



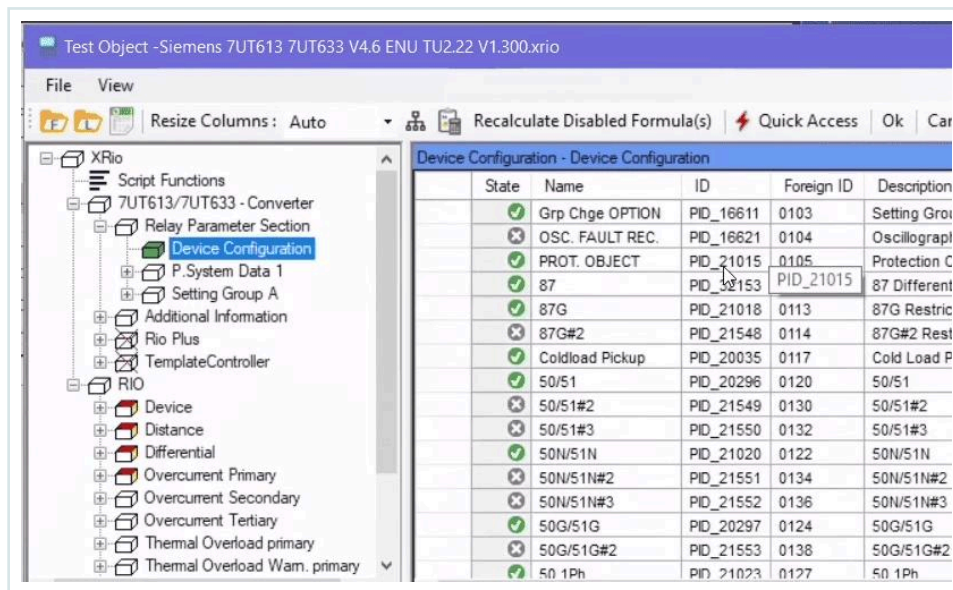
VEBKO ONLINE HELP

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# XRIO and XRIO Converter

|           |                                      |
|-----------|--------------------------------------|
| Category  | <b>tester</b>                        |
| Section   | <b>Modules Toolbar and Statusbar</b> |
| Language  | <b>English</b>                       |
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After getting familiar with “XRIO Converter”, it is necessary to, also, get familiar with the concept of “Name”, “ID”, “Foreign ID” and “Description”. “ID” Definition: The relay producer companies define a unique “ID” for every parameter and in all relays of a brand, this ‘ID’ is used for a specific parameter; for example, in the “7UT613” Siemens relay, “ID=21015” is related to the “PROT.OBJECT” parameter. This “ID” is used in other relays produced by this company for the same parameter. Also, in connecting to the relay via Modbus protocol, if this “ID” is sent to the relay as a “Packet”, the relay will return the parameter value related to the sent “ID”.

