

# ATS1.1 / 1.0

ENKO Electronic Control Systems - IZMIR / TURKIYE

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## Automatic Load Transfer Switches: ATS1.1 and ATS1.0

ATS1.1 and ATS1.0 are dedicated Load Transfer Control switches, which allow independent control of



load and generator, feeding the load from either Mains or Generator bus-bars, whichever is available, with mains bus-bar priority.

ATS1.1 and ATS1.0 are both Load Transfer Control Switches, which monitors the Mains Bus-Bar voltages and transfer the load if the voltage limits fall beyond required tolerances. These units can be used with any two voltage bus-bars, where the load is required to be controlled according to their availability. All three phase voltages are monitored on the mains bus-bar side and each phase can have independent upper and lower voltage limits.

ATS1.0 is a basic Transfer Control Switch, where only the basic control functions are required with no auxiliary input or output functions. ATS1.1 is on the other hand, designed with 2 auxiliary outputs and 3 auxiliary inputs. These i/o ports can be configured from the device menu for peripheral device control.

The units allow the user to crank the generator on for testing or periodical maintenance. This test function can be executed with or without load transfer, allowing testing for the transfer switch at the same time. Normal system operation is maintained in the Automatic mode.

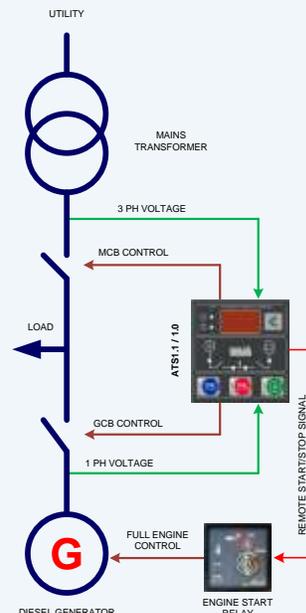
During operation, mains or generator phase voltage can both be monitored on the controller display, hence avoiding extra AC voltmeters to be used on the panel. All voltage values are displayed in True RMS values with high reading accuracy.

All unit parameters can be adjusted from the device configuration menu and all program parameter values can be seen on the controller display. The units can also be programmed to control the engine cool-down function, hence allowing simple engine starter units to be used with small capacity generator sets.

- **SIMULTANEOUS MONITORING OF MAINS AND GENERATOR BUSBARS**
- **CONFIGURABLE I/O PORTS FOR CUSTOMER SPECIFIC APPLICATIONS**
- **MAINS FREQUENCY MONITORING**

### Technical specifications:

DC power supply:	9-35Vdc @ 1W maximum power dissipation (12Vdc, relays off)
Operating temperature:	-35°C to +70°C
Relative humidity:	20%rH to 99%rH, non condensing
AC voltage measurement:	20Vac to 500Vac phase to phase
Frequency measurement:	1.0Hz to 99.9Hz, ±0.1Hz
Auxiliary i/o:	3 i/p and 2 o/p (dry contact) on ATS1.1 only
Measurement accuracy:	Phase voltages: ±2% of scale, Frequency: ±0.1Hz
System Outputs:	Remote start/stop: 10A/250Vac MCB, GCB: 10A/250Vac AUX: 6A/250Vac
Weight:	160 grams
Mounting:	72mmX72mm front panel
Protection class:	IP52 (front panel protection)
Monitoring:	Mains side (3 phase voltage)



