

NEW

Power Cube[®] System 900

Precision Induction Heating Generator & Controller



- HIGH POWER OUTPUT / HIGH EFFICIENCY
- VERY COMPACT DESIGN
- CONTINUOUS SINGLE OUTPUT or ALTERNATE DOUBLE OUTPUT
- AUTOMATIC TUNING
- FRIENDLY USER INTERFACE
- EMBEDDED TEMPERATURE CONTROL with 3 control modes
- MANAGEMENT of TWO OPTICAL PYROMETERS for heating temperature control
- FIELD BUS INTERFACE
- WIDE RANGE OF ANALOG-DIGITAL I/O SIGNALS
- INTERNAL MEMORY to store up to 50 working receipts
- STABLE and ACCURATE OUTPUT POWER even with variable load conditions
- HIGH SAFETY: all models output isolated from the mains
- BUILT-IN SELF-DIAGNOSIS
- Supplied with CALIBRATION CERTIFICATE



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Microcomputer controlled advanced solid-state Generator

Power Cube System 900 is a high power, high frequency, induction 900 series **Generator in a very compact size** with an **integrated Controller** and a **graphic TFT display for programming**.

Power Cube System 900 provides all the features of the Power Cube 900 generators along with embedded thermal cycle control, pyrometric temperature measurement and sophisticated interfaces with external logic controllers.

Fully integrated Heating System



1 Precision programmable GENERATOR, controlled by microcomputer

2 One or two miniaturized HEATING HEADS, applicable on special adjustable supports

3 One or two ANTIOXIDANT GAS DIFFUSERS

4 One or two SLE OPTICAL PYROMETERS

5 FIELDBUS interface

3 One or two COOLING GAS DIFFUSERS

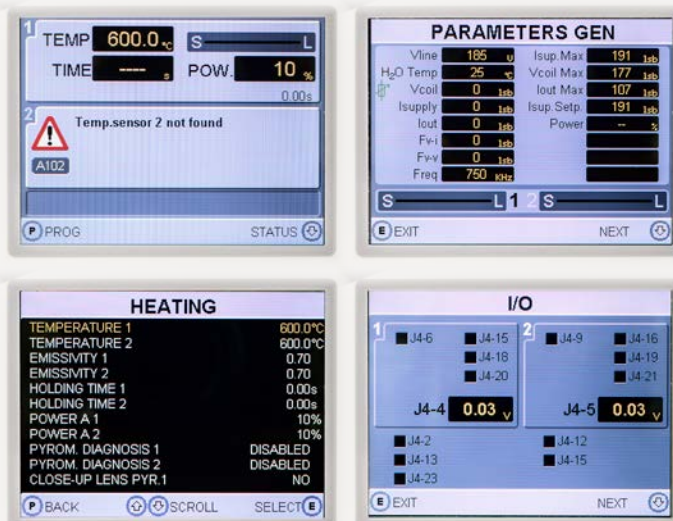
Main specifications

POWER SUPPLY	Supply voltage	180 ÷ 260 Vac, 1ph - 50/60 Hz
	Maximum absorbed power	3.5 kW
DIMENSIONS	Generator [W x D x H]	275 mm x 265 mm x 140 mm
	Heating head HH10 [W x D x H]	62.5 mm x 123 mm x 95 mm - cable length from 1.5 to 6 m
	Heating head HH15 [W x D x H]	52 x mm 75.5 mm x 77 mm - cable length from 1.5 to 6 m
WEIGHT	Generator	10 kg
	Heating head	HH10: 1.6 kg / HH15: 1.3 kg
OPERATING CONDITIONS	Working temperature	+5° ÷ +55°C
	Storage temperature	-25° ÷ +70°C
	Relative humidity	20-95% (without condensation)
CONFORMITY	Complies with applicable international standards for Electrical Safety and Electromagnetic Compatibility (EMC)	

The functions managed by the Generator include the temperature reading by means of CEIA optical pyrometers of the SLE series, the related power regulation and the activation (by means of relays) of antioxidant/cooling gas diffusers. A wide 3.5" high-resolution colour display allows the operator to access all programming function parameters quickly.

