ENERTEC
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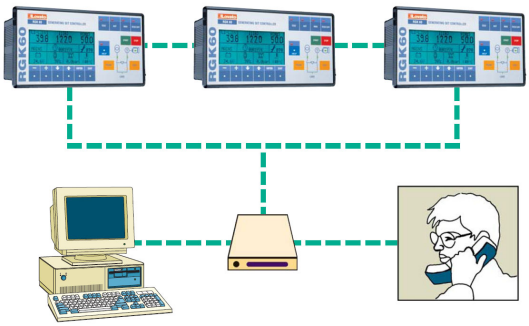
Agent for Lovato Electric: **RGK60**

GENERATING SET & TRANSFER SWITCH CONTROLLER



BENEFITS

- **Outstanding functions & user-friendliness**
- **Complete protection & data display**
- **Optional remote communication simplified**
- **Ideal for export projects**
- **Reliable at extreme temperatures**
- **Transfer switch control available**

GENERAL FEATURES

- **For AC systems from 120 to 600 Vac, 1 & 3 phases, 50 & 60Hz**
- **Complete power & instrumentation display**
- **Normal & Generator power information display**
- **Automatic or manual start possibility**
- **Telecommunication interface included (RS-232)**
- **Plug-in terminal**
- **Complete documents for the installation & setup**
- **CSA Approved (UL & cUL)**
- **Temperature and oil pressure sender selected**
- **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**
- **7 internal output relays**
- **Predefined sender models or manual configuration allowed**
- **Buttons: START/ STOP/ TEST/ AUTO/ MAN/ RESET-OFF/ HELP/ MAIN/ 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 on specific fault or event**
- **More then 125 system parameters in flash memory**
- **Help menu for explanation of the remaining operation**
- **Weekly Exerciser**
- **Modbus protocol 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
- Main / Generator contactor failure
- System error
- Maintenance requested
- Fuel transfer tank empty
- Fuel transfer tank too full
- Rent hours exhausted
- 4 spear 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 available

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

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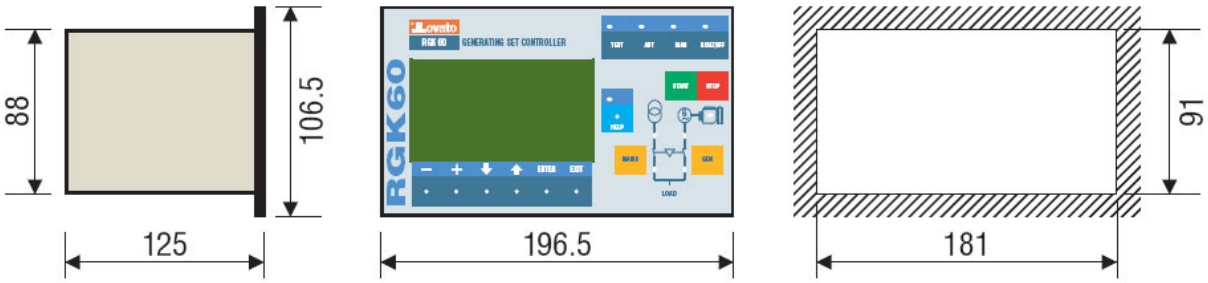


