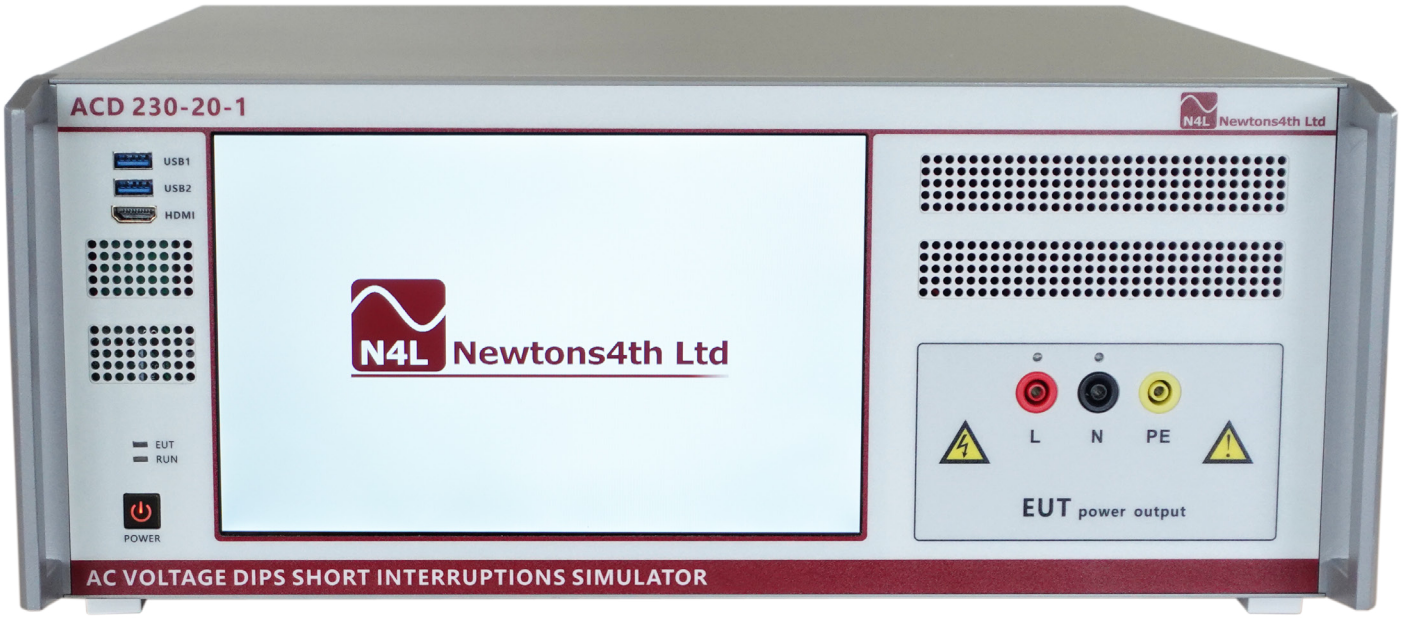
ACD230-20-1

1-5µS Rise/Fall time compliant to IEC 61000-4-11



N4L ACD230-20-1
AC Voltage Dips & Short Interruptions Simulator

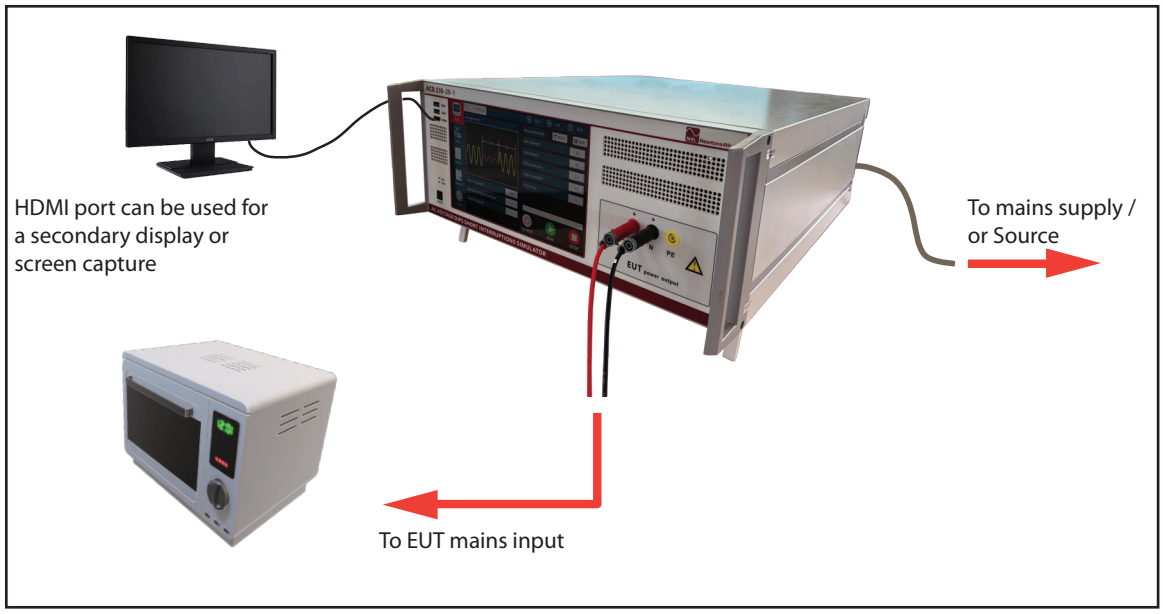
The latest addition to our IEC 61000 EMC Test range

Key Features & Benefits

- Standalone - Designed for independent operation with any source
- Accurate Simulation of voltage dips and short interruptions
- Full compliance IEC 61000-4-11 with 1-5µS rise and fall times
- Full cycle, half cycle and subcycle Dip & Interruption simulation
- Touchscreen menus and test configuration interface
- Non-volatile test storage and download to USB drive for PC file handling
- PC software with test waveform graphic and tick box results in accordance with IEC 61000-4-11:2020
