

### GENERAL SPECIFICATION

<b>Displays</b>	Large 0.56" 4 digit High Efficiency Red 7 segment led display of measured temperature, Error 10 Red bar leds Alarm Status Red leds. Heat Output Red led. Cool Output Green led.	
<b>Switches</b>	Touch with Tactile Feedback.	
<b>Facia</b>	Polyester, dustproof resistant to most liquids.	
<b>Case</b>	Coated sheet steel case with plastic bezel	
<b>Terminals</b>	3 independent rear terminal blocks, screw connections	
<b>Dimensions</b>	Overall 96 x 96 x 200 mm behind panel depth Cut out 92 x 92 mm +0-0.8 mm to DIN 43700.	
<b>Weight</b>	1500 grams approx.	
<b>Inputs</b>	Thermocouple, Resistance Thermometer (Pt100), 4 wire. Automatic lead compensation Linear Volts, 0 - 5V, 0 - 10V, Linear mA, 0-20 mA, 4-20 mA,  Calibration overall 0.2% (For 10-45°C ambient) Including automatic CJC for thermocouple inputs Sampling rate 10 readings per second.	
<b>Sensor Failure</b>	Thermocouple	Open circuit detection, heat output off (Fail safe),
	Resistance thermometer	Short circuit and open circuit detection.
	4 - 20 mA	Out of range detection.
<b>Control</b>	Three Term (P+I+D) fully adjustable : Proportional (Heat) 0.1 - 100.0% Proportional (Cool) 0.1 - 100.0% Integral 0 - 100.0 mins. Derivative 0 - 10.00 mins. Integral Desaturation 0-1.00 Xp Heat/Cool Crossover + / - 99°C	
<b>Control Outputs</b>	Heat output : Relay 2A/264V, logic, isolated Volts and mA, Valve positioner Cool output : Relay 2A/264V, logic, Volts and mA, Valve positioner  Note: Valve positioner output can be fitted as a heat or cool output, but not both	
<b>Alarm Outputs</b>	Two Relay with voltage free contacts rated at 2A/264V. Fully configurable as an absolute value or error value, and coil status as energised or de-energised in the alarm condition	
<b>Remote Setpoint input</b>	Remote input 0-5 volts dc linear representing configured range. Configurable as Track or Hold as standard. Option : Input of 4 - 20 mA or 0 - 10 volts dc.	
<b>Retransmission of Output Signal</b>	Measured as 0-5 volts dc linear (12 bit resolution).	
<b>Serial Communications</b>	Optional RS 232, RS 485.	
<b>Supply</b>	110 or 230 Volts 50 / 60 Hz - 10% / + 15%	
<b>Power</b>	10VA Max.	
<b>Operating temperature</b>	0 - 50°C	

**MICRO 96T+** High performance 1/4 din (96 x 96 mm)  
An evolution of the very popular and widely used **MICRO 96** range, providing a direct, plug in replacement of older units



- ▶ High Stability temperature / process controllers
- ▶ Direct replacement for existing MICRO 96 controllers
- ▶ Simple user friendly operation
- ▶ 96 x 96 mm Din Format
- ▶ Bright 0.56 inch Red led Display
- ▶ Process & Temperature Inputs
- ▶ Wide range of outputs including: Relay, Logic, isolated dc and motorised valve positioner
- ▶ Optional heat / cool, and fully configurable alarms
- ▶ 14 bit Analogue to Digital conversion
- ▶ Simple to install and use
- ▶ High Accuracy and Stability
- ▶ Designed and made in Great Britain
- ▶ Two year parts and labour warranty

The MICRO 96T+ 1/4 DIN Controller is a High Stability temperature Controller / Process controller available with a wide range of options and outputs including motorised valve positioner.

### Features of the MICRO 96T+ controller include :

Development of the highly successful MICRO 96 range of temperature / process controllers, offering a direct replacement for original controllers.  
 Large red display giving continuous indication of measured value.  
 Accurate high resolution deviation indication of measured value from setpoint.  
 Large finger size pushbuttons with positive tactile feel for ease of use.  
 High resolution 14 bit Analogue to Digital converter  
 Sophisticated proven control algorithm.  
 The 96 x 96 mm 1/4 DIN size makes it ideal for replacement of industry standard controllers.  
 It is manufactured and tested to provide high performance, high stability and long reliable life in the most demanding research and industrial environments.  
 Optional cool outputs may be specified.  
 Two optional fully configurable alarms with 2 Amp relay outputs may be specified.  
 Other options include analogue remote setpoint, retransmission of measured value and serial communications RS 232, RS 485.

### Very simple to operate

The controller can be locked, so that the operator can only adjust the set temperature within a restricted range and interrogate the control parameters and alarms, but not adjust them.

### Fully configured

All controllers are supplied fully tested and configured to your requirements they are ready to install and work.

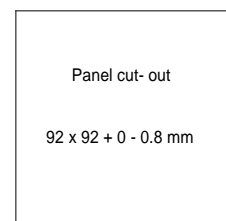
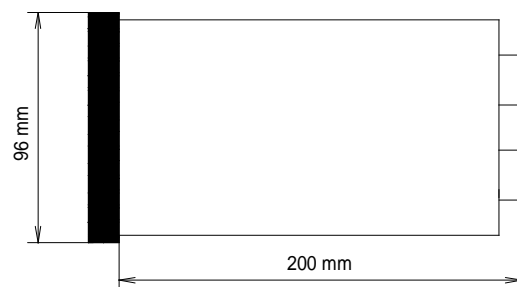
### Warranty

All MICRO 96T+ controllers are covered by 2 years parts and labour warranty.