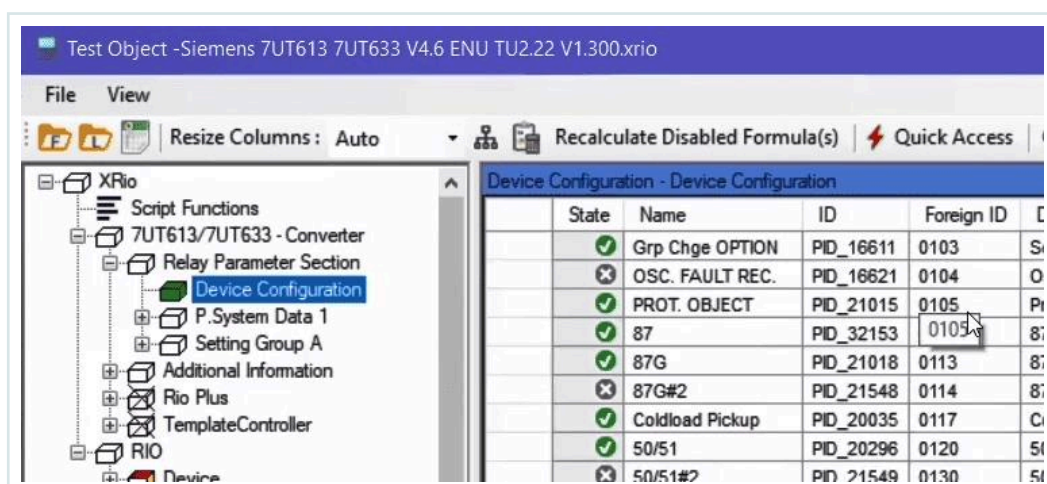


The screenshot shows the 'Device Configuration - Device Configuration' window. The left sidebar displays a tree view of the project structure, including 'XRIO', 'Script Functions', '7UT613/7UT633 - Converter', 'Relay Parameter Section', 'Device Configuration' (highlighted), 'P.System Data 1', 'Setting Group A', 'Additional Information', 'Rio Plus', 'TemplateController', and 'RIO'. The main table lists various parameters with their status, names, IDs, foreign IDs, and descriptions.

| State | Name            | ID        | Foreign ID | Description  |
|-------|-----------------|-----------|------------|--------------|
| ✓     | Grp Chge OPTION | PID_16611 | 0103       | Setting Gro  |
| ✗     | OSC. FAULT REC. | PID_16621 | 0104       | Oscillograp  |
| ✓     | PROT. OBJECT    | PID_21015 | 0105       | Protection C |
| ✓     | 87              | PID_32153 | PID_21015  | 87 Different |
| ✓     | 87G             | PID_21018 | 0113       | 87G Restrict |
| ✗     | 87G#2           | PID_21548 | 0114       | 87G#2 Rest   |
| ✓     | Coldload Pickup | PID_20035 | 0117       | Cold Load P  |
| ✓     | 50/51           | PID_20296 | 0120       | 50/51        |
| ✗     | 50/51#2         | PID_21549 | 0130       | 50/51#2      |
| ✗     | 50/51#3         | PID_21550 | 0132       | 50/51#3      |
| ✓     | 50N/51N         | PID_21020 | 0122       | 50N/51N      |
| ✗     | 50N/51N#2       | PID_21551 | 0134       | 50N/51N#2    |
| ✗     | 50N/51N#3       | PID_21552 | 0136       | 50N/51N#3    |
| ✓     | 50G/51G         | PID_20297 | 0124       | 50G/51G      |
| ✗     | 50G/51G#2       | PID_21553 | 0138       | 50G/51G#2    |
| ✓     | 50 1Ph          | PID_21023 | 0127       | 50 1Ph       |

Figure 1

“Foreign ID”: Unlike “ID” which is used as a standard for identification of the same parameters in relays produced by a company, “Foreign ID” is used as a means of differentiation between parameters of different relays which allows them to be used in other software’s. As an example, in “7UT613” relay of Siemens, there is a parameter named “PROT.OBJECT” defined with “ID=21015” and “Foreign ID=0105”. If the user intends to enter and analyze some models of relays produced by different companies in a software like “Digsilent”.



The screenshot shows the 'Device Configuration - Device Configuration' window, similar to Figure 1. A mouse cursor is pointing at the 'Foreign ID' column header. The table structure is identical to the one in Figure 1.

| State | Name            | ID        | Foreign ID | Description  |
|-------|-----------------|-----------|------------|--------------|
| ✓     | Grp Chge OPTION | PID_16611 | 0103       | Setting Gro  |
| ✗     | OSC. FAULT REC. | PID_16621 | 0104       | Oscillograp  |
| ✓     | PROT. OBJECT    | PID_21015 | 0105       | Protection C |
| ✓     | 87              | PID_32153 | PID_21015  | 87 Different |
| ✓     | 87G             | PID_21018 | 0113       | 87G Restrict |
| ✗     | 87G#2           | PID_21548 | 0114       | 87G#2 Rest   |
| ✓     | Coldload Pickup | PID_20035 | 0117       | Cold Load P  |
| ✓     | 50/51           | PID_20296 | 0120       | 50/51        |
| ✗     | 50/51#2         | PID_21549 | 0130       | 50/51#2      |

Figure 2

The interesting point is that in some relays such as Siemens, the “ID” and “Foreign ID” are different while in some other relays such as “P441”, after loading its file in the “Load XRio and Rio file from list” page, it can be seen that the “ID” and “Foreign ID” are the same. Also, in “Name” and “Description” sections there is information, provided by the producer company, about name of the parameter as well as some description about that parameter.

