

## AUTOMATIC TRANSFER SWITCH CONTROLLERS

- ◆ *Supervision of two supply lines*
- ◆ *Emergency demand supervision for stand-by generating set*
- ◆ *Supervision of motorized manual starters*
- ◆ *Event logging*
- ◆ *TRMS measures of voltage values*
- ◆ *Microprocessor remote control and supervision*
- ◆ *RS232 and RS485 serial ports*
- ◆ *Modbus®-RTU and Modbus®-ASCII communication protocols*
- ◆ *Real time clock.*



### Automatic transfer switch controllers

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## Standard version with RS232 port



ATL20 A120

Description	Catalog number	Price
		\$ each
Controller with RS232 port Software.	<b>ATL20 A120</b>	1255.00
Set-up software complete with 51 C2 cable	<b>ATL SW</b>	965.00
Accessories.		
PC ↔ ATL connecting cable, 9ft (2.8m) long, for RS232/TTL communication	<b>51 C2</b>	60.00
Front IP54 protective cover	<b>31 PACR</b>	40.00

### General characteristics

The automatic transfer switch controller ATL 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 is made of a single unit in an insulated housing and has two outputs for the “automatic” and/or “manual” control of contactors or motorized manual starters.

The controller has the following main features:

- Dual supply input: One for AC and the other for battery supply
- Measure inputs of three-phase plus neutral voltages, also suitable for 1 and 2-phase lines
- 2 displays to view main and secondary line measures
- 22 status LED indicators
- 8 digital inputs, 6 of which programmable
- 7 relay outputs, 5 of which programmable
- 4 operating modes: OFF-MAN-AUT-TEST
- Viewing of phase and phase-to-phase line voltage measures
- Viewing of motorized manual starters or contactors status
- Configuration programming of lines and control parameters
- Emergency demand supervision parameter programming for stand-by generating sets
- Microprocessor supervision of functions
- RS232 communication interface
- Modbus<sup>®</sup>-RTU and Modbus<sup>®</sup>-ASCII communication protocols
- Set-up and remote control software via direct PC connection, desk or GSM modem or Ethernet network.

### CONTROL FUNCTIONS OF THE LINES

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

### Operational characteristics

- Auxiliary supply
  - Control power: 12-24-48VDC and 110-120VAC
  - Operating range: 9-70VDC; 93.5-132VAC
  - Power consumption: 6VA at 120VAC
  - Power dissipation: 2.8W at 48VDC or 120VAC
  - Current consumption: 420mA at 12VDC; 200mA at 24VDC; 100mA at 48VDC
  - Frequency range: 45-65Hz.
- Voltage measurement inputs
  - Rated voltage U<sub>e</sub>: 690VAC phase-phase; 400VAC phase-neutral
  - Measurement range: 80-800VAC phase-phase
  - Frequency range: 45-65Hz.
- Digital inputs
  - Negative type of inputs
  - Input current: ≤10mA.
- Relay outputs
  - 2 relay outputs, each with 1 N/O contact rated B300/16A AC1 at 250VAC
  - 3 relay outputs, each with 1 N/O contact rated B300/8A 8A AC1 at 250VAC
  - 2 relay outputs, each with 1 SPDT contact rated B300/8A AC1 at 250VAC; 1A 30VDC pilot duty.
- Housing
  - Flush-mount 5.7x5.7in (144x144mm) version
  - Degree of protection:
    - IP20 at rear
    - IP41 on front, without protective cover
    - IP54 on front, complete with protective cover.

### Certifications and compliance

UL listed for USA and Canada, file E93601.  
Compliant with standards: IEC/EN 60947-1, IEC/EN60947-6-1, IEC/EN61000-6-3, IEC/EN61000-6-2.

## Version with RS232 and RS485 opto-isolated ports



ATL30 A120

Description	Catalog number	Price
		\$ each
Controller with RS232 and RS485 ports and RTC	<b>ATL30 A120</b>	1506.00
Software.		
Set-up software complete with 51 C2 cable	<b>ATL SW</b>	965.00
Accessories.		
PC ↔ ATL connecting cable, 9ft (2.8m) long	<b>51 C2</b>	60.00
PC ↔ 4 PX1 converter connecting cable, 6ft (1.8m) long	<b>51 C4</b>	65.00
ATL ↔ Analog modem connecting cable, 6ft (1.8m) long	<b>51 C5</b>	69.00
ATL ↔ 4 PX1 converter connecting cable, 6ft (1.8m) long	<b>51 C6</b>	60.00
PC ↔ Analog modem connecting cable, 6ft (1.8m) long	<b>51 C9</b>	83.00
RS232/RS485 converter drive, opto-isolated, 110-120VAC	<b>4 PX1 115</b>	707.00
Front IP54 protective cover	<b>31 PACR</b>	40.00

