MAMAC SYSTEMS®
MONITOR • DECISION • CONTROL

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Temperature Transducer

Model TE-211/213

FEATURES:

- 4 to 20mA, 0-1VDC, 0-5VDC, 0-10VDC, or 1-50KHz AFCP, and custom output options
- Transducers are available in different housing for space, duct, immersion, duct averaging, remote strap-on probe and outside air applications
- -50°F to +500°F wide operating range
- Custom calibration of temperature range is available

APPLICATIONS:

- Air Ducts
- Outside Air
- Clean Rooms
- Air Handlers
- Computer Centers
- Laboratories
- Office Buildings
- Paper Storage Rooms
- Grain Silos
- Food Processing Plants
- Green Houses
- Environmental Chambers
- Process Control
- Hydraulic Systems

DESCRIPTION:

Signal conditioning is performed by industrial quality integrated circuits to provide a true linear output. The circuit is factory calibrated but zero and span trimmers are provided to adjust the output if necessary. Output accuracy is not affected by long wire runs or electrical noise. The transducer can operate over a wide supply voltage range.

The TE-210 is available in many different housings to cover all applications. For space temperature sensing, the transducer is available in a unique plastic enclosure that has two separate compartments divided by a solid partition. Each compartment is ventilated individually from three sides. One chamber incorporates the electronics and the other the sensing element. In this way there is total isolation between the electronics and the sensor to assure accuracy. For air duct temperature, the sensor is encapsulated in a 1/4 inch OD aluminum or stainless steel probe. The probe protrudes from the bottom of the die cast aluminum transducer housing minimizing lead length error. The probe can be inserted directly into the duct and mounting holes are provided to rigidly support the assembly. TE-210 is also available in a bendable aluminum 3/8 inch OD extra long probe for averaging duct air temperature. The probe incorporates numerous sensors encapsulated at equal distances across the length of the probe. The complete assembly acts as a single sensor and any temperature change is averaged across the sensors. The probe can be easily bent to fit any size duct.

For monitoring water temperature, the TE-210 is available in a die cast aluminum enclosure with a 1/4 inch OD, probe with a brass fitting that can be screwed directly into any thermowell providing a rigid support to the transducer. The TE-210 is also available with a remote probe to be strapped on a pipe or any other application in which high temperatures are encountered. For monitoring outside air temperature the TE-210 is also available in a weather proof enclosure with a suitable sun shield to be mounted outside.

TE-210 is also available with 100 ohm or 1000 ohm precision thin film platinum RTD (±. 1% @0°C), For 100 ohm specify TE-211Y and 1000 ohm specify TE-211Z. Remaining options are the same as TE-210.

ORDERING INFORMATION: TE-210-

ENCLOSURE	PROBE LENGTH	PROBE MATERIAL	THERMOWELL FITTING	SUPPLY VOLTAGE	OUTPUT	RANGE
A) Space	A) 4 inches	1) Aluminum	A) Brass 1/4" NPT	1) 24VDC	A)O-1VDC	1)+50°F-+85°F
B) Duct	B) 6 inches	2) Stainless Steel	B) Brass 1/2" NPT	2) 24VAC	B)0-5VDC	2)+ 40°F-+140 °F
C) Immersion	C) 8 inches	3) Custom	D) Custom	3) 115VAC	C)0-10VDC	3)-30°F-+130°F
D) Duct Avg	D)12 inches			4) 12VDC	D)4-20mA	4)0°F- +100°F
E) RP/SO*	E) 2 inches			5) Custom	E)4-20mA	5)100°F-+250°F
F) OAWP**	F) 6 feet				(2-wire)	6)0°F-+250°F
G) Custom	G) 12 feet				F) 1-50KHz	7)Custom
	H) 24 feet	Note: TE-211Y/TE-2l1Z available for			AFCP	
	1) Custom	24VDC 4-20mA 2-wire loop only.			G) Custom	

