ATS115

Micro-processed controller able to manage the automatic switch between two supply sources, both mains and genset(s)

DESCRIPTION

Automatic Transfer Switch controller with 3 phase (RMS) mains voltage and 3 phase (RMS) generator voltage and current monitoring, suitable for operation with **two different power sources**.

ATS115/**ATS115**_Plus_ is a device suitable to manage the switch in different plants configuration.
A or B sources can be set as "mains" or "genset" in any possible combination.

All the parameters can be set directly by the controller's keyboard or, alternatively using the **free software tool** (**BoardPRG3**), available from SICES' website.

ATS115, in both versions, has a graphic display that allows a real time check of the switch status, of measures and any occurred alarms.

ATS115 and **ATS115**_Plus_ allows the remote control of the switch by its communication ports.

The plus version, have an extensive input and output capability with optional communication interfaces.

INPUTS - OUTPUTS AND AUXILIARY FUNCTIONS

8 Digital inputs	**8 Digital outputs**	**4 Analogue inputs**	**AND/OR Logic control**
Event history log	**16 Calendars 4 timers**	**USB port**	**RS232** _Plus_ Version
RS485 _Plus_ Version	**Ethernet connection** _Plus_ Version		

- N. 8 Digital inputs.
- N. 4 Analogue inputs, also available as non-isolated digital inputs.
- N. 2 Programmable relay Outputs.
- N. 4 Insulated digital Outputs.
- N. 2 Programmable relays (10A), usually used for the switch management.
- All inputs and Outputs are freely programmable.

ATS115
_Datasheet_EN_

MAIN FEATURES

> True RMS measure for voltages of both sources, currents on loads.
> Measure of active power and power factor.
> Measure of frequency for both sources, powers on load.
> 8 programmable digital inputs (insulated).
> 8 programmable digital outputs.
> USB Port and ETHERNET Port (for **ATS115***Plus*).
> Graphic display with single-line diagram representation.
> Real time clock.
> Events and data recording.
> Remote switch commands and remote start and stop commands.
> Embedded alarm horn.

COMMUNICATION

ATS115
· N.1 USB Port to program the controller through PC.

ATS115*Plus*
· N. 1 USB Port.
· N. 1 Serial port RS232 Modbus RTU.
· N. 1 Isolated serial port RS485 Modbus RT.
· N. 1 RJ45 Port Ethernet interface TCP/IP.

Optional
· GSM/GPRS/GPS modem (REWIND): SMS in case of warnings and alarms.
· PSTN modem for data call in case of alarm and warning.
· Supervisor software for Windows®.

ATS115 and **ATS115***Plus* are multilingual devices.
The selectable languages are, English, Italian, Spanish, French, Russian and Portuguese/Bra.

MEASURES

Source A Voltage:
(mains or genset)
L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1.
True RMS measure.
Lx-N max. voltage < 300Vac cat. IV.

Source B Voltage:
(mains or genset)
L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1.
True RMS measure.
Lx-N max. voltage < 300Vac cat. IV.

A or B Currents
or towards load:
L1, L2, L3, N.
True RMS measure.
Rated current: /5A and /1A.
Overload of measure current: 4 x 5Aac (sinusoidal).

A or B Frequency:
Resolution = 0.1 Hz.
Accuracy = ± 50ppm, ±35ppm/°C (typical).

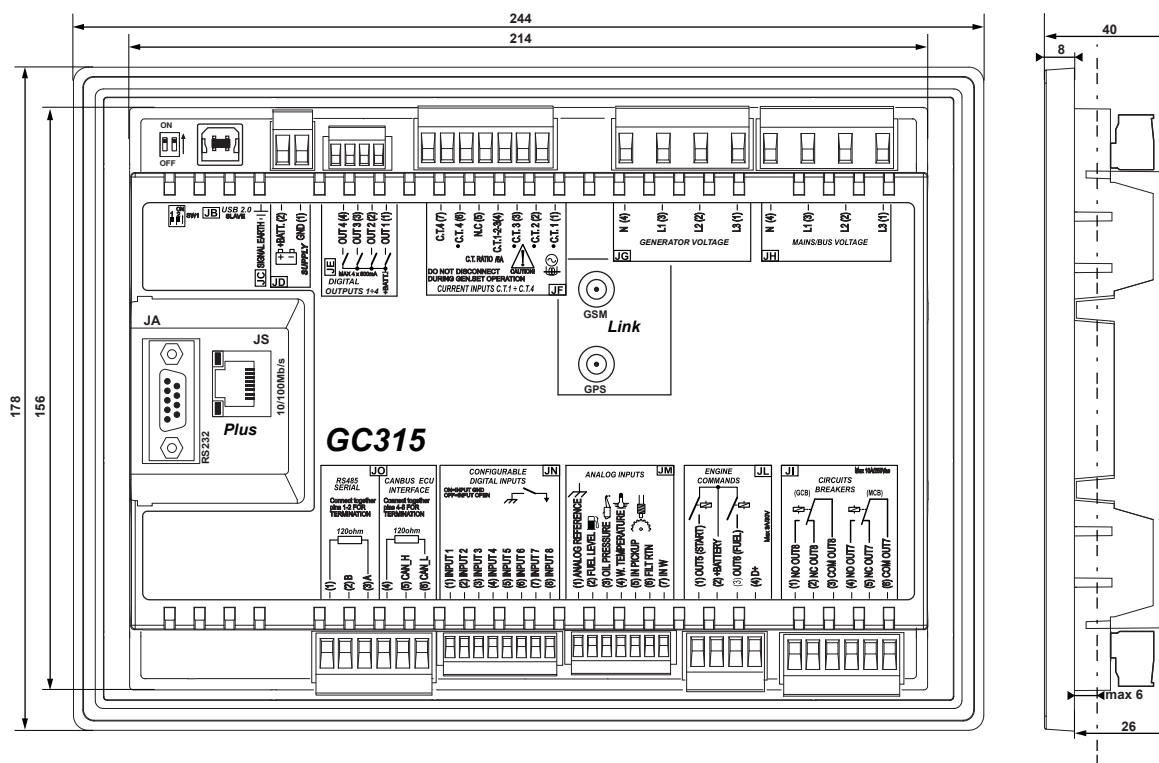**Battery Voltage:**
Resolution = 0.1V.

