

**ENERGY-OPTIMIZED POWER SAVING DEVICE USING RETURNED
LIGHT ENERGY BY INFRARED SYNTHETIC WAVELENGTH WITH
OVERLOAD PROTECTION DEVICE**

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ABSTRACT

The present invention relates to an energy-optimized power saving device (Power Optimizer) using returned luminous energy by an infrared synthetic wavelength equipped with an overload protection device, in order to prevent the

10 Unstable Return Luminous Energy Wave generated by the Power Optimizer from being applied to the power supply system, causing disturbance in the power supply system or reducing the power saving effect of the power supply system, provide an energy-optimized power saver (Power Optimizer) being equipped with a power control unit as a connection control means to control the on/off status of the

15 electronic brake to interrupt the operating connection to the power supply system of the Power Optimizer for a certain period of time, in cases where the return light energy wave is judged to be unstable (the Return Luminous Energy Wave) by detecting whether the judgment conditions that may cause the return light energy wave generated by the energy-optimized power saving device (Power Optimizer) to

20 become unstable (Unstable Return Luminous Energy Wave) are met or not.

(Fig. 7)