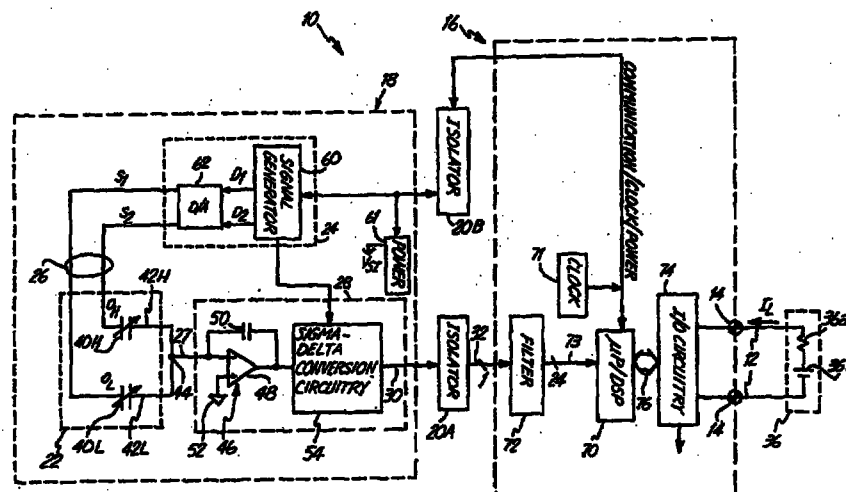




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(54) Title: PROCESS CONTROL TRANSMITTER



(57) Abstract

A transmitter (10) in a process control system includes input/output circuitry (74) for coupling to a process control loop (12). A first sensor (40L) having a first impedance is responsive to a first sensed parameter. A second sensor (40H) having a second impedance is responsive to a sensed parameter. First and second excitation signals (S₁, S₂) are applied to the first and second sensors (40L, 40H). A summing node (44) sums the outputs (O_L, O_H) of the first and second sensors (40L, 40H). An analog to digital converter (54) provides a digital output representative of the summed signals. Digital signal processing circuitry (70) coupled to the analog to digital converter (54) provides an output related to the outputs (O_L, O_H) of the first and second sensors (40L, 40H) to the input/output circuitry (72) for transmission over the process control loop (12).