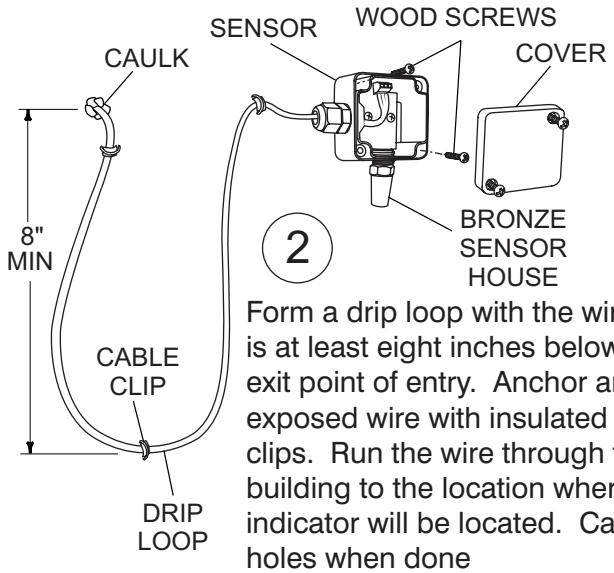
STRATUS

INSTALLATION

PROPER INSTALLATION IS IMPORTANT. IF YOU NEED ASSISTANCE, CONSULT A CONTRACTOR, ELECTRICIAN OR TELEVISION ANTENNA INSTALLER (CHECK WITH YOUR LOCAL BUILDING SUPPLY, OR HARDWARE STORE FOR REFERRALS). TO PROMOTE CONFIDENCE, PERFORM A TRIAL WIRING BEFORE INSTALLATION.

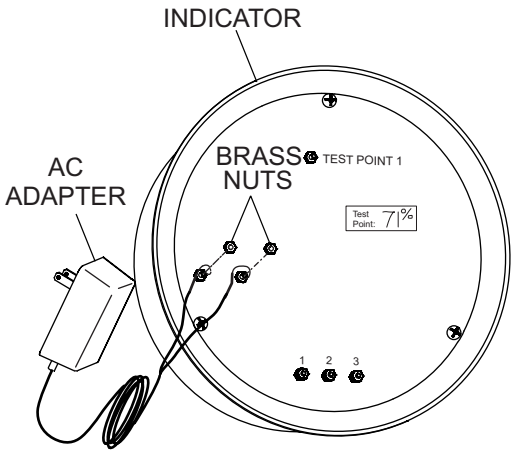
1

Remove the cover of the Humidity sensor to gain access to the holes on the upper left and lower right side of the sensor. Mount the sensor to the wall with two wood screws. The sintered bronze sensor house should face toward the ground. Select a location that is protected from direct sunlight. (A northern exposure about six feet off the ground with good air flow will give the best results.)



2

Form a drip loop with the wire that is at least eight inches below the exit point of entry. Anchor any exposed wire with insulated cable clips. Run the wire through the building to the location where the indicator will be located. Caulk any holes when done

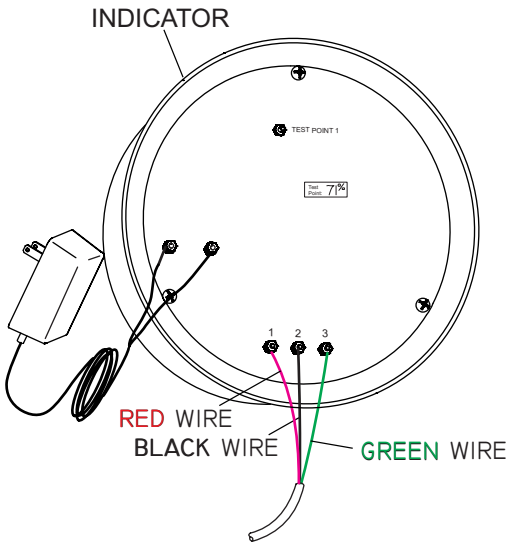


3

Feed the AC adaptor's cord to the rear of the indicator. Connect the two wires of the AC adapter cord to the indicator using the brass nuts supplied in the hardware pack. The polarity does not matter.

