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(54) **LIGHTING FLEX-LINK SMART SYSTEM FOR SENDING WIRELESS LIGHTING FIXTURE CONTROL SIGNALS TO LIGHTING FIXTURES USING POWER LINE COMMUNICATION (PLC) SIGNALS**

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(57) **ABSTRACT**

A master control unit (MCU) is adapted to send wireless lighting fixture control signals to lighting fixtures using wired power line control (PLC) signals. The MCU has: an MCU power controller coupled through power lines for sending illumination power to the lighting fixtures; a command receiver for receiving from an input device, a modulated command signal having lighting fixture commands for the of lighting fixtures; a demodulator for demodulating the modulated command signal to obtain the lighting fixture commands; a wireless encoder for encoding the lighting fixture commands into wireless lighting fixture control signals for the lighting fixtures; a PLC modulator for converting the wireless lighting fixture control signals for the lighting fixtures into PLC lighting fixture control signals; and a power and PLC transmitter for sending the PLC lighting fixture control signals and the illumination power to each of the lighting fixtures using the wired power lines.