

CRAIG OCEAN SYSTEMS, INC.

Catalog & pricing for the MCU500 and components

ITEM

PART NUMBER

HUMIDITY /TEMP PROBES:

Relative Humidity:

Relative Humidity is defined as the ratio of the amount of gaseous water vapor present in the air compared to the total that could be present before condensation occurs. This condensation point is called the Dew Point. RH is expressed as a percentage, where 100 percent represents the dew point, or point of maximum saturation.

Accuracy vs. Cost: There is a direct relationship between accuracy and cost. COS calibrates its probes using the ASTM E 104-85 method, which is based on primary standards. The two probes we offer are electrically identical; the difference is in the calibration. Our lower cost,



“field” version is calibrated using a three point method, and is accurate to +/- 3 RH units. The higher cost “Lab” grade instrument is calibrated using a seven point method, and is accurate to +/- 1 RH unit. Each calibration point requires a relatively long “settling” time (approximately 2 hours) to achieve equilibrium in the test environment. In general, the probes will reach +/- 3 % equilibrium with the test vapor in approximately 2 to 4 minutes. To reach +/-0.2% requires a much longer settling time. The greater the accuracy desired, the longer it takes to calibrate.

COS manufactures two versions of RH instruments. These low cost, rugged and reliable instruments provide a 0-5 V output in response to RH between 0 and 100%.

Our probes use a capacitive probe to sense RH, which we have found to be superior to the resistive versions for most industrial type applications. Our probes are packaged in a metal, 1” diameter probe body with a protective shield over the probe itself.

COS Model CRH201D-3: 3% RH probe, 10 to 90%RH

200-40200-01

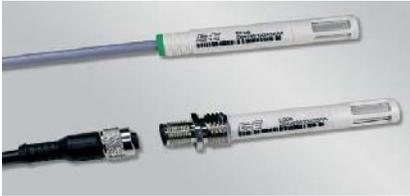
COS Model CRH201D-1: 1% RH Probe, 10-90%RH

200-40200-02

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EE Elektronik Humidity & Temperature Probes

EE08 Series
High-Precision Miniature Humidity / Temperature
Transmitter

Accurate humidity / temperature measurement over a wide working range, fitted in a small-sized housing and high flexibility have been the main goals for the development of the EE08 series. Low power consumption and short start-up time support efficient energy management for battery operated systems. For this application an additional version (V10) with supply voltage 4.5-15V DC has been developed. Calibration data and other relevant functions like linearization or temperature compensation are stored in the probe. This feature, together with the optional connector, allows for easy replacement of the probe without a need for re-adjustment of the reading device (interchangeability).

The humidity and temperature measurement are available as analogue outputs (0-1/2.5/5V) and as a digital interface (E2-interface). Easy implementation and data processing is warranted. Humidity and temperature reading can be re-adjusted using the calibration software; available as an accessory.

COS part number: 12VDC, 0-5VDC outputs

098-EE08-PFT2V11E602T22

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TEMPERATURE MEASUREMENTS:



COS temperature probes use a precision thermistor as the sensor element. The line amplifiers and MCU IOX cards provide the excitation for the sensors, as well as the input to the MCU channel.

COS has 2 standard types, a 5Kohm @ 25 deg.C, and a 33Kohm @ 25 deg.C . They interface directly with the MCU500 and COS line amplifiers. Custom options are available.

The probes come in a variety of sizes and cable lengths.

COS CTP44007-1.5: 2 inch x 0.25 OD hard body probe (stainless steel) with standard 1/2" NPT mounting. Air probe with 4 pin LEMO quick disconnect connector.	200-40100-1.5
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CTP-44203: 3 inch sealed probe (SS), 0.25 OD, with 6 foot lead and 4 pin Hypertronics quick disconnect connector (interfaces to Line Amplifiers).	200-40100-6
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CTP-44205: 10 inch sealed probe (SS), 0.25 OD, with 20 foot lead and 4 pin Hypertronics quick disconnect connector (interfaces to Line Amplifiers).	200-40100-20
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Also shown below are a sampling of some of the specialty probes we provide.

