



# MCS-HUMD-OS

## Description & Specifications



Part # **MCS-HUMD-OS**

### Specifications

Input Power .....	10 to 35 VDC, 22mA max or 12 to 24 VAC, 0.53VA max
Enclosure material.....	Polycarbonate, UV resistant
Enclosures Ratings.....	NEMA-4, IP66, UL94V-0
Operation Range .....	-22° to 158°F, (-30° to 70°C)
Filter.....	100 micron sintered stainless steel filter
Dimensions.....	2.82" x 2.35" x 7.98"
Humidity Sensor .....	Resistive
Output.....	0 to 5VDC
Accuracy.....	±2% RH
Temperature Sensor.....	Resistive
Output.....	100k
Accuracy.....	77°F

### Description

Outside Air Combination Sensor with Humidity Transmitter and 100K Thermistor Temperature Transmitter.

Humidity control is an important aspect of any climate control system. Therefore, humidity sensors must be both accurate and dependable. MCS's outside air humidity and temperature sensor is tested for accuracy, eliminating the need for field calibration.

MCS's temperature and humidity sensor has etched Teflon leadwires and are built to withstand high humidity and condensation and perform under real world conditions. This is especially important in an Outside Air Unit which can be exposed to rain, snow, and large temperature swings.

**Humidity to VDC to mA Chart**

Humidity	VDC (S1 to GND)	mA
0%	0	4
10%	0.5	5.6
20%	1	7.2
30%	1.5	8.8
40%	2	10.4
50%	2.5	12
60%	3	13.6
70%	3.5	15.2
80%	4	16.8
90%	4.5	18.4
100%	5	20

**Temp to OHMS to VDC Chart**

Temp (°F / °C)	Resist (ohms)	VDC (S1 to GND)	Temp (°F / °C)	Resist (ohms)	VDC (S1 to GND)	Temp (°F / °C)	Resist (ohms)	VDC (S1 to GND)
-5/-20.6	1,141,345	0.403	60/15.5	157,353	1.943	125/51.6	31,399	3.805
0 /-17.7	964,963	0.470	65/18.3	137,363	2.106	130/54.4	28,093	3.903
5/-15.0	818,070	0.545	70/21.1	120,169	2.271	135/57.2	25,173	3.994
10/-12.2	695,433	0.629	75/23.9	105,347	2.435	140/60	22,590	4.079
15 /-9.4	592,755	0.722	80/26.7	92,541	2.597	145/62.8	20,309	4.156
20/-6.6	506,560	0.824	85/29.4	81,454	2.756	150/65.5	18,284	4.227
25/-3.8	434,007	0.936	90/32.2	71,838	2.910	155/68.3	16,484	4.292
30/-1.1	372,778	1.058	95/35	63,480	3.058	160/71.1	14,881	4.352
35/1.6	320,976	1.188	100/37.7	56,200	3.201	165/73.8	13,456	4.407
40/4.4	277,040	1.326	105/40.5	49,846	3.337	170/76.6	12,185	4.457
45/7.2	239,686	1.472	110/43.3	44,287	3.465	175/79.4	11,052	4.502
50/10	207,850	1.624	115/46.1	39,420	3.586	180/82.2	10,033	4.544
55/12.7	180,647	1.782	120/48.8	35,149	3.370	185/85	9,121	4.582

For complete temperature chart, refer to the **MCS-T100** spec sheet