

ABSTRACT

In a GSR sensor element, t_m and t_i of rising pulse detection are close, and the induced voltage is significantly high at t_m . Thus, a variation due to the magnetic field cannot be ignored. To remove an induced voltage from an output voltage and achieve a GSR sensor with a rising pulse detection system. On the basis of the knowledge that the polarity of an induced voltage becomes opposite relative to a direction of the current flowing in a magnetic wire, if one coil includes therein two magnetic wires in which currents of opposite polarities flow, an induced current is cancelled, allowing for the detection of a voltage in proportion to a magnetic field.