PROTECTIONS

Status and Signals
- Source A live (Mains or Genset).
- Source B live (Mains or Genset).
- Source A circuit breaker closed.
- Source B circuit breaker closed.
- Source A or B Start/Stop.
- Remote Start.
- Battery failure (Max/Min Voltage).
- Max. controller temperature.
- Emergency stop.
- Clock set up failure.

Protections
- Genset "X" not stopped.
- Genset "X" out of threshold.
- Source A or B operation conditions not reached.
- Source A or B wrong phase sequence.
- Source A or B failure.
- Source A or B circuit breaker not open.
- Source A or B circuit breaker not closed.

A set of high efficiency LED is used for signaling the statuses of the genset and of potential alarms occurred. Secondary alarms are represented by their corresponding display code.

TECHNICAL DATA

> Supply voltage: 7...32 Vdc.
> Power consumption: typically, less than 2W (Auto mode, Standby, AMF active, LCD Lamp Saving active).
> Genset rated frequency 50Hz or 60Hz.
> LCD: transflective with LED backlight.
> Operating temperature: -25 °C to 60 °C.
> Protection degree: IP65 (gasket included).
> Weight: 600g - 650g (*Plus* version).
> Overall dimension: 244 (W) x 178 (H) x 40 (D).
> Panel cut-out: 218 x 159 (W x H).
> Graphic display dimensions: 70 x 38 mm - 128 x 64 pixel.
> EMC: compliant with EN61326-1.
> Safety: built in compliance with EN61010-1.

SICES ®
Empowering your control

GC315

Dimensions: 244, 214, 178, 156, 40, 8, 26, max 6

ON / OFF

SW1 | JB USB 2.0 SLAVE

JC SIGNAL EARTH | JD +BATT. (2) / SUPPLY GND (1)

JE OUT 4 (4) / OUT 3 (3) / OUT 2 (2) / OUT 1 (1)
MAX 4 x 800mA
DIGITAL OUTPUTS 1÷4

C.T.4 (7) / C.T.4 (6) / NC (5) / C.T.3 (4) / C.T.3 (3) / C.T.2 (2) / C.T.1 (1)
C.T. RATIO /5A
DO NOT DISCONNECT DURING GEN-SET OPERATION
CURRENT INPUTS C.T.1 ÷ C.T.4
CAUTION
JF

JG GENERATOR VOLTAGE: N (4) / L1 (3) / L2 (2) / L3 (1)
JH MAINS/BUS VOLTAGE: N (4) / L1 (3) / L2 (2) / L3 (1)

GSM Link
GPS

JA
JS 10/100Mb/s
RS232
Plus

JO
RS485 SERIAL
Connect together pins 1-2 FOR TERMINATION
120ohm
(1) / (2) B / (3) A

CANBUS ECU INTERFACE
Connect together pins 4-5 FOR TERMINATION
120ohm
(4) / (5) CAN_H / (6) CAN_L

JN CONFIGURABLE DIGITAL INPUTS
ON=INPUT GND OFF=INPUT OPEN
(1) INPUT 1 / (2) INPUT 2 / (3) INPUT 3 / (4) INPUT 4 / (5) INPUT 5 / (6) INPUT 6 / (7) INPUT 7 / (8) INPUT 8

JM ANALOG INPUTS
(1) ANALOG REFERENCE / (2) FUEL LEVEL / (3) OIL PRESSURE / (4) W. TEMPERATURE / (5) IN PICKUP / (6) PILT RTN / (7) IN W

JL ENGINE COMMANDS
(1) OUT 5 (START) / (2) +BATTERY / (3) OUT 6 (FUEL) / (4) D+
Max 9A/9W

JI CIRCUITS BREAKERS
(GCB) / (MCB)
Max 10A/250Vac
(1) NO OUT 8 / (2) NC OUT 8 / (3) COM OUT 8 / (4) NO OUT 7 / (5) NC OUT 7 / (6) COM OUT 7

CERTIFIED MANAGEMENT SYSTEM
ISO 9001 - ISO 14001
BS OHSAS 18001
RINA / IQNet

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