company**

- unzip a package in the form of a zip file (com.ipesoft.lib.Valves.zip) into prepared directory
- choose an item *XML Import* in the *CNF* process in the objects menu (see Figure 8 – (CNF) XML Import of components)
- choose a directory where we have unzipped the component package in the directory structure
- execute **Import**

after a successful import, imported components will display in the process of graphic editor in the corresponding category (see Figure 1 – Selection of the component object)