

TCGEN



Automatic mains failure unit with remote display

- Automatic Mains Failure
- Graphic remote display
- Configurable inputs / outputs
- Gensets and mains Protections
- Full communication ports :
RS232/RS485 Modbus/LAN/CAN J1939
- Multilingual :
French, Spanish, English, Chinese, Russian,
Italian, Polish, German



TCGEN controller is a supervision equipment for mains signal and also a supervision and electrical supply through the genset. This controller is composed of 2 different modules:

- **Remote display module**

The remote display module provides information about the status of the device and, at the same time, allows the user to interact with it. With this visualization module the user is able to control, program and configure the functions of the unit.

- **Core unit**

The core unit controls and monitors the control board. It is located in the rear part of the panel, in order to reduce the wiring and to avoid electromagnetic disturbances. Every signal, sensor and actuator is connected to this module.

Connection between those 2 modules is made by a CAN bus (Communication Bus).

HIGH PROTECTION

TCGEN offers protection for the Genset, as well as the different instruments and devices connected to the genset. It protects against: overvoltage, undervoltage, asymmetry, overamperage, overfrequency, underfrequency, overload, incorrect genset phase sequence, inverse power, shortcircuit, high coolant temperature, low oil pressure, overspeed, underspeed, battery charger failure, fuel reserve, low coolant level, genset droop, maximum and minimum mains voltage failure, max. and min. mains frequency failure, mains sequence failure, droop mains signal failure, mains and genset changeover failure, etc.

COMPLETE SET OF MEASUREMENTS

The unit allows a complete monitoring of the genset with no need of additional module or external sensors. In addition to protection, TCGEN offers a continuous monitoring of the genset with his digital display: voltage, amperage, frequency, fuel level, tachometer (hour counter) power consumption, battery alternator voltage, battery voltage, engine temperature, oil pressure, current power measures, power factor, reading and situation of the programmable inputs, total energy consumption measures, alarm control.

GREAT VERSATILITY

This device allows you to adapt to any project specification demand and growing with the market demand and the law requirements. It is possible to obtain several configurations with the same device. We start from a standard design and according to the needs it is possible to extend the configurations. The same control panel can also be used with different voltages and with different electrical supply voltages: 12/24V (stock reduction).

SIMPLE

Installation is really simple and the wiring system is shortened. It is easy to switch for an automatic mode to a manual mode. With one simple programming of the control panel you can adjust measures and levels. Power outputs remain protected. The unit allows up to 64 units on the same CAN communication bus and up to a 1.000 meters distance without any signal repeaters.

FAST PROGRAMMING

It is possible to personalize the features of the control panel to your own application. Apart from programming measure parameters, thresholds, times, alarms, regulations, etc, you can also program the control panel to stop the genset (with or without cooling time) or trip a warning without stopping the engine.

DIFFERENT STARTING MODE

Manual start, automatic start, mains failure, or free voltage contact.

ALARMS

Engine:

- High water temperature
- Low oil pressure
- Battery charger alternator
- Start Failure
- Low coolant level
- Fuel storage
- Overspeed
- Underspeed
- Battery low voltage
- High coolant temperature by sensor
- Low oil pressure by sensor
- Low fuel level by sensor
- Unexpected shutdown
- Stop Failure
- Low Engine temperature
- Genset voltage Droop
- Emergency stop
- Genset contactor switching failure

Generator:

- Overload
- Genset voltage asymmetry
- Maximum genset voltage
- Minimum genset voltage
- Maximum genset Frequency
- Minimum genset Frequency
- Erroneous phase sequence of the genset
- Inverse power
- Shortcircuit

Mains

- Maximum mains voltage
- Minimum mains voltage
- Maximum mains frequency
- Minimum mains frequency
- Mains phase sequence failure
- Mains power failure
- Mains contactor switching failure

Programming timer

The programming timer informs the controller device about the current date and hour.

This device allows the weekly programming of:

- Programmed starts.
- Programmed cut-outs.
- Programmed engine and maintenance tests.
- Extension of the fault history.
- Power counters (day, month, year).

The maximum capacity of the timer is 5 daily programs. The TCGEN must be in automatic mode to carry out the programming.

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EXTENSIONS

Multi-visualization

You can add as much display modules as you wish to one measurement module via the CAN connection.

Users Softwares

Telecontrol allows to control, program and monitorize the TCGEN either in local or remote mode.

In local mode, Telecontrol can be up to 1km distance away by using 2 CAN/BUS cables.

The Telecontrol functions in local mode are :

- Possibility of total management from PC
- Input/Output status visualization.
- Memory Events visualization with date/hour (history records)
- Alarms visualization
- Time programming from PC.
- Parameters management

Related software :

- Configuration software
- Monitoring software

TCGEN



FEATURES

Engine alarm inputs:

- Fuel reserve.
- Oil pressure.
- Coolant temperature.
- Coolant level.
- Emergency stop. (stop button).

Analogic engine inputs

- Fuel level.
- Oil pressure.
- Coolant temperature.
- Configurable input (i.e. Oil temperature).
- Battery charge alternator voltage.

5 Configurable inputs to carry on:

- Mains contactor feedback.
- Genset contactor feedback.
- Rate change notice.
- Rate change.
- Start disabling.
- External start.
- Test.
- Manual override.
- 3 programmable alarms.

Engine statistics:

- Number of working hours.
- Number of starts.

Controls engine's functions:

- Pre-heating or Glow Plug.
- Stop.
- Start.
- Coolant heater.
- Fuel Transfer pump.
- Alternator excitation.
- Monitoring outputs of the operative conditions of the controller:
 - Engine running (on).
 - Control board alarm.
 - 3 programmable outputs which monitor the control board alarm conditions or the inputs about the engine data.
- 3 relay outputs incorporated:
 - Mains contactor output.
 - Genset contactor output.
 - Fuel pump / water heating output.

MEASUREMENTS

- Phase to neutral voltage.
- Phase to phase voltage.
- Phase amperage.
- Frequency.
- Real, apparent and reactive powers.
- Power factor and cos phi.
- Instant power (KWh) and historical power (day, month, year).

CHARACTERISTICS

Current, voltage and frequency

- Voltage supply: min. 8V max. 30V
- Maximum amperage consume when rest: 100mA
- Starting output amperage: 70A in transitory regime, 40A during one second. 20 A in regime of stationary work.
- Output amperage when engine stop: (exc./des) 70A in transitory regime, 40A during one second. 20 A in regime of stationary work.
- Pre-heating output amperage: 70A in transitory regime, 40A during one second. 20 A in regime of stationary work.
- Alarm contact amperage, Engine working 1A
- Genset/Mains contactors max. amperage 8A
- Genset frequency status: 30-80 hz
- Pick-up frequency status: 100 Hz at 8 Khz

Component details

- Fuel level resistance: 330 Ohms.
- Measure Accuracy: 1%

Environment

- Operating temp.: -20 °C to 80 °C .
- Protection rank: IP65 (on control panel)

Dimensions and weight

- Visualization module dimensions: 210x160x35,5mm
- Visualization module weight: 437 g
- Measurement module dimensions: 202x117x36mm
- Measurement module weight: 324 g

Other

- Languages : French, Spanish, English, Chinese, Russian, Italian, Polish, German

PART NUMBER

A62Z0

SOFTWARE

Monitoring Soft/ Configuring Soft

CABLE

A60W5 (CAN/USB)

ASSOCIATED PRODUCTS

Reduced: MDX PLUS J1939

Complementary: GENSYS 2.0

