

**Title:** Universal test system for boards hosting bPOL12V DC-DC converters.

## Supplementary materials

### List of abbreviations

ASIC	Application Specific Integrated Circuit
CMS	Compact Muon Solenoid
DMM	Digital Multimeters
EB	Electromagnetic calorimeter Barrel
GUI	Graphical User Interface
HL-LHC	High-Luminosity Large Hadron Collider
LHC	Large Hadron Collider
LS3	Long Shutdown 3 (of the LHC)
LVR	Low Voltage Regulator
MTD BTL	Minimum Ionizing Particle Timing Detector, Barrel Timing Layer
PCB	Printed Circuit Board
PCC	Power Conversion Card
pk-pk	Peak to Peak
SD	Standard Deviation

## Figures

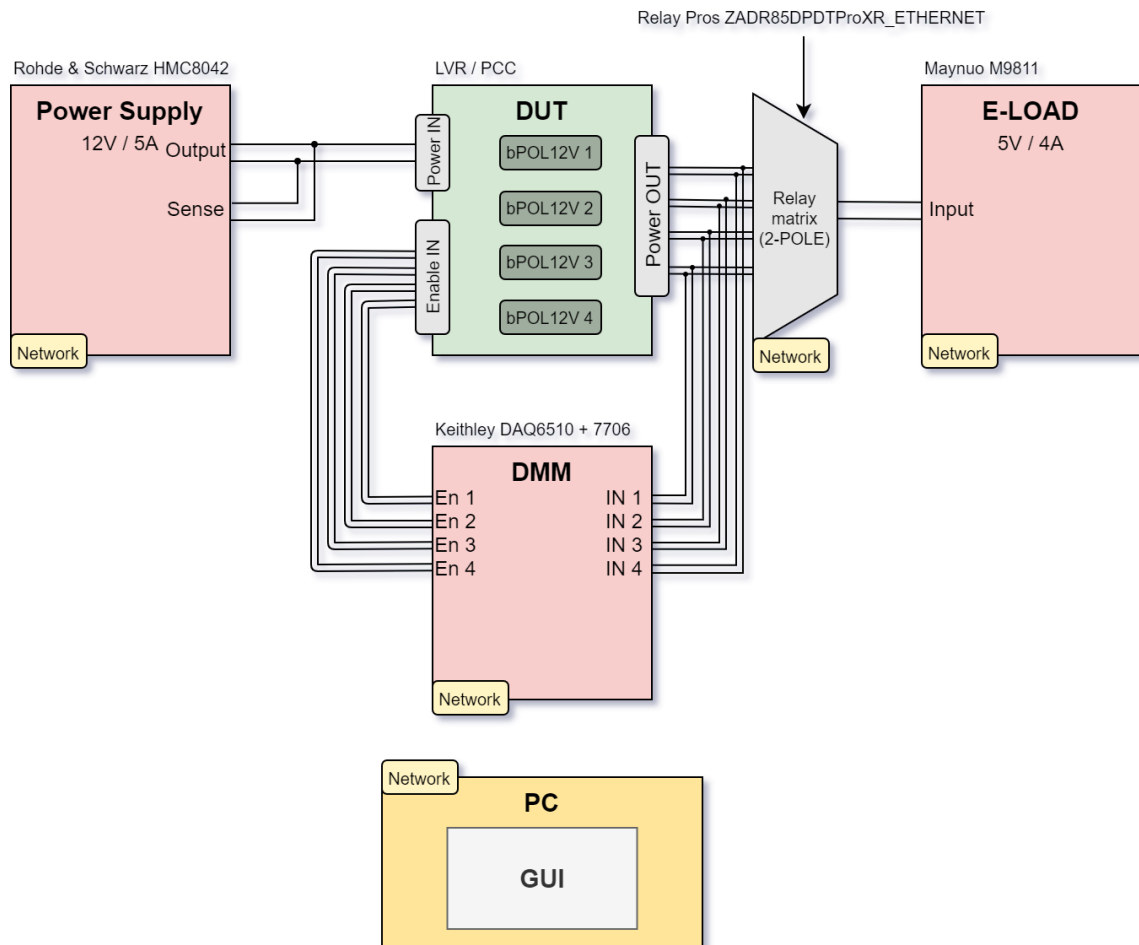


Figure 1: Diagram of test system architecture and example devices used.

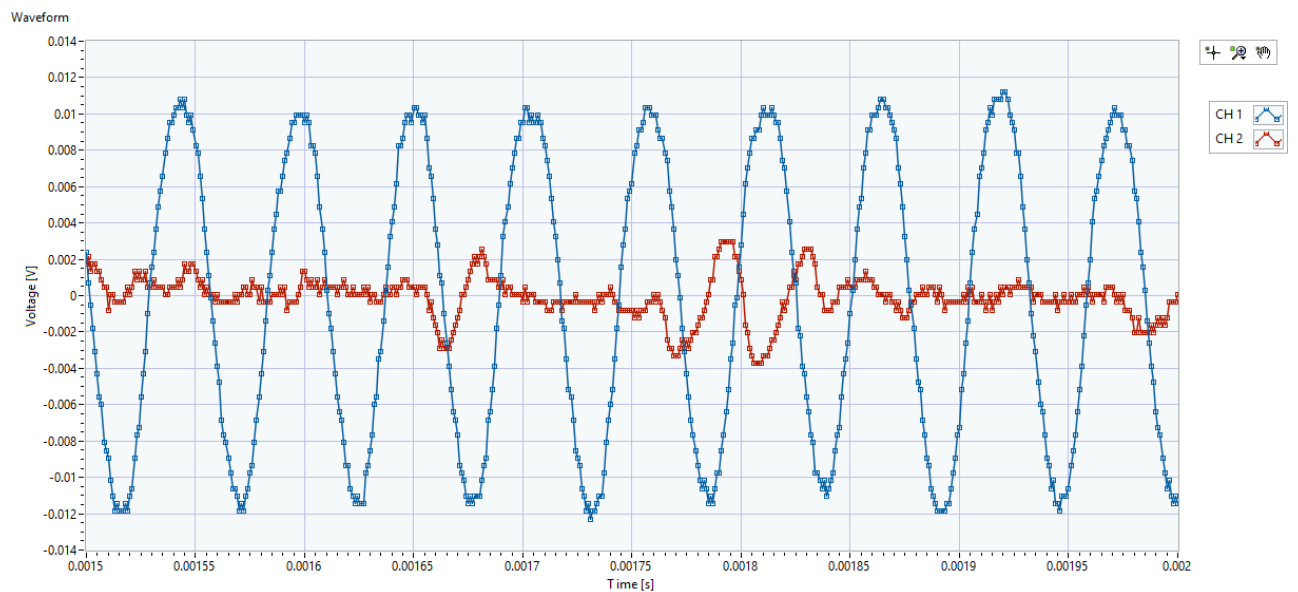


Figure 2: AC component of output voltage waveforms for bPOL12V unstable operation region (blue) and stable operation region (red).