

THYNE

Excitation Systems

THYNE1 Compact Excitation

Voltage Regulator for Synchronous Machines



Power Part

- Incoming power
 - generator shuntfield
 - station supply
 - Permanent magnet generator
 - AC 3~/1~ (≤ 250 V)
 - DC (≤ 350 V)
- Output to field
 - ≤ 25 A , ≤ 210 VDC (continuous)
 - ≤ 36 A , ≤ 320 VDC (forcing)

Measurement

- Generator voltage, 3~/1~
- Generator current, 3~/1~
- Grid voltage, 1~
- Rated frequencies
 - 50 Hz, 60 Hz, 16.7 Hz

Digital Regulator

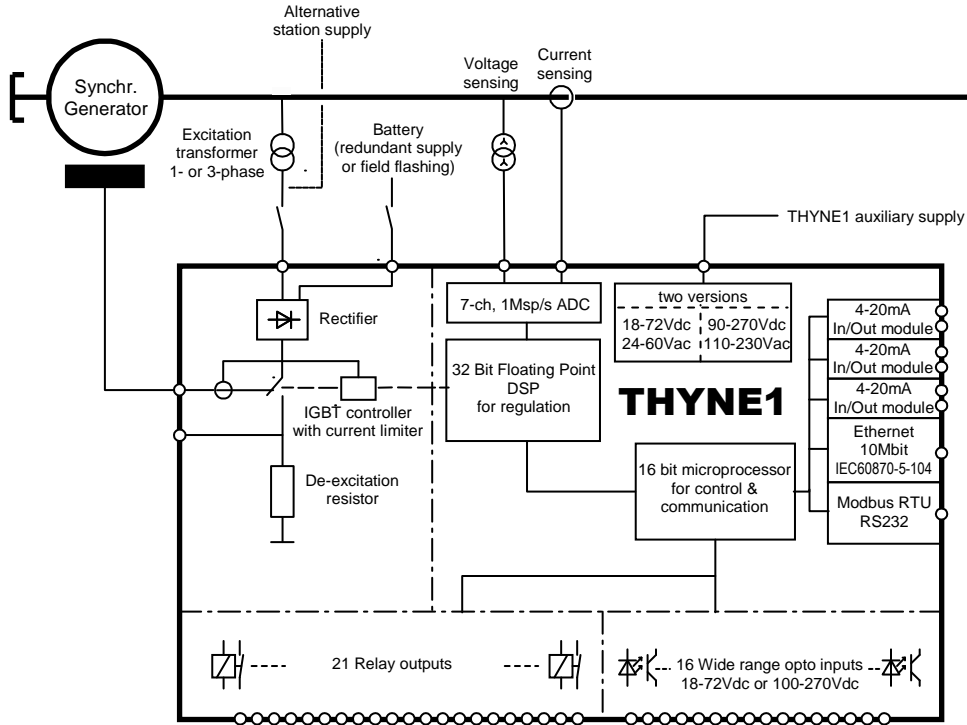
- AVR and limiter
- Reactive power regulator
- Power factor regulator
- Field current (manual operation)
- Soft start
- Diode failure detection
- Supervision, alarms, trip signals, feedback signals

Operation and Display

- Local operation via color touch panel
- Analog meter display
- USB port for loading and saving of parameters

Application and Overview

THYNE1 is an integrated and compact excitation system for voltage regulation of synchronous motors and synchronous generators with AC or DC exciter machine.



Application

- Grid operation
- Isolated operation
- Parallel operation of synchronous generators

Machine Arrangement

- With AC exciter machine
- With DC exciter machine

Technology

- High speed response due to positive/negative field voltage at positive field current
- 32 bit floating point DSP
- Binary/Analog I/O's (galvanically isolated)
- Communication
 - IEC 60870-5-104
 - Modbus RTU

Engineering

- Operation, maintenance, diagnostics by means of PC or touch panel