- Compliant inrush with suitable source or direct connection to a mains supply

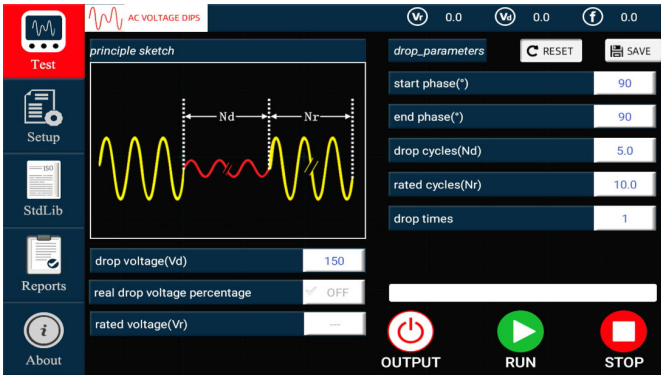
Specification			
Input		Connectivity	
EUT Power Input	20~265VAC 50/60Hz	EUT supply input	4mm safety sockets L, N, PE
Output		EUT supply output	4mm safety sockets L, N, PE
Rated output	20~265VAC - 16Arms	Unit Power Supply	90~265VAC 50/60Hz IEC C14 panel mount
Drop output voltage range	0~265VAC	USB-A x2	1x Pen Drive 1x PC port
Drop cycle	0~9999 (Subcycle via phase)	Video	HDMI
Recovery Cycle	0~9999 (Subcycle via phase)	Environmental	
Drop numbers	1~9999	Operational Temperature	-5 to +40˚ C non-condensing
Drop angle	0~359˚	Storage Temperature	-10˚ C to +70˚ C
Recovery angle	0~359˚	Humidity	20 - 95% RH non-condensing
Mechanical		Altitude	2,000 metres
Dimensions (including feet)	450W x 187H x 560D mm		
Weight	21kg		

