

COMPISO System Unit 100-1GAMP4

The COMPISO System Unit (CSU) 100-1GAMP4 is a turnkey P-HIL solution for electrical power system test benches. It is equipped with four independent four-quadrant digital power amplifiers that can be operated from DC up to 5 kHz full span output voltage. The system offers various AC, DC and hardware-in-the-loop (HIL) operation modes. The system delivery includes the power path, the necessary safety infrastructure and software applications to configure and run the system.

The CSU100-1GAMP4 can operate in various system modes, including: AC, DC, free amplifier and HIL operation modes. The operation mode defines the connection of the four COMPISO digital amplifiers (CDA) in the system.

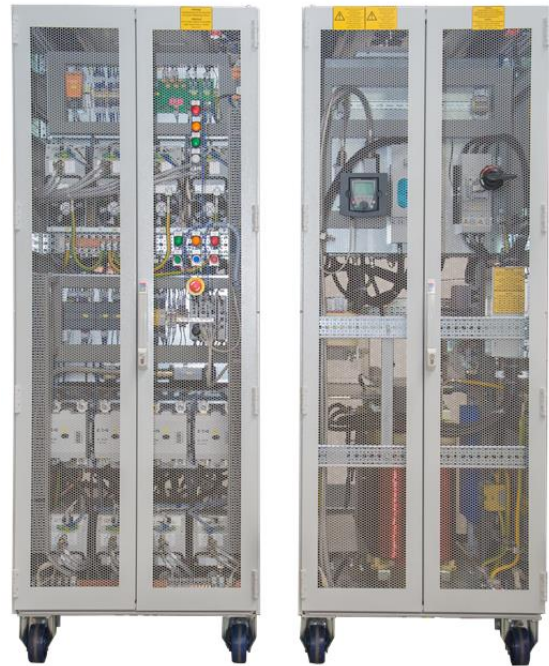


Figure 1 – CSU 100-1GAMP4 cabinets

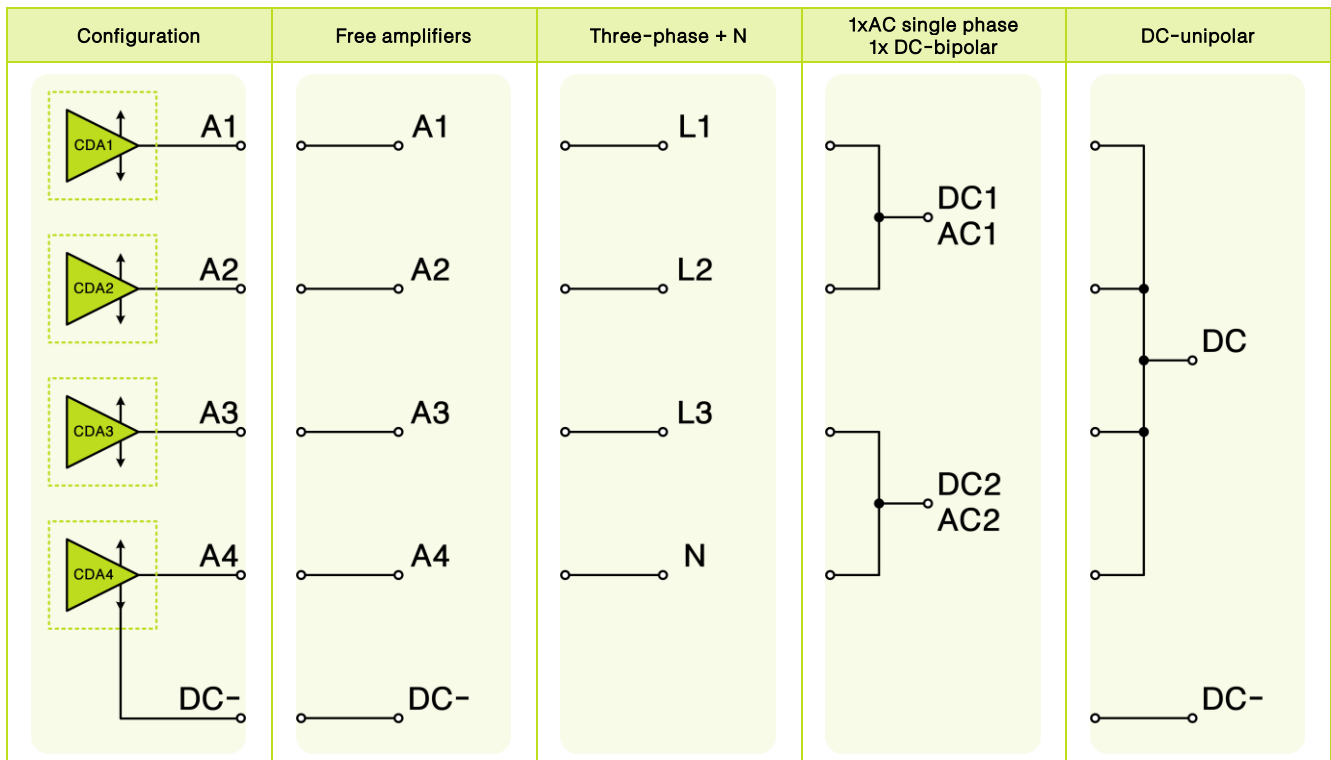


Figure 2 – Operation Modes

Data Sheet – Summary

DC operation		AC operation	
DC unipolar operation mode		1x AC single phase operation mode	
V _{DC} MAX	732 V _{DC}	V _{AC} MAX	500 V _{RMS}
I _{DC} MAX	600 A _{DC}	I _{AC} MAX	250 A _{RMS}
1x DC bipolar operation mode		Three-phase + N operation mode	
V _{DC} MAX	±713 V _{DC}	V _{LL} MAX	433 V _{RMS}
I _{DC} MAX	300 A _{DC}	I _L MAX	126 A _{RMS}
Frequency range		Rated output power	
from DC up to 5kHz full span output voltage		S _{MAX}	100 kVA

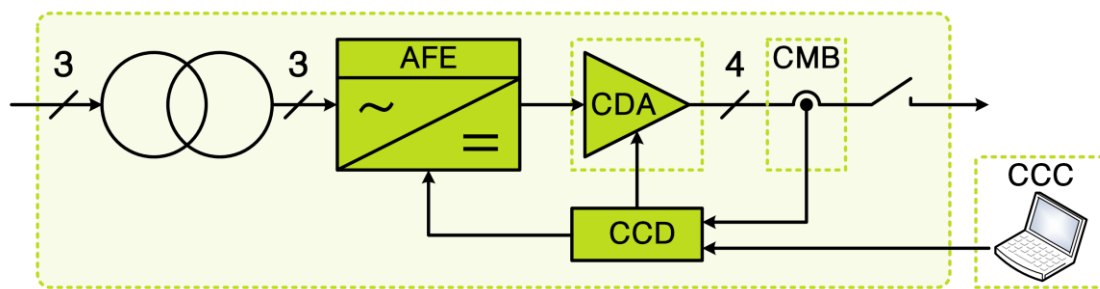


