TUC2

Microprocessor Based Temperature Sensor

The microprocessor based A/TUC2 can indicate room temperature, setpoint, fan speed, and occupied or unoccupied status with corresponding signals sent to your Direct Digital Control System (DDC System). This unit supports single sensor operation for several common sensor types and it provides the flexibility to indicate several options. Additionally, many options are field adjustable via the key-pad menu. The A/TUC2 is highly configurable as a standard offering but can also be engineered to meet special OEM requirements.

The A/TUC2 Series is covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on on ACI's web site, www.workaci.com

TEMPERATURE

SPECIFICATIONS

Supply Voltage	+12-40 VDC (0-1V, 0-5V, 0.5-4.5V) | +18-40 VDC (0-10V, 2-10V, 0-20 mA, 4-20 mA) | 20-28 VAC
Supply Current	Current Output: 100 mA maximum | Voltage & Resistive Output: 16 mA maximum
Temperature Accuracy	+/-1ºF (+/- 0.56ºC)
Operating Temperature Range	40ºF to 104ºF (5ºC to 40ºC)
Operating Relative Humidity Environment	0 to 95% Relative Humidity (non-condensing)
Analog Temperature Sensor Outputs	Resistive, 0-1V, 0.5-4.5V, 0-5V, 1-5V, 0-10V, 2-10V, 0-20 mA, 4-20 mA
Setpoint Accuracy	Resistance: +/-5% Full Scale Output, Analog: +/-2% Full Scale Output
Analog Setpoint Outputs	Resistive, 0-1V, 0.5-4.5V, 0-5V, 1-5V, 0-10V, 2-10V, 0-20 mA, 4-20 mA
Product Dimensions	(H) 4.56" (W) 3.00" (D) 1.26"

ORDERING

Select one Sensor Type (A), one Temperature Scale (B), one Setpoint Range (C), one Setpoint Offset (D) & one Setpoint Action (E). Proceed to (F) and select one Setpoint Midpoint, one Setpoint Range (G), one Setpoint Display (H), one Override (I) one Feedback (J), One Fan Speed (K), one System option (M) and one Display (N). **NOTE:** When selecting Fan (K) or System (L), please indicate the corresponding voltage, current, or resistance value for each selection. This chart is for reference purposes only. Please contact ACI for a finished part number before ordering.

A Temperature Sensor Type

○ None	○ 1K-RTD (385)	○ 2252	○ 10K-CP	○ 100K-S	○ 0-1 VDC	○ 0-10 VDC	○ 10-2 VDC	○ 20-0 mA
○ 1K-Nickel	○ 1035	○ 3K	○ 10K-CSI	○ 20K	○ 0-5 VDC	○ 2-10 VDC	○ 10-0 VDC	
○ 1K-Balco	○ 2K RTD	○ 3K-ASI	○ 10KS	○ 0-20 mA	○ 0-5.45 VDC	○ 4.5-0.5VDC	○ 5-0 VDC	
○ 1K-RTD (375)	○ 1.8K	○ 10K-AN	○ 20KS	○ 4-20 mA	○ 1-5 VDC	○ 5-1 VDC	○ 20-4 mA	

B Temperature Scale | C Setpoint Range | D Setpoint Offset Resistor | E Setpoint Action

B Temperature Scale

- ○ ºF (Fahrenheit)
- ○ ºC (Celcius)

C Setpoint Range

○ None	○ 8.5K	○ 0.5-4.5V
○ 400	○ 10K	○ 1-5V
○ 1K	○ 20K	○ 0-10V
○ 2K	○ 100K	○ 2-10V
○ 3K	○ 0-1 VDC	○ 0-20 mA
○ 5K	○ 0-5V	○ 4-20 mA

D Setpoint Offset Resistor

○ None	○ 2.05K	○ 866	○ 1290
○ 0	○ 4.75K	○ 889	○ 4K
○ 800	○ 6.2K	○ 3890	○ 2.49K
○ 900	○ 7.8K	○ 4550	○ 879
○ 1K	○ 10K	○ 1422	○

E Setpoint Action

- ○ NA (None)
- ○ DA (Direct)
- ○ RA (Reverse)

F Setpoint Midpoint

○ 55ºF (14ºC)	○ 60ºF (16.5ºC)	○ 65ºF (19ºC)	○ 70ºF (21.5ºC)	○ 75ºF (24ºC)	○ 80ºF (26.5ºC)	○ None
○ 56ºF (14.5ºC)	○ 61ºF (17ºC)	○ 66ºF (19.5ºC)	○ 71ºF (22ºC)	○ 76ºF (24.5ºC)	○ 81ºF (27ºC)	
○ 57ºF (15ºC)	○ 62ºF (17.5ºC)	○ 67ºF (20ºC)	○ 72ºF (22.5ºC)	○ 77ºF (25ºC)	○ 82ºF (27.5ºC)	
○ 58ºF (15.5ºC)	○ 63ºF (18ºC)	○ 68ºF (20.5ºC)	○ 73ºF (23ºC)	○ 78ºF (25.5ºC)	○ 83ºF (28ºC)	
○ 59ºF (16ºC)	○ 64ºF (18.5ºC)	○ 69ºF (21ºC)	○ 74ºF (23.5ºC)	○ 79ºF (26ºC)	○ 84ºF (28.5ºC)	

