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**ATL 600**

- Automatic transfer switch controller with optical port and graphic LCD
- AC power supply
- 6 programmable digital inputs
- 7 programmable relay outputs.



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**ATL 610**

- Automatic transfer switch controller with optical port and graphic LCD
- Virtual calendar clock (RTC)
- AC and DC power supply
- Expandable with EXP series modules (inputs and outputs, communication ports)
- 6 programmable digital inputs
- 7 programmable relay outputs.



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**ATL DPS1**

- Module specifically designed to control power supply voltage of motorised circuit breakers and changeover switches
- Continuous monitoring of supply line status
- Microcontroller management.



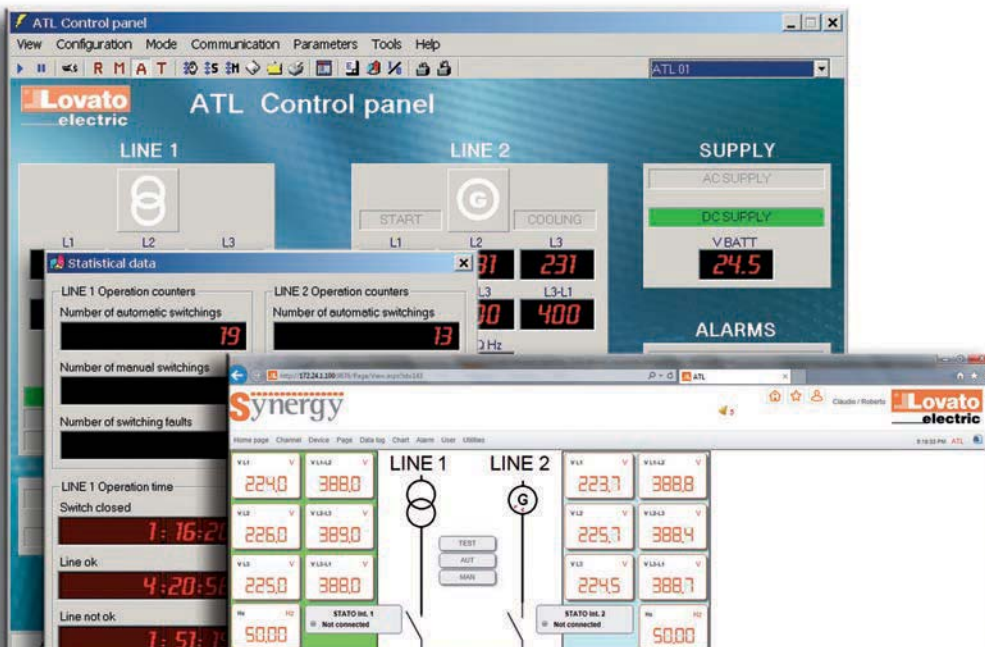
- Supervision of two three-phase supply lines
- Emergency demand supervision for standby generating set
- Control of contactors, motorised circuit breakers or motorised changeover switches
- Event logging
- TRMS measurements of voltage values
- Remote control and supervision
- Front optical port
- Expandability
- Modbus-RTU and Modbus-ASCII communication protocols
- Real time clock.

## Automatic transfer switch controllers

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# NON-STOP CONTROL!

● **STREAMLINE DESIGN**

ATL controllers have an ergonomic design and particular care has been given to details.

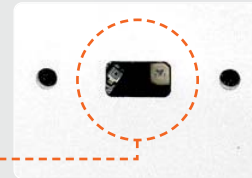
● **CUSTOMISING OPTION**

There is a customising slot available on the front to show controller brand name, trademark, part number, brief indication or wording, etc.



● **BACKLIGHT GRAPHIC DISPLAY**

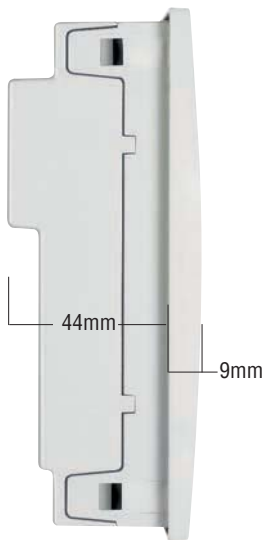
120x80 pixel with excellent legibility with adjustable brightness and contrast.



