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Two-wire AC Switch using Switch-mode technology

Abstract

5 This document discloses a two-wire switch circuit for controlling single phase AC
(Alternating Current) supply to an AC electrical load (e.g. a lamp load) where access to
the AC supply is only possible via a single active conductor. Novelty associated with the
said two-wire switch circuit lies with its inventive circuitry enabling highly power
efficient switch-mode harvesting of DC (Direct Current) energy for the said switch to
10 power its own control circuitry as well as a multitude of other auxiliary DC devices. The
said switch-mode technology enables DC harvesting to as high as 40 mA. Such DC
current requirements are often associated with the use of auxiliary DC devices that send
and receive RF signals, the use of which is necessary in the scenario of wireless home
automation systems where every wall switch can be remotely controlled using RF signals.

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Figure 1