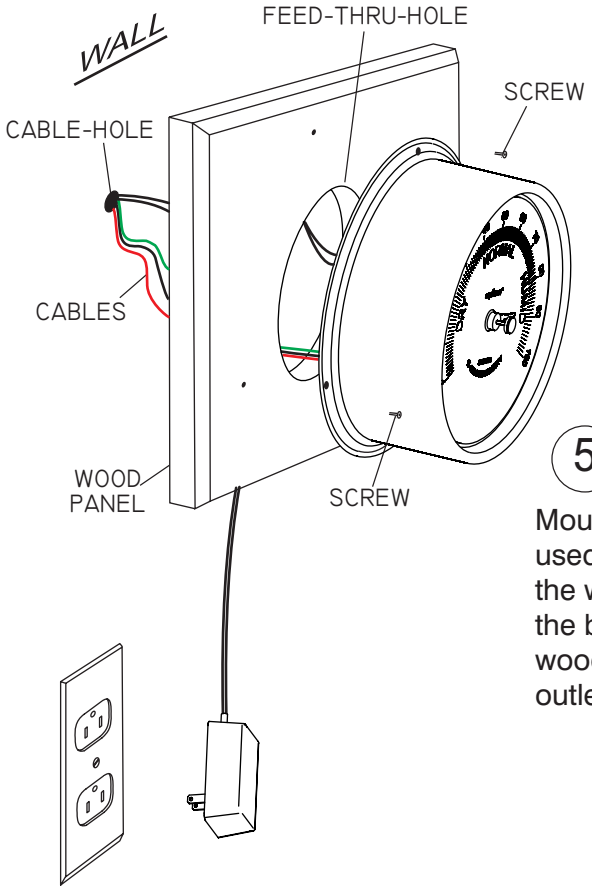
STRATUS

INSTALLATION (CONT.)



4

Connect the three wires from the Humidity sensor. Connect the **RED** wire to post #1, the **BLACK** wire to post #2, and the **GREEN** wire to post #3. Do not plug the adapter in until all of the connections have been checked.

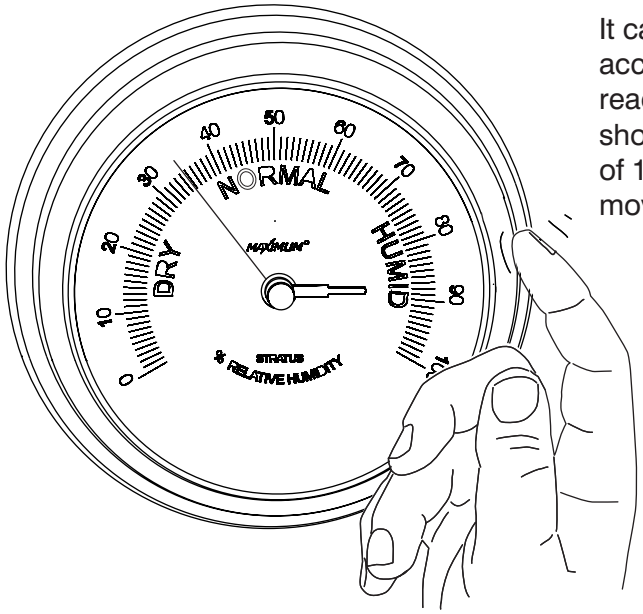


5

Mount the brass instrument directly over the cable hole used to route the power and sensor wires to avoid crimping the wire under the lip of the case. We recommend mounting the brass instrument on one of our pre-drilled and centered wood panels. Plug the AC adapter into a 110 VAC power outlet.

