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KITTISAK DEEYA : A HIGH INPUT POWER FACTOR , 500-VA UNINTERRUPTIBLE POWER SUPPLY

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This thesis presents the design , construction and testing of a single-phase 500 VA uninterruptible power supply (UPS). The rectifier of this UPS is designed to provide an input power factor higher than 0.9 with nearly sinusoidal input current waveform. The UPS comprises of a switchmode rectifier , a battery charger and an inverter. These circuits are connected together by a dc bus of 450 volts.The inverter uses PWM technique and voltage feedback to provide sinusoidal output voltage with good regulation. The UPS functions satisfactory with an efficiency of 70% when operate from battery.