General specifications

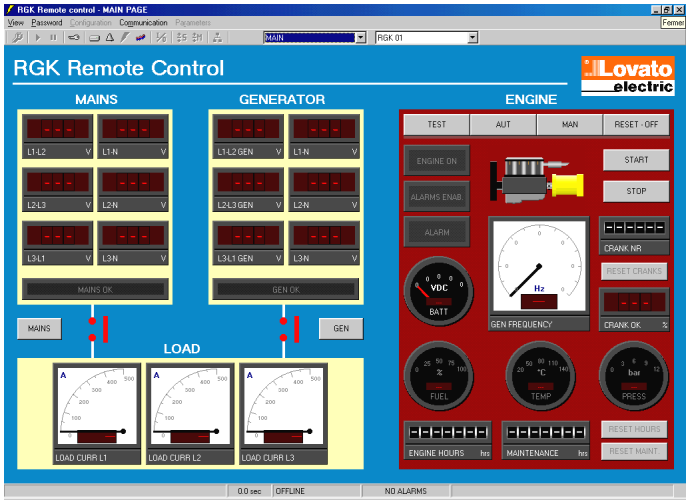
Power supply:	
Battery rated voltage	12 or 24 Vdc
Voltage range	9 to 33 Vdc
Minimum voltage at starting	6.7 Vdc
Voltage inputs:	
Voltage range	50 to 620 V L-L (358 Vac L-N)
Frequency range	45 to 65 Hz
Measuring method	RMS
Wiring mode	1, 2 or 3 phases, with or without neutral
Current inputs:	
Current range	0.02 to 6 A. RMS
Analog inputs:	
Pressure current sensor	20 mA max
Temperature current sensor	7 mA max
Level current sensor	10 mA max
Speed inputs:	
Voltage range	5 to 50 Vp-p
Frequency range	25 to 5000 Hz

Relay output terminal: power control	
Contact type	1 NC ("normal") 1 NO ("generator")
Rated voltage	250 Vac (440 Vac max)
Rated current	8 A.
Relay output terminal: common fault contact	
Contact type	1 NO – 1NC
Rated voltage	250 Vac max
Rated current	8 A
Relay output terminal: buzzer, fuel, starter.	
Contact type	1 NO
Rated voltage	30 Vdc
Rated current	5 A
Measuring characteristics (at –10 to +45ºC):	
Voltage / current	±1% ± 1 digit
Frequency	±0.2% ± 1 digit
Power	±2% ± 1 digit
Energy	±2% ± 1 digit
Housing:	
Temperature operation	-30 to +60ºC
Storage temperature	-30 to +80ºC
Relative humidity	< 90%
Dimensions	

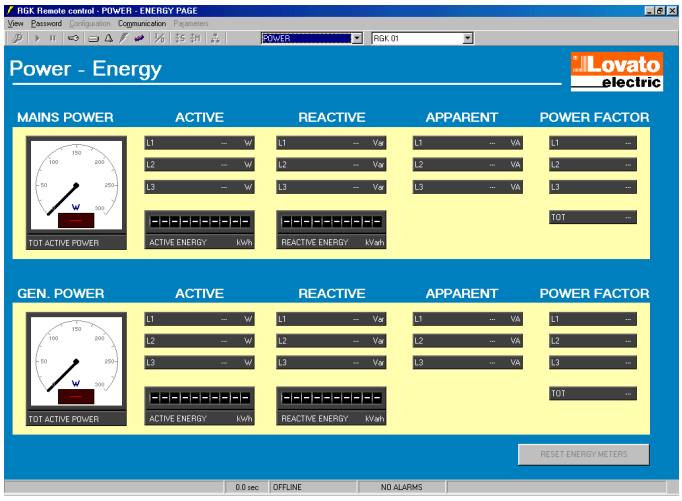
Code	Standard
RGK60	RGK60 programmable controller with plug-in terminals and manual.
RGK60-PK	Controller RGK60 – with magnetic pick-up input, + 2 output, + 4 digital input

Code	Option
RGK-ZSD	Standard (VDO) Sender for oil pressure & coolant temperature circuits;
RGK-ZPROG	Programmed at our plant.
RGK-SW10	Windows (XP to Win7) software SW10 for local set-up, including cable
RGK-SW20	Windows (XP to Win7) software SW20 for remote control and set-up, including cables (see pictures below).
RGK-X01	Expansion Card with: isolated RS-485 port + 12 days clock reserve + 2 other digital outputs.
RGK-ZC485	RS232 - 485 converter for RGK-X01 communication, 1x RS232 cable, configured
RGK-ZMODD	Industrial modem 12 Vdc, configured and tested for the RGK60, c/w RS-232 cable

Do not hesitate to contact us if you need information on these softwares



Main display of the SW20 remote control software.



Power display of the SW20 software.