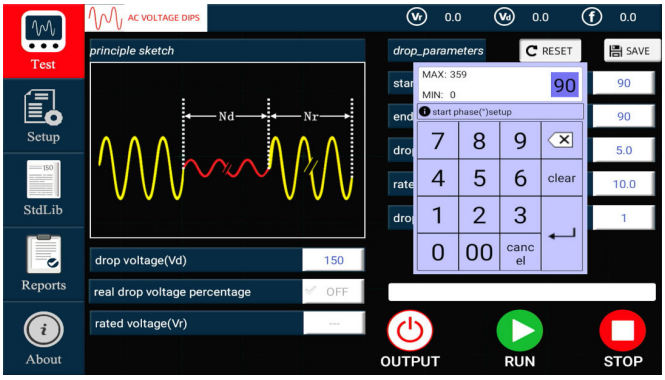
Typical Test Setup



Intuitive programming of dip test requirements, with direct entry of each parameter via touchscreen

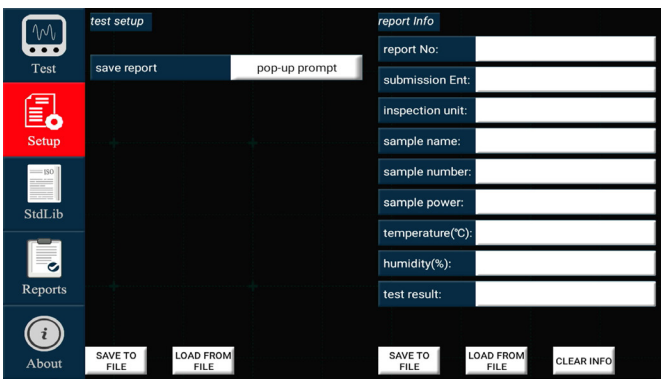
Test Configuration

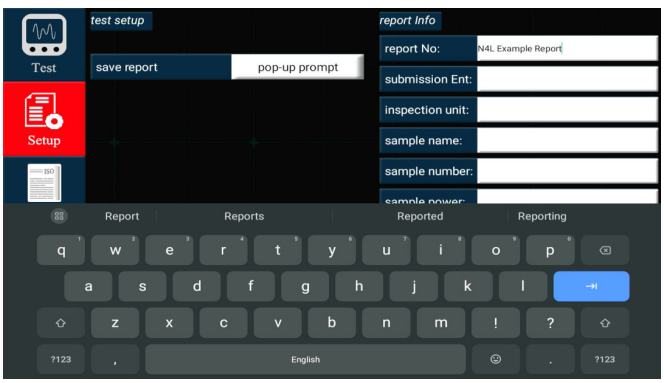




Test settings are entered on a touchscreen display, making the desired values quick and simple to program.
An on-screen dip graphic illustrates the event to be simulated and direct entry fields with a pulldown keyboard give a simple and intuitive test setup.

Once the test parameters have been entered, a test can be RUN from the touchscreen keys, or saved to an inbuilt test library for later recall.

