

Automatic transfer switch controllers ATL series





Configuration

General | Devices | Modem index

Language: English, Italiano, Francais, Espanol

Serial port settings:

- Port: COM1 (selected), COM2, COM3, COM4, COM5, COM6, COM7, COM8, COM9, COM10, COM11, COM12, COM13, COM14, COM15, COM16
- Speed: 1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps, 38400 bps
- Parity: None (selected), Even, Odd

Modem: Connection by modem

Modem init string:



Set-up and remote control software ATL SW

- Measurement viewing of 2 sources
- Data and event viewing and printout
- Set-up data programming
- Real time clock programming, with PC clock synchronising feature
- Virtual front panel viewing with key activation feature
- Analog modem / GSM modem support.

Statistical data

LINE 1 Operation counters	LINE 2 Operation counters
Number of automatic switchings: 19	Number of automatic switchings: 13
Number of manual switchings: 11	Number of manual switchings: 8
Number of switching faults: 7	Number of switching faults: 2

LINE 1 Operation time	LINE 2 Operation time
Switch closed: 1:16:20	Switch closed: 0:00:01
Line ok: 4:20:58	Line ok: 4:20:58
Line not ok: 1:51:19	Line not ok: 0:38:54

General operation time: **2:17**



Event log

Date	Time	Event
82	01-01-06 12:00:32	[083] - Begin of alarm A03 - Line 1 switch fault
83	01-01-06 12:01:02	[087] - Begin of alarm A07 - Load not powered timeout
84	01-01-06 12:00:00	[001] - ATL Power on
85	01-01-06 12:00:12	[042] - Line 1 present
86	01-01-06 12:00:12	[062] - Line 2 present
87	01-01-06 12:00:12	[029] - Stop command to generator 2
88	01-01-06 12:00:14	[052] - Line 1 switch closed
89	01-01-06 12:00:00	[001] - ATL Power on
90	01-01-06 12:00:12	[042] - Line 1 present
91	01-01-06 12:00:12	[062] - Line 2 present
92	01-01-06 12:00:12	[029] - Stop command to generator 2

Buttons: Delete, Export, Print, Exit

ATL Control panel

View Configuration Mode Communication Parameters Tools Help

LINE 1: L1, L2, L3 (231); L1-L2, L2-L3, L3-L1 (400); FREQ Hz (50.0)

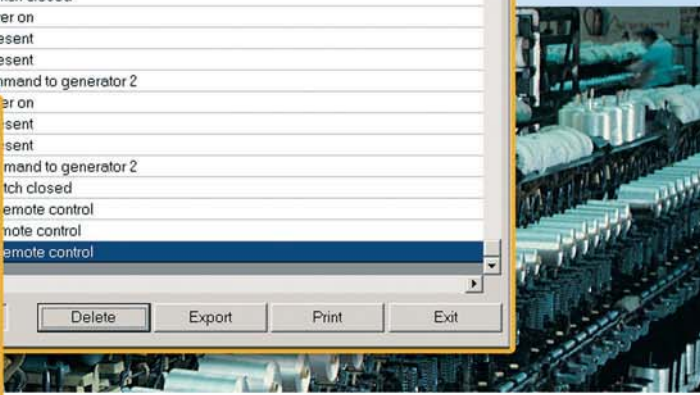
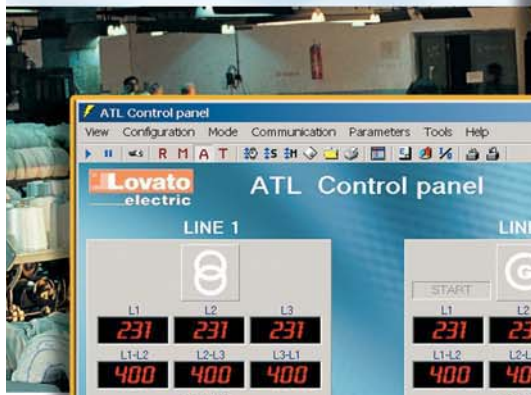
LINE 2: L1, L2, L3 (231); L1-L2, L2-L3, L3-L1 (400); FREQ Hz (50.0)

SUPPLY: AC SUPPLY, DC SUPPLY, VBATT (24.5)

ALARMS: A01-LOW BATTERY VOLTAGE, A02-HIGH BATTERY VOLTAGE, A03-LINE1 SWITCH FAULT, A04-LINE2 SWITCH FAULT, A05-LINE1 WRONG PHASE SEQ, A06-LINE2 WRONG PHASE SEQ, A07-LOAD NOT POWERED TIMEOUT, A08-GENERATOR NOT READY, A09-EMERGENCY STOP

Buttons: OPEN, CLOSE, TRIP, WITHDRAWN

STATUS: ONLINE, AUT MODE, 0.43



Automatic transfer switch controllers

Keep control around the clock



The ATL's are designed and developed to control and supervise the automatic or manual transfer of a utility load from a principal power supply source to a stand-by.

