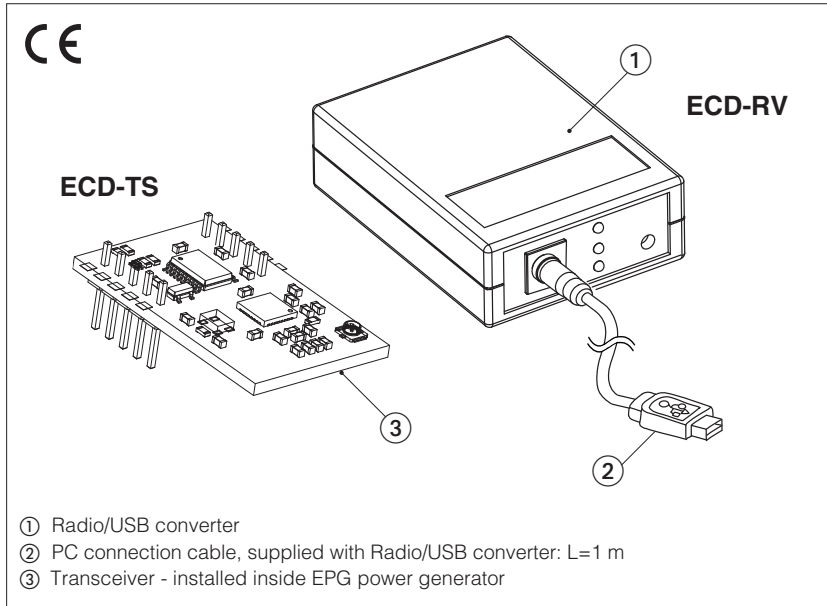


Electronic communication devices

for EPG Electronic Power Generators



ECD

Electronic communication devices designed to monitor the operating parameters of EPG generators of Atos Induction heating systems.

They allow the wireless transmission of the diagnostic information from EPG power generator to a PC, such as the operating status of the system and any alarms.

The system consists of an ECD-TS transceiver module, preinstalled in the EPG generator, and a USB/radio converter ECD-RV to be connected to the PC through USB port; see section 2.

The communication between the devices is managed by ECD-SW software, to be installed on the PC. The software is supplied together with the ECD-RV radio/USB converter.

1 MODEL CODE

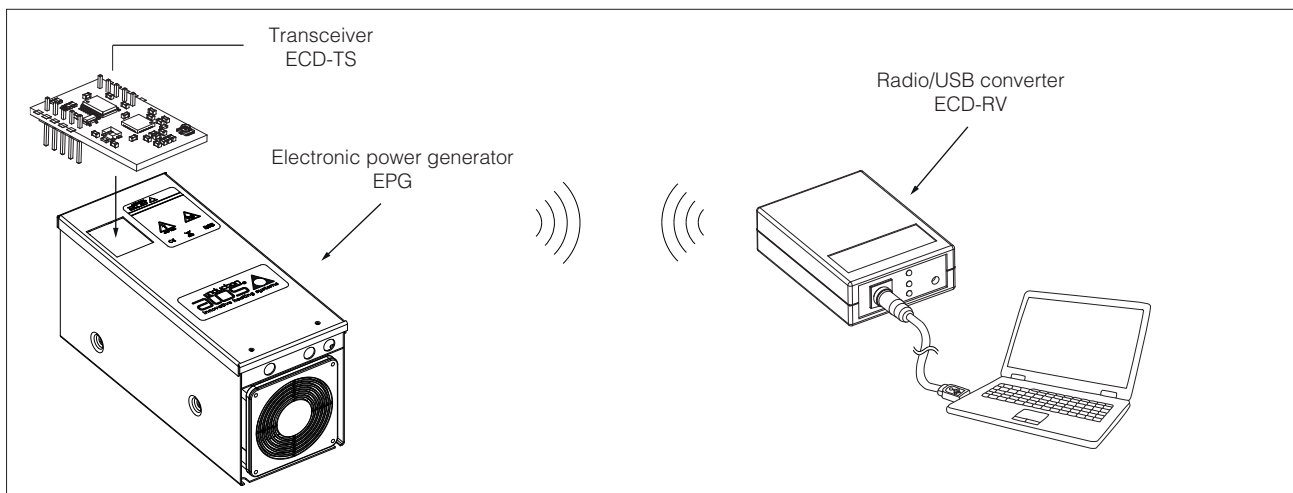
ECD	-	RV	*
Electronic communication device			Series number
Type of device			
RV = Radio/USB converter TS = Transceiver SW = Software			

2 COMPONENTS DESCRIPTION

The ECD system includes the following devices:

- ECD-TS: the transceiver is preinstalled in the EPG generator. See the E-MAN-ECD manual "ECD Radio Modules for Electronic Power Generators" for the installation procedure of the ECD-TS module.
- ECD-RV: Radio/USB converter to be connected to PC or laptops via USB port A type. The radio module dialogues with the ECD-TS counterpart module installed in the power generator. The radio/USB converter can communicate with several EPG generators equipped with an ECD-TS transceiver; however, simultaneous communications are not possible, the communication can be established with one device at time.
- ECD-SW: software developed by Atos Induction to manage communication between ECD-TS and ECD-RV modules and to display process data.

