



AUTOMATIC TRANSFER SWITCH CONTROL ATS 1.X



DESCRIPTION

ATS 1.1 automatic transfer unit is a microprocessor based digital unit monitoring the 3 phases of the mains and controls the changeover of mains and generator contactors if a mains failure on any phase is detected. The module offers a very cost effective and space saving solutions as it is able to display all the parameters which are essential for the basic genset transfer control. The module has 3 operation modes. Test on load, test off load and Auto operation modes can be chosen via the push-buttons mounted on the front panel. The 39 (29 parameters on ATS1.0) parameter settings can also be adjusted from the front panel. So the module can be adapted to all generators without the need of any other unit or module.

OPERATION PRINCIPLES

Monitoring and Indicators:

- L1-N mains voltage
- L2-N mains voltage
- L3-N mains voltage
- L12, L23, L31 mains voltage
- L1-N generator voltage
- Generator and Mains frequency
- By pressing the menu button, parameters can be displayed on the unit.
- All the status indicators on the front panel

Operation modes:



Test On Load

This is used to manually start and run the engine on load.



Auto

The Auto button is used for automatic mode of operation. If a mains failure on any phase is detected, the load is switched off from the mains and the ATS unit automatically will issue a start command to the genset controller by using the parameters settings which are adjusted before. When the generator operates within the limits adjusted before, the load is transferred to the generator by the ATS module. When the mains supply has been restored, the ATS module will transfer the load back from the generator to the mains supply and issue a stop command to the genset controller. In case of a failure while operating, the unit will stop the generator automatically. A clear mimic diagram and LEDs provide information about the load status and voltages.



Test Off Load

This is used to manually start and run the engine off load. If the mains supply fails, then the load is transferred to the generator automatically.

ATS 1.X AUTOMATIC TRANSFER SWITCH CONTROL

SPECIFICATIONS	ATS1.1	ATS1.0
DC Supply	9-35VDC	9-35VDC
	Stop Mode: 20mA ($\pm\%10$)	Stop Mode: 20mA ($\pm\%10$)
	Aotu Mode: 70mA ($\pm\%10$)	Aotu Mode: 70mA ($\pm\%10$)
	Maximum: 110mA ($\pm\%10$)	Maximum: 110mA ($\pm\%10$)
Operating Temperature	-10°C / +70°C	-10°C / +70°C
Relative Humidity	%10-%95 non-condensing	%10-%95 non-condensing
Relay Outputs	Start and auxiliary outputs	Start outputs
	6A/12-24VDC	6A/12-24VDC
	Generator and mains contactor outputs 10A / 250VAC	Generator and mains contactor outputs 10A / 250VAC
Frequency Measurement	1-99Hz	1-99Hz
Voltage Measurement	50-300VAC	50-300VAC
Measurement Accuracy	Phase Voltages : + / - %1	Phase Voltages : + / - %1
	Generator Frequency : + / - 0.2Hz	Generator Frequency : + / - 0.2Hz
Cranking Dropouts	0 V for 50ms.	0 V for 50ms.
Connection	Screw socket	Screw socket
Housing	High temperature proof PPO GF %20	High temperature proof PPO GF %20
Protection Class	IP 52 (Front side)	IP 52 (Front side)
Weight	255 gr. (aprox.)	255 gr. (aprox.)
Dimensions (GxYxD)	72x72x62 mm	72x72x62 mm
Panel cut out	68x68mm	68x68mm
Mounting Installation	Front panel mounted with metal screw fixings Max. allowable mounting panel thickness 3mm	Front panel mounted with metal screw fixings Max. allowable mounting panel thickness 3mm