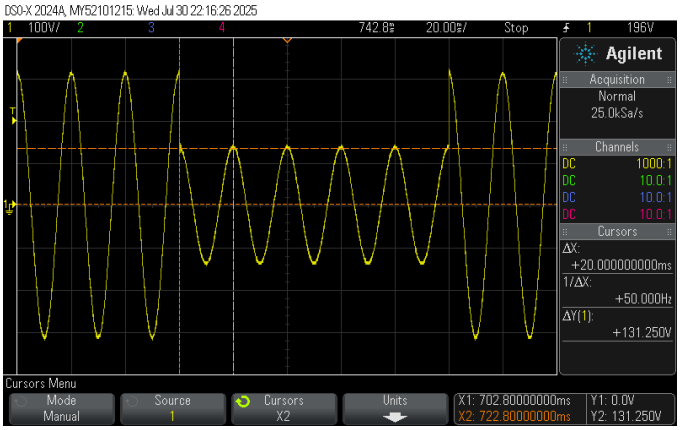




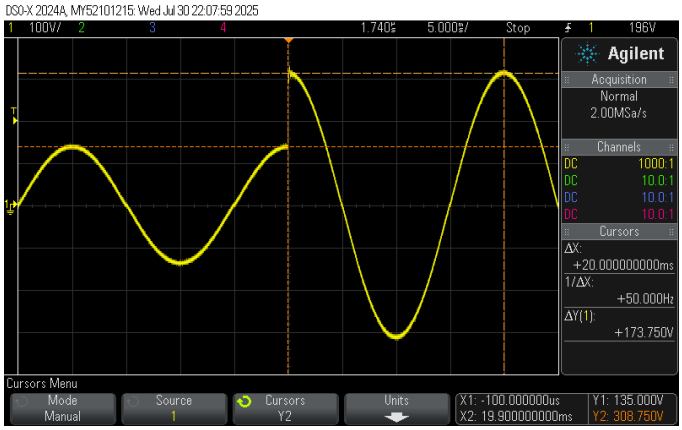
Environmental and EUT details along with observations made during the test, can be entered using an on-screen keyboard. Tests are saved internally and can be copied to a USB pen drive for further revision and export to a PDF test report via our free software.

Performance

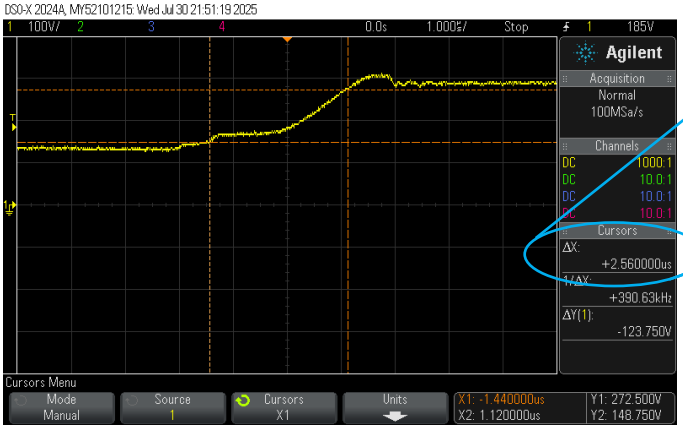
Accurate reproduction of IEC 61000-4-11 dip events requires precise phase control and switch timing. These features combined with a single power source, user selectable voltage step and cycle or subcycle count, allow the N4L Dip Simulator to maintain waveform integrity, without the uncertainties inherent in systems that switch between two sources.

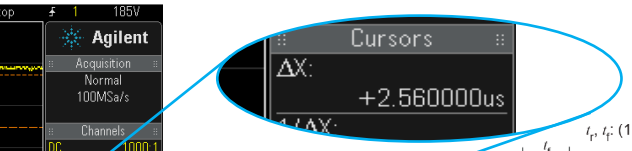


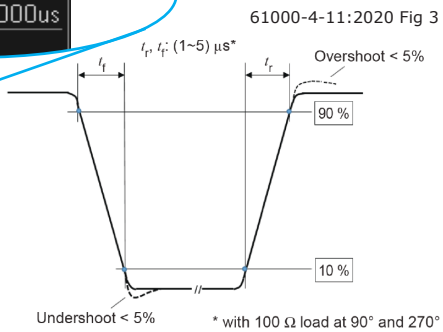
5 cycle dip with 90˚ start and end points



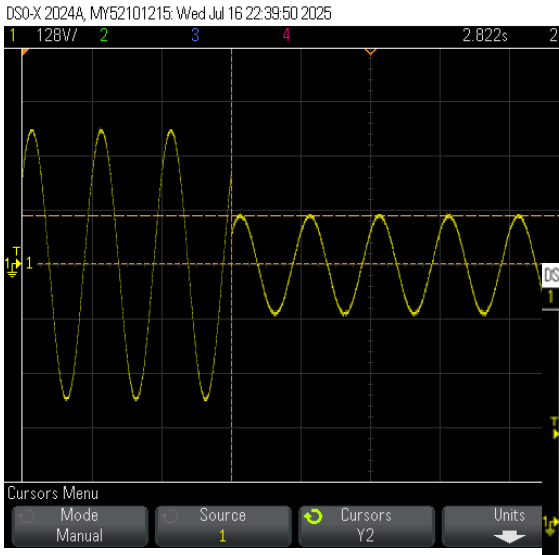
End point zoom. Drop voltage ΔY can be set as a percentage or absolute



