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OBJECT DETECTING DEVICE WITH A PYROELECTRIC SENSOR

ABSTRACT

An object detecting device utilizes a pyroelectric sensor providing a sensing current, a voltage amplifier providing an amplified voltage proportional to the sensing current, and a level monitor providing a detection signal when the amplified voltage exceeds a detection threshold. The device has a standby mode where the voltage amplifier receives a limited source current to provide the voltage of low amplification, and the level monitor provides a wake-up signal when the low amplified voltage exceeds a preliminary threshold lower than the detection threshold. In response to the wake-up signal, the device is switched to an operation mode where the amplifier receives a rated source current to provide a voltage of high amplification for comparison with the detection threshold. Thus, the amplifier is kept to be less-power consuming in the absence of the wake-up signal, reducing a power requirement.

(Fig. 1)