*Remote probe or strap-on
**Outside air weather proof

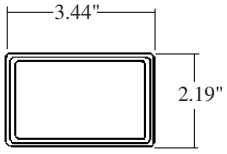
Model TE-210

SPECIFICATIONS:

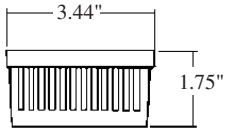
Range:
-50°F - +500°F

Accuracy:
±0.5°F

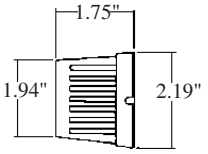
Ambient Temperature:
0-70°C



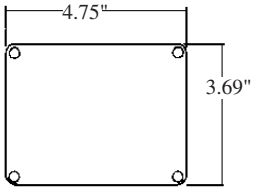
Front View



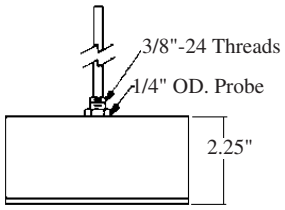
Top View



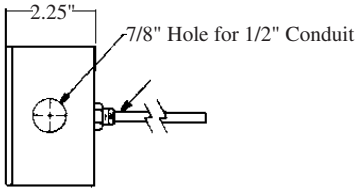
Side View



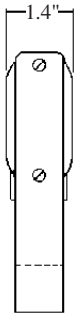
Front View



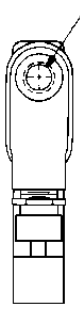
Top View



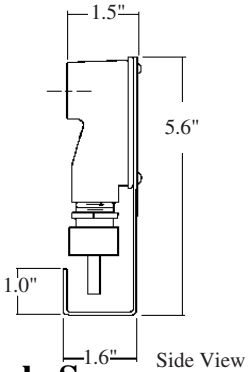
Side View



Front View



Back View



Side View

A Complete Line of Transducers From a Single Source

Space Temperature
Duct Temperature
Outside Temperature
DuctAvg Temp
Strap-On Temp
Remote Temperature
Space Avg Temp
Differential Temp
Space Humidity
Duct Humidity
Outside Humidity

Remote Humidity
Temp & Humidity
Motor Current
Voltage
Pneumatic Pressure
Steam Pressure
Water Pressure
Air Pressure
Duct Static Pres
Bldg Static Pres
Filter Pres Drop

Compressor Head Pres
Compressor Suction
Pres Chiller Head Pres
Chiller Suction Pres
CW Flow
HWFlow
Steam Flow
Gas Flow
Tank Level
Rainfall
Windspeed

Wind Direction
Air Flow
Water Alert
Ambient Light
Outside Light
Damper Control
Mixing Valve Ctrl
Vane Control
Soil Moisture
Local Indication
Setpoint Control

All Mamac Transducers Are Directly Compatible To:

Advanced Electrical Appl.
Advanced Micro Systems
Aegis
Allan Bradley
American Auto-Matrix
Andover Controls
AT&T
Atlantic Energy Tech
Automated Logic
Barber-Colman
Butler Controls
Carrier-Bldg Auto Sys

CESCO
Climatron
Computer Science
Control Pak Corp
Control Systems International
Detection Systems
Eagle Signal
EDA Sims
Elemco Prime Energy
Encon Systems
Facilitec

Functional Devices
General Electric
Hewlett Packard
Honeywell
HSQ Technology
Hypertek
Johnson Controls
Leviton
Litton FMS
Margaux Controls
MCC Powers

Micro Control Sys
Mosler
Novar Controls
OakAdec
Opto 22
Paragon Electric
Powerline Comm
Radix 11
Raytheon
Robertshaw Controls
Rotertshaw Integrated Sys

Solid State Systems
Solidyne
Sparton
Square D
Staefa Control Sys
TJ Controls
Tour Anderson
The Trane Company
Triangle Micro Sys
Trimax
United Technologies
Westinghouse

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