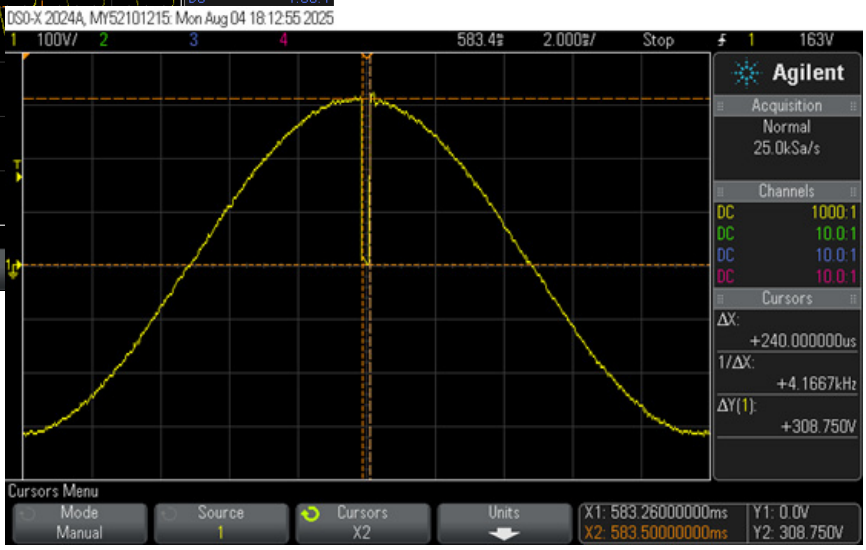




ΔX measured between the 10% and 90% points demonstrates a rise time of 2.56µs, the middle of the specified range as set out in IEC 61000-4-11:2020 Figure 3, above