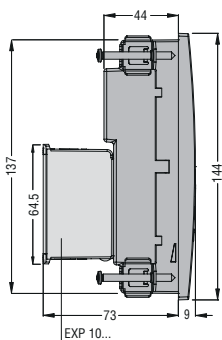
● **OPTICAL COMMUNICATION PORT**

The optical port on the front, using a standard USB or Wi-Fi point, permits to communicate with a PC, smartphone and tablet, to carry out programming, diagnostics and data download without removing power to the electric panel.

● **COMPACT SIZE**



Trim frame profile and reduced total depth simplify installation of the transfer switch controller also in very compact electric panels.



● **FIXING SYSTEM**



The fixing system with metal screws guarantees excellent adhesion over time.

● **HIGH PROTECTION DEGREE**

The controller front and the optional frame seal have been designed to warrant an IP65 protection degree.

● **FIVE-LANGUAGE TEXT**

Viewing of events, alarms and measurements are in Italian, English, Spanish, French and German.

● **DUAL POWER SUPPLY**

ATL 610 versions has both 110-240VAC line and 12-24VDC battery supply.

● **EMERGENCY DEMAND SUPERVISION FOR STANDBY GENERATING SET**

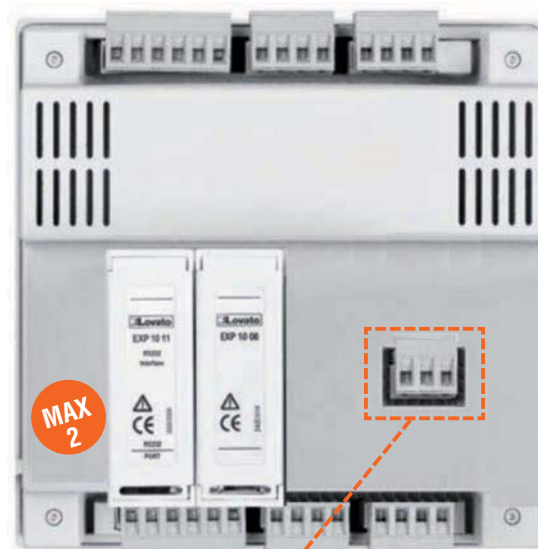
In applications where one of the two supply sources is a generating set, the transfer switch controller has specific functions to supervise the generator starting and stopping operations.

● **EXPANDIBILITY**

Basic functions of the transfer switch controllers can be easily extended using EXP series expansion modules:

- Relay outputs
- Digital and analog inputs and outputs
- Opto-isolated RS232 interface
- Opto-isolated RS485 interface
- Opto-isolated Ethernet interface

The use of modules dedicated to communications, the transfer switch controller can be controlled and supervised by the Synergy software.