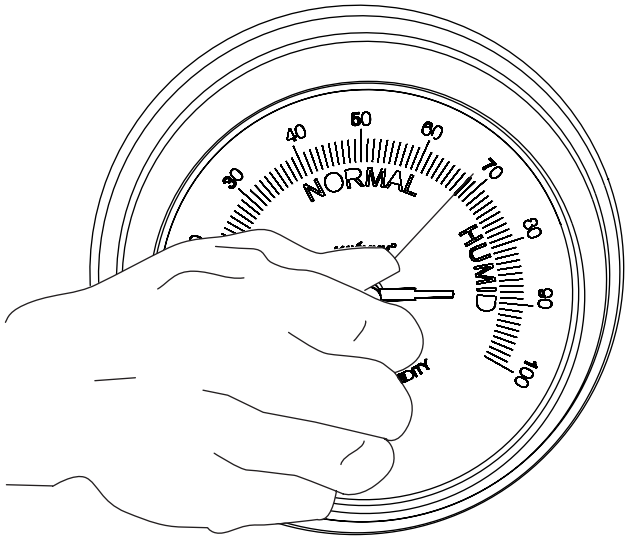
STRATUS

OPERATION



It can take 12-24 hours for the humidity sensor to acclimate to its surroundings and reflect accurate readings. Before reading your Hygrometer, you should tap the case with your finger. A tap change of 1-2% is a common occurrence with any slow moving precision meter movement.

The trend register needle can be set by turning the center knob on the indicator dial.



MAXIMUM INC

STRATUS

INFORMATION ON HUMIDITY

DEW POINT

Dew point is the temperature at which a parcel of air reaches its saturation point and can no longer hold water in the vapor state. When the dew point falls below freezing it is called the frost point. This is the point at which water vapor no longer creates dew, but instead creates frost.

Dew point formula:

This formula will give you a good approximation of Dew Point.

$$\text{Dew point} = \text{Air temp} - \frac{(100 - \text{R.H.})}{5}$$

Dew points above 70°F are very uncomfortable.

Dew points between 60°F and 70°F are sticky.

Dew points between 50°F and 60°F are comfortable.

Dew points below 50°F feel dry.

Dew Point Chart:

RELATIVE HUMIDITY	AIR TEMPERATURE (°F)										
	20	30	40	50	60	70	80	90	100	110	120
	DEW POINT (°F)										
90%	18	28	37	47	57	67	77	87	97	107	117
85%	17	26	36	45	55	65	75	84	95	104	113
80%	16	25	34	44	54	63	73	82	93	102	110
75%	15	24	33	42	52	62	71	80	91	100	108
70%	13	22	31	40	50	60	68	78	88	96	105
65%	12	20	30	38	47	57	66	76	85	93	103
60%	11	19	29	36	45	55	64	73	83	92	101
55%	9	17	25	34	43	53	61	70	80	89	98
50%	6	15	23	31	40	50	59	67	77	86	94
45%	4	13	21	29	37	47	56	64	73	82	91
40%	1	11	18	26	35	43	52	61	69	78	87
35%	-2	8	16	23	31	40	48	57	65	74	83
30%	-6	4	13	20	28	36	44	52	61	69	77

HEAT INDEX

The Heat Index combines air temperature and relative humidity for an apparent temperature feeling on the human body.

If the heat index is 80°F-90°F fatigue is possible with prolonged exposure and activity.

If the heat index is 89°F-105°F sunstroke, heat cramps, and heat exhaustion are possible.

If the heat index is 105°F-130°F sunstroke, heat cramps, and heat exhaustion are likely.

If the heat index is over 130°F heat stroke, and sunstroke are very likely with continued activity.

Heat Index Chart:

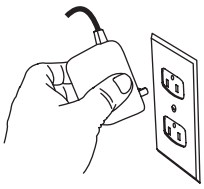
RELATIVE HUMIDITY	AIR TEMPERATURE (°F)										
	80	82	84	86	88	90	92	94	96	98	100	102
	HEAT INDEX-TEMPERATURE FEELS LIKE (°F)											
40%	80	81	83	85	88	91	94	97	101	105	109	114
45%	80	82	84	87	89	93	96	100	104	109	114	119
50%	81	83	85	88	91	95	99	103	108	113	118	124
55%	81	84	86	89	93	97	101	106	112	117	124	130
60%	82	84	88	91	95	100	105	110	116	123	129	137
65%	82	85	89	93	98	103	108	114	121	128	136	
70%	83	86	90	95	100	105	112	119	126	134		
75%	84	88	92	97	103	109	116	124	132			
80%	84	89	94	100	106	113	121	129				
85%	85	90	96	102	110	117	126	135				
90%	86	91	98	105	113	122	131					
95%	86	93	100	108	117	127						
100%	87	95	103	112	121	132						

