GENSYS COMPACT PRIME

All-in-one generator controller & paralleling unit

- Competitive price
- Add your own language
- Isolated speed/AVR outputs

PART NUMBER
A56Z0

SOFTWARE
CRE Config

CABLE
A53W1

The GENSYS COMPACT PRIME is a new panel-mounted generator controller fit for standby application.

This new generation of controller is optimized for its ease of use. Installation and configuration for up to 32 generators in island(-parallel mode). GENSYS COMPACT PRIME will benefit from years of GENSYS 2.0 experience.
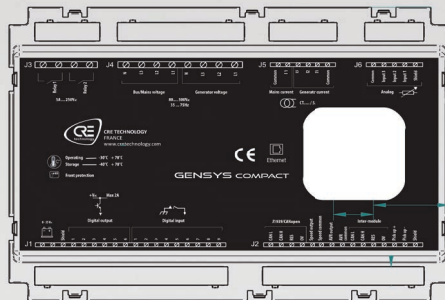
A SIMPLE PRODUCT WITH ADVANCED FEATURES

GENSYS COMPACT PRIME offers a fully compatible with all speed governors and AVRs, J1939 communication with electronic engines, isolated speed and AVR outputs and 3 isolated communication ports : 2 for CAN bus, 1 for Ethernet

BENEFITS

GENSYS COMPACT PRIME offers a less wiring and components, less engineering & programming, less commissioning and troubleshooting. It also allows up to 32 generators in parallel.

COMPATIBILITY

Thanks to its versatile connectivity the GENSYS COMPACT PRIME is compatible with peripheral devices:
- ECU: CAN bus J1939
- Modbus TCP: SCADA or PLC
- CANopen devices (up to 32 digital inputs/ouputs)
- Secondary regulators:
  - Speed governors: $\pm$ 10 V_{DC}/Pulse
  - AVR: $\pm$ 10 V_{DC}/Pulse

APPLICATIONS WITH GENSYS COMPACT

- Diesel generators
- Synchronization and power management module
- 2 to 32 generators parallelized dynamically or statically

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FEATURES

Control and management
- Manual or automatic engine control,
- J1939 compatibility (Cummins, Volvo, Scania, MTU, CAT...)
- Automatic start/stop control depending on load demand,
- Dead busbar management.
- kW load sharing control (via CAN bus, up to 32 generators) in isochronous mode
- kVAR load sharing control (via CAN bus, up to 32 generators)

Protections
- Generator electrical protections: <F, >F, <U, >U, >I, >In, short circuits (IDMT), >P, <P, >Q, <Q,

Synchronization
- Manual or automatic frequency & phase synchronization (differential frequency meter + synchroscope available on screen).
- Manual or automatic voltage synchronization.

Information display
- Engine parameters: oil pressure, water temperature, speed, hours run meter,
- Generator electrical parameters:
    - Phase-phase voltage (3 phases RMS)
    - Phase-neutral voltage (3 phases RMS)
    - Current (3 phases RMS)
    - Frequency
    - Active power (3 phases + total)
    - Reactive power (3 phases + total)
    - Power factor (3 phases + total)
    - Calculated active energy (kWh)
    - Calculated reactive energy (kWARh)

- Mains/bus electrical parameters:
    - Phase-phase voltage (3 phases true RMS)
    - Frequency

Events
- 2000 alarms/faults are recorded on non volatile memory,
- Display last 30 alarms/faults,
- Data logging every 100ms.

CHARACTERISTICS

Current, voltage and frequency
- DC voltage power supply input: $8...35V_{DC}$,
- AC voltage inputs: $100...480V_{AC}$, 100mA max. Neutral terminal does not need to be connected.
- AC current inputs: 0...5A, 1VA.
- AC current overload: 15A during 10s.
- AC Frequency measurement: 35....75 Hz – $15V_{AC}$ minimum between phase and neutral.

Environment
- Operating temperature: -30°C...+70°C (-22...158°F)
- Storage temperature: -40°C...+80°C (-40...176°F)
- Humidity: 5 to 95%. Tropic-proof circuits for operation in humid conditions.

Inputs, outputs
- 9 digital inputs: NO or NC to ground.
- 2 relay outputs (breakers): 5A, $230V_{AC}$ max.
- 6 solid state outputs: 2A, over-current protected.
- 3 analog inputs: 0...500 Ω.
- Speed and frequency control: $+/-10V_{DC}$ isolated output with adjustable span and offset, or +speed/-speed contacts
- Voltage (AVR) control: $+/-10V_{DC}$ isolated output with adjustable span and offset, or +voltage/-voltage contacts.
- Magnetic pick up input: 100...10kHz, $2V_{AC}$ minimum.

Ports
- 3 isolated comm ports are available:
    - CAN bus for inter module connection
    - CAN bus dedicated to J1939 and I/O extensions
    - Ethernet: PC communication/ Modbus TCP

Size and weight
- Size: 245x182x40mm (3.6x8.16x1.6in)
- Panel cut out: 220x160mm (6.3x8.7in)
- Weight: 0.7kg (1.54lb)

Certifications
- European Union Directives: EN 50081-2, EN 50082-2, 73/23EEC
- EMC: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11, EN55011, EN55022
- Front panel: IP65
- Rear panel: IP20

Other
- LCD characteristics: 128 x 64 pixels
- Terminals: blocks
- Languages: English, Spanish, French, Italian.
- Other custom languages: downloadable through Ethernet port

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WIRING DIAGRAM

By default, the inputs 1, 2 and 3 are preset to these functions
Examples:
Remote start-stop
Emergency stop
Ext. electrical fault
+/- speed inputs
Low water temp
Low water level
Low fuel level
Low oil pressure
Charger fault

Digital inputs 1 ... 9

Setup
Spervision
Modbus TCP
Firmware update

GENSYS COMPACT PRIME

CAN2 J1939/Extensions
CAN1 Inter-GENSYS

4 mm², AWG 11

Examples:
- +/- pulses to speed gov.
- Visual/audio alarm
- Generator breaker trip
- Lubrication pump
- Reverse power
- Excitation command