# Low Power Multiple Output DC Supply with Wide Input Voltage Range

## Description

A thorough redesign of switched-mode power supply of a three-phase electricity meter MT860 (Iskra Emeco) was performed. During its design, a special attention has been paid to a simple and cost effective solution confronted with a wide input line-voltage range

$(57 \div 3\times 240)\cdot(1 \pm 0.2)\ V_{RMS}$ and with the frequency range from 40 Hz to 65 Hz.

Such extreme demands are commonly of particular interest in industrial applications where devices should be supplied either from the single- two- or three-phase network. In order to reduce human errors and production cost, use of mechanical switches were avoided.

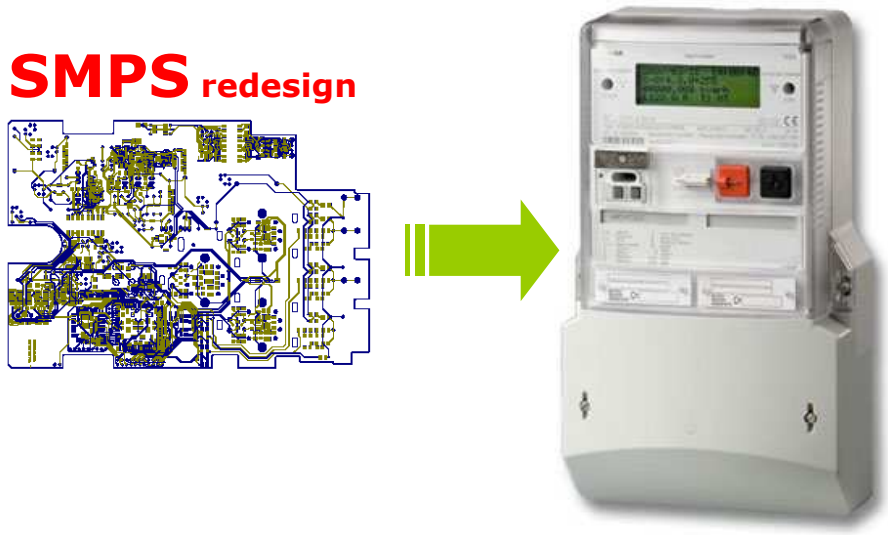


Fig: SMPS layout and its targeted installation

## Key Advantages/Skills

Flyback front-end, multiple DC supply, crossover regulation, energy back-up, load current discontinuity

## Publications


1. Danijel Vončina, Marko Petkovšek, Janez Nastran, Peter Zajec, **Low power multiple output DC supply. Part I, Flyback converter with wide input voltage range**, EPE-PEMC 2006, pp. 668-671.
2. Peter Zajec, Danijel Vončina, Janez Nastran, Marko Petkovšek, **Low power multiple output DC supply. Part II, Crossover voltage control in multiple output DC supply**, EPE-PEMC 2006, pp. 672-676.



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