3 FUNCTIONAL EXAMPLE



4 FUNCTIONAL DESCRIPTION - see E-MAN-ECD manual for a detailed description of the functions and use of the software

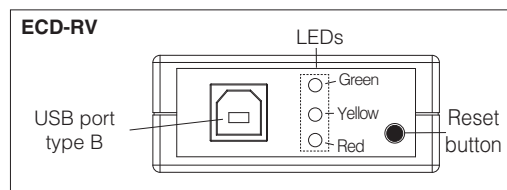
Through the ECD-SW software it is possible to monitor, in real time, the operating parameters of the power generator. In order to establish the communication with the generator follow the next steps:

- 1) Connect the ECD-RV radio converter to the PC's USB port by the cable supplied with the module. Once connected, the converter is immediately ready and does not require external power sources.
- 2) Start the ECD-SW software, previously installed on the PC.
- 3) Power the EPG generator to connect with.
- 4) On the main screen of the software (HOME), insert the generator's serial number in the software box "Device Serial Num." ①. The serial number is shown on the generator's internal board and is visible through the window on the cover, see section 7 of tech. table AI100. The serial number consists of a letter and a number (for example M77).
- 5) Click on the software box "Connect" ②: if the connection is successful, in the box "Power Set" will appear the value of the maximum output power set on the generator. Otherwise, no number will be displayed in the box. This connection operation is necessary every time the software is started. If a new generator is to be connected, (the previous one must be disconnected using the "Disconnect" box) enter the new serial code, and press the "Connect" box again.

The operating status of ECD-RV is represented by three LEDs on the converter front panel:

- Green LED ON: unit powered
- Yellow and Red LEDs flashing: data transfer to and from the module

In case of communication problems, it is possible to restart the ECD-RV converter. To reboot the radio module, press the reset button positioned on the front of the converter (using a little screwdriver), hold for a second and release it; repeat the steps from point 4).



The main page (HOME) shows the main information of the induction process. This essential tool allows you to check the correct system functioning, facilitating remote assistance in case of faults.

Below is shown the page (HOME) with the main parameters; to view the English version click on the British flag at the top left.

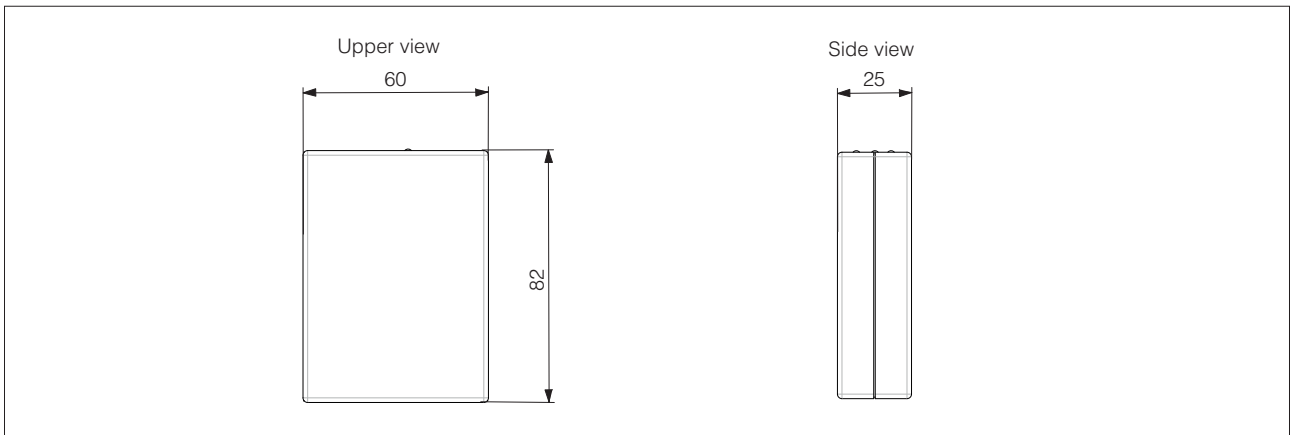
- Line Voltage: line voltage measured at generator input
- Temperature: internal generator temperature
- Line current: current absorbed by the generator
- Coil current: instantaneous current supplied to the heating element, maximum current allowed and margin between the two values
- Frequency: working frequency, resonance electric frequency and difference between the two values
- Actual Error Code: any system errors are listed here; for a description of the error codes see the E-MAN-EPG generator user manual
- Power Set: maximum output power set on the generator
- Power Gen: instantaneous power supplied to the heating element

5 MAINS CHARACTERISTICS

Transmission frequency	868 MHz
Transmission power	10 mW
Radio range	up to 150 m in open field
Compliance	EC Declaration of Conformity valid in accordance with the directives: 2004/108/CEE (EN 301 489-03; EN 301 489-01; EN 55022 + A1 ; EN 61000-4-1 ; IEC 61000 – 4-3); 1999/05/CE (R&TTE); ETS 300.220-2; ETS 300.220-1

6 MINIMUM SYSTEM REQUIREMENTS

Operating System	Window 7, 8, 10
USB port	1.1; A type
Processor	32 bit (x86)
RAM	1 Gb

7 DIMENSIONS OF ECD-RV [mm]**8 RELATED DOCUMENTATION**

AI100 Electronic power generators	E-MAN-ECD Radio Modules for Electronic Power Generator User Manual
AI700 Electronic command trolleys	