OMICRON Test Universe
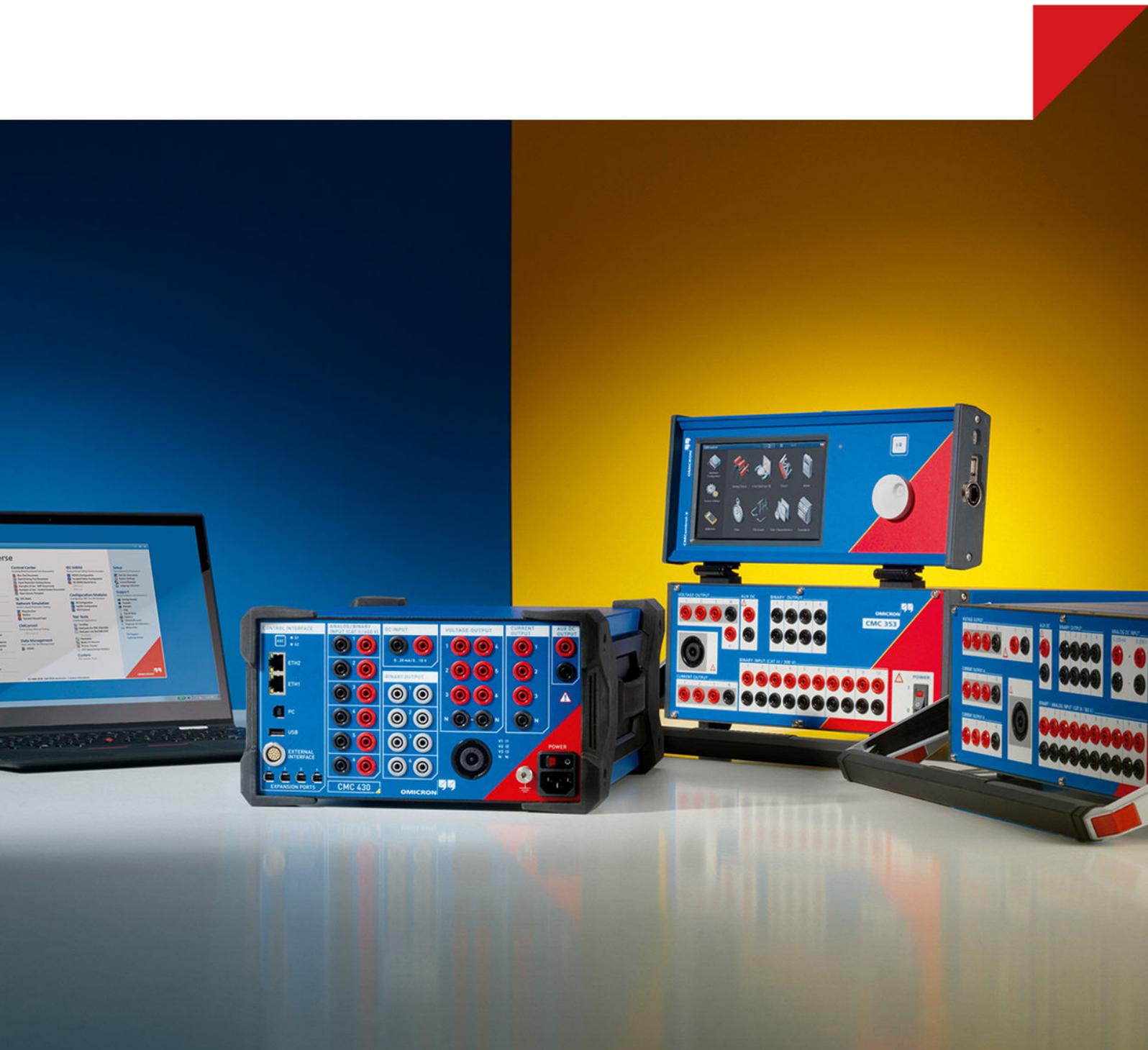
What's New in version 4.10

Manual version: What's New in *Test Universe* 4.10 — Language: ENU — Year: 2019

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Contents

1   Introduction

Test Universe 4.10 is a major software release, supporting the new LLX accessory units for the *CMC 430* test set, and offering additional benefits.

Test Universe 4.10 can work with test files created with previous *Test Universe* versions, whereas files created/edited with *Test Universe* 4.10 cannot be opened with previous versions.

The main new features are listed in chapter **2. New Features**. Further changes, improvements, and bug fixes are listed in chapter **3. Changes, Improvements, and Bug Fixes**.

2 New Features

2.1 Support of new LLX accessory units

For the *CMC 430* there are four new low level output accessory units available:

- *LLX1* - Testing devices with sensor inputs.
- *LLX2* - Low level interface for external amplifiers and accessories.
- *LLX3* – Versatile low level outputs with 4 mm sockets.
- *LLX4* – Low level outputs for recloser and sectionalizer controls.

All of these accessory units are now supported by *Test Universe*.

2.2 Hardware configuration for amplifiers, LLO and sensor simulation improved

The hardware configuration for external amplifiers, low level outputs and sensor simulation has been improved, and the layout has been aligned with *RelaySimTest* to provide a better guidance to users.

