



A.T.S.

Automatic Transfer Switch panel

Sices ATS control panel is designed for mains/genset transfer switch applications that involve a genset usually equipped with an automatic control panel. The ATS control panel comprises all circuits, devices and controls, which enable the switch between the mains and the genset, in order to supply the load in case of mains failure.

The ATS control panel is made with a steel sheet subjected to a painting treatment using high resistance epoxy powder. The power circuit is safety split from the control area in accordance to the main operation rules.

The protection degree with closed door is IP40 for the BASIC version and IP54/55 for the LOGICA version based on the size of the panel.

According to the power of the genset, and the Customer' needs, the power circuit is composed by a couple of interlocked contactors (up to 125A included) or by a motorized changeover switch, in both cases 4 poles.

In addition, there is a version of ATS with power circuit composed by two automatic, interlocked and motorized circuit breakers.

The operating voltage is $380 \div 400V (\pm 10\%)$ with the possibility to offer multi voltage options as well.

Frequency: 50/60Hz

- **Double frequency 50/60Hz**
- **BASIC and LOGICA version**
 - **From 45A up to 4000A**
 - **Attractive price**
 - **Used by the greatest genset companies**
- **Perfect for Dual Gensets operations**
 - **Made in Italy**
 - **ISO 9001 certified**



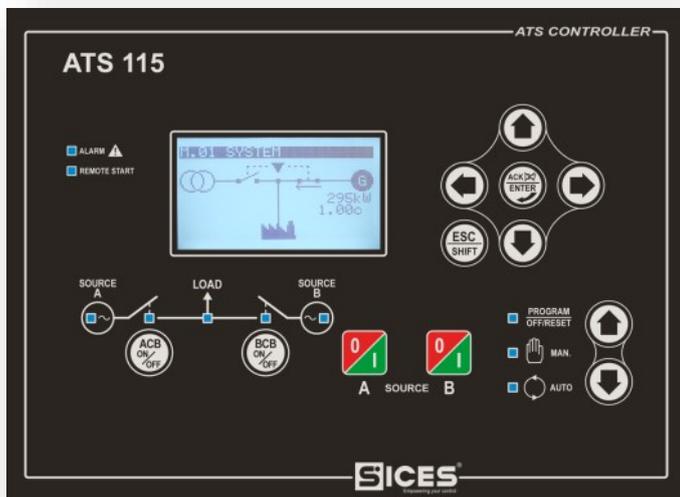
TWO TYPES OF ATS CONTROL PANEL ARE AVAILABLE:

“BASIC” VERSION: It’s a manual ATS Control panel without microprocessor-based controller, equipped with a 4 positions switch selector with AUTOMATIC – 0 – MAINS – GENSET and lamps for optical signalling “Load supplied by the Mains” and “Load supplied by the Genset”. Fuses, protections and terminal boards are available as well. This type of ATS panel is usually combined to a local genset control panel.

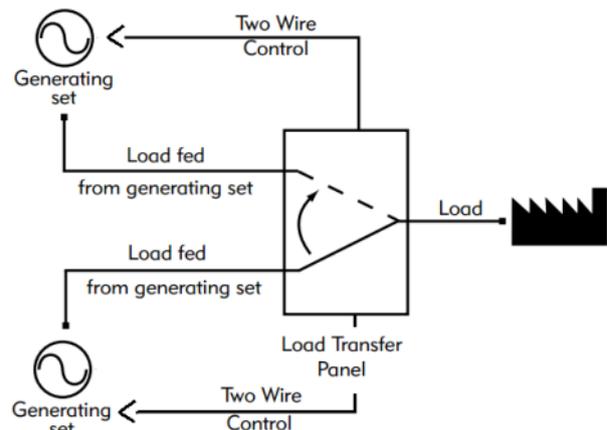
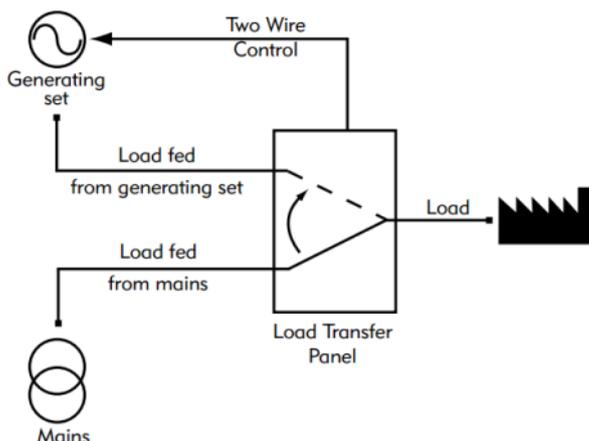
“LOGICA” VERSION: It’s an automatic ATS Control panel equipped with microprocessor-based controller with graphic display that allows to show voltages, frequency, working hours and the battery voltage of the genset. This type of ATS panel is particularly suggested in combination to gensets with semi-automatic controllers that require an external contact to start (e.g. Caterpillar, FG Wilson, Cummins, etc. gensets).

The “LOGICA” ATS panel supports a microprocessor-based controller, available in two versions: ATS115 and ATS115^{Plus}.

