HYGRODYNAMICS

MICROBASED HYGROTHERMOGRAPH

MODEL 4206

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PARTLOW RECORDER MANUAL	

NEWPORT SCIENTIFIC, INC.
8246-E Sandy Court
Jessup, MD 20794
P: (301) 498-6700 F: (301) 490-2313
E: newport888@aol.com W: www.newport-scientific.com

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INTRODUCTION

The 4206 Hygrothermograph is a programmable circular chart recorder that is able to display and record relative humidity and temperature. It also provides four relay outputs for humidity and temperature control.

SPECIFICATIONS

POWER	115VAC ±10%, 50/60hZ
MEASUREMENT RANGE	
RELATIVE HUMIDITY	5 - 95%RH
TEMPERATURE	0 - 65EC
ACCURACY	
RELATIVE HUMIDITY	±2%RH
TEMPERATURE	±1EC
SENSOR PART NUMBER (sold separately)	1828 with 15' cable.
DUCT ADAPTER PLATE (Optional)	1900212
WALL MOUNT BRACKET (Optional)	1900213

INSTALLATION

Select a Suitable Sensor Location

Humidity measurement and control is complicated by the effect of other variables such as temperature and the presence of hygroscopic materials. The humidity sensor indicates the moisture conditions of the ambient environment immediately surrounding the sensor. Therefore, the sensor should be located in a space representative of the conditions to be measured. Avoid installation in stagnant air or near a radiant heating surface. Look for the presence of hygroscopic material (wood, textile, etc.) near the proposed mounting location which, in stagnant air, could significantly influence the sensor's immediate environment.

Install Duct Adapter Plate or Wall Mount Bracket

The duct adapter plate or wall mount bracket must be installed between the sensor housing and the sensor cable fitting.

1) Loosen the sensor cable fitting back nut until cable is free to slide through the sensor housing.

2) Loosen and remove the fitting body from the sensor housing and slide the fitting off.

3) Slide the duct adater plate or wall mount bracket onto cable then slide the cable fitting behind it.

4) Tighten the fitting body into the sensor housing to retain the duct adapter plate or wall mount bracket.

5) Tighten the cable fitting back nut to secure cable.

Connect Sensor

1) Route sensor cable through the liquid tight strain relief near the lower right corner of the recorder.

2) Connect wires to the terminal block as shown in the wiring diagram (this terminal block is pluggable).

3) Hand tighten the strain relief back nut to secure the sensor cable.

MAINTENANCE

The transmitter electronics inside of the recorder are not field adjustable. If false readings are evident the sensor may be bad.

If the recorder is malfunctioning, refer to the Partlow manual for troubleshooting hints.

Sensor Limitations

The humidity sensor has a finite life that depends on the environment to which it is exposed. In normal room conditions the sensor should provide years of continued accuracy. Be aware of the following parameters that affect sensor life and accuracy.

Condensation - Repeated wetting of the sensor can cause a shift in accuracy. The teflon wrap provides some protection but condensation should be avoided.

Chemical Vapors - Polar compounds, such as alcohol, react with the sensor to cause temporarily high readings. Chemicals such as mercury vapor, unstable hydrocarbons, halon gases, sulfur, and acids can damage the sensor.

Particulates - Dust or soot on the sensor does not directly effect accuracy, but because it is hygroscopic it can dampen the sensor's response to change in humidity.

For more information on sensors, please consult the factory.

NEWPORT SCIENTIFIC PROGRAM SETTING FOR 4206

For Degrees Centigrade
All settings same as above except the following:

PEN2

Euu	65
EuL	0

For Degrees Fahrenheit

	PEN1	PEN2	UNIT	
inPS	30	30	rLyA	1
iCor	0	0.0	rLyB	2
AL1	1	1	rLyC	3
AL2	2	2	rlyd	4
dPOS	0	1	Crt	24.0
Euu	100	149	Coo	0
EuL	0	32		
HyAo	0	0.0		
Prnd	0	0.0		
dFF	1	1		
PFF	1	1		
Pout	0	0		
Cru	100	100.0		
CrL	0	0.0		
PAEC	0	0		

HYGRODYNAMICS

LIMITED WARRANTY

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