

Primäry Switched Battery / Power Supply SL1024 18V - 30V, 10A for hat rail mounting



- Softstart
- High Efficiency, > 90%
- Small Operating Temperature
- Heavy Charging up to 30V (10A)
- EG-Conformity acc. to EN50081/82
- Short Circuit Proofed (Fold back)
- Very Low Output Ripple
- Charge Charact. acc. to DIN 41773

General Data

The battery charging / Power supply SL1024 has been developed for charging of lead or nickel-cadmium batteries and for the DC-supply of standing loads to be installed on standard hat rail. The charger is especially suitable for the supply of diesel engine batteries and dc control system batteries. Particular attention has been given to the safe operation of units and protection of associated equipment.

The unit has been designed as primary switched power supply. Therefore it is compact, has a light weight and small heat radiation. The output of the unit can be directly connected to the battery (with fuses) or be used as power supply. The output voltage/current will be stable with input voltages from 180 - 260VAC and temperature variations.

The output voltage, maximum output current and heavy charging voltage can be adjusted on the front side panel. During operation with maximum current with increased environment temperatures the setting of charge current is automatically reduced.

Normal Charging

The new/empty battery is charged first with a constant current. Before reaching the final charging voltage the current is reduced in accordance with the charging characteristic and subsequently changes to maintenance charging. In the event of prolonged high current drain and coinciding high ambient temperature the charging current is automatically reduced.

Heavy Charging

Compensation-type chargings should be carried out for nickel-cadmium batteries at intervals in accordance with the manufacturer's recommendations so as to avoid capacity loss of the batteries. For this purpose the final charging voltage is increased to corresponding values (Please use potentiometer U_{St} to choose the correct voltage, adjustment without load). This "over"-charging is achieved by linking the terminals GND - ST. Note: To avoid any damage to the batteries switching to normal charging should take place automatically.

Settings

The chargers are factory set before delivery to a final charging voltage of 26,6V and charge current of 10A. The adjustment of final charging voltage has be done without load with the potentiometer U Ld. Setting of current requires a load resistance, empty battery or an electronic load.

Serial / Parallel Operation

To increase the output current or the output voltage the units can be parallel or serially connected in any quantity. At parallel operation of units output voltages of units must be set to same voltages before connecting the units.

Technical Data

Type	Charg. Voltage within heavy charg.	Charg. Current max.	Power cons. at mains (max)	Fusing		Weight	Dimensions (mm , W x H x D)
				Prim. (Q1) acc. to EN 60 898	Sek. (Q2)		
SL1024	18 - 30V	10A	350W	4A B	16A B	1,1kg	200x104x80
Construction	Closed aluminium case for mounting on hat rail 35mm						
Supply voltage	231V (50/60Hz) -20 +15%						
Charging parameters	IU -param. Acc. to DIN 41773 (< +/- 1% tolerance) and DIN 57510 with reduced current (Wa) in area of open load (approx. 3,5% from adjusted level)						
Cyclic duration factor	Continous operation						
Efficiency	> 90%						
Softstart	appr.0,5 sec. after switching on the load current will be switched on						
Overload	Automatic power limitation, short circuit proof, charger switches on again after overload condition is cleared (fold back)						
Temperature overload	In case of overheating the load current will be limited, after the overheating has been cleared the fully output current is available again						
Polarity protection	up to 50A (100ms) [battery feedback current]						
Final charging voltage	18 - 30VDC, Ripple < 100mV, Tolerance 0,1% / 10°C (Option 12 - 30VDC)						
Ambient temperatures	-20 °C bis +55°C, Continous maximum output current up to 35°C, > 35°C Derating, Operation possible up to 70°C (0A)						
Storing temperatures	-40°C bis + 85°C						
Relative air humidity	95%						
Kind of protection	IP00						
Maintenance	Maintenancefree						
Mains isolating	EN 60 742 (Savety transformers)						
General regulations	EN 50 178 (Units in power current installation)						
Radio interference	EN 55 022 / Class B						
EMV	EN 61000 und EN V 50 140						

Circuit Diagram :