12/24VDC battery supply input



**ATL 600**



**ATL 610**

	<b>ATL 600</b>	<b>ATL 610</b>
<b>POWER SUPPLY</b>		
Rated DC supply voltage		12/24VDC (9-36VDC range)
Rated AC supply voltage	110-240VAC (90-264VAC range)	110-240VAC (90-264VAC range)
<b>FRONT PANEL / HOUSING</b>		
Backlight display	Graphic 128x80 pixel LCD	Graphic 128x80 pixel LCD
Multilanguage (5 standard onboard; others downloadable)	●	●
Size	144x144mm / 5.7x5.7"	144x144mm / 5.7x5.7"
Degree of protection	IP54 / optional IP65	IP54 / optional IP65
Expandable with EXP series modules		●
<b>VOLTAGE MEASUREMENT INPUT</b>		
"Line 1" controlled voltage	3 phases + neutral	3 phases + neutral
"Line 2" controlled voltage	3 phases + neutral	3 phases + neutral
Rated voltage Ue L-L	100-480VAC (50-576VAC range)	100-480VAC (50-576VAC range)
Frequency range	45-65Hz	45-65Hz
Type of voltage control	L-L and L-N	L-L and L-N
<b>BUILT-IN DIGITAL INPUTS AND OUTPUTS</b>		
Number of inputs	6	6
Number of outputs	7	7
<b>LINE SWITCHING DEVICE CONTROL</b>		
Contactors	●	●
Motorised automatic circuit breakers	●	●
Motorised changeover switches	●	●
<b>INTERFACE</b>		
USB communication		● EXP10 10
RS232 communication		● EXP10 11
RS485 communication		● EXP10 12
Ethernet communication with web server function		● EXP10 13
Front optical USB communication port	● CX01 dongle	● CX01 dongle
Front optical Wi-Fi communication port	● CX02 dongle	● CX02 dongle
<b>FUNCTIONS</b>		
Line/Line function	●	●
Line/Generator function	●	●
Real time clock with back reserve energy		●
Event logging	●	●

## Non expandable



**new**

Order code	Description	Qty per pkg	Wt
		n°	[kg]
<b>ATL 600</b>	Automatic transfer switch controller with optical port for 2-line control (144x144mm/5.7x5.7") power supply 110-240VAC	1	0.540

ATL 600

## Expandable



**new**

Order code	Description	Qty per pkg	Wt
		n°	[kg]
<b>ATL 610</b>	Automatic transfer switch controller with optical port for 2-line control (144x144mm/5.7x5.7") power supply 110-240VAC and 12/24VDC	1	0.640

ATL 610



EXP 10...

Order code	Description
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ATL610 EXPANSION MODULES  
Snap in fixing of two modules on ATL 610 rear.  
Inputs and outputs.

<b>EXP10 00</b>	4 opto-isolated digital inputs
<b>EXP10 01</b>	4 opto-isolated static outputs
<b>EXP10 02</b>	2 digital inputs and 2 static outputs, opto-isolated
<b>EXP10 03</b>	2 relay outputs rated 5A 250VAC
Communication ports.	
<b>EXP10 10</b>	Opto-isolated USB interface
<b>EXP10 11</b>	Opto-isolated RS232 interface
<b>EXP10 12</b>	Opto-isolated RS485 interface
<b>EXP10 13</b>	Opto-isolated Ethernet interface

EXP... expansion module fixing  
ATL 610

**MAX  
2**



### General characteristics

The automatic transfer switch controller ATL 600/610 is used for the automatic switching of the load from the MAIN LINE to a stand-by or emergency SECONDARY LINE and vice versa.

It has two outputs for the "automatic" and/or "manual" control of contactors or motorised circuit breakers. The transfer switch controller has the following main features:

- Supply input:
  - Single in AC for ATL 600
  - Dual in AC and DC for ATL 610
- Measurement inputs for three phase + neutral voltage values; also suitable for 1 and 2 phase lines
- 1 backlight 128x80 pixel LCD to view measurements, events and alarms in multi languages
- 2 status indication LEDs
- 6 programmable digital inputs
- 7 programmable relay outputs
- Viewing of L-L and L-N voltage values of the controlled lines
- Status viewing of contactor or motorised circuit breakers
- Configuration programming of lines, control and supervision parameters for emergency demand of generating set
- Event logging
- Microprocessor supervision of functions; including virtual real time clock for ATL 610
- Communication interface by front optical port using USB CX01 or Wi-Fi CX02 dongle
- Compatible with **Synergy** software
- ATL SW programming and remote control software with direct PC connection or by Ethernet network.

### CONTROL FUNCTIONS OF THE LINES

- Phase sequence and phase loss
- Minimum and maximum voltage
- Voltage asymmetry
- Minimum and maximum frequency.

