



TCGEN 2.0

Automatic and manual mains failure unit

- Automatic Mains Failure
- Graphic remote display
- Configurable inputs / outputs
- Genset and mains protections
- Full communication ports :
RS232/RS485 Modbus/CAN J1939



The TCGEN 2.0 is a comprehensive AMF unit for a single generating set operating in standby mode. It offers a complete manual and automatic management for generator and mains. The electronic module TCGEN 2.0 is enabling remote monitoring and control.

The unit is completely programmable by a software that allows one or more setting configurations to be saved on PC. The TCGEN 2.0 is controlled with front panel push-buttons.

A BASIC UNIT WITH ADVANCED FEATURES

The TCGEN 2.0 monitors mains phase voltages and controls the automatic starting, stopping and load transfer of the generating set in case of a mains failure. All mains parameters are monitored and, in case of failure, the controller will immediately start the generator.

When the voltage is within the programmed limits, genset contactor is immediately closed on load.

During the running period, the engine and the alternator are monitored. Any failure is shown on the display and will shut down the engine. When mains reappears the controller will open the genset contactor and transfer the load to the mains. The generator will be stopped after the cooling down time.

FEATURES

- Engine speed measurement with magnetic pick-up / Alternator voltage
- Back-lit LCD graphic display with multipages information
- User friendly: a button per command and per LED indicator and intuitive fluorescent keyboard
- Help button for on-board instructions
- Different password access
- Configurable alarms and protections (57)
- High accuracy TRMS measurement
- Date and time (real time clock with battery)
- 5 languages available on board (English, French, Italian, Spanish, Russian)
- Engine history events log (250) and data-logger
- System statistics: engine, alternator and mains
- Modem communication via GSM – GPRS
- Fast and easy setup
- Fully programmable by keyboard
- Modbus communication
- Start engine depending of the mains load

MEASUREMENTS

Generator measures

- V_{AC} : L1/L2-L2/L3-L3/L1
- V_{AC} : L1N-L2N-L3N
- kVA: L1-L2-L3-Total
- kW: L1-L2-L3-Total
- kVAR: L1-L2-L3-Total
- kWh
- Cos ϕ : L1-L2-L3
- Frequency Hz
- Fuel level
- Oil pressure
- Engine temperature
- Autonomy hours
- Hours left to service
- Run hours

Load measures

- Currents: L1-L2-L3

Mains measures

- V_{AC} : L1/L2-L2/L3-L3/L1
- V_{AC} : L1N-L2N-L3N
- kVA: L1-L2-L3-Total
- kW: L1-L2-L3-Total
- kVAR: L1-L2-L3-Total
- kWh
- Cos ϕ : L1-L2-L3
- Frequency Hz

