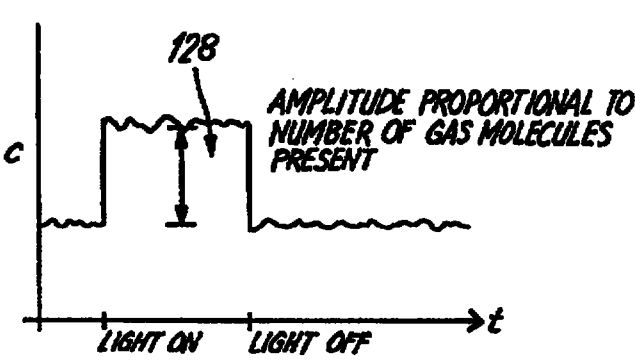




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(21) International Application Number: PCT/US97/01957 (22) International Filing Date: 6 February 1997 (06.02.97) (30) Priority Data: 08/605,941 23 February 1996 (23.02.96) US (71) Applicant: ROSEMOUNT INC. [US/US]; 12001 Technology Drive, Eden Prairie, MN 55344 (US). (72) Inventor: WILLCOX, Charles, R.; 16128 Baywood Lane, Eden Prairie, MN 55346 (US). (74) Agents: CHAMPLIN, Judson, K. et al.; Westman, Champlin & Kelly, P. A., International Centre - Suite 1600, 900 Second Avenue South, Minneapolis, MN 55402-3319 (US).		(81) Designated States: BR, CA, CN, JP, <u>SG</u> , European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
(54) Title: PRESSURE SENSOR DIAGNOSTICS IN A PROCESS TRANSMITTER (57) Abstract A perturbation is inputted to a capacitance transducer. It can be illuminated by an LED, causing an increase in capacitance (fig. 4). The effect decreases with decreasing vacuum level. A step voltage can be applied to cause an effective pressure change. Ringing frequency, decay rate, amplitude are observed (fig. 5). The pressure output is accordingly compensated or an alarm is risen.  $A = A_0 \cos(2\pi f_0 t) e^{-t/(2Q/\pi f_0)}$ 