The units include all the necessary features to supervise and control power supply sources, composed by energy distribution systems or generating sets, and the relative transfer equipment, such as contactors, motorised circuit breakers and changeover switches.

The utility changeover, from one power source to the other, can be automatic or manual. The automatic transfer takes place whenever conditions predefined by the user take place, for example:

- power supply source not respecting programmed limits
- the need to have a very reliable power source
- the need to use the most economical power source.

All the operations for set-up, operating mode change, manual transfer controls and operating checks can also be conducted, via personal computer, by using the specific remote control software.

Features

	ATL10	ATL20	ATL30
Power supply 12-24-48VDC	Yes	Yes	Yes
Power supply 220...240VAC	No	Yes	Yes
Double 3ph+N voltage control	Yes	Yes	Yes
Rated input voltage	100...480VAC	100...690VAC	100...690VAC
Display	1 x 4 digit	2 x 3 digit	2 x 3 digit
RS232 interface	Yes	Yes	Yes
RS485 interface	No	No	Yes
Digital inputs	6	8	8
Relay outputs	6	7	7
Real time clock	No	No	Yes
GSM-SMS modem support	No	Yes	Yes
Housing	96x96mm	144x144mm	144x144mm

Operational characteristics

- Supported applications: utility/utility, utility/gen-set and gen-set/gen-set
- Control capability choice: single, two, three-phase lines, with or without neutral
- Single enable controls on the lines: phase loss or failure, phase sequence, min and max voltage, asymmetry and min and max frequency
- Statistical logging
- Event logging with time and date entry: source of automatic transfer control, automatic controls, manual controls, incomplete transfer controls, operating mode change and set-up data variations
- Data and event storage in non-volatile ferromagnetic memory
- PC or keypad set-up
- Modbus[®]-RTU and Modbus[®] ASCII communication protocols
- Analog modem / GSM modem support
- Programmable automatic gen-set test.

Programmable functions

- Automatic test
- Transfer strategy
- Gen-set starting supervision
- Two generator rotation (ATL20 - ATL30)
- Principal line selection
- Non priority loads disconnection (ATL20 - ATL30)
- Before and after transfer indication (ATL20 - ATL30)
- EJP (Effacement Jour Pointe - special energy tariff) signal supervision.

Transfer equipment capability

- Contactors
- Motorised circuit breakers
- Motorised changeover switches.



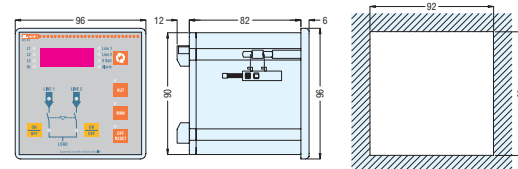
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Advantages

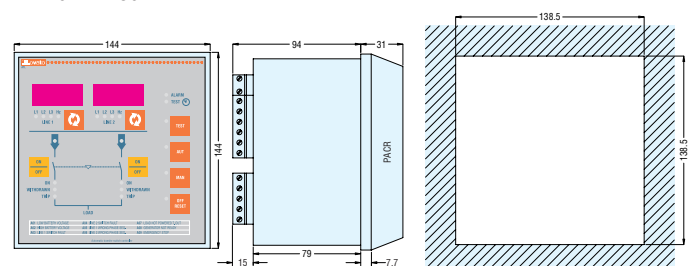
- Control of three-phase systems, with or without neutral
- 7 different control parameters of the supply lines, individually activated
- Frequency measurement on both lines
- Control relay of motorised circuit breakers or changeover switches
- Statistical data recording related to lines, changeover systems and utilities, indispensable for optimising the system and steady operation (ATL20 - ATL30)
- Event logging with date and time entry, fundamental for diagnostics whenever breakdowns or malfunctions take place (ATL20 - ATL30)
- Memory for permanent storage of logged data and events (ATL20 - ATL30)
- Programmable inputs and outputs available for generating sets supervision and control
- Use and set-up ease
- Standard-supplied RS232 port for quick PC set-up
- Simultaneous use of both RS232 and RS485 ports (ATL30 only).

Dimensions [mm]