2.3 New expansion mode for CMC 430

Using a *CMC 430*, you can now connect a second *CMC 430* to the expansion port. This second *CMC 430* then provides three additional current outputs. This provides you 6 voltage and 6 current channels for testing with *Test Universe*. This is especially useful for sporadic testing of differential protection relays using two *CMC 430* test sets.

2.4 Start signal available for Power modules

In *Power* and *Advanced Power* a dedicated Start signal can now be routed and used in addition to trip and alarm contacts. In *Advanced Power* the Start signal can also be used for the Ramp Assessment.

2.5 Error handling once an empty RTC battery has been detected

Newer CMC test sets have a battery-powered real time clock (RTC) to monitor the license status. The *Test Universe* error handling when detecting an empty battery has been improved in the following aspects:

- it ensures that you get a proper and easily comprehensible error message,
- you can continue using test modules with a permanent license without any limitation,
- you can continue using test modules with a timed licence for several restarts of the CMC.

2.6 GOOSE Simulation/Test mode set by default

For safety reasons, *GOOSE Configuration* now selects the Simulation/Test mode by default (**Simulation/Test** option on **Home** tab). That way the test data is marked as "simulated" by default, and the live system does not get affected. The Simulation/Test parameter of the GOOSE message is set to "Inherited" by default, which signifies that it automatically takes over the Simulation/Test setting made on the **Home** tab.

2.7 SV Simulation mode set by default

For safety reasons, *Sampled Values Configuration* now selects the Simulation mode by default (**Simulation** option on **Home** tab). That way the test data is marked as "simulated" by default, and the live system does not get affected. The Simulation parameter of the SV stream is set to "Inherited" by default, which signifies that it automatically takes over the Simulation setting made on the **Home** tab.

2.8 Sampled Values Quality Attribute Dialog

In *Sampled Values Configuration* Quality Attribute values can now be defined in a dialog providing according check boxes and drop-down menus. The selected attributes are shown in the **Details** box.

2.9 New test plans for testing PQ analyzers of class A

With an increasing number of power quality analyzers installed in the network, the demand for testing such devices grows. The according *Test Universe* Example of Use **Testing PQ Analyzers with Predefined Test Templates** has been entirely reworked to reflect recent changes in standards and to give better guidance to users when testing such devices.

2.10 New XRIO import filter for Mitsubishi MRD and MDT settings files

A new XRIO import filter for importing Mitsubishi MRD and MDT settings files into Mitsubishi MDT-HA Line and Mitsubishi MRD-HA Transformer PTTs was added to *Test Universe*.

3 Changes, Improvements, and Bug Fixes

- *Advanced Distance*: Fixed a crash that occurred after using the **Single Test** option together with a Search test.

- *Advanced Power*: Fixed a crash for power ramps in online mode caused by a rounding of ramp parameters due to excessive XRIO usage.

- *Advanced Power* and *Power* Test Object: Changing the setting for the Overcurrent threshold or its absolute tolerance provoked a warning message that formulas have been disabled. To avoid such irritating messages, the default values are now defined as fixed values instead of a formula referring to the nominal value. Already existing test objects are not affected.

- *Control Center*: In the **Choose Template** dialog, the Test Wizard Template Directory Icon was removed. This directory was not used anymore and remained empty.

- *Control Center*: In some cases, binary signals correctly named and routed in the global *Hardware Configuration* of a *Control Center* test plan were not automatically taken over to the local **Hardware Configuration** of an embedded test module. This is fixed now. This applied, for example, to the binary outputs in *Advanced Distance* for the automatic *CM ASB2* switch box.

- *Distance* Test Object: When entering a distance zone, it might happen (caused by a formula, for example) that the impedance value of a characteristic element is negative. This was prohibited with *Test Universe* 4.00 but is now allowed again for compatibility reasons.

- **Hardware Configuration**: The overall limits for propagation delays have been changed. For external user-defined amplifiers and sensors, they are now between 0 µs and 1000 µs for "classic" CMC test sets, and between -1000 µs and 1000 µs for the new LLX accessoriy units (*CMC 430* test set). For CTs/VTs connected directly to any test set or intelligent amplifier, the limits are now between 0 µs and 1000 µs.

- **Hardware Configuration**: Opening the **Hardware Configuration** from an embedded test module for the first time was wrongly displaying the connected CMC test set as offline. This is fixed now.

- *Overcurrent* Test Object: When importing an Overcurrent characteristic, the file extension (*.dcc or *.xml) is not case-sensitive any longer.

- *Pulse Ramping*: A warning message (**Overwrite?** dialog) is now shown if a change of ramped signals affects links within the "Fault State" table for the "Powers" mode. Before that they remained persistent in this case by mistake.

- *QuickCMC*: When *QuickCMC* ran unattended (that is, without any user input), frequency synchronization to binary input 10 and the **Sync. Mode** dialog visible, the application froze after 20-50 minutes. This is fixed now.

- *Test Universe* Help: Fixed a non-working link to the *CMS 356* User Manual in the *Test Universe* Help.

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