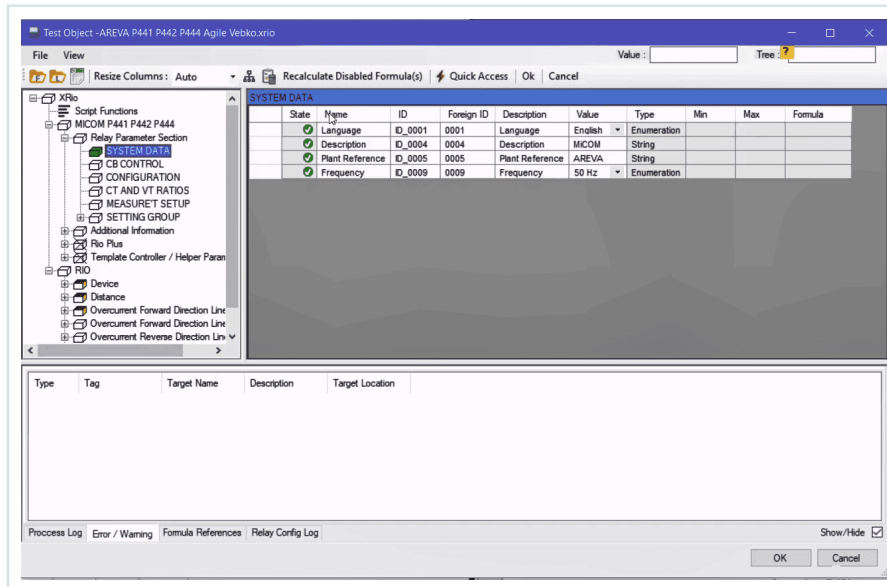


Figure 3

An introduction to “XRio” and its difference with “XRio Converter”: By clicking on the “Import from list” icon on the “Load XRio and Rio file from list” page, “XRio Converter” of a relay is selected where the information regarding the relay is complete in the “Custom” and “Rio” sections. It should be noted that it is not possible to extract the “XRio Converter” file from a relay because producer companies do not put the file in their relays. In fact, the relay producer companies never limit their relays to a single tester device such as “Omicron”.