### Operational characteristics

- Power supply voltage: 110-240VAC for both; 12/24VDC for ATL 610
- Voltage range: 90-264VAC for both; 9-36VDC for ATL 610
- Voltage measurement inputs
  - Rated voltage  $U_e$ : 100-480VAC L-L
  - Measurement range: 50-576VAC L-L
  - Frequency range: 45-65Hz
- Programmable digital inputs
  - Type of input: Negative
- Programmable relay outputs
  - 5 each with 1 normally open contact (NO - SPST) rated 8A 250VAC
  - 2 each with 1 changeover contact (NO/NC - SPDT) rated 8A 250VAC
- Flush-mount housing: 144x144mm/5.7x5.7"
- IEC degree of protection: IP20 at rear; IP54 on front with optional IP65 using EXP80 01.

**Synergy** supervision software  
See Section 27.

EXP series expansion modules  
See Section 28, page 2.

### Certifications and compliance

Certificates pending: EAC; cULus.  
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL508, CSA C22.2 n°14.

## Dual power supply module



ATL DPS1



Order code	Description	Qty per pkg	Wt
		n°	[kg]
ATL DPS1	For measurement and control of voltages present at supply inputs to power motorised circuit breakers/changeover switches, 110/230VAC configurable	1	0.300

### General characteristics

ATL DPS1 is capable of measuring and controlling voltages at its inputs designating the most ideal to connect to the output. It is suitable to supply motorised circuit breakers and changeover switches in automatic switching systems of 2 three phase supply lines. The two voltage inputs of the module are independent and insulated; each is capable of supplying the internal measuring circuit managed by the microcontroller. It reduces the number of components and improves installation safety.

Main ATL DPS1 features include:

- Voltage value selectable via bypass terminals
- Minimum and maximum voltage tripping thresholds
- 2 single phase L+N inputs
- 1 single phase L+N output
- L1 priority line
- Use with motorised control units powered at 110VAC or 230VAC
- Indicating LEDs for abnormal conditions and status of inputs and outputs.

### Operational characteristics

- Rated supply voltage: 110/230VAC configurable
- Frequency: 50/60Hz
- Input voltage range: 80-300VAC
- Voltage tripping thresholds min / max: 80% / 120% of preset value
- 2 line inputs L1-L2: Single phase, between phase and neutral
- Current output: 4A max
- Priority line: L1 when both input values are within limits
- Fixed delay time between line switching: 0.5 second
- 4 status indication LEDs for voltage of each line within limits, voltage present at output, relay output anomaly
- Mounting: on 35mm DIN rail (IEC/EN 60715) or by screws using extractable clips
- Modular housing, 4 module
- IEC degree of protection: IP40 on front; IP20 at rear.

### Certifications and compliance:

Certifications obtained: EAC.  
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL508, CSA C22.2 n°14.

## Communication devices



CX 01



CX 02



CX 03

Order code	Description	Qty per pkg	Wt
		n°	[kg]
<b>CX 01</b>	USB/optical dongle with PC ↔ LOVATO Electric product with optical port for programming, data download, diagnostics and firmware upgrade	1	0.090
<b>CX 02</b>	Wi-Fi dongle for PC ↔ LOVATO Electric product programming, data download, diagnostics and cloning	1	0.090
<b>CX 03</b>	GSM/GPRS quad-band antenna (800/900/1800/1900MHz) for EXP1015 expansion module	1	0.090

### General characteristics

Communication devices for connection of LOVATO Electric products to personal computers, smartphones and tablets.

#### CX 01

The USB/optical dongle, complete with cable, allows the connection of products compatible with PCs without having to disconnect the power supply from the electric panel.

The PC identifies the connection as a standard USB.

#### CX 02

By Wi-Fi connection, compatible LOVATO Electric products can be viewed on PCs, smartphones and tablets with no need for cabling.

#### CX 03

Antenna compatible with the major part of worldwide mobile networks thanks to the available frequencies at 800/900/1800/1900MHz.

IEC degree of protection: IP67. Fixing by Ø12mm/0.04" drilling.

For dimensions, wiring schemes and technical characteristics, refer to technical instructions in Downloads of local or global websites or consult Customer Service. See contact details on the inside front cover.