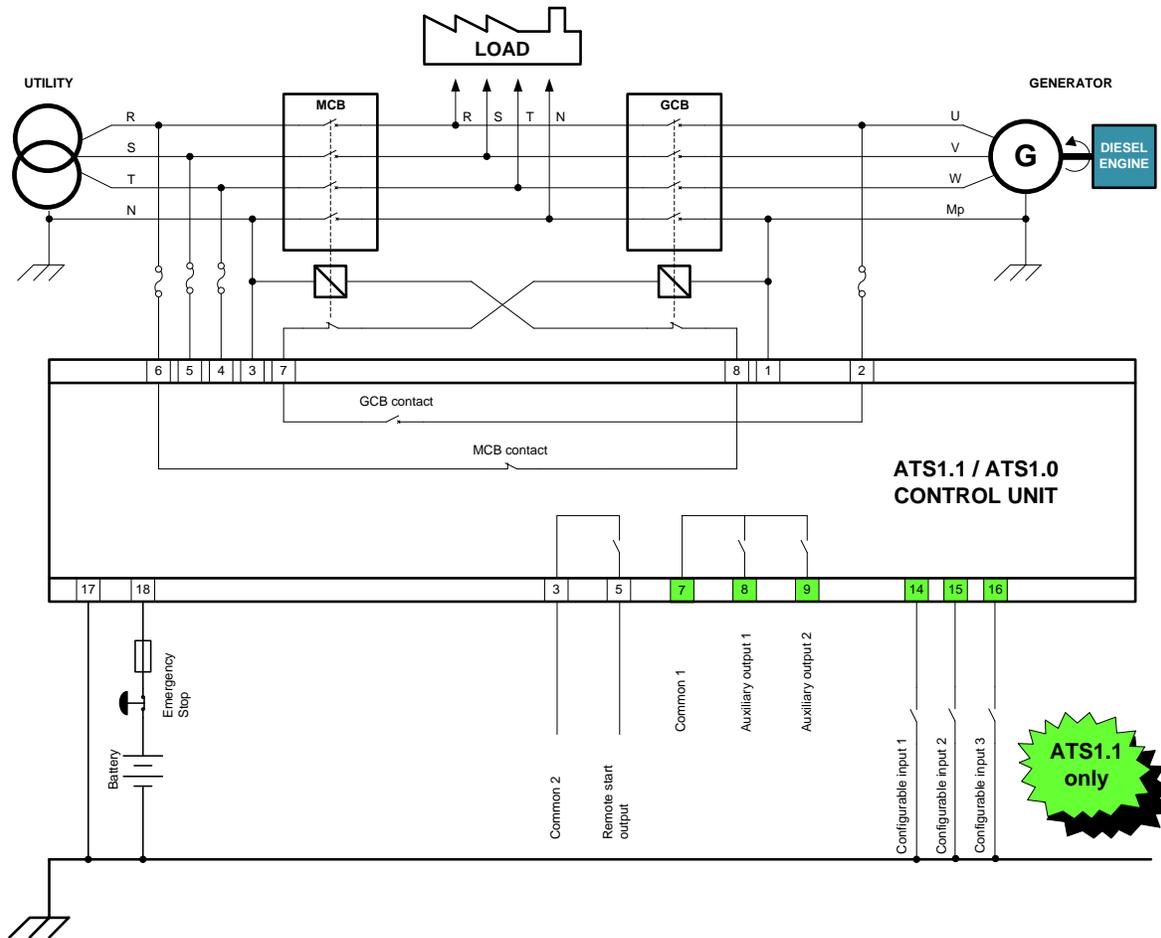
### Main features:

- 3 phase mains voltage single phase generator voltage monitoring and measurement
- 3 digit LED display for voltage readouts and parameter displaying
- 5 configurable i/o ports for engine and system controls
- Full LED indicators for bus-bar status condition indication
- AUTOMATIC, TEST on-load and TEST off-load operation modes
- Full digital calibration of all analog measuring variables
- Load transfer function on Mains Frequency monitoring
- Small mechanical outline for minimal control applications
- Plug type terminals on the rear panel

### Additional features:

- TRUE RMS VOLTAGE MEASUREMENTS ON BOTH BUSBARS ✓
- WIDE OPERATING TEMP. RANGE (-35°C to +70°C) ✓
- MAINS FREQUENCY MONITORING AND CONDITIONAL LOAD TRANSFER ✓
- FULL CONFIGURATION ON CONTROLLER I/O PORTS ✓
- LOAD TRANSFER CONDITIONAL ON MAINS PHASE STATUS (LOCK-ON MAINS BUS BAR) ✓
- IP52 PROTECTION CLASS (front panel protection) ✓
- REMOTE START AND STOP OPERATION INTERFACE ✓
- ENGINE COOL-DOWN TIMER FOR SIMPLE GENERATOR CONTROLLER INTERFACE ✓

## APPLICATION CONNECTION DIAGRAM



Typical connection diagram is shown above for both models. ATS1.1 has additional auxiliary ports for more specific applications. All ports are configurable through the system menu.

Two stage password control protects system settings against inexperienced users.

All auxiliary outputs are dry contact relay type switches, which can be connected to different potential levels, if required.

Different levels of alarm interface algorithm (C, D, E or F) allows easy interface to peripheral devices.

**ATS1.1 has additional auxiliary ports for more specific applications...**

**ATS1.1 and ATS1.0 offer simple control of Load / Bus-Bar switching...**

ATS1.1 and ATS1.0 controllers have plastic housings, designed according to DIN norms. Mechanical dimensions are shown in the drawing.

Plastic housing is made of NORYL (PPO) with added fiber, which provides high temperature resistance and good mechanical stability. The electrical characteristics of the housing is excellent.

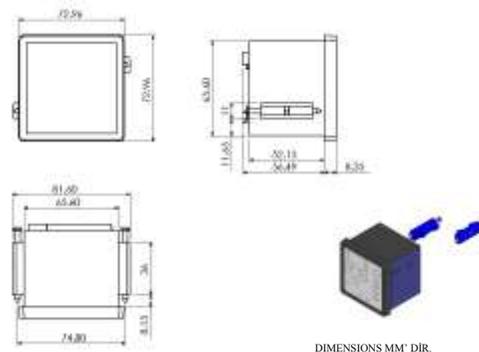
The front panel is designed to comply with IP52 protection class. Embossed *Lexan* is used for front panel, which provides easy control of the buttons and clear reading of the digital values. ESD protection is provided for front panel.

All components are SMD mounted, including the buttons and LED indicators. The use of mechanical switches for control buttons ensures reliable operation over long periods.

Inner construction is specially tailored for resistance against vibration. Also, special chemical treatment ensures reliable operation in high humidity environments.

## Mechanical dimensions

### MOUNTING AND INSTALLATIONS



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