ATL10



ATL20 - ATL30



Technical characteristics	ATL10	ATL20 - ATL30		ATL10	ATL20 - ATL30
Auxiliary power supply			Communication lines		
DC supply	12...48VDC	12...48VDC	Serial interface	RS232 connection by RJ6/6 jack	RS232 with programmable baud rate 1200-38400bps. Connection by RJ6/6 jack
AC supply	—	220...240VAC			RS485 opto-isolated with programmable baud rate 1200...38400bps. Connection by removable/plug-in terminals (only ATL30)
Frequency	—	45...65Hz			
Power consumption max	3W	9VA (240VAC)			
Power dissipation max	3W	4.1W (48VDC) 6.3W (240VAC)			
Current consumption max	250mA (12VDC); 130mA (24VDC); 65mA (48VDC)	300mA (12VDC); 180mA (24VDC); 90mA (48VDC)			
Immunity time for microbreaking	50ms	50ms			
Voltage inputs			Real time clock for ATL30 only		
Maximum rated voltage	480VAC phase-phase (277VAC phase-neutral)	690VAC phase-phase (400VAC phase-neutral)	Type of backup energy	—	Capacitor (Super Cap)
Measure range	50...576VAC phase-phase	80...800VAC phase-phase	Operating autonomy without power supply	—	12...15 days
Frequency range	45...65Hz	45...65Hz			
Method of measuring	True TRMS	True TRMS	Insulation voltage		
Measuring input impedance	>1.1MK phase-phase; >0.5MK phase-neutral	>1.1MK phase-phase; >0.5MK phase-neutral	Rated insulation voltage Ui	480V	690V
Method of connection	One, two or three phase	One, two or three phase	Connections		
Measuring error	±0.25% f.s. ±1digit (Class 0.5)	±0.25% f.s. ±1digit (Class 0.5)	Type of terminals	Removable / Plug-in	Removable / Plug-in
Current inputs			Conductor section (min-max)	0.2...2.5 mm ² (24 - 12 AWG)	0.2...2.5 mm ² (24 - 12 AWG)
Number of inputs	6	8	Tightening torque (max)	0.5 Nm (4.5 lbin)	0.5 Nm (4.5 lbin)
Type of input	Negative	Negative	Ambient conditions		
Input current	A10mA	A10mA	Operating temperature	-20...+60°C	-20...+60°C
Input signal "0" logic state	A1.5 (2.9V typical)	A1.5 (2.9V typical)	Storage temperature	-30...+80°C	-30...+80°C
Input signal "1" logic state	B5.3 (4.3V typical)	B5.3 (4.3V typical)	Relative humidity	<90%	<90%
Input signal delay	B50msec	B50msec	Maximum pollution degree	2	3
Relay outputs			Housing		
Number of outputs	6	7	Material	Black self-extinguishing Noryl UL94 V0	Self-extinguishing thermoplastic LEXAN
Contact configuration	- 5 relays, each with 1 N/O contact 5A - 250VAC AC1 - 1 relay, with 1 c/o contact - 5A - 250VAC AC1	- 2 relays, each with 1 N/O contact - 16A - 250VAC AC1 - 3 relays, each with 1 N/O contact - 8A - 250VAC AC1 - 2 relays, each with 1 c/o contact - 8A - 250VAC AC1	Version	Flush mount 96x96mm	Flush mount 144x144mm
			Degree of protection	IP54 on front IP20 at rear	IP41 on front IP20 at rear
			Certifications and compliance		
			Certifications obtained	cULus ²	cULus
			Compliant with standards	IEC/EN 60947-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3.	IEC/EN 60947-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3.

① IP54 using protective cover 31PACR.

② Certification pending.

How to order

Order code	Description	Quantity per package	Weight [kg]
Automatic transfer switch controllers			
ATL10	Type with RS232 port. Supply voltage 12-48VDC (96x96mm)	1	0.480
ATL20 A240	Type with RS232 port. Supply voltage 12-48VDC or 220-240VAC (144x144mm)	1	0.950
ATL30 A240	Type with RS232 and RS485 port and real time clock. Supply voltage 12-48VDC or 220-240VAC (144x144mm)	1	0.950
Software			
ATL SW	Set-up and remote control software, complete with 51 C2 cable	1	0.246
Accessories and spare parts			
51 C2	PC-ATL connecting cable, 1.8m long	1	0.090
51 C4	PC-PX1 converter connecting cable, 1.8m long (ATL30 only)	1	0.147
51 C5	ATL30-analog modem connecting cable, 1.8m long	1	0.111
51 C6	ATL30-PX1 converter connecting cable, 1.8m long	1	0.102
51 C7	ATL30-modem connecting cable, 1.8m long	1	0.137
4 PX1	RS232/RS485 converter drive, opto-isolated 220-240VAC ² (ATL30 only)	1	0.600
31 PA96X96	Front IP54 protection cover (ATL10 only)	1	0.090
31 PACR	Front IP54 protection cover (ATL20 and ATL30 only)	1	0.107

② 110-120VAC supply on request. Contact our Customer Service (Tel. +39 035 4282422, email: service@LovatoElectric.com) for details.

A complete offer



Automatic battery chargers



Changeover contactors 20-1600A (Ith-AC1)



Motorised switch disconnectors 200-1250A (Ith-AC21A)

new
2009

orange



Contactors



Push buttons and selectors



Rotary cam switches

moduLo



Protection relays



Frequency meter



Digital multimeters and power analyzers DMG series

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- Contactors
- Motor protection relays
- Electromechanical starters
- Control and signalling units
- Limit, micro and foot switches
- Rotary cam switches

PLANET Din

- Modular contactors
- Time relays
- Protection relays
- Level control relays
- Earth leakage relays

PLANET Logic

- Metering instruments and current transformers
- Soft starters
- AC motor drives
- Automatic power factor controllers
- Automatic battery chargers
- Automatic transfer switch controllers
- Programmable logic relays
- Switching power supplies
- Engine and generator controllers

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