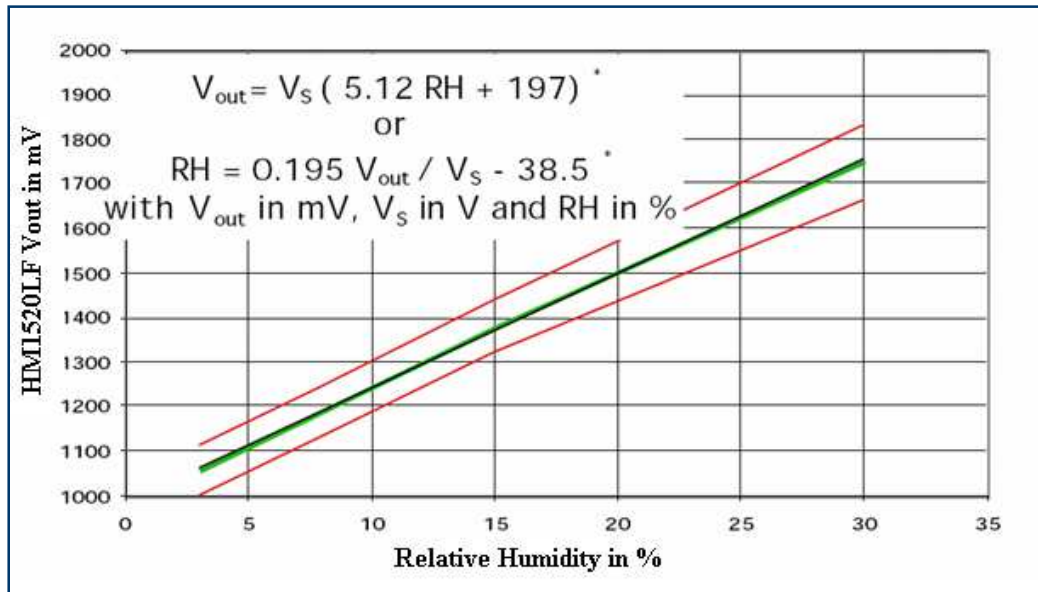


TYPICAL PERFORMANCE CURVES

HUMIDITY SENSOR

- HM1520LF Preliminary Specification when used from 1 to 30% RH



- Those equations can be used above 30% RH and allow to obtain an over all accuracy as described in page 4 of this document in all humidity measuring range.
- Temperature (in the range 0 to 50°C) does not affect HM1520LF measurement when used from 1% to 30% RH. No temperature compensation is required
- Signal output from 1% to 20% RH at 23°C

RH (%)	1	2	3	4	5	6	7	8	9	10
Vout (mV)	1013	1038	1064	1089	1115	1141	1166	1192	1217	1243
RH (%)	11	12	13	14	15	16	17	18	19	20
Vout (mV)	1269	1294	1320	1346	1371	1397	1422	1448	1474	1499

With $V_s = 5.0$ Volts DC

Calibration data are **traceable to NIST** standards through CETIAT laboratory.

IMPORTANT NOTICE : HM1520LF is based on HS1101LF capacitive sensor and thus is fully useable on a large range of relative humidity (1% to 99% RH). In that range, HM1520LF presents a typical accuracy of +/- 5% RH at 55% RH.)

However HM1520LF is a dedicated module for humidity measurements at low Relative Humidity levels.

Thus, HM1520LF is also well adapted to measure water concentrations (ppm) or low dew points when associated with an ambient temperature probe.

HM1520LF features an optimized accuracy for **water concentration below 6000 ppm water or 0°C dew point at 23°C** (equivalent to 20% RH).

- **Typical Output of HM1520LF when measuring water concentration at ambient temperature of 23°C**

ppm	275	550	825	1100	1375	1650	1925	2200	2470	2750
Vout (mV)	1013	1038	1064	1089	1115	1141	1166	1192	1217	1243
ppm	3025	3300	3570	3850	4120	4395	4670	4945	5220	5495
Vout (mV)	1269	1294	1320	1346	1371	1397	1422	1448	1474	1499

$$\text{ppm}_{\text{water}} = 10.75 V_{\text{out}} - 10615 \text{ with } V_{\text{out}} \text{ in mV}$$

- **Typical Output of HM1520LF when measuring dew point at ambient temperature of 23°C**

DP (°C)	-36	-29	-24	-21	-18.5	-16	-14.5	-13	-11.5	-10
Vout (mV)	1013	1038	1064	1089	1115	1141	1166	1192	1217	1243
DP (°C)	-9	-7.8	-6.8	-5.8	-4.9	-4.1	-3.2	-2.5	-1.6	-1.1
Vout (mV)	1269	1294	1320	1346	1371	1397	1422	1448	1474	1499

- **Accuracy of HM1520LF when used from 1% to 95% RH**