STRATUS

TROUBLESHOOTING

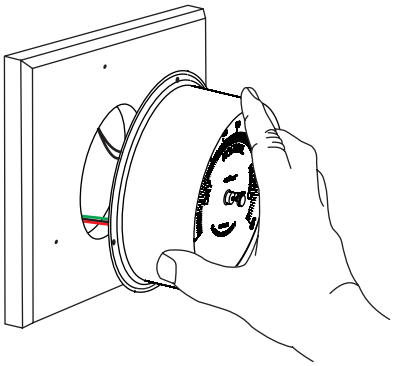
1

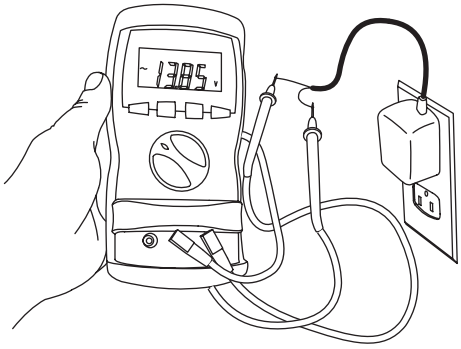
Unplug the
AC Adapter.



2

Remove the
instrument from
the wall.



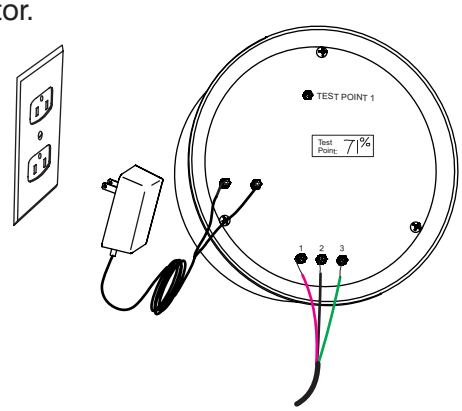


3

Disconnect the AC adapter from the indicator and connect it to an AC voltmeter. Plug the AC adapter back in. If working properly, the AC adapter will deliver 11.5 to 18VAC. If not working properly please contact Maximum. If the Adapter is working properly, continue to step 4.

4

Unplug the AC adapter and reconnect it to the indicator. Plug the adapter back into a 110V outlet.



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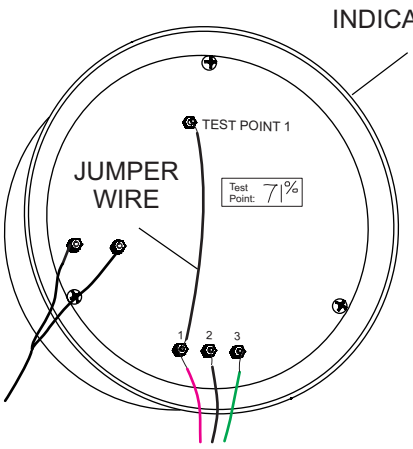
TROUBLESHOOTING (CONT.)

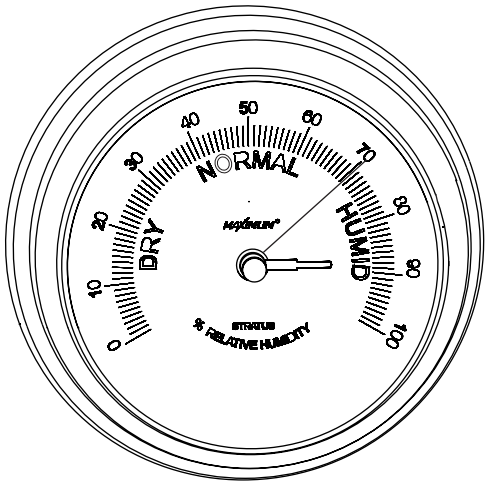


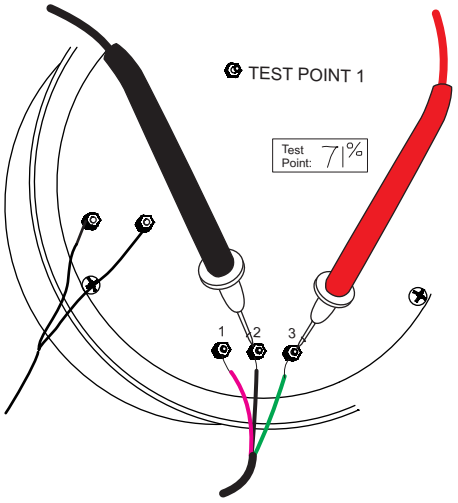
5

Use a jumper wire to connect across the test point terminal and terminal #1. The calibration test point has been hand-written on the back of the indicator.

