

# FRIWO gives you a plus



- Always near to you – global sales organisation
- Worldwide manufacture and flexible production capacity
- Products for universal use
- Know How from the leader on the market
- Flexibility to match the customer's individual needs



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**FRIWO®**

NEWS

## Power Solutions



**FRIWO – Proficiency in standards and developing individual solutions.**

# Responsibility for our environment

FRIWO always felt responsible for our environment – this did not start because of the present discussion about climate protection, energy consumption or ENERGY STAR. In fact, for many years now, FRIWO has been working to offer especially environmental friendly products to our customers and so concentrates on switchmode technology. With the growing demands of environmental authorities for the high efficiency of power supply units, the linear device technology no longer meets these requirements.

In the United States, the Environmental Protection Agency (EPA) started a certification programme for particularly energy-efficient products in 1992: ENERGY STAR.

Today, the ENERGY STAR programme comprises almost all electronic devices. The requirements on external power supplies include ambitious efficiency targets. In the process, not just the maximum output is taken into consideration nowadays. Since many terminal devices are often operated at partial load, greater energy savings are expected when the average is formed from 25%, 50%, 75%, and 100% of the load and output-dependent limit values are defined.

In California, the CEC (California Energy Commission) declared the ENERGY STAR requirements to be binding from 1 July 2007, and the other states in the United States will follow suit.

In Europe, the Code of Conduct of the European Communities has introduced a voluntary self-obligation of manufacturers to the limitation of equipment power loss; power supplies with a power output of up to 50 W may not exceed a power loss without load of 0.5 W from 1 January 2007.



Furthermore, within the scope of the EuP (Energy-using Products) directive, the entire life cycle of the product is taken into consideration and the resources for design, production, distribution up to reuse are included. According to experts, the directive will become binding in 2008 and assume the ENERGY STAR limit values.

For the global suppliers of power supplies, it is thus essential that they fulfil the strictest limit values. Today, FRIWO already has the necessary competence for its product portfolio to realise power supplies with high efficiency and lower standby losses and thus to replace the linear power supply programme by the SP series.

# SWITCHMODE INSIDE

## Applications

- Audio
- Bluetooth / WLAN
- Communication accessories
- Measurement and weighing technology
- Modems DSL, ADSL, VDSL
- Medical technology

## Characteristics

- Universal input 100 to 240 V AC
- Constant voltage, current limited
- Low leakage current  $\leq 10 \mu\text{A}$
- Low standby power  $\leq 0.3$  to 0.5 Watts
- Continuously short circuit proof
- Conforms to IEC 60601-1, IEC 60950, IEC 60335

## FRIWO-Product Portfolio

	<b>3 Watts</b>		<b>6 Watts</b>		<b>8 Watts</b>
PP 3		PP 6		PP 8	
	<b>6-30 Watts</b>		<b>10-18 Watts</b>		<b>12-80 Watts</b>
MPP 6/15/30		GPP 10/18		DT 12/50/80	
	<b>3-80 Watts</b>		<b>8-60 Watts</b>		<b>8-80 Watts</b>
Open Frame		Chargers for Plump, NiCd/NiMH, Li-Ion		Medical	
<b>The new SP series replaces „environmental unfriendly“ linear power supplies and chargers</b>					
	<b>NEW</b> <b>3-18 Watts</b>		<b>NEW</b> <b>12-24 Watts</b>		<b>NEW</b> <b>12-24 Watts</b>
SP 3		SP 7		SP 12	SP 18
				SP 24	

## Average Efficiency and Standby Losses

