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(54) Title: SEQUENTIAL MEASUREMENT OF STATUS OF LED LIGHTING AND OTHER APPARATUS CONNECTED TO AN ELECTRICAL POWER LINE AND DISPLAY OF THE STATUS AND THE EXACT GPS POSITION THEREOF

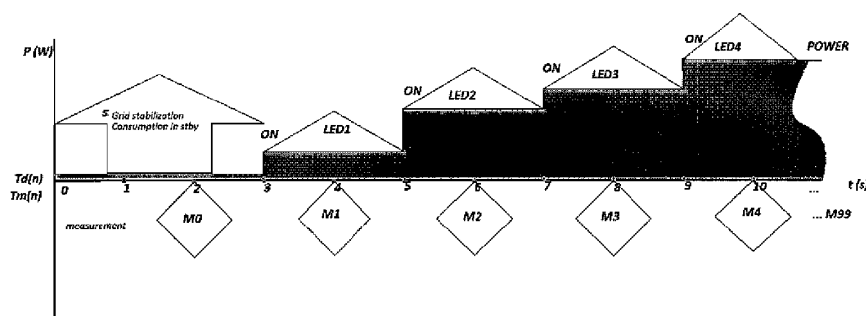


Figure 2

(57) Abstract: The subject of the invention is a simple, reliable and inexpensive application-wise system for obtaining information on the status of apparatus connected to a "lighting power line." Such a system of obtaining information is completely immune to disturbances since nothing additional is introduced into the grid. Information is detected in a substation or an electric lighting enclosure i.e. at the power supply source in standard classical measurement methods. The process for the sequential measurement of operational parameters of LED lighting and other apparatus connected to a power line comprising an electric lighting enclosure (1) in which all energy power lines ($L_1, L_2, L_3, \dots, L_n$) are located, and are also connected to a meter device (2) installed in the electric lighting enclosure (1), and where a larger number of LED lighting fixtures (3) are connected to each sequentially-arranged energy power line, whereby each LED lighting fixture (3) includes a power supply (PS) as part of the electronics within the LED lighting fixture (3), and the process includes a "zero-point" measurement of power or current after the grid's stabilization period, followed by the sequential activation of all lighting fixtures (3) at full power at each individual power line ($L_1, L_2, L_3, \dots, L_n$), by a power supply (PS), which is programmed in advance for time-delayed activation of each individual LED lighting fixture (3). During

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the activation of LED lighting fixtures (3) on each power line ($L_1, L_2, L_3, \dots, L_n$), power-time curves or current-time curves are measured and recorded for the corresponding energy power line ($L_1, L_2, L_3, \dots, L_n$), and from them a start diagram (P_{start}) is derived after activating all lighting fixtures (3) on that particular power line, and this diagram is used for comparing the status on each individual power line ($L_1, L_2, L_3, \dots, L_n$), and then the derived start diagram (P_{start}) is compared with the initial diagram (P_i) of the power-time curve or current-time curve for the corresponding power line. If deviations are present on-site or if there are locations where deviations are present upon comparing the start diagram (P_{start}) with the initial diagram (P_i), the system signals such errors in the operation of a corresponding LED lighting fixture (3).