## Software and accessories



51 C4



4 PX1

Order code	Description	Qty per pkg	Wt
		n°	[kg]
Software.			
<b>ATL SW</b>	Parameter programming and remote control software complete with 51 C2 cable	1	0.246
Accessories.			
<b>EXP80 01</b>	IP65 gasket seal for internal ATL 6...display frame	1	0.150
<b>51 C2</b>	For PC ↔ ATL610 + EXP1011 module, 1.8m/2yd long	1	0.090
<b>51 C4</b>	For PC ↔ 4PX1 converter drive, 1.8m/2yd long	1	0.147
<b>51 C5</b>	For ATL610 + EXP1011 module ↔ analog modem, 1.8m/2yd long <sup>①</sup>	1	0.111
<b>51 C6</b>	For ATL610 + EXP1011 module ↔ 4PX1 converter drive, 1.8/2yd long	1	0.102
<b>51 C7</b>	For ATL610 ↔ GSM modem, 1.8m/2yd long <sup>①</sup>	1	0.101
RS232/RS485 converter drive.			
<b>4 PX1</b>	Opto-isolated, 220-240VAC supply (110-120VAC on request) <sup>②</sup>	1	0.600

<sup>①</sup> Consult Customer Service; see contact details on inside front page.

<sup>②</sup> RS232/485 opto-isolated converter drive, 38,400 Baud rate maximum, automatic or manual TRANSMIT line supervision, 220-240VAC ±10% (110-120VAC supply on request).

### General characteristics

By using the **ATL SW** software, the quick setup of the controllers can be done by PC avoiding parameter programming errors and omissions.

The parameter programming of ATL... controllers can also be PC saved and quickly uploaded into another device requiring the same programming.

It permits to carry out the control of the installation operation, bar graph and numerical viewing of measurements and controller status.

The **Synergy** software provides for the remote control and supervision of the ATL... transfer switch controllers. See details given in Section 27.

Its structure and applications are based on MS SQL relational database management system. Consulting is made through popular programs for Internet browsing available across different platforms and operating systems.

It is a highly versatile system, simultaneously accessible to a large number of users/workstations via intranets, VPN or Internet.

### APP for smartphone and tablet

**Sam1** (Setup And Maintenance 1) application allows the user to program the controller, view alarm conditions, send commands, read measurements, download statistical data and events and send retrieved data by email. The connection is made by Wi-Fi with a smartphone or tablet using the CX02 dongle.

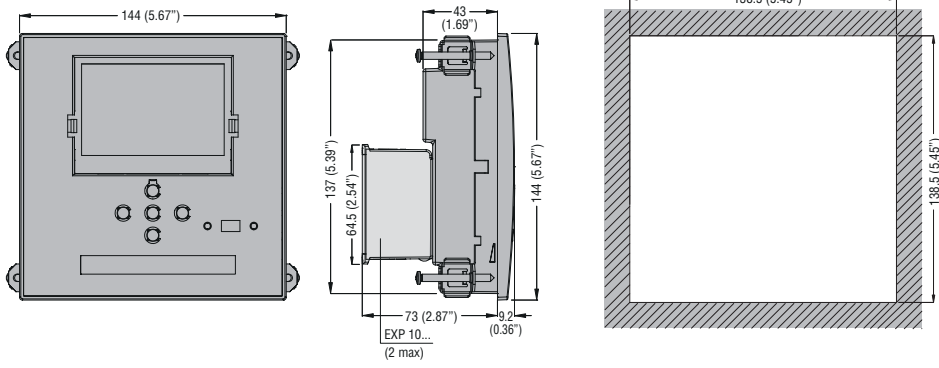
It is iOS and Android compatible. For more details, see Section 27 or consult Customer Service; see contact details on inside front cover.



# Automatic transfer switch controllers

## Dimensions [mm (in)]

### TRANSFER SWITCH CONTROLLERS ATL 600 - ATL 610



### DUAL POWER SUPPLY MODULE ATL DPS1