As option, it’s possible to add 3 CTs in order to enable the current and power measure and the cosfi.



Features:	“BASIC” VERSION	“LOGICA” VERSION
Power Terminal board Mains/ Genset/Load	YES	YES
Selector switch Mains – Automatic – 0 – Genset	YES	NO
Keyboard with push buttons for the mode/control selection	NO	YES
Optical signal with lamp/led to advise the load is supplied by the Mains	YES	YES
Optical signal with lamp/led to advise the load is supplied by the Genset	YES	YES
Fuses for protections	YES	YES
Adjustable three-voltage relay Mains and Genset voltage	NO	YES
Microprocessor controller	NO	YES
Voltmeter for Mains voltage: Phases L1-L2/L2-L3/L1-L3	NO	YES
Mains and Genset frequency meter	NO	YES
Battery voltage meter	NO	YES
Working hour meter	NO	YES
Current transformers for the activation of currents, power and cosfi measurement	NO	OPTION (*)
Automatic battery charger	NO	OPTION



IN CASE OF ATS LOGICA CONTROL PANEL

Controls

- START Engine start push-button
- STOP Engine stop push-button
- ACK Acoustic alarm silencing push-button
- UP/DOWN push-buttons for the display selection
- MCB push-button
- GCB push-button
- N.4 ARROW keys for LCD display selection mode, window selection, parameter change and other
- EXIT and ENTER keys
- SHIFT key
- Operation panel and LEDs for the signalisation and selection of the operation modes: off/reset/program, manual, automatic, alarms/warnings, aux., mains live, genset live, etc.

Measures

Mains Voltage

L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1
True measure calibrated to RMS.
Lx-N max. voltage < 300Vac cat. IV
High voltage pulse = 6kV 1.2/50 us
Max. measurable voltage = 25.000V (by external TV).

Generator Voltages

L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1
True RMS measure.
Lx-N max. voltage < 300Vac cat. IV
High voltage pulse = 6kV 1.2/50 us
Max. measurable voltage = 25.000V (by external TV).

Generator Currents (Optional in case additional current transformers)

L1, L2, L3, N
True RMS measure.
Nominal max. current: 5Aac
Overload measurable current : 4 x 5Aac (sinusoidal).
Internal current transformer.
Max. nominal current = 6000A (by external TA).

Generator and Mains Frequency meter

Resolution = 0.1 Hz.
Accuracy = $\pm 50\text{ppm}$, $\pm 35\text{ppm}/^\circ\text{C}$ (typical)

Battery Voltmeter

Resolution = 0.1V

Protections/Signalling

A set of high efficiency LEDs are used to inform on the current status of the Mains and of the Genset and for the visualization of any alarm. Secondary alarms are represented by their corresponding display code.

Status and signalling

- Source A live (Mains or Genset)
- Source B live (Mains or Genset)
- Source A circuit breaker closed
- Source B circuit breaker closed
- Start/Stop Source A or B
- Remote start
- Battery fault (Min./Max. voltage)

- Max. controller temperature
- Emergency stop
- Clock not configured

Protections

- Genset "X" not stopped
- Genset "X" out limit
- Source A or B operating mode not reached
- Phase sequence failure on Source A or B
- Source A or B failure
- Source A or B circuit breaker stopped
- Source A or B circuit breaker open

Additional indications are available to display measures and cumulative alarms.

Communication

N.1 USB Port for the configuration of parameters

As option:

- Use of the ATS115^{Plus} controller equipped with:
 - N.1 RS232 Serial port Modbus RTU
 - N.1 RS485 Serial port Modbus RTU
 - N.1 RJ45 Ethernet Serial port Modbus TCP/IP
 - Direct management of a PSTN and GSM modem
- GSM/GPRS/GPS Modem

Optional circuits available:

- Addition of a battery charger 5A 12/24Vdc
- Addition of 3 CTs on the Output
- Dual Genset operation for the automatic switch of the two gensets

Additional characteristics

- Engine diagnostic codes
- Periodic test
- Clock and History log
- Remote start and stop
- Alarm horn
- Different levels of password for the correct configuration of the parameters
- Graphic display 70x38 mm - 128x64 pixel
- LCD display with LEDs
- Multilanguage display: IT, EN, FR, RU, ES, PT/BR

Additional technical features:

- Supply voltage: 230 ÷ 400 Vac (others to be specified)
- Auxiliary voltage: 12 Vdc or 24 Vdc
- Frequency: 50 Hz or 60 Hz
- The electric diagrams are available in double language, choosing among: EN, FR, IT, PT, ES.
- Insulation: > 50 Mohm
- Dielectric strength AC: 2500V/1'
- Dielectric strength DC: 1000 V/1'
- Level of protection: IP40 (BASIC version) or IP5/55 (LOGICA version)
- Colour: RAL 7035
- Operating temperature: -20°+70°C
- Compliance to CEI – IEC – EN rules:
 - 2006/95/CE – LOW VOLTAGE DIRECTIVE
 - 2004/108/CE – EMC DIRECTIVE
 - 93/68/CEE – CE STAMP REGULATION
 - The ATS panel is designed and manufactured in compliance with the **ISO9001** certification



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