

RTSTAND LV124

FULLY-AUTOMATED
TESTING SYSTEMS
FOR LV 124 / LV 148

DEVELOPED TO SUPPORT THE REQUIREMENTS OF THE AUTOMOTIVE NORMS:

- LV 124, ISO 16750-2, VW 80000, BMW GS 95024-2-1, MBN LV 124-1 etc.
- LV 148, VDA 320, VW 82148, BMW GS 95026 etc.

The RTStand LV124 is the first fully-automated test system, developed in order to support requirements of the automotive norms LV 124 and LV 148, enabling the automated execution of the electrical tests for any kind of ECU on one generic system.

HIGHLIGHTS

- ✓ Reduces test times and test costs by up to 50%
- ✓ Easy and fast new DUT definition and configuration
- ✓ No manpower needed during test runs
- ✓ Reproducible testing & consistent automated protocoling
- ✓ Natively supports all short circuit, ground offset and feedback tests
- ✓ Not prone to human error
- ✓ Time synchronization between voltage and current
- ✓ Seamless current measurement, from sleep to transmit
- ✓ 24/7 testing
- ✓ Based on the open tools NI TestStand and NI LabVIEW

TECHNICAL DATA

RTStand LV124 – F8



RTStand LV124 – F24



RTStand LV124 – F96

Picture not available

	RTStand LV124 – F8	RTStand LV124 – F24	RTStand LV124 – F96
Number of analog pins	8	24	96
Number of bus pins (optional)	2-16	2-16	2-16
Maximum current per pin	30A or 80A	30A or 80A or combination	30A or 80A or combination
Generic DUT connector (for any kind of ECU)	yes	yes	yes
Generic extension connector (for additional hardware)	yes	yes	yes
Automated climate chamber control	yes	yes	yes
Fully-automated execution of E01-E22 (excl. E18,E20)	yes	yes	yes
Analog measurements for all voltage pins in parallel	yes, 100kHz per pin	yes, 100kHz per pin	yes, 100kHz per pin
Analog measurement for current (sleep to transmit)	yes, 100kHz per pin	yes, 100kHz per pin	yes, 100kHz per pin
Time- synchronized current and voltage measurements	yes	yes	yes
Easy definition of new DUTs	yes	yes	yes
LV124 arbitrary pulse library	yes	yes	yes
Fast definition of additional LV124 tests	yes	yes	yes
Automated logging and Word reporting on all tests	yes	yes	yes
Voltage measurement accuracy	< +/--1% in +/-60V range	< +/--1% in +/-60V range	?
Current measurement accuracy	< +/--1% in all ranges (+/-1mA to +/-150A)	< +/--1% in all ranges (+/-1mA to +/-150A)	?

GENERAL DATA

Layout	19" rack
Height	190.5cm
Width	76cm
Length	110cm-130cm, depending on current capabilities (max. 30A or 80A)
Power supply	400V/16A
Temperature range	15 °C to 40°C
Humidity	25% to 75% noncondensing
Max. altitude	2000 m

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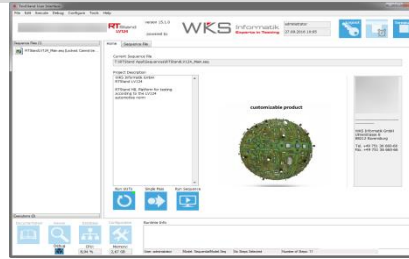
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TOOL CHAIN

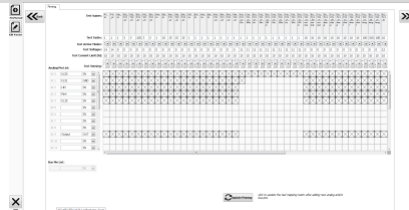
DUT definition, activation and editing

RTStand User Interface – enables the automated test start of all tests and controls the whole tool chain of the RTStand LV124 system.



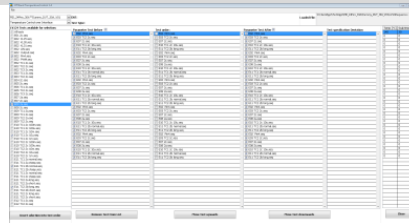
DUT definition, activation and editing

VariantHandler – enables the definition of any kind of DUT within the system limits. The user can set the pin name and type, as well as define additional tests. All needed files for the automated testing are being generated based on these definitions. After generation, the DUT can be activated for testing and edited for additional requirements.



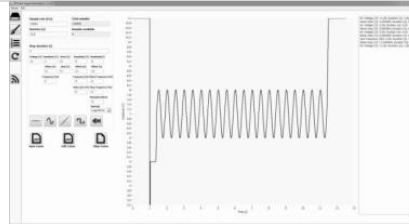
Test run configuration

TemperatureControl – enables the free test run configuration, with or without climate chamber control. When using climate chamber control, the desired temperatures and soak times must be set. All configurations can be saved and reloaded at any time.



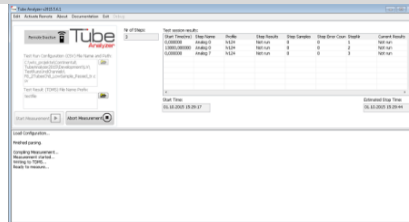
Pulse generation

RTStand SignalGeneration - enables the generation of signals according to the LV124/LV148. A parallel data acquisition on 2 channels is possible. The bordnet simulation pulse for output is loaded in a graph display and the current output value is marked correspondingly with a cursor. The device also controls the interruption generation (E10/E13 tests) and 4Q amplifier outputs.



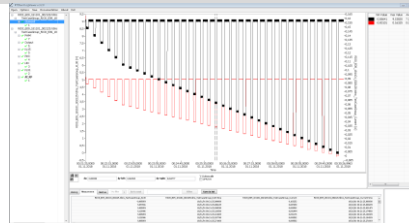
Analog measurement

Tube Analyzer – enables the time-synchronized measurement of all voltages and current pins with up to 100kHz per pin. Moreover, the current measurement is done seamless on several ranges, from sleep to transmit modes, covering +/-150A. An innovative adaptive logging algorithm, allows the user to define a data reduction if the signals stay within defined limits.



Log file visualization

RTStand LogViewer – enables the synchronized display of Tube Analyzer measurement files, as well as other RTStand TDMS files, for a very fast visual check of the voltage and current signals.



Reporting

Word Reports – automated Word reports for all tests run are generated based on the test results and user input. The reports can be customized with customer information and can be edited after generation.

XML Reports – automated XML reports for each test are generated, containing a short overview of the runtime information.