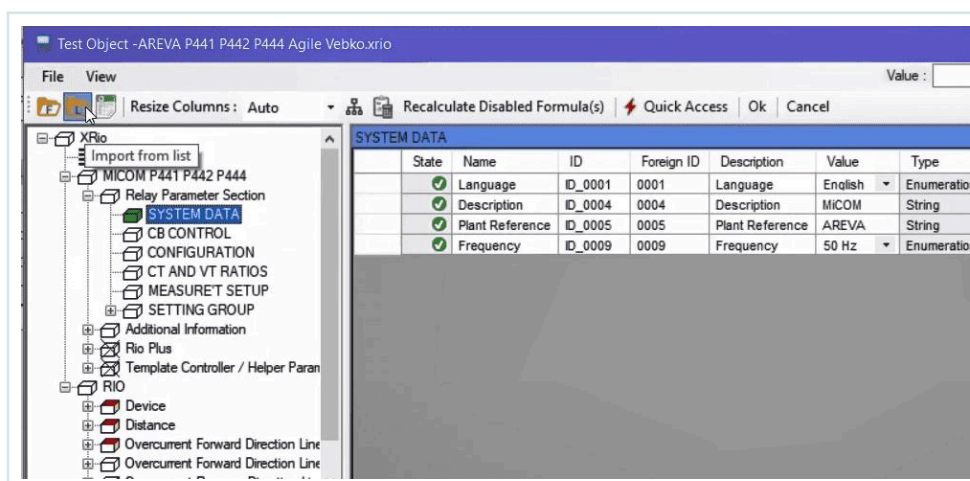


Figure 4

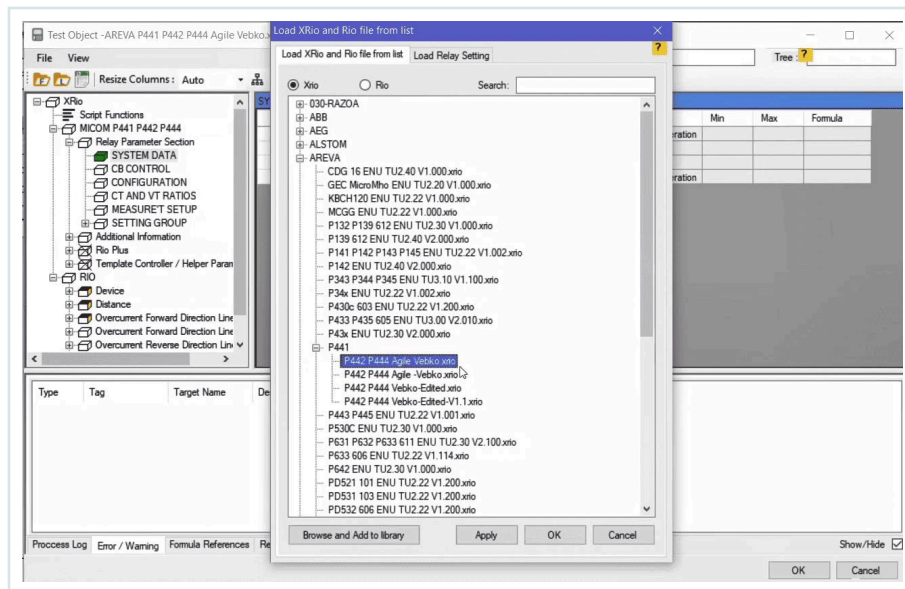


Figure 5

Therefore, instead of the “XRio Converter” file, the relay producer companies provide a file with “.CSV” or “.text” format in which information of the “Custom” section along with the values set to the relay can be found. Upon extensive use of “XRio” which has been created by “Omicron” company, most relay producers decided to provide their users with “XRio” output files of their relays too. You should consider that this file is not the same as the “XRio Converter” file which is designed and written by producers of the tester device and is available in the tester software.

The “XRio” file of the relay contains “Custom” section as well as “Relay Parameter Section” and “Additional Information” blocks with the information and values set to the relay, but it does not contain “Rio Plus” and “Template Controller” sections. If, in the tester software, the “XRio Converter” file is selected correctly, after loading the “XRio” file of the relay in the “XRio Converter”, the settings and necessary information of the relay are completely imported to the “Rio” section.

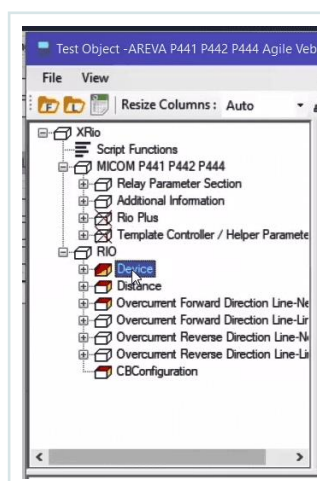


Figure 6

Some more points regarding "XRio" and "XRio Converter" should be mentioned: The first point is that if the "XRio" file of the "7SA522" relay is opened in "notepad++", by opening the "Rio Converter" tag it can be seen that unlike "XRio Converter", there are no "Script References" functions in this section. Einige weitere Punkte zu „XRio“ und „XRio Converter“ sollen noch erwähnt werden:

