

# AUTOMATIC TRANSFER SWITCH CONTROLLER ATL500



# AUTOMATIC TRANSFER SWITCH CONTROLLER ATL500

ATL500 is a **basic** and **ready to use** automatic transfer switch controller for the automatic or manual switching of the load from a MAIN LINE to a stand-by or emergency SECONDARY LINE and vice versa. It monitors two **three phase voltage inputs** coming from two sources and it connects to the output the line that is within the limits. It can be used in three-phase with neutral, two phase or single phase systems. It can control **contactors** or **motorized changeover switches** to perform the transfer between the lines.

The **synoptic on front** with LEDs provides a simple and clear visualization of the status of the ATS system. From the push buttons on the **frontal keyboard** it is possible to select the operating mode (automatic or manual) and command the manual switching of the load in position I (line 1), 0 (neural position, load not supplied) or II (line 2) directly from the push buttons on the keypad without need to program any setting on the controller. The **NFC connectivity** allows to configure the parameters of the controller in a fast and intuitive way directly from your smartphone with LOVATO NFC App. On the back of the ATL500 **two potentiometers** are also present for the manual setting of line presence delays or tripping delays for the protection thresholds.

## SYNOPTIC AND KEYBOARD ON FRONT

### LINE 1 and LINE 2 status

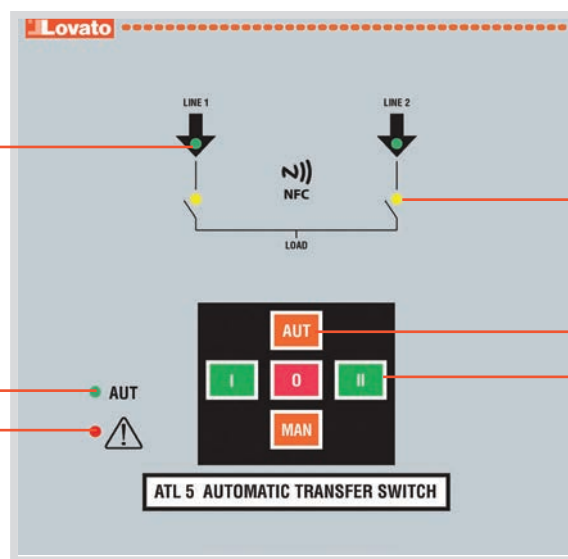
ON = line ok  
OFF = line not present  
FLASHING = line out of limits

### Operating mode active

ON = automatic mode  
OFF = manual mode or device not powered.

### Alarm

Flashing in case of active alarm.  
The number of the flashes identifies the type of alarm.



### LINE 1 and LINE 2 changeover devices status

Steady indicates the status of the changeover device (off=opened / on=closed), flashing during the transitions

### Operating mode selection

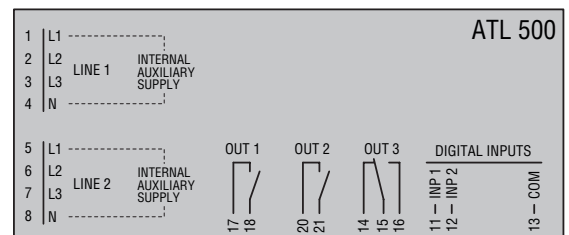
AUT = automatic mode  
MAN = manual mode

### Manual changeover commands

I = switch to LINE 1  
O = neutral position  
II = switch to LINE 2

## SELF-SEEKING POWER SUPPLY

The **self-seeking power supply** allows the automatic selection of the best available line for the internal supply, taken directly from the two measuring inputs (rated voltage 110...240VAC L-N), without need of an external circuit or dual power supply module for the selection of the power for the auxiliary supply.



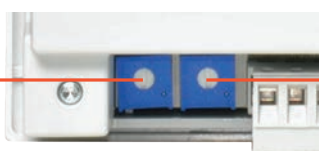
## POTENTIOMETERS

ATL500 is provided with two potentiometers on the back, one for each line (LINE 1 and LINE 2), which can be used for the following functions:

- setting of the **line presence delays** (default setting)
- setting of the **tripping delays** of the **protection thresholds**

The delays can be adjusted between 0 and 60 seconds. The function of the potentiometers can be modified with the LOVATO NFC App.

LINE 1  
0...60sec



LINE 2  
0...60sec

## CONTROL FUNCTIONS OF THE LINES

For each line, the ATL500 monitors the status of the **voltage and the frequency** to detect if the line is available and all the parameters are within the correct limits.

The following **controls** are performed:

- phase sequence and phase loss
- minimum and maximum voltage
- voltage asymmetry
- minimum and maximum frequency.

The tripping thresholds and delays of ATL500 already have default settings.