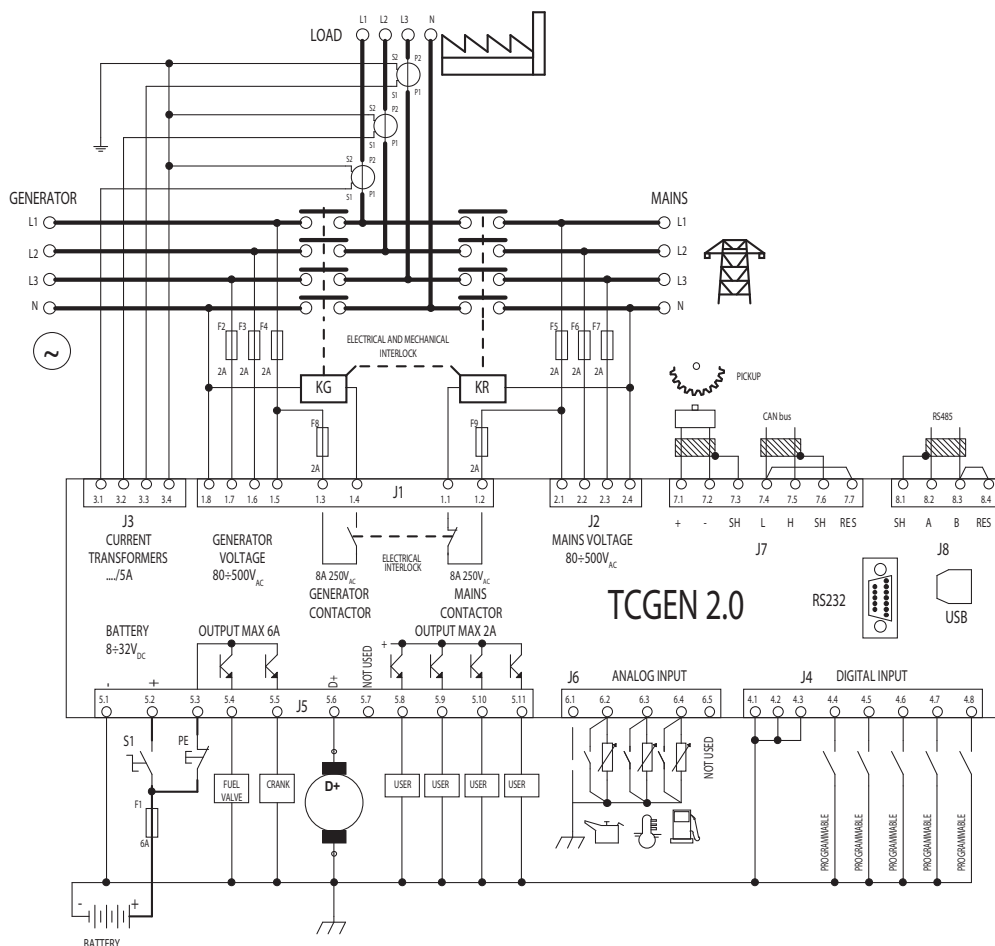
Alarms and events

- Date and time
- Information page
- Events log
- Active alarms page

PROTECTIONS

- Low oil level
- Low coolant level
- Ground protection alarm
- High fuel consumption
- Stop phase
- Start phase
- Battery maintenance
- Stop failure
- Fuel low leakage
- Fuel high leakage
- Unexpected consumption
- Service
- Refueling timeout
- Remote start
- Remote stop
- Warranty expired
- Charger alternator failure
- Faulty mains
- Test failed
- High temperature alarm (digital)
- Low fuel alarm (digital)
- Low oil pressure alarm (digital)

- Battery charger alarm
- Emergency button
- Feedback generator breaker
- Feedback main breaker
- System locked
- User alarm 1
- User alarm 2
- User alarm 3
- Faulty start
- Mechanical fault
- Low frequency generator
- High frequency generator
- Low voltage generator
- High voltage generator
- Wrong phase sequence generator
- Current overload
- Current short-circuit
- Low frequency mains
- High frequency mains
- Low voltage mains
- High voltage mains
- Wrong phase sequence mains
- High temperature prealarm
- High temperature alarm (analog)
- Low fuel prealarm
- Low fuel alarm (analog)
- Low oil pressure prealarm
- Low oil pressure alarm (analog)
- High battery voltage
- Low battery voltage
- High RPM value
- Low RPM value
- Low autonomy



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CHARACTERISTICS

- DC range: 8 to 35 V_{DC}
- AC supply range: 50 to 500 V_{AC}
- Typical standby current: 100 mA_{DC}
- Maximum operating current: 350 mA_{DC}
- Generator breaker relay output: 16 A / 250V
- Mains breaker relay output: 16 A / 250V
- DC relay outputs: 10 A / 28V
- Charge excitation current: 54mA @ 12V_{DC}.

Ports

- 1 RS232 port for modbus RTU protocol
- 1 RS485 port for modbus RTU communication
- 1 USB port for computer communication
- 1 CAN bus J1939 for engine communication (Scania EMS, Volvo EMS, Volvo EPC, Perkins, John Deere, Deutz, Iveco, Cummins, MTU)

Environment

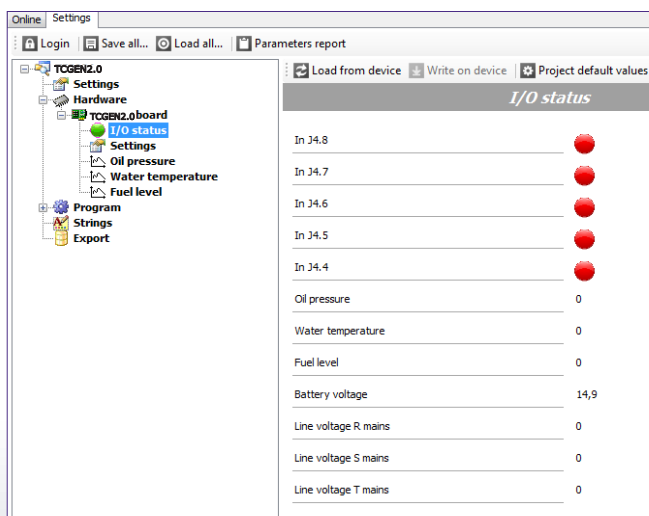
- Operating temp.: -30°C + 70°C
- Maximum humidity: 95% non-condensing.
- Front panel protection: IP65

Dimensions and weight

- Dimensions: 245x182x40mm
- Panel cut-out dimensions: 220x160 mm minimum.
- Weight: 750 g

Homologation

- EN61000-6-(2), (4) - EN60086-2-2
- IEC61000-4-(2), (3), (4), (5), (6)
- IEC60086-2- (1), (2), (6) + IEC60086-2-30 - CISPR 16-1



TCGEN 2.0 PC software

PART NUMBER
A63Z0

ASSOCIATED PRODUCTS
AC GEN 2.0
IC GEN 2.0

