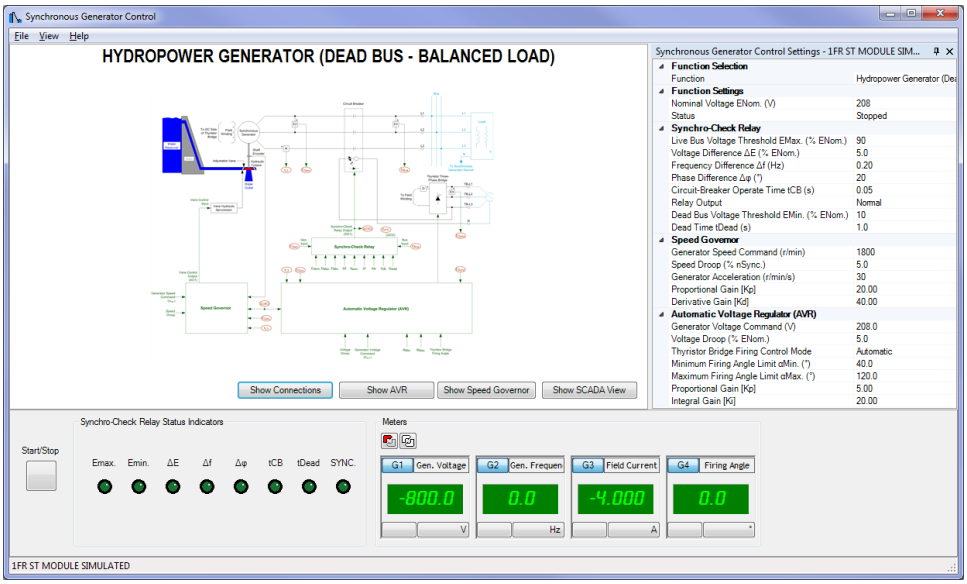
Synchronous Generator Control Function Set
579788 (9069-A0)

LabVolt Series

Datasheet



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General Description

The Synchronous Generator Control Function Set enables the control of synchronous generators using different prime movers (emulated using the Four-Quadrant Dynamometer/Power Supply, and different control types for each prime mover. The function set allows the following prime movers and control types to be implemented using the Data Acquisition and Control Interface, and the Power Thyristors:

- Hydropower Generator (Dead Bus - Balanced Load)
- Hydropower Generator (Infinite Bus)
- Hydropower Generator (Balanced Infinite Bus)
- Hydropower Generator (Generator Paralleling - Balanced Bus)
- Generator (Microgrid)

Specifications

Parameter	Value
Control Functions	
Control Functions	Hydropower generator (dead bus - balanced load)
	Hydropower generator (infinite bus)
	Hydropower generator (balanced infinite bus)
	Hydropower generator (gen. paralleling - balanced bus)
	Generator (Microgrid)
Controller Features	Each function of the Synchronous Generator Control Function Set comprises a synchro-check relay, a speed governor, and an automatic voltage regulator.
Synchro-Check Relay	
Live Bus Voltage Threshold	50-100 V
Voltage Difference	2-40 V
Frequency Difference	0.02-2 Hz
Phase Difference	5-50°
Circuit-Breaker Operate Time	0.05-0.25 s
Relay Output	Normal, high, or low
Dead Bus Voltage Threshold	10-80% of nominal voltage
Dead Time	0.1-20 s
Speed Governor	
Speed Command	0-2000 r/min
Speed Droop	0-10%
Generator Acceleration	10-100 r/min/s
Automatic Voltage Regulator (AVR)	
Generator Voltage Command	0-240 V
Voltage Droop	0-10%
Thyristor Bridge Firing Control Mode	Automatic or manual
Minimum Firing Angle Limit	40-120°
Maximum Firing Angle Limit	120°

Reflecting the commitment of Festo Didactic to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

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