Integrated advanced Controller

- Digital and analog control of the power
- 3 programmable control modes
- Piece temperature managed by one or two optical infrared sensors
- Extremely fast closed-loop control algorithm (0.5ms feedback control time) for the most accurate power and temperature regulation
- Constant and repeatable power generation via microprocessor control
- Independent programming for each heating head
- Internal memory with 50 sets of working parameters



SH/SLE Compact Optical Pyrometers

- Adjustable emissivity from 0.1 to 1
- High accuracy & high measurement speed
- Very compact design with stainless steel case
- Available with different focus distance and aiming spot size
- LED aiming light
- Supplied with Calibration Report traceable to Certified International Standards



SH15/SLE specifications

	D1	D2	D3	D4
TEMPERATURE RANGE	80... 700°C	120... 900°C	200... 1600°C	500... 2000°C
TEMPERATURE RESOLUTION	0.1 °C		0.1 °C [up to 999.9 °C]	1 °C [above 1000 °C]
SPOT RANGE [mm]	0.5÷12.5	0.4 ÷4.5	0.4÷2	0.4÷2
EMISSIVITY RANGE	0.1-1.0			
RESPONSE TIME	100 uS Time Constant			
PROTECTION CLASS	IP54 [IP65 upon request]			
OPERATING TEMPERATURE	0 °C to + 65 °C			
CONFORMITY	Complies with applicable international standards for Electrical Safety and Electromagnetic Compatibility [EMC]			

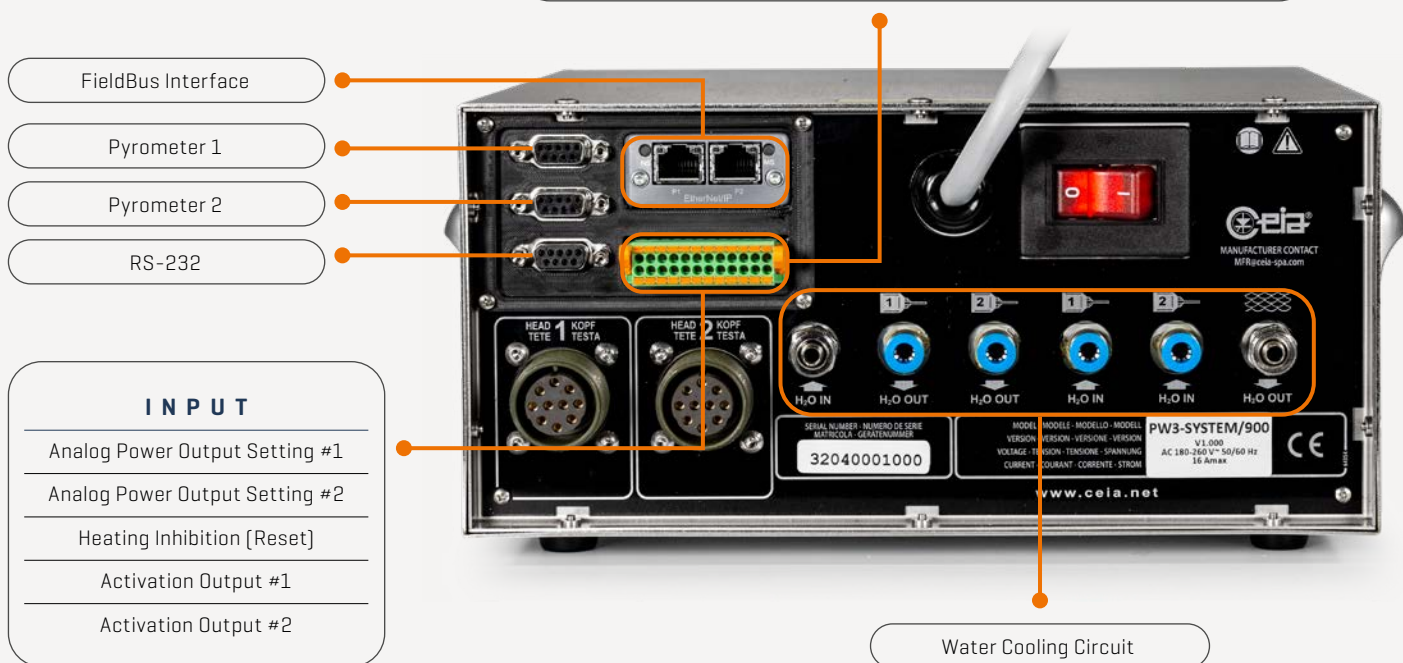
Interface Functions

The **Field Bus and RS-232 interfaces** allow connection to a PLC or custom external logic for remote programming, activation and control of the output power, of the temperature, of the operational status of the generator and any working parameter.

Equipment Connection

NINE OUTPUT (RELAYS)

Antioxidant gas diffuser#1/2	End of heating cycle
Workpiece at target temperature #1/2	Generator ready
Gas diffuser#1/2	Generator running



INPUT

Analog Power Output Setting #1
Analog Power Output Setting #2
Heating Inhibition (Reset)
Activation Output #1
Activation Output #2

Field Bus management (optional)



• Management and control of the heating process via Field Bus protocol:

- ▶ Profinet
- ▶ EtherCAT
- ▶ EtherNet / IP
- ▶ Profibus
- ▶ Modbus TCP



Model Configuration



BASE UNIT	code
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INDUCTIVE HEATER AND CONTROLLER	PW3-SYSTEM/900
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FIELDBUS OPTION*		code
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FIELDBUS INTERFACE	ETHERCAT	SYS900-ETHERCAT
	ETHERNET/IP	SYST900-ETHERNET/IP
	MODBUS	SYS900-MODBUS-1
	PROFIBUS	SYS900-PROFIBUS-1
	PROFINET	SYS900-PROFINET

*To be required at the moment of the generator order

HEATING HEADS	code
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COMPACT HEATING HEAD HH10

CABLE LENGTH	1.5 m	PWH-10-XX-15/900
	3.0 m	PWH-10-XX-30/900
	4.0 m	PWH-10-XX-40/900

MINIATURIZED HEATING HEAD HH15

CABLE LENGTH	1.5 m	PWH-15-XX-15/900
	3.0 m	PWH-15-XX-30/900
	4.0 m	PWH-15-XX-40/900

INDUCTOR HOLDER KIT	code
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COMPLETE INDUCTOR HOLDER KIT [1 PIECE]

TOTAL LENGTH	150 mm	32836
	100 mm	32837
	65 mm	32838

ACCESSORIES	code
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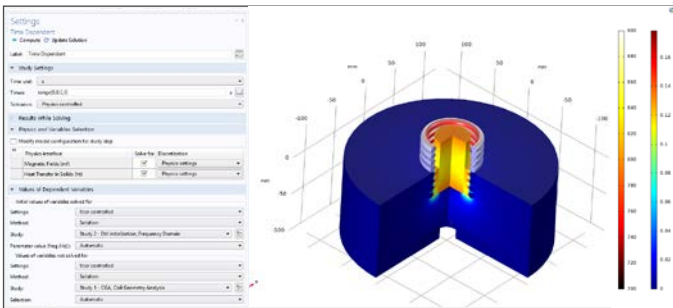
SH/SLE COMPACT OPTICAL PYROMETERS	80... 700°C	SH15/SLE-550-D1
	120... 900°C	SH15/SLE-550-D2
	200... 1600°C	SH15/SLE-550-D3
	500... 2000°C	SH15/SLE-550-D4
OPTICAL PYROMETERS CONNECTION CABLE LENGTH	1.5 m	19623
	3 m	23243
	6 m	66685
CLOSE-UP LENS	60 mm	CL60/SH15
	120 mm	CL120/SH15
	240 mm	CL240/SH15
LENS CLEANING ACCESSORIES	for SLE Optical Pyrometers	SLE-PURGE
COOLING JACKET	for SLE Optical Pyrometers [complete with lens cleaning accessories]	SLE-PURGE-COOL
90° READING ACCESSORY	for SLE Optical Pyrometers	SLE-90D-BD
SH23 SUPPORTING BASE	for SLE Optical Pyrometers	21871
ACTIVATION PEDAL CABLE LENGTH	1,5 m	3457
	4 m	46059
ES35 MICROMETRIC SUPPORT	for Heating Heads	9252
ES35B BALANCING MICROMETRIC SUPPORT	for Heating Heads	79900
ES35P PNEUMATIC SUPPORT	for Heating Heads	30313
ES35PS PNEUMATIC SUPPORT	for Heating Heads complete with position sensors	31166
GAS DIFFUSERS [Includes gas diffusers, flow regulators, electric valves and adjustable supports]	Anti-Oxidizing gas diffusion system	SG100
	Cooling and Anti-oxidizing gas diffusion system	SG101
POWER SUPPLY KIT	for Gas Diffusers	106134



CEIA Headquarters (Italy)

The CEIA Difference

▶ Constant market share growth thanks to the recognized outstanding quality and reliability of the installed equipment



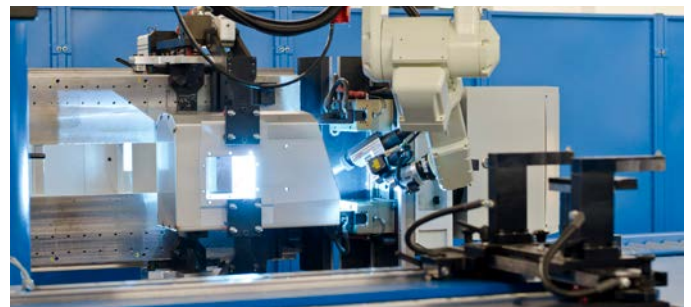
▶ Consolidated electromagnetic coil design and engineering capability



▶ ISO 17025 accreditation on Electromagnetic Testing



▶ Complete control and execution of the electronics manufacturing



▶ Highly automated and repeatable mechanical manufacturing processes



▶ Digital Factory Testing, accurate automated calibration and final individual certification of the delivered equipment



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CEIA reserves the right to make changes, at any moment and without notice, to the models (including programming), their accessories and options, to the prices and conditions of sale. DP040K0018v2000hUK- 2021