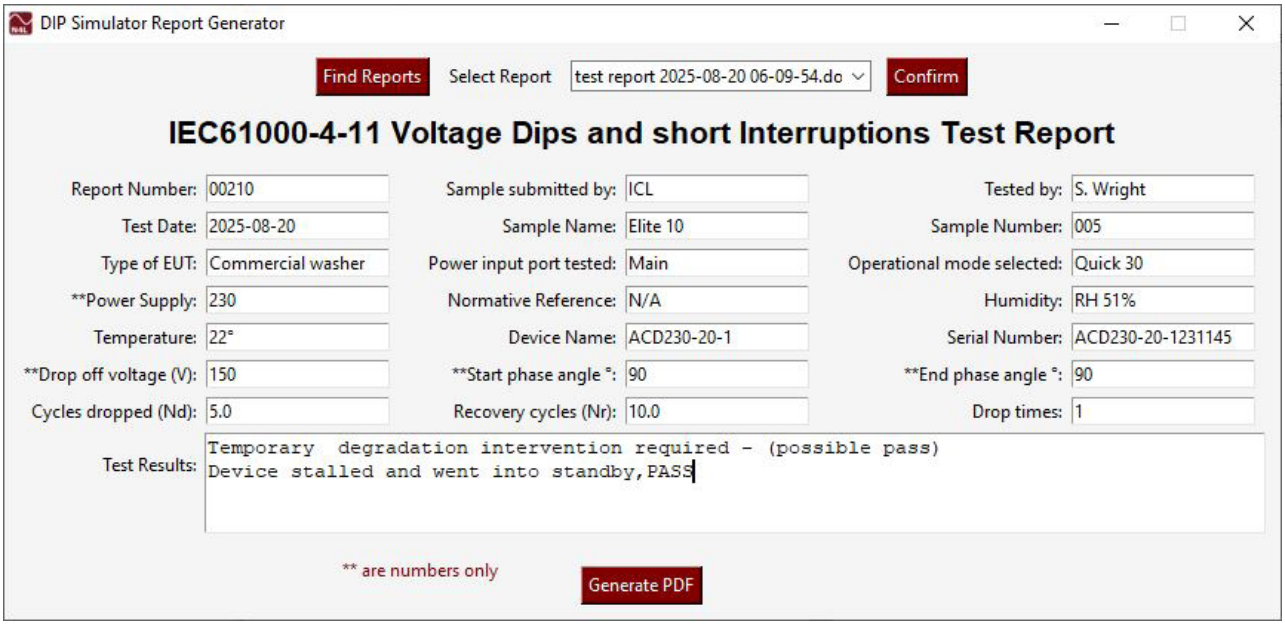


5 cycle dip with 45˚ Start and End points

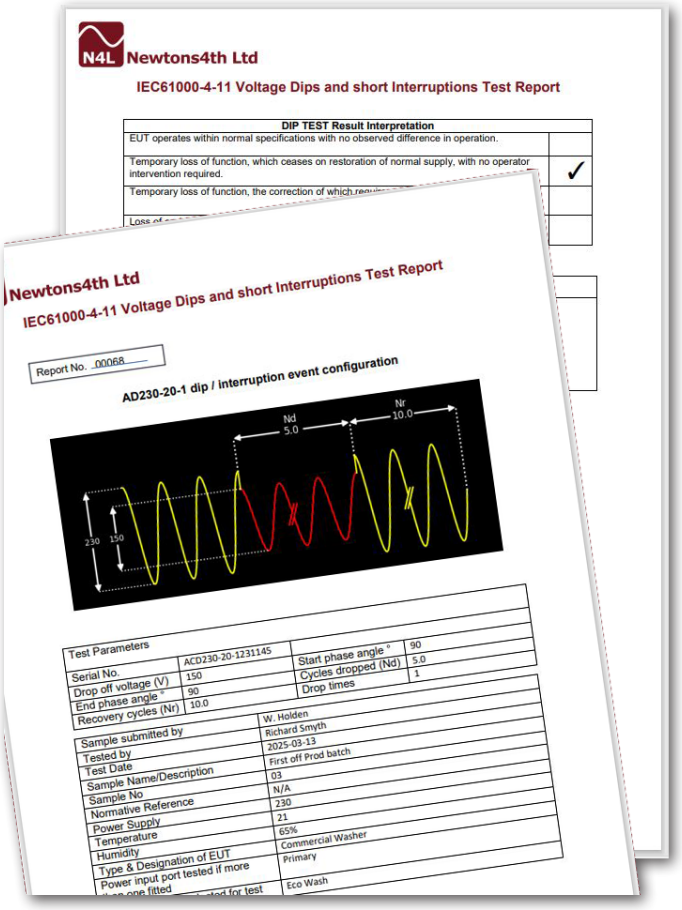


90° to 95° Short Interruption test

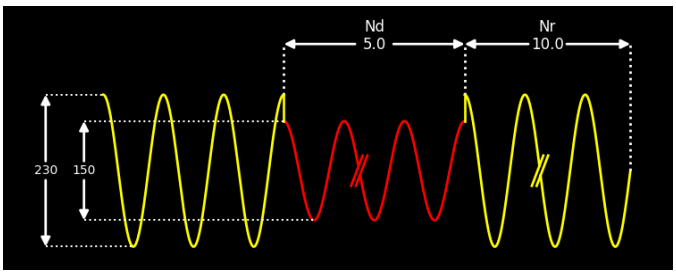
Automated Test Reports



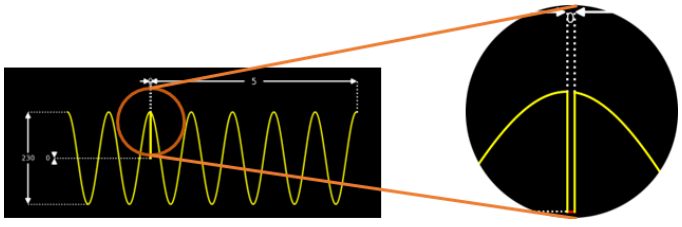
N4L provides free software that retrieves the Dip Simulator test files from a USB drive, allows revison of DUT data where required, and presents a simple tick box entry, assisting a test engineer to confirm the DUT response to tests in accordance with IEC 61000-4-11.
After adding any additional test result data with a free field entry, a 'Generate PDF' button produces a finished 2-page report with test waveform graphic, DUT data and test result observations.



Our software reproduces a scaled graphic that accurately represents either voltage dips or interruptions.



For a clear undertsanding of the test condition, this graphic reproduces magnitude, phase and cycle count of the associated test.



The test report graphic will also illustrate a subcycle test simulation.

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