

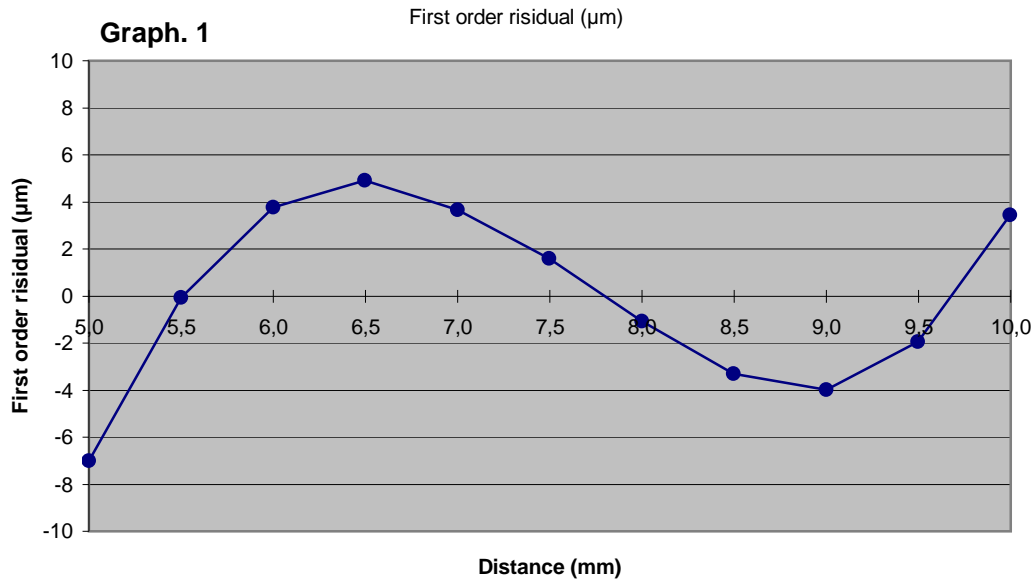
H7DC-058

Date : 19/12/2012

First order linearization

First order regression coefficients

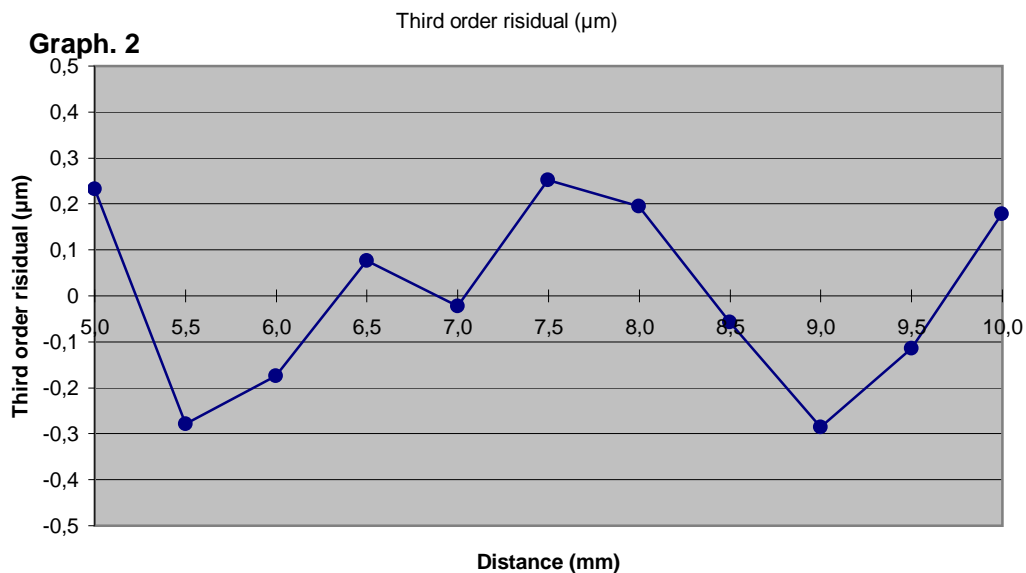
$$d = 5,0066 + 0,49947 V$$



Third order linearization

Third order regression coefficients

$$d = 4,9994 + 0,50915 V - 0,002325 V^2 + 0,0001464 V^3$$



Legend : Linearization polynoms express distance d as a fonction of voltage V

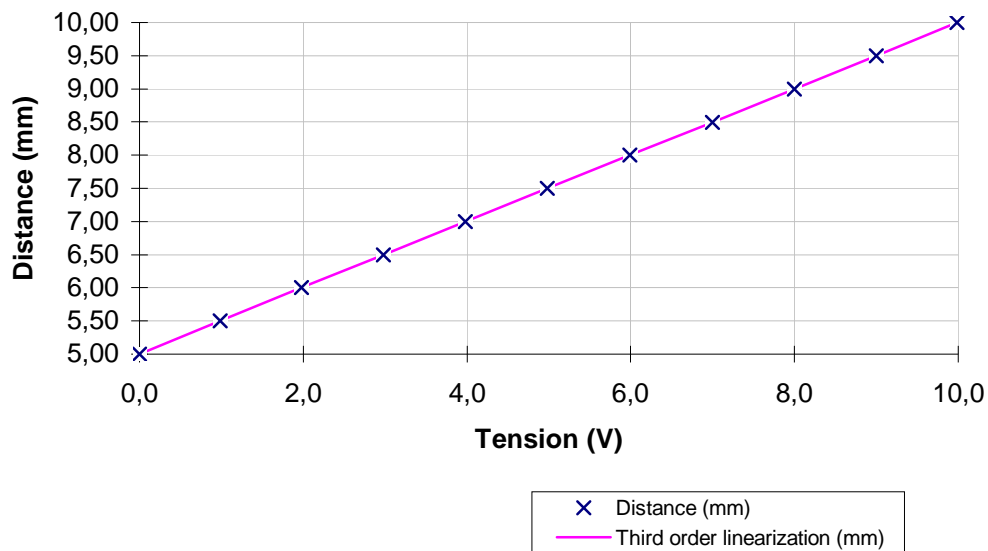
- Distance is in mm

- Voltage is in V

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Sensor linearization



Résults

| Distance (mm) | Voltage (V) |
|---------------|-------------|
| 4,9995 | -0,0002 |
| 5,4994 | 0,9868 |
| 5,9992 | 1,9797 |
| 6,4978 | 2,9757 |
| 6,9984 | 3,9805 |
| 7,4976 | 4,9840 |
| 7,9984 | 5,9920 |
| 8,4975 | 6,9957 |
| 8,9983 | 7,9998 |
| 9,4977 | 8,9955 |
| 9,9982 | 9,9868 |