Test Universe Package Overview

For the combination of CMC test sets (CMC 500, CMC 430) and Test Universe software, four different packages as well as optional add-ons are offered, which are tailored to diverse focal points of use. Each of these packages contains a selection of software modules that can be either used independently from each other for single tests or be embedded into test plans for automated testing:

Packages

Essential	offers a good introduction with basic functions and modules; can serve as a base for custom compiled packages
Standard	contains all modules that are typically used for settings-based testing of protection devices
Enhanced	like Standard, specifically extended by functions for system-based testing and transient simulation as well as for free programming
Complete	covers all functions and software modules that are offered for controlling CMC test sets

A package can be extended at any time by ordering additional single modules or optional add-ons.

			Essential	Standard	Enhanced	Complete
Test Universe modules	OMICRON Control Center [1]	Automation tool, document-oriented test plan, template and report form	■	■	■	■
	QuickCMC	Convenient manual testing in the Test Universe environment	■	■	■	■
	State Sequencer	Determining operating times and logical timing relations by state-based sequences	■	■	■	■
	Harmonics	Generation of signals with superimposed harmonics	■	■	■	■
	CB Configuration	Module for setting the CB simulation	■	■	■	■
	Ramping	Determining magnitude, phase, and frequency thresholds by ramping definitions	■	■	■	■
	TransPlay	Playback of Comtrade files, recording of binary input status	■	■	■	■
	Advanced TransPlay	Playback of Comtrade files, recording of binary input status, processing options and automatic assessment	□	■	■	■
	Pulse Ramping	Determining magnitude, phase, and frequency thresholds by ramping definitions	□	■	■	■
	Overcurrent [2]	Automatic testing of positive/negative/zero sequence overcurrent characteristics	□	■	■	■
	Distance	Impedance element evaluations using single-shot definitions in the Z-plane	□	■	■	■
	Advanced Distance	Impedance element evaluations using automatic testing modes	□	■	■	■
	VI Starting	Testing of the voltage dependent overcurrent starting function of distance relays	□	■	■	■
	Autoreclosure	Testing of the autoreclosure function with integral fault model	□	■	■	■
	Differential [3]	Comprehensive three-phase differential relay testing (four modules)	□	■	■	■
	Annunciation Checker	Verification of the correct marshalling and wiring of protection devices	□	■	■	■
	Power	Testing with visualization and assessment in the P-Q plane (basic)	□	■	■	■
	Advanced Power	Testing with visualization and assessment in the P-Q plane (enhanced)	□	■	■	■
	Transient Ground Fault [4]	Simulation of ground-faults in isolated or compensated networks	□	□	■	■
	Synchronizer	Automatic testing of synchronizing devices and synchro-check relays	□	□	■	■
	Meter	Testing of single and multifunction energy meters	□	□	□	■
	Transducer	Testing of measurement transducers	□	□	□	■
	PQ Signal Generator	Simulation of power quality phenomena according to IEC 61000-4-30 and IEC 62586	□	□	□	■
IEC 61850	IEC 61850 Client/Server	Automatic SCADA testing in accordance with IEC 61850	□	□	□	■
	GOOSE Configuration	Testing with GOOSE according to IEC 61850	□	□	□	■
	Sampled Values Configuration	Testing with Sampled Values according to IEC 61850-9-2 ("9-2 LE") and IEC 61869-9	□	□	□	■
	IEDScout	Universal software tool for working with IEC 61850 IEDs	□	□	□	□
Additional tools	CMControl P App [5]	Quick and easy manual testing of protection and measurement devices	□	■	■	■
	CMC Swift [6]	Easy and intuitive tool for simple protection and wiring checks	□	■	■	■
	RelaySimTest [4]	System-based protection testing by simulating realistic power system events	□	□	■	■
	Adv. Transformer Features	Advanced transformer features for differential protection	□	□	□	■
	Motor Features	Motor features for asynchronous motor simulation	□	□	□	■
	CMEngine	Programming interface for controlling CMC test sets with user specific software	□	□	■	■
	EnerLyzer	Analog measurements and transient recording with CMC test sets	□	□	□	■
	TransView	Transient signal analysis for COMTRADE files	□	□	□	■
	ADMO light [7]	Asset and maintenance management for protection systems	■	■	■	■

Contained in all packages: OCC Batch, AuxDC Configuration, ISIO Connect (for ISIO 200), Polarity Checker (for CPOL3).

[1] Includes licenses for Pause Module, ExeCute, TextView
[2] Includes license for Overcurrent Characteristics Grabber
[3] Includes Single-Phase Differential
[4] RelaySimTest license also includes the license for Transient Ground Fault
[5] Valid for CMC 430
[6] Valid for CMC 500
[7] ADMO light is limited to 50 assets but can be upgraded to a full ADMO version at any time

■ Contained
□ Optionally available