

CONTROL PANEL FOR GENERATOR SET


RGK50 Lovato controller

BENEFITS

- ⊕ Outstanding functions & user-friendliness
- ⊕ Complete protection & data display
- ⊕ Optional remote communication simplified
- ⊕ Optional CANbus communication with engine ECU
- ⊕ Ideal for export projects
- ⊕ Reliable at extreme temperatures
- ⊕ CSA approved control panel

GENERAL FEATURES

- Includes the powerful RGK50 controller from Lovato
- For AC systems from 120 to 600 Vac, 1 & 3 phases, 50 & 60Hz
- Complete power & instrumentation display
- Automatic or manual start (start & stop button)
- Telecommunication interface included (RS-232)
- Modem and Internet communication possibility
- Enclosure painted black with front panel hinge & top cover
- A.C. voltage input fuse protection (Normal)
- Breaker for DC input protection
- Terminal compatible with #10 gauge wire
- Shock mount for vibration protection included
- Complete documents for the installation & setup
- CSA Approved (UL & cUL for the controller)
- Temperature and oil pressure sender included

RGK50 controller

- Large LCD graphic display with backlight, functional at -30°C
- Liquid proof (IP 64) Front panel
- No PT's are required for nominal voltage system ≤ to 600 Vac
- Quick-connect terminal block
- Operating temperature from -30°C to 60°C
- 12 programmable digital [contact] inputs (6 connected in standard)
- 7 internal output relays (1 form 'C' & 3 x NO form connected in standard)
- Allows the use of multiple predefined sender models or manual configuration
- Buttons: START/ STOP/ TEST/ AUTO/ MAN/ RESET-OFF/ HELP / GEN
- Choice of 5 languages
- Events, help & alarm text are editable
- Information on status, alarms and events
- Events and data recording
- Automatic call* to a remote PC when a specific fault or event is activated
- More than 125 system parameters in flash memory
- Help menu for explanation of the remaining operation
- Weekly Exerciser
- Modbus protocol (Via RS-485 com. card) available for PLC communication

- Fast setup on site by the controller keypad or by using an Windows software*
- Powerful software* available for programming, controlling and monitoring.

List of alarms:

- Pre-alarm & shutdown on high coolant temperature [analogue]
- High coolant temperature [digital]
- individual analogue (4) and digital (1) sender fault
- Pre-alarm & shutdown on low oil pressure [analogue]
- Low oil pressure [digital]
- Pre-alarm & shutdown on low fuel level [analogue]
- Low fuel level [digital]
- High, low & very low battery voltage
- Defective battery charge alternator
- Speed signal lost (magnetic pickup)
- Low / high frequency
- Defective starter
- Emergency stop
- Unexpected stop
- Engine stop failure
- Low / high generator frequency
- Low / high generator voltage
- Asymmetry / short-circuit & generator overload
- External generator protection tripping
- Incorrect generator phase sequence
- Incorrect main phase sequence
- Incorrect system frequency setting
- Generator contactor failure
- System error
- Maintenance requested
- Fuel transfer tank empty
- Fuel transfer tank too full
- Rent hours exhausted
- 4 spare faults*

Note: * = option

Display – Main screen (like the picture above)

- Battery voltage (Vdc)
- CA Current & voltage (3 phases) / frequency / hour meter
- Fuel level (%) / oil pressure / coolant temperature
- Maintenance timer (hours)

Display – Other information's available

- Voltage ph. to ph., ph. to neutral for main & generator sides
- Active, reactive & apparent power / active-reactive energy
- Power factor for each phases
- Engine speed (RPM).
- Total number of starting attempts & percentage of successful starting attempts
- All parameters & status of the system
- Event messages & help

TECHNICAL CHARACTERISTICS

Power supply:	
Battery voltage	12 or 24 Vdc
Voltage range	9 to 33 Vdc
Minimum voltage at Start-up	6.7 Vdc

Voltage inputs:	
Voltage range	50 to 620 V L-L (358 Vac L-N)
Frequency range	45 to 65 Hz
Measurement method	True RMS
Wiring type	1, 2 or 3 phases, with or without neutral

Current inputs:	
Current range	0.02 à 6 A. true RMS

Sender inputs:	
Pressure current	20 mA max
Temperature current	7 mA max
Fuel level current	10 mA max
Analogue ground signal	-0.5 to +0.5V

Speed inputs:	
Input type	AC coupling
Voltage range	5 to 50 Vpp
Frequency range	25 to 5000 Hz

Relay output: power control	
Contact type	1 NF ("normal") 1 NO ("generator")
Rated voltage	250 Vac (440 Vac max)
Rated current	8 A

Relay output: common alarm	
Contact type	1 forme C
Rated voltage	250 Vac
Rated current	8 A

Relay output: buzzer, fuel, starter	
Contact type	1 NO (battery + output)
Rated voltage	30 Vdc
Rated current	5 A

Measurement characteristics (from -10 to +45°C):	
Voltage/ current	±1% ± 1 digit
Frequency	±0.2% ± 1 digit
Power	±2% ± 1 digit
Energy	±2% ± 1 digit