6

If the indicator is in proper working order it will read within 2% of the calibration test point. We recommend that you re-mount the instrument in this mode for several hours and observe it periodically. This will help identify intermittent problems. If the indicator registers within 2% of the test point then the problem is in the sensor or wire.





7

To test the sensor connect a DC voltmeter to terminals #2 and #3. Terminal #2 is the ground terminal and #3 the positive of the meter. Use this chart to identify that the voltage output of the sensor is correct.

%RH	10	20	30	40	50	60	70	80	90	100
Voltage	.9V	1.1V	1.4V	1.6V	1.9V	2.1V	2.4V	2.6V	2.9V	3.12V

MAXIMUM INC

IMPORTANT ADDITIONAL INFORMATION

Components: Along with the indicator, the following components are included with this instrument:

Humidity Sensor with 60' cable

110V AC Adaptor

3 Brass Screws

AC Adaptor: This instrument requires its own AC Adaptor. Due to the various power requirements of each Maximum instrument, attempting to run more than one instrument on a single adaptor could cause improper operation and/or damage to the instrument(s) thereby voiding your 5-year warranty.

Brass Case: Your brass case is solid brass A70-30 Holloware quality, with a durable lacquer finish. It is in fact a piece of jewelry and should be treated as such. It should be cleaned at least once a week to keep airborne pollutants (dust, etc…) and any moisture from collecting on the case thereby attacking the lacquer. At no time should you use an abrasive cleaner or cloth on the brass case. Simply use a soft cloth or soft paper towel with a mild glass cleaner to wipe the case clean. If your instruments are in a summer home, and you are not able to clean them regularly, simply lay a small cloth or towel across the top two-thirds so that dust cannot settle on the finish.

Specifications: All instrumentation or measuring devices have accuracy tolerances and specifications. Making comparisons between different pieces of equipment is appropriate provided the specified accuracies of both are known.

	Measurement Range	**Guaranteed Accuracy**
Relative Humidity (Indicator)	0 to 100%	± 2%
Relative Humidity (Sensor)	0 to 100%	± 4%

MAXIMUM®
WEATHER INSTRUMENTS

Electrical Damage – Common Causes & Recommended Prevention

Electrical damage can be caused by many different factors. Below are some of the more common causes and some suggested methods of minimizing potential problems.

Common Causes:

- **Storm Activity –** lightening in your area can do damage to your instruments in different ways. The obvious way is due to a direct or nearby strike. In addition, lightening storms, dust storms, dry snowstorms and strong dry winds can all cause static electricity to build up on and around your external sensors. Regardless of the cause, this built up electricity can discharge itself through the cable connecting the external sensors to the instrument.

- **Power Surges –** A surge may come from the electric company's switching generators or power grids, from local industries or after power interruption when accumulated power suddenly surges back through AC lines. Even the on-and-off switching of large electrical appliances, such as refrigerators or clothes dryers can create damaging fluctuations. This is especially true with sensitive weather recording devices.

- **Yourself –** Are you constantly giving and/or receiving a shock every time you touch a doorknob or another person? If so, you have a great deal of static electricity in your environment. Depending on where you live, static electricity may be a year round problem or only a seasonal problem. In either case, it is possible for a person to carry enough of a charge to damage an instrument.

Recommended Prevention:

- **Use Surge Protectors –** For the AC adapter, a UL 1449 rated surge protector with EMI/RFI filtering is recommended. This rating will be clearly listed on the packaging of all good quality surge protector.

- **Discharge Yourself –** If the instruments are located in an environment where static electricity is a problem, make sure that you discharge yourself before touching the instrument(s). The shock that you get from touching a doorknob or another person can often be sufficient to damage an instrument.