INDUS CP CONTROLLER MODEL CP 402

INDUS CP controller model CP402 controls the Carbon Potential (CP) inside a heat treatment furnace following one of the 50 set programs selected by the user. It takes its inputs from the Oxygen Sensor (Zirconia oxygen probe or Lambda sensor), thermocouple output representative of the process and uses these data to compute CP. These parameters as well as the measured temperature are used for control.

SPECIFICATIONS

Principle	The controller calculates CP from input data from the Zirconia oxygen probe or Lambda sensor and thermocouple at the tip of the probe as well as the CO % in the furnace and controls the carburization process at the set values of CP. CO % can be set from the front panel.
Oxygen Measurement	Zirconia oxygen probe or Lambda sensor
Thermocouple	K – Type or R – Type
Measurement Parameter	Parameter / Range / Resolution CP / 0.2 – 1.4 / 0.01 O2 in mV / 0 – 1500 / 0.1 T/C in mV (K-Type) / 0 – 50 / 0.01 T/C in °C (K-Type) / 0 – 1200 / 1 T/C in mV (R-Type) / 0 – 20 / 0.01 T/C in °C (R-Type) / 0 – 1600 / 1
Display	2 x 16 Alpha Numeric LCD Display
Keyboard	Membrane - 3 x 4
Warm-up Time	30 Sec
Response Time	1 Sec
Serial output	RS232 and RS485
Analog output for CP	4-20mA or 0-20mA or 0-5V (specify on order)
Isolated Relay output	230 V AC potential free contacts – 4 Nos.
Features	Calculates CP online, Programmable with different levels of security, Memory storage for 50 programs, Power failure detection, Auto Purging, Inbuilt PID algorithm for controls, Programmable Alarms – Control cycle over alarm, Sensor and T/C failure alarm, Inbuilt Temperature monitor (Optional)External display port
Operating Temperature	0 – 55 °C
Power Supply	230V AC, ±10%, 50 Hz
Control Cycles Heating Cycle	Process fluid (Methanol) switched ON at operator set temperature, Control fluid (Acetone) switched ON at a higher preset temperature
Boost Cycle	The system controls CP at the set value (high CP) by controlling the control fluid till the boost cycle time is over
Diffusion Cycle	The system controls CP at the set value (low CP) by controlling the control fluid till the diffusion cycle time is over
Cooling Cycle	The process fluids are switched OFF at the cooling temperature settable by the operator

Manufactured & Marketed by :

INDUS *Scientific* Private Limited

11/2B, Hennur Bande, Hennur Road, Bangalore 560 043
T/F: (080) 2544 9762/ 64, Fax: + 91 80 2543 0914
Email: info@indusscientific.com
Website: www.indusscientific.com

AN ISO 9001:2000 Certified Company

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