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It is made of a single unit in an insulated housing and has two outputs for the “automatic” and/or “manual” control of contactors or motorized manual starters. The controller has the following main features:

- Dual supply input: One for AC and the other for battery supply
- Measure inputs of three-phase plus neutral voltages also suitable for 1 and 2-phase lines
- 2 displays to view main and secondary line measures
- 22 status LED indicators
- 8 digital inputs, 6 of which programmable
- 7 relay outputs, 5 of which programmable
- 4 operating modes: OFF-MAN-AUT-TEST
- Viewing of phase and phase-to-phase line voltage measures
- Viewing of motorized manual starters or contactors status
- Configuration programming of lines and control parameters
- Supervision parameter programming for emergency demand of generating sets
- Microprocessor supervision of functions
- RS232 communication interface
- RS485 opto-isolated communication interface
- Modbus<sup>®</sup>-RTU and Modbus<sup>®</sup>-ASCII communication protocols
- Set-up and remote control software via direct PC connection or via normal modem or GSM modem or Ethernet network.

### CONTROL FUNCTIONS OF THE LINES

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

### Operational characteristics

- Auxiliary supply
  - Control power: 12-24-48VDC and 110-120VAC
  - Operating range: 9-70VDC; 93.5-132VAC
  - Power consumption: 6VA at 120VAC
  - Power dissipation: 2.8W at 48VDC or 240VAC
  - Current consumption: 420mA at 12VDC; 200mA at 24VDC; 100mA at 48VDC
  - Frequency range: 45-65Hz.
- Voltage measurement inputs
  - Rated voltage Ue: 690VAC phase-phase (400VAC phase-neutral)
  - Measurement range: 80-800VAC phase-phase
  - Frequency range: 45-65Hz.
- Digital inputs
  - Negative type of input
  - Input current: ≤10mA.
- Relay outputs
  - 2 relay outputs, each with 1 N/O contact rated B300/16A AC1 at 250VAC
  - 3 relay outputs, each with 1 N/O contact rated B300/8A AC1 at 250VAC
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  - Degree of protection:
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**PROGRAMMABLE LOGIC RELAYS**

- Versions with:
  - 6 inputs + 4 outputs
  - 8 inputs + 4 outputs
  - 12 inputs + 8 outputs
- 24VDC, 24VAC or 110-240VAC control power
- Relay or transistor outputs.



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**EXPANSION MODULES**

- Variants with a total of 8 inputs/outputs
- 24VDC, 24VAC or 110-240VAC control power
- Relay or transistor outputs.



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**STARTER KITS**

- Complete kit to begin using the programmable relays
- Each equipped with LRD relay, programming-supervision software and connecting cable.



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**LOGIC RELAY ACCESSORIES**

- Communication and memory modules
- Power supply unit
- Supervision software.

**LOGIC FUNCTIONS**

10 different operating modes:

- AND - Consent simultaneity (series connection of contact)
- AND  $\uparrow$  - Consent simultaneity with edge evaluation
- NAND - No simultaneity (parallel connection of contact)
- NAND  $\downarrow$  - Simultaneity loss with edge evaluation
- OR - At least one consent (parallel connection of contact)
- NOR - No consents (series connection of contact)
- XOR - 2 signals of diverse state (dual changeover contact)
- NOT - State inverter
- Pulse - Pulse output
- SR - Two distinct signals for permanent enable and disable.

**TIMERS (15 maximum)**

7 different operating modes:

- ON delay - standard
- ON delay - sum of time at enable and reset signals
- OFF delay - output enable on up time, off on down time
- OFF delay - output enable and off on down input
- Recycle - input signal always enabled (equal timing)
- Recycle - output enable on input and enable resets up time (equal timing)
- Recycle - on-off intervals with independent timing.

**RTC - REAL TIME CLOCK (15 maximum)**

3 different operating modes:

- Daily - choice of days of the week (from ... to) and daily hours (from ... to)
- Weekly - choice of week day and hours to begin and end of week day
- Yearly - choice of date to begin and end.

**COUNTERS (15 maximum)**

8 different operating modes (up and down):

- Without over-counting and no retain at power loss
- With over-counting function and no retain at power loss
- Without over-counting and retain function at power loss
- With over-counting and retain function at power loss
- With over-counting and no retain at power loss and reset to 0
- With over-counting and retain function at power loss and reset to 0
- High speed counter
- Frequency comparison.

**ANALOG COMPARATORS (15 maximum)**

5 different operating modes:

- Comparators for analog inputs
- Comparators for analog inputs and constants

- ◆ Suitable for small automated and control systems
- ◆ Quick and easy to program, versatile and expandable
- ◆ Activation of logic control, timer, counter, real time clock, analog comparators functions
- ◆ FBD and LADDER program language logic.



### Programmable logic relays

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### Accessories

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