### Applications

The high stability specification together with a wide choice of outputs make the MICRO 96T+ controller ideal for all applications in research and industry where precise, reliable control of temperature is required such as: crystal growth, metallurgical creep testing machines, environmental chambers, ovens and heat treatment furnaces.

### DIMENSIONAL DETAILS



### ORDERING INFORMATION

MICRO 96T+	Sensor	Minimum Range	Maximum Range	Heat Output	Cool Outputs	Options
T.C Type <b>K</b> NiCr / NiAl	Range 1	- 200 °C	1300 °C	H0 None	C0 None	<b>Sb Sensor break</b>
T.C Type <b>J</b> Fe / Con	Range 2	- 200 °C	800 °C	H0-5V 5V isolated reverse acting (1)	C0-5V 5V (1) reverse	*Sb0 Standard*
T.C Type <b>R</b> Pt 13% Rh	Range 3	0 °C	1700 °C	H0-10V 10V isolated reverse acting (1)	C0-10V 10V (1)	Sb1 Man power heat
T.C Type <b>S</b> Pt 13% Rh	Range 5	0 °C	1700 °C	H0-20mA 0-20mA isolated reverse acting (1)	C0-20mA 0-20mA (1)	Sb2 Man power cool
T.C Type <b>N</b> Nicrosil / Nisil	Range 11	- 200 °C	1300 °C	H4-20mA 4-20mA isolated reverse acting (1)	C4-20mA 4-20mA	Sb3 Auto power heat
T.C Type <b>T</b> Copper / Con	Range 10	- 200 °C	350 °C	HLF(2) Fast Cycle logic	CLF(2) Fast Cycle logic	Sb 4 Auto power cool
T.C Type <b>E</b> NiCr / Con	Range 29	- 200 °C	1000 °C	HR2(3) Slow Cycle Relay 30 seconds	CR2(3) Slow Cycle Relay	Sb5 as Sb0 but Auto rec.
T.C Type <b>B</b> Pt6% 30% Rh	Range 9	40 °C	1800 °C	HR2(4) Slow Cycle Relay 20 seconds	CR2(4) Slow Cycle Relay	Sb6 as Sb1 but Auto rec.
T.C Type <b>W/W26% Rh</b>	Range 20	0 °C	2000 °C	HR2(5) Slow Cycle Relay 10 seconds	CR2(5) Slow Cycle Relay	Sb7 as Sb2 but Auto rec
T.C Type <b>W3%Rh/W26% Rh</b>	Range 21	0 °C	2400 °C	HR2(6) Slow Cycle Relay 5 seconds	CR2(6) Slow Cycle Relay	Sb8 as Sb3 but Auto rec
T.C Type <b>Pallaplat Hereus</b>	Range 27	0 °C	1300 °C	H0-5V 5V isolated direct acting (7)	C0-5V 5V (7) direct	Sb9 as Sb4 but Auto rec
<b>Pt 100</b> RTD	Range 4	- 199.9 °C	199.9°C	H0-10V 10V isolated direct acting (7)	C0-10V 10V (7) direct	
<b>Pt 100</b> RTD	Range 7	0 °C	399.9 °C	H0-20ma 0-20mA isolated direct acting (7)	C0-20ma 0-20mA (7)	<b>P power up option</b>
<b>Pt 100</b> RTD	Range 26	-200 °C	800 °C	H4-20ma 4-20mA isolated direct acting (7)	C4-20ma 4-20mA (7)	*P0 Standard*
0 - 5 Volts Linear	Range 30	0	3.999	HVP Valve positioner (8)	CVP Valve positioner (8)	P1 Start up using stored op
0 - 10 Volts Linear	Range 31	0	39.99			P2 full power for 15 secs plus stored op
1 - 5 Volts Linear	Range 32	0	399.9			
2 - 10 Volts Linear	Range 33	0	3999			
0 - 20 mA Linear	Range 34	-1.999	1.999			
4 - 20 mA Linear	Range 35	-19.99	19.99			
	Range 36	-199.9	199.9			
	Range 37	-1999	1999			
						<b>Alarm outputs</b> A1, A2 2 Alarm Relays
						<b>Supply</b> 110V 50/60Hz 220V 50/60Hz 240V 50/60Hz
						<b>Remote Setpoint RSP</b> *RSP 5V(1), or 10V(1) RSP 5V(2), or 10V(2) Hold RSP 4-20mA(3) Track RSP 4-20mA(4) Hold
						<b>Retransmission of MV</b> RTM5V 0-5 Volts RTM10V 0-10 Volts RTM4-20mA 4-20mA *Factory default options
						<b>Comms</b> RS232 Comms RS422 Comms RS485 Comms

### ORDER CODE EXAMPLES

<b>MICRO96T+</b>	K Range 1	0	400	HLF Heat logic	CR2(4)	A1 A2
			110V	RS232 Comms	Sb0 P1 RSP5V(2) RTM 5V	

This specifies MICRO96T+ Controller Type K input 0-400 degrees Fast cycle logic heat output, relay cool output 2 alarms 110 Volts supply Standard sensor break, stored output power up 5 Volts Hold remote setpoint and 5 Volts retransmission of MV