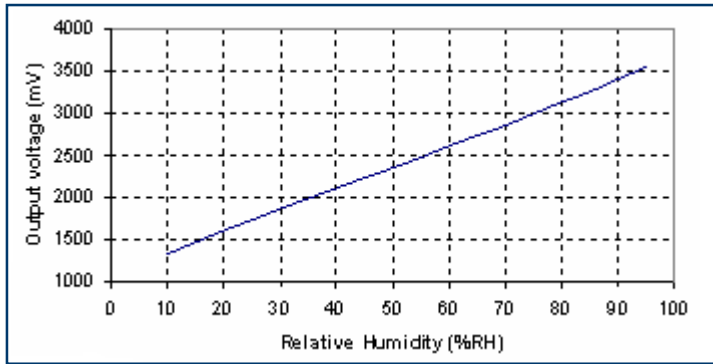


• **Modeled Signal Output**



RH (%)	Vout (mV)	RH (%)	Vout (mV)
10	1325	55	2480
15	1465	60	2605
20	1600	65	2730
25	1735	70	2860
30	1860	75	2990
35	1990	80	3125
40	2110	85	3260
45	2235	90	3405
50	2360	95	3555

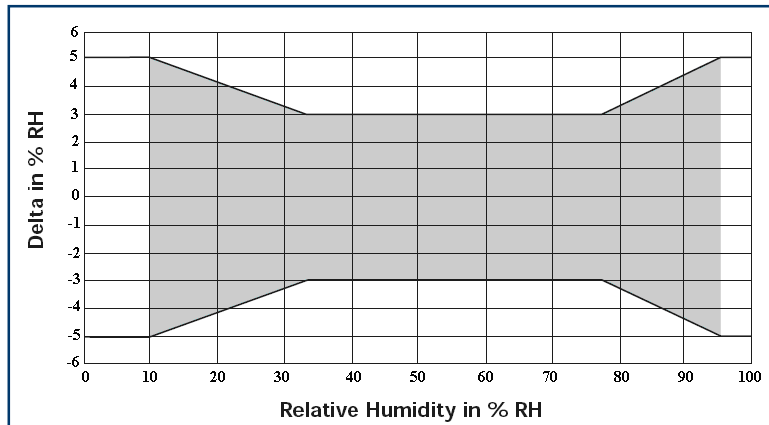
LINEAR EQUATIONS:

- $V_{out} = 25.68RH + 1079$
 - $RH = 0.03892 V_{out} - 42.017$
- (With V_{out} in mV and RH in %)

POLYNOMIAL EQUATIONS:

- $V_{out} = 9E^{-4} RH^3 - 1.3E^{-1} RH^2 + 30.815 RH + 1030$
 - $RH = -1,91E^{-9} V_{out}^3 + 1,33E^{-5} V_{out}^2 + 9,56E^{-3} V_{out} - 2,16E^+1$
- (With V_{out} in mV and RH in %)

• **Error Budget at 23°C**



TEMPERATURE COMPENSATION:

$$RH_{compensated} = RH_{actualatT} + (T - 23) \times 0.05$$

(With T : Temperature in °C and RH: Relative Humidity in %)

QUALIFICATION PROCESS

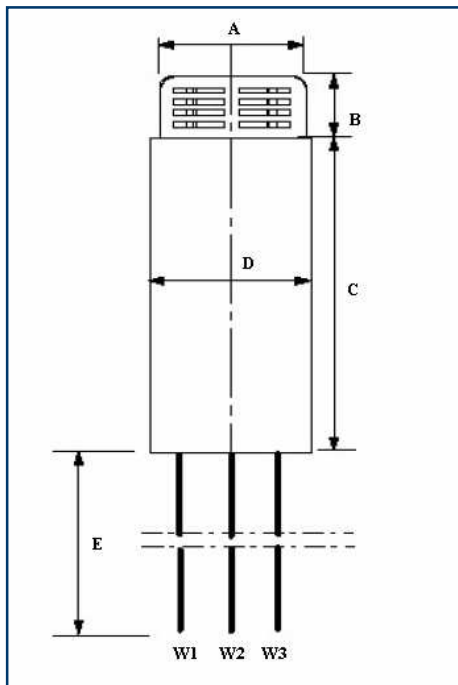
RESISTANCE TO PHYSICAL AND CHEMICAL STRESSES

- HM1500LF has passed through qualification processes of MEAS-FRANCE including vibration, shock, storage, high temperature and humidity, ESD.
- Additional tests under harsh chemical conditions demonstrate good operation in presence of salt atmosphere, SO₂ (0.5%), H₂S (0.5%), O₃, NO_x, NO, CO, CO₂, Softener, Soap, Toluene, acids (H₂SO₄, HNO₃, HCl), HMDS, Insecticide, Cigarette smoke, this is not an exhaustive list.
- HM1500LF is not light sensitive.

SPECIFIC PRECAUTIONS

- HM1500LF is protected against reversed polarity.
- If you wish to use HM1500LF in a chemical atmosphere not listed above, consult us.

PACKAGE OUTLINE



Dim	Min (mm)	Max (mm)
A	9.75	10.25
B	4.00	4.50
C	53	55
D	10.9	11.4
E*	200	250

* Specific length available on request

Wire	Color	Function
W1	White	Ground
W2	Blue	Supply Voltage
W3	Yellow	Humidity Output Voltage