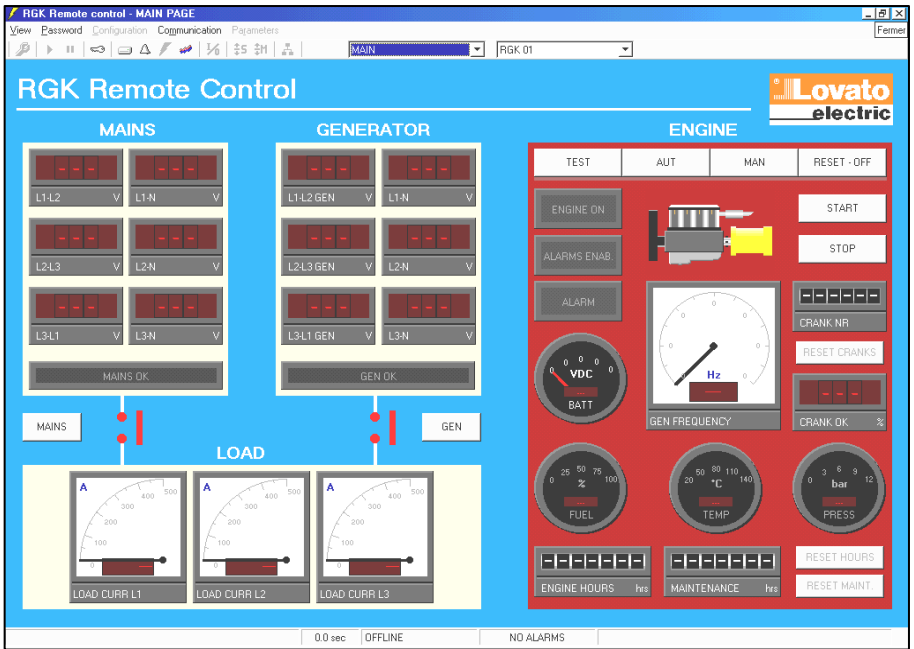
Physical characteristic:	
Operating temperature	-30 to +60°C
Storage temperature	-30 to +80°C
Relative humidity	< 90%
Dimensions	17" W x 10" H x 10" D

PARTS

Code:	Control panel GL4K - standard
Code:	Options:
GL4-ZSD	Oil pressure & temperature sender kit
RGK-SW20	Remote control & configuration software SW20, Windows (98 to XP)
RGK-SW10	Configuration software SW10, Windows (95 to XP)
RGK-X01	Isolated RS-485 port + 12 days clock backup + 2 others output
RGK-ZPROG	Factory programmed
GL-ZPBAU	Mushroom button for Emergency Stop
GL4-ZINV	Parts and configuration setup for transfer switch / breaker control
GL-ZEC	Heating element for cabinet, 100 watts
GL-ZCAUX	One auxiliary (10 A @ 120 Vac) contact set relay
GL-ZBUZ	Ultrasonic audible alarm at front
GL4-ZMODD	Inside panel installation & configuration of a industrial 12 Vdc modem.

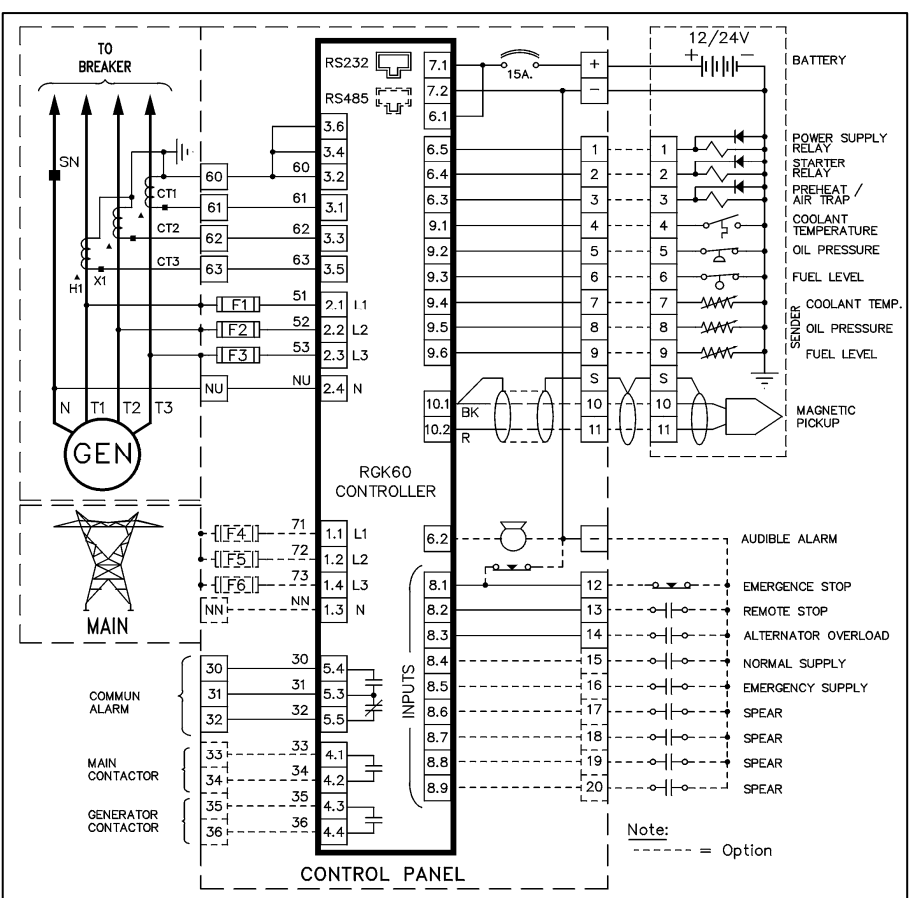
REMOTE CONTROL SOFTWARE SW20 (Optional)

You could read, configure, receive message and control live with a remote PC.



Main display example from the remote control software SW20 (you can design your own display)

WIRING DIAGRAM:



CONTACT US for more information on the RGK50 controller, the SW10 configuration software or the SW20 remote control software.