
TELECOM POWER ENERGY STATION FOR INDOOR INSTALLATION

SETB SERIES

Main Features

DC current single output with battery back-up in normal or redundant configuration Telecom Power Energy Stations. Provided with switching technology main converter and self-stabilizing insulation transformer. Particularly developed to be used in telecommunication applications where are needed high reliability features and capabilities to withstand, in input side, high overvoltages produced by perturbations on the supply line. The self-standing steel cabinet have dimensions according to 19" racks or ETS300 with protection degree equal or better than IP30; inside are foreseen drawers to accept AGM type batteries.

Electrical Features

The most important characteristics that distinguish these types of stations are the following.

Input supply voltage	230 Vac 1 Ph.
Accepted tolerance	±15%
Input frequency	50 Hz
Accepted tolerance	±2%
Nominal output voltage	48/60 Vdc
Warranted tolerances	
Line variations	±0,5%
Load variations	±0,5%
Alternate ripple	less than 100mV
Psophometric residual	less than 2mV
Users voltage	48/60 V ±15%
Overvoltages attenuation	better than 40 dB
Inrush current	less than 5 times nominal input current
Power factor	better than 0,9 at full load
Efficiency	better than 80%
Single unit MTBF	about 100.000 hrs
Hold-up time	6 hours at 25 °C
Recharge time	less than 12 hours

Main converter output power

The product range comprises the following models as a function of the converter output power.

Model	Output Power
SETB 1000	1000 Watt
SETB 1500	1500 Watt
SETB 2000	2000 Watt
SETB 2500	2500 Watt
SETB 3000	3000 Watt
SETB 4000	4000 Watt

Options and accessories

Some accessories are normally installed to correctly manage the Energy Station; they are:

AC Mains input magnetothermic breaker

User side magnetothermic breaker

Low voltage loads detach contactor

Digital switchable instrument

Alarms tele-signalling

Output overvoltage protection

Moreover a large quantity of options and accessories can be installed, on demand, to adequate the apparatuses to more complex applications.

It is possible to install the following.

Dual redundant converters

One phase 400 V input voltage

Forced ventilation

Inverter to supply AC loads

Mechanical features

The mechanical construction is self-standing type cabinet with covers and drawers for the converters and battery installation. The depth is 500 mm, the width is 660 mm while the height is variable as a function of the output power as reported in the following table.

Model	Battery	Cabinets	Height
SETB 1000	80 Ah	1	1400 mm
SETB 1500	110 Ah	1	1400 mm
SETB 2000	125 Ah	1	1800 mm
SETB 2500	160 Ah	1	1800 mm
SETB 3000	180 Ah	1 (2)	2000 mm
SETB 4000	300 Ah	2	1800 mm

The cables entry is foreseen on top side of the cabinet near the door opening.

Ambient compatibility

The energy station fulfill typical or production test to warrant ambient compatibility. Most important are the following (* identify typical tests).

*Vibrations 5 m.s⁻² - 0,032mm

*Not operating temperature from -25 to 70 °C

*