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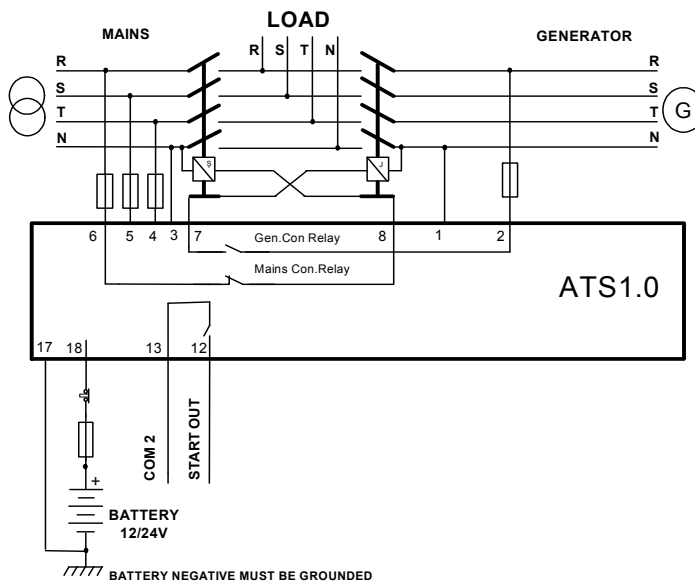
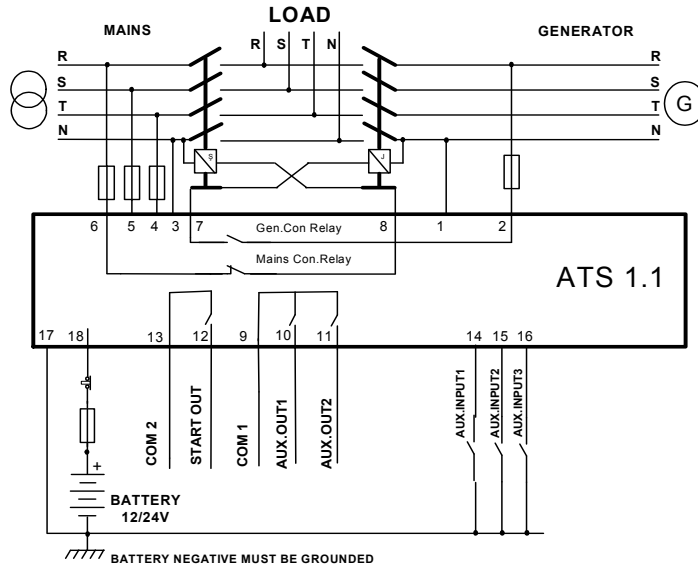
FEATURES	ATS1.1	ATS1.0
Micro-processor based design	✓	✓
Automatic engine start /stop command output	✓	✓
Automatic load transfer	✓	✓
Configurable via front panel	✓	✓
Automatic shut down on fault condition	✓	✓
Test on / off modes	✓	✓
LED mimic indication	✓	✓
Operate with cranking dropouts	✓	✓
2 configurable auxiliary outputs	✓	
3 configurable auxiliary inputs	✓	
3 phase true RMS Mains voltage measuring and monitoring	✓	✓
Generator phase true RMS voltage measuring and monitoring	✓	✓
Generator frequency measuring and monitoring	✓	✓
Mains frequency measuring and monitoring	✓	✓
Digitally adjustable low&high mains and generator voltage limits	✓	✓
Digitally adjustable generator start command timings	✓	✓
Digitally adjustable generator overspeed /underspeed limits	✓	✓
Digitally adjustable mains voltage overspeed/underspeed limits	✓	✓
Digitally adjustable auxiliary inputs specifications	✓	
Digitally adjustable auxiliary outputs specifications	✓	
Digitally adjustable load transfer timings	✓	✓
Digitally adjustable warm up/cooling timings	✓	✓
Failure control	✓	✓
Digitally adjustable measurement calibrations	✓	✓
Digital display	✓	✓
Low cost, small dimensions	✓	✓
INPUT/OUTPUTS	✓	
Start command output	✓	✓
Generator / Mains Contactor Output	✓	✓
3 phase mains /1 phase generator sensing inputs	✓	✓
Aux1 input	✓	
Aux2 input	✓	
Aux3 input	✓	
Aux1 output	✓	
Aux2 output	✓	

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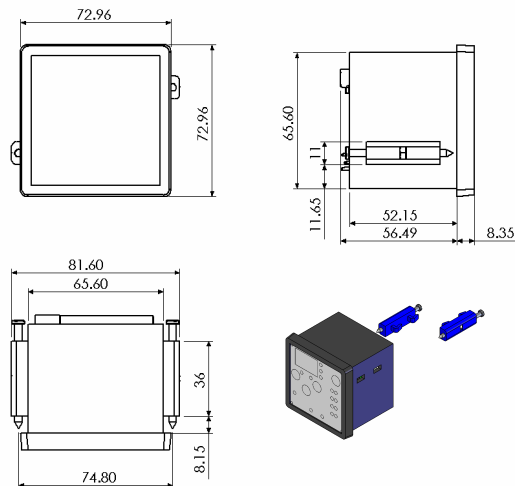
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CONNECTION DIAGRAM



MOUNTING AND INSTALLATIONS



DIMENSIONS MM' DIR.

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