

Abstract

Provided is a signal processing device for a two-wire type sensor which ensures that two-wire cables can be used and an output of 4-20 mA is obtained, which are an advantage of a two-wire type configuration, while being capable of achieving high performance without sacrificing the performance.

A signal processing device 300 including a sensor 10 and a signal converter 100 for converting a signal detected by the sensor, in which an external cable connection part 20 of the sensor is provided with a pair of output signal terminals 120, 130 for solid state pulses and a pair of power supply terminals 140, 150, one of the pair of output signal terminals is connected via a certain resistance 160 to a positive side of the power supply terminals, while the other of the pair of signal terminals and a negative side of the power supply terminals are short-circuited to each other in such a manner as to form superimposed power supply lines 210, 220 such that a current consumed by the power supply terminals of the sensor is superimposed with a current consumed by a pulse output circuit, the sensor and the signal converter are connected to each other using the superimposed power supply lines, and the signal converter extracts from a superimposed current wave flowing through the superimposed power supply lines only a signal 304 corresponding to a pulse output.

Figure 1 accompanies.