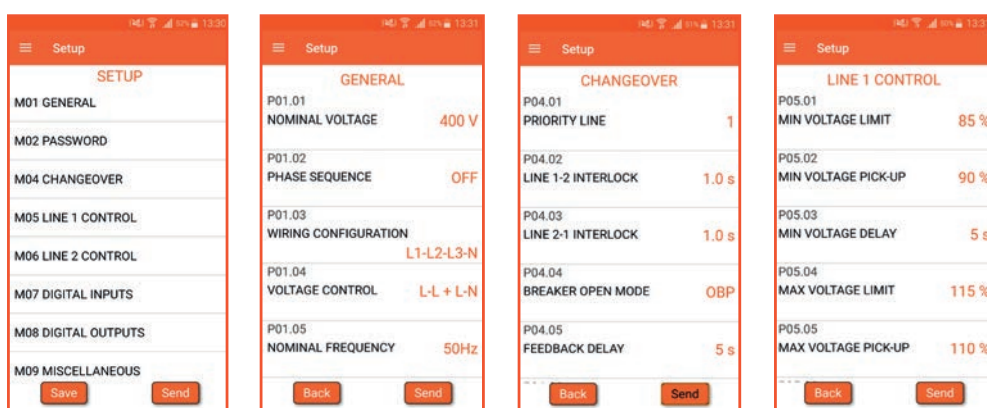
If necessary, it is possible to adjust these values using the LOVATO NFC App.

## NFC CONNECTIVITY

ATL500 is provided with built-in **NFC connectivity** for the programming via Android smart devices (smartphone and tablets) with the **LOVATO NFC App** in a simple, fast and innovative way, which does not need any connection cable and is able to operate even without power supply on the controller.

With the LOVATO NFC App it is possible to configure:

- **system parameters:** rated system voltage, rated frequency, type of wiring, voltage control mode, etc.
- **password** for the protection of the access to the settings
- **changeover settings:** priority line selection, interlock times, feedback delays, etc.
- **protection thresholds and tripping delays:** min/max voltage, min/max frequency, phase sequence, asymmetry, etc.
- **function** of the programmable **digital inputs and outputs**
- **function** of the **potentiometers**
- **alarms properties.**



## How to order



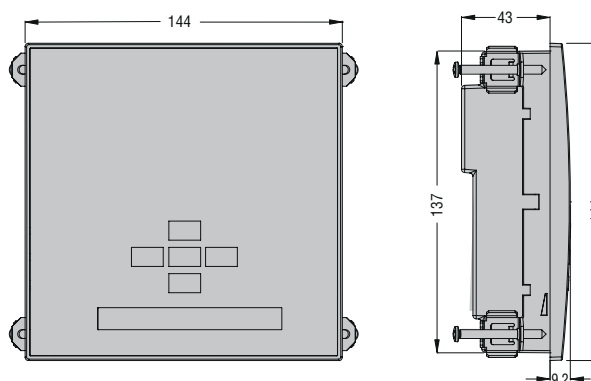
ATL500

ORDER CODE	DESCRIPTION
<b>ATL500</b>	Automatic transfer switch controller with NFC technology and synoptic, for 2 power sources with three-phase control, (144x144mm/5.7x5.7"), self-seeking power supply 110...240VAC
<b>EXP8001</b>	IP65 gasket seal

## Operational characteristics

- self-seeking power supply from the two measurement inputs (L1-N) 110...240VAC
- voltage measurement inputs:
  - rated voltage: 110...240VAC L-N / 190...415VAC L-L
  - operative range: 90...300VAC L-N / 155...519VAC L-L
- rated frequency: 50/60Hz
- 2 programmable digital inputs
- 3 programmable relay outputs:
  - 2 each with 1 normally open contact (NO - SPST) rated 8A 250VAC
  - 1 with changeover contact (NO/NC - SPDT) rated 8A 250VAC
- operating temperature: -30...+70°C
- flush-mount housing: 144x144mm
- IEC degree of protection: IP40 on front, IP65 with optional gasket seal **EXP8001**; IP20 at rear.

## Dimensions [mm]



## Certifications and compliance

Certifications (pending): EAC, RCM, ReTie.  
 Compliant with standards: IEC/EN 61010-1, IEC/EN 61010-2-030, IEC/EN 60947-1, IEC/EN 60947-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3.

# AUTOMATIC TRANSFER SWITCH CONTROLLER ATL500



ENERGY AND AUTOMATION

[www.LovatoElectric.com](http://www.LovatoElectric.com)

**LOVATO ELECTRIC S.P. A.**

Via Don E. Mazza, 12  
24020 Gorle (Bergamo), Italy

tel. +39 035 4282111  
[info@LovatoElectric.com](mailto:info@LovatoElectric.com)

Follow us



The products described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in the leaflet are to be considered as purely illustrative, and consequently have no contractual relevance. Remember also that the products themselves must be used by qualified personnel, in compliance with current plant engineering and installation standards, in order to avoid injury to persons or damage to property.