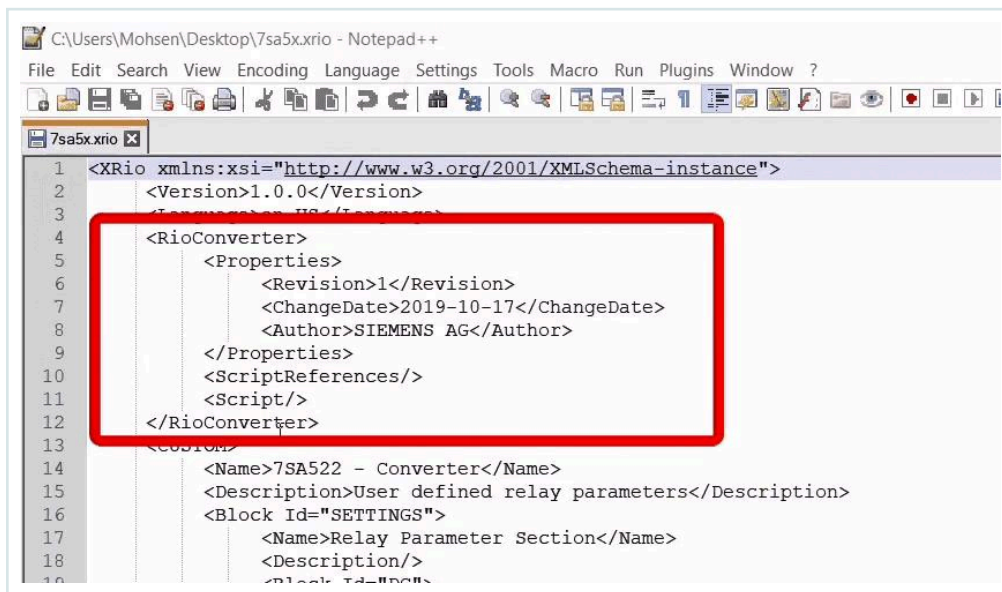


Figure 7

The second point is that in the "Custom" tag, only information regarding "Setting" block is available which is the same as "Relay Parameter Section" in the software and in some relays such as "7SA522", the information regarding "Additional Parameter" is also available which is the same as "Additional Information" in the software. Also, the information regarding "Device" block has been made available in the "Rio" section by a producer of the relay.

