Patent claims

1. The process of sequential measurement of operational parameters of LED lighting and other apparatus connected to a power line comprising an electric lighting enclosure in which all energy power lines are located, whereby the stated energy power lines are also connected to a meter device installed in the electric lighting enclosure by which the desired readouts are conducted, and where a greater number of LED lighting fixtures are connected to each sequentially-arranged energy power line, whereby each LED lighting fixture includes a power supply as part of the electronics within the LED lighting fixture is characterized in that the process consists of the following steps:
a) a "zero-point" measurement of power or current after a stabilization period of the grid of approximately 2 seconds, in the mentioned state of the grid, the consumption of an apparatus that is not connected sequentially but immediately (e.g. various decorations, advertisements) and initial/starting consumption of the power supply of each LED lighting fixture,
b) sequential activation of all lighting fixtures at full power at each individual power line, by the stated power supply, which is programmed in advance for time-delayed activation of each individual LED lighting fixture,
c) during sequential activation of each LED lighting fixtures on each power line, and after activation of each individual LED lighting fixture, power-time curve or current-time curves are measured and recorded for the corresponding energy power line, and from them a start diagram is derived after activating all lighting fixtures on that particular power line, and this diagram is used for comparing the consumption status on each individual power line,
d) after activation of all LED lighting fixtures on each power line, the start diagram of the power-time curve or current-time curve of each power line is compared with the initial diagram of the power-time curve or current-time curve for a corresponding energy power line,
e) if deviations are found upon comparing the start diagram of the power-time curve or current-time curve in respect to the initial diagram of the power-time curve or current-time curve, errors in operation of the corresponding LED lighting fixture are signalled at the location or locations where there are deviations between the start diagram of the power-time curve or current-time curve in respect to the initial diagram.

2. The process of sequential measurement of operational parameters of LED lighting according to claim 1 characterized in that measurements are conducted in the electric lighting enclosure by a meter device, which is configured to record the power or current of each individual LED lighting fixture the moment after stable operational parameters of each individual LED lighting fixture is achieved, preferably 1 to 2 seconds after activation.

3. The process of sequential measurement of operational parameters of LED lighting according to claim 1 characterized in that the recording of each start diagram of a power-time curve or current-time curve for a corresponding power line is conducted only during the process of activating individual power lines.

4. The process of sequential measurement of operational parameters of LED lighting according to claim 1 characterized in that the recording of the initial diagram of a power-time curve or current-time curve for each individual power line is achieved with the first activation of operation or alternatively, the project diagram of the power-time curve or current-time curve for a corresponding power line can be used.

5. The process of sequential measurement of operational parameters of LED lighting according to claim 1 characterized in that the appearance of the initial diagram of the power-

time curve or current-time curve can change depending on newly connected apparatus on a corresponding power line and during the first next activation of a corresponding power line, a new initial diagram of the power-time curve or current-time curve is recorded for each individual power line that received an addition of new apparatus, whereby from that moment, the newly recorded diagram is used as the initial diagram for comparison with the start diagram of the power-time curve or current-time curve.

6. The process of sequential measurement of operational parameters of LED lighting according to claim 1 characterized in that the initial/starting consumption of the power supply of each LED lighting fixture can be adjusted from 0 to 90% of the total power supply, preferably in the range 10-50%, while the remainder of the total power supply is used for the complete activation of the sequential measurement of the status of lighting fixtures on an individual power line.

7. The process of sequential measurement of operational parameters of LED lighting according to claim 1 characterized in that each individual power line with an exact position of each LED light fixture on that line is paired with a corresponding geographic position and based on the readout of the moment of activation of an individual LED lighting fixture for which a deviation was registered on a corresponding power line, it is possible to acquire the exact geographic location of a lighting fixture that signals a deviation/error in operation.

8. The process of sequential measurement of operational parameters of LED lighting according to claim 1 characterized in that during the first activation upon construction of the system, it is possible to record the start diagram of the power-time curve or current-time curve for a corresponding power line and conduct its comparison with the project diagram of the power-time curve or current-time curve for a corresponding power line in order to determine whether all apparatus have been correctly installed on the corresponding power line.

9. The process of sequential measurement of operational parameters of LED lighting according to claim 3 characterized in that the status and exact GPS position are sent to a server and web portal where the user has all necessary information for supervision, management, maintenance and exploitation.

10. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 1.

11. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 2.

12. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 3.

13. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 4.

14. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 5.

15. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 6.

16. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 7.

17. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 8.

18. Public lighting systems or industrial and building lighting that use LED lighting fixtures are characterized in that they use the process of sequential measurement of operational parameters of LED lighting according to claim 9.