G Setpoint Scale

○ None	○ -2 to +2	○ -5 to +5	○ -8 to +8	○ -11 to +11	○ -14 to +14	○ -17 to +17	○ -20 to +20
○ -0 to +0	○ -3 to +3	○ -6 to +6	○ -9 to +9	○ -12 to +12	○ -15 to +15	○ -18 to +18	
○ -1 to +1	○ -4 to +4	○ -7 to +7	○ -10 to +10	○ -13 to +13	○ -16 to +16	○ -19 to +19	

H Display | I Override | J Feedback | K Fan* | L System* | M Comm Jack | N Display

H Display

- ○ None
- ○ ºF or ºC
- ○ Offset (+/-)

I Override

- ○ None
- ○ Short Temp Sensor
- ○ Short Temp Setpoint
- ○ Dry Contact

J Feedback

- ○ None
- ○ Digital Low Input
- ○ Digital High Input
- ○ 24 VAC
- ○ Dry Contact

K Fan*

- ○ Off
- ○ Auto
- ○ Low
- ○ Med
- ○ High
- ○ None

L System*

- ○ On
- ○ Off
- ○ Auto
- ○ Heat
- ○ Cool
- ○ None

M Comm Jack

- ○ No Jack
- ○ 4 Pin 4 Conductor
- ○ 6 Pin 4 Conductor
- ○ 6 Pin 6 Conductor
- ○ 3.5mm Stereo

N Display

- ○ Temp Only
- ○ Setpoint Only

*Voltage: 0, 1, 2, 3, 4, 5, 6, 8, & 10V
*mA: 0, 4, 8, 12, 16, & 20mA
*K Ohms: 0, 2.5, 7.5, 10, 15, 20 25, 10.77, & 13.866KΩ

The TUC2 enclosure has UL94-5VB flammability ratings.

RoHS COMPLIANT 2002/95/EC

TUCH2

Microprocessor Based Humidity Sensor

The microprocessor based A/TUCH2 can indicate room relative humidity, temperature, setpoint, fan speed, and occupied/unoccupied status with corresponding signals sent back to your DDC System. They utilize a capacitive sensing element to deliver a proportional analog output based on the relative humidity value sensed. The A/TUCH2 supports single sensor operation for several common sensor types (see A/TUC2 data sheet) and provides the flexibility to indicate several options. Additionally, many options are field selectable via the key-pad menu, including the blue backlight illumination settings. The A/TUCH2 is highly configurable as a standard offering, but can be engineered to meet special OEM requirements as well.

The A/TUCH2 Series is covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, www.workaci.com.

Automation Components, Inc.

SPECIFICATIONS

Supply Voltage	+12-40 VDC (Resistive, 0-1V, 0-5V, 0.5-4.5V, 1-5V)
	+18-40 VDC (0-10V, 2-10V, 0-20 mA, 4-20 mA)
	20-28 VAC (All Outputs)
Supply Current	Current Output: 100 mA maximum, Voltage & Resistive Output: 16 mA maximum
Temperature Accuracy	+/-1ºF (+/- 0.56ºC)
Operating Temperature Range	40ºF to 104ºF (5ºC to 40ºC)
Operating Relative Humidity Environment	0 to 95% Relative Humidity (non-condensing)
Analog Temperature Sensor Outputs	Resistive, 0-1V, 0.5-4.5V, 0-5V, 1-5V, 0-10V, 2-10V, 0-20 mA, 4-20 mA
Setpoint Accuracy	Resistance: +/-5% Full Scale Output Analog: +/-2% Full Scale Output
Analog Setpoint Outputs	Resistive, 0-1V, 0.5-4.5V, 0-5V, 1-5V, 0-10V, 2-10V, 0-20 mA, 4-20 mA
Product Dimensions	(H) 4.56" (W) 3.00" (D) 1.26"

ORDERING

Please refer to the ordering grid on page 32 of the Temperature Section (A/TUC2) and complete (A), (B), (C), (D), (E), (F), (G), (H), (I), (J), (K), (L), (M) & (N). Then select (O), (P), (Q), (R), (S), (T), (U) & (V) from the grid below. **NOTE:** This chart is for reference purposes only. Please contact ACI for a finished part number before ordering and/or if desired Output is not listed.

O RH Sensor
- 2%
- 3%
- 5%

P Sensor Output
0-1V	0-10V	1-0V	10-0V
0-5V	2-10V	5-0V	10-2V
0-.5-4.5V	0-20 mA	4.5V-.5V	20-0 mA
1-5V	4-20 mA	5-1V	20-4 mA

Q Setpoint Range
400	5K	100K	1-5V	4-20 mA
1K	8.5K	0-1V	0-10V
2K	10K	0-5V	0-20V
3K	20K	0.5-4.5V	0-20 mA

R Setpoint Offset
0	2.05K	10K
800	4.75K	4K
900	6.2K	2.49K
1K	7.8K	

S Pot Action
- NA (None)
- DA (Direct)
- RA (Reverse)

T Setpoint Midpoint
33	39	45	51	57	63
34	40	46	52	58	64
35	41	47	53	59	65
36	42	48	54	60	66
37	43	49	55	61	67
38	44	50	56	62	

U Setpoint Range
-0 to +0	-6 to +6	-12 to +12	-18 to +18
-1 to +1	-7 to +7	-13 to +13	-19 to +19
-2 to +2	-8 to +8	-14 to +14	-20 to +20
-3 to +3	-9 to +9	-15 to +15	
-4 to +4	-10 to +10	-16 to +16	
-5 to +5	-11 to +11	-17 to +17	

V Display
- RH (%)
- Offset (+/-)

The TUCH2 enclosure has UL94-5VB flammability rating.

RoHS COMPLIANT 2002/95/EC

HUMIDITY