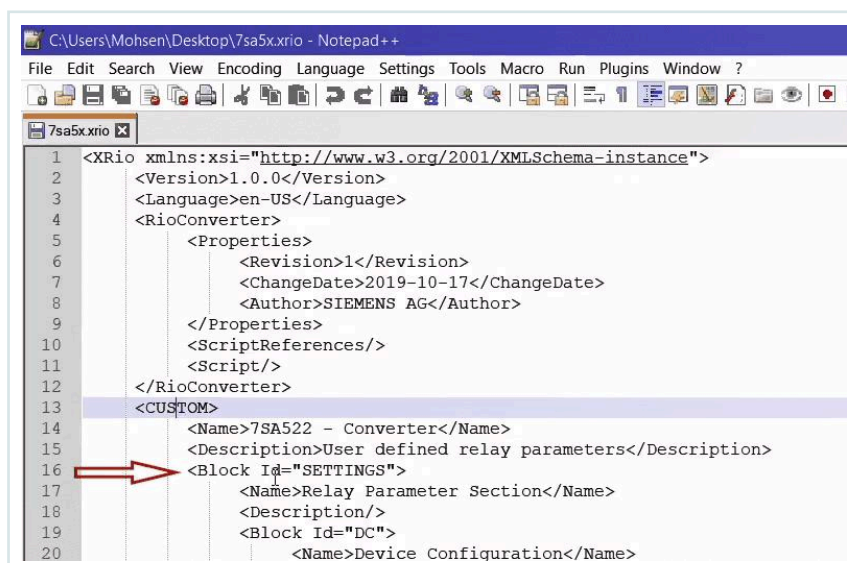


Figure 8

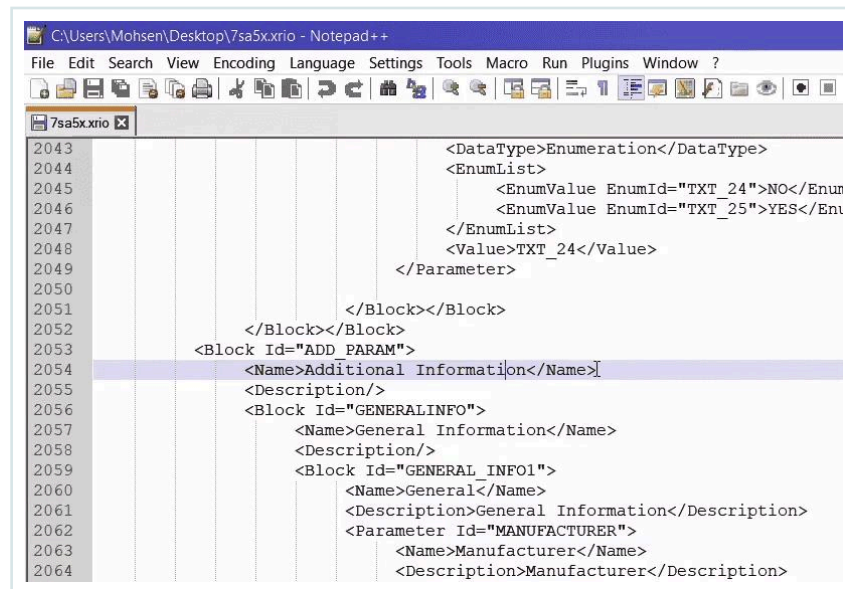


Figure 9

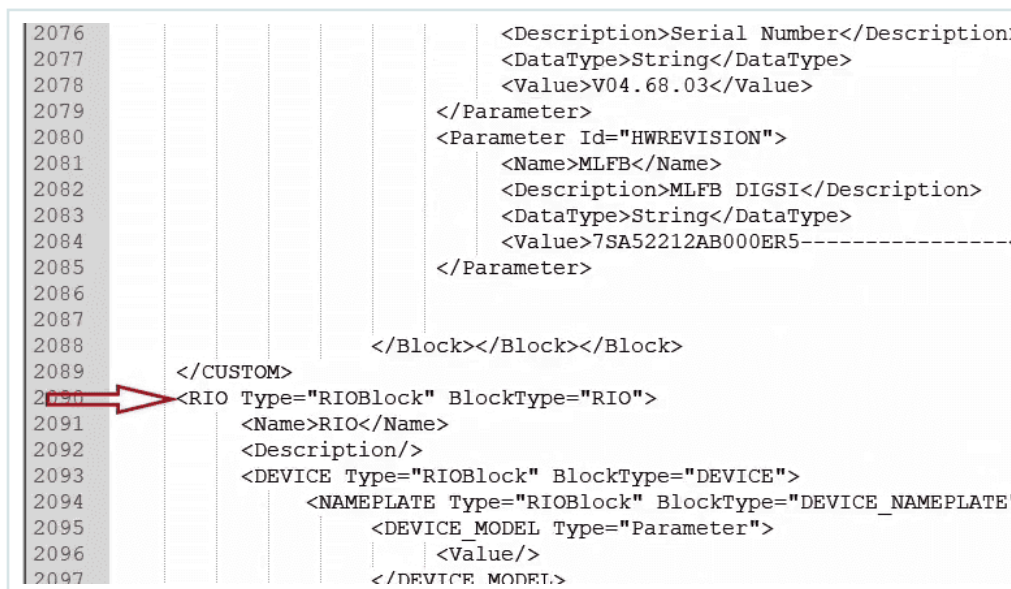


Figure 10

The third point is that if the "XRio" file of a relay is selected and loaded by clicking on "Import from file" and without "XRio Converter", it can be seen that the mentioned sections are available in the "XRio" section of the software but because of not using the "XRio Converter", the values of "RIO" section are not linked with the "XRio" information and only the "DEVICE" section has been completed according to the information of the "XRIO" file.

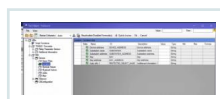


Figure 11

The last point is that if the “XRio” file of a differential relay such as “7UT613” is loaded in a universal room such as the sequencer room, in the “Rio” section, the blocks other than those completed according to the settings of the relay and information of the loaded “XRio” by “XRio Converter”, like “Distance” block which are entered to the software by the designer of the tester are empty of information because in the “XRio” file of the relay there is no information about them.

[jg1]XRio\_and\_XRio\_Converter