Figure 3 – CSU topology

P–HIL Turnkey Solution

The CSU100-1GAMP4 is delivered with the following components

- Three-phase Active Front End (AFE) with galvanic isolation
- Four independent four-quadrant amplifiers
- Output contactor at each amplifier output
- Voltage and current measurement device at each amplifier output
- High speed real-time communication board
- Fibre optic interfaces for communication with external HIL-processors
- Fibre optic interfaces for connecting EGSTON analogue and digital input and output boxes
- Cabinet safety infrastructure
- COMPISO Control Center (CCC) graphical user interface software, to parametrize and monitor the CSU system

Applications

Basic <ul style="list-style-type: none"> • Arbitrary Waveform Generator • Electrical Load 	Aerospace / Defense <ul style="list-style-type: none"> • 400 Hz AC Grid Emulator • DC Grid Emulator • Electrical Load Emulator • Power Electronics Device Emulator
Power Grid <ul style="list-style-type: none"> • AC & DC Source / Load • Power Grid Emulator (16 2/3, 50, 60, 400 Hz) • PV-Module Emulator • Inverter Test Bench • Wind-Generator Test Bench • Harmonic Injection Generator • Signal Generation compliant with standards 	Automotive <ul style="list-style-type: none"> • Drive Train Emulator • Battery Emulator / Tester • Electric Machine Emulator • Drive Train Inverter Test Bench