

## AC50 Single-Loop Atmosphere Controller



- Carbon
- Oxygen
- Dew Point

### Features and Benefits

- Direct replacement for SSi's AC20 and atmosphere controllers
- Controls % carbon, dew point, probe millivolts, % oxygen
- Oxygen autorange, % O<sub>2</sub>, ppm, ppb, and exponential
- 1/4 DIN
- Ethernet Modbus TCP communications
- Modbus RTU RS485 communications
- 4 Relay outputs
- 2 Analog outputs
- 5 Digital inputs
- High impedance input > 100 meg
- Three internal timers for probe burnout, duration, and recovery
- Digital input for door or external activation of burnout
- Automatic probe impedance test
- Remote software configuration tool
- CE, RoHS, Reach (Europe), UL, cUL

Designed with advanced features and cutting-edge technology, the AC50 is the ideal choice for ensuring optimum performance of atmosphere furnaces and generators. With its high accuracy and fast response time, the AC50 delivers unparalleled control and stability, even in the most demanding conditions.

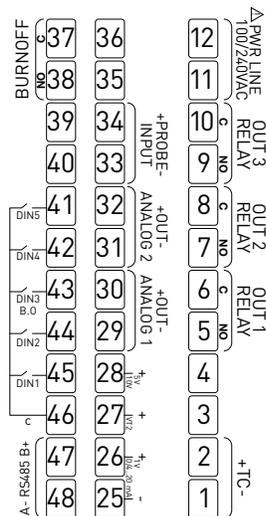
<b>MAIN AND AUXILIARY INPUT (Main, Aux1, Aux2)</b>	Zirconium probe input (AUX2)	- 0...2.4V high impedance - Input impedance: > 100 MΩ - Calibration accuracy: < 0.1% full scale - Thermal shift: < ±0.003% full scale/°C starting from 25°C room temperature - impedance reading (0..100kΩ)	
	T/C Input 1	Thermocouples type J, K, R, N, S, T, C, D, B, E, L; Custom linearization	
	Temp. unit of measure	Grade °C/°F, selectable on the keypad	
	Type	Isolated via external transformer	
<b>DIGITAL INPUTS</b>	Number	5	
	Type	voltage-free contact, or NPN 24 V - 4,5 mA, or PNP 12/24 V - max 3,6 mA	For detail see Connections
	Isolation	250 V	
<b>OUTPUTS</b>	Relay (R)	Number: 4; Type of relay contact: NO Max. current: 5A (2A at ambient temperature up to 45 °C for certification UL), 250VAC /30 VDC, cosφ = 1 Minimum load: 5 V, 10 mA	
	Analog retransmission (A1) (A2)	Number: 2; 4...20 mA, Rout: < 500 Ω Resolution: 12 bit; Isolated from main input	
	No. of alarm functions	4 max, assignable to an output	
<b>ALARM</b>	Possible configurations	Zirconium probe diagnostics alarms, both during operation and when cleaning the probe, PV alarm capability	
<b>CONTROL</b>	Control	PID, single action enriching gas (out 1) or dilution air (out 2), double action enriching gas (out 1), dilution air (out 2)	
<b>POWER SUPPLY</b>	Operating voltage	100...240 VAC ±10%, 50/60 Hz	
<b>CONNECTIONS</b>	RS485	Baudrate: 1200, 2400, 4800, 9600, 19.200, 38.400, 57.600, 115.200 bit/s Protocol: Modbus RTU Insulation compared to main entrance Screw terminals and crimp connector, max wire section 2.5mm	
	Server Modbus	Baudrate: 1200, 2400, 4800, 9600, 19.200, 38.400, 57.600, 115.200 bit/s Protocol: Modbus RTU Server	
	Ethernet Modbus TCP	Baudrate : 10/100BaseTX, 10/100Mbit/s Protocol : Modbus TCP Client Standard RJ45 connector	
<b>CE STANDARDS</b>	EMC (electromagnetic compatibility)	Conforms to Directive 2014/30/EU standards EN 61326-1 Emissions in industrial environment class A	
	LVD safety	Conforms to Directive 2014/35/EU standards EN 61010-1	
<b>CERTIFICATIONS</b>		CE, RoHS, REACH (Europe); UL, cUL (USA, Canada)	

Description	Part Number
AC50 with Ethernet Modbus TCP	31070
AC50 with Modbus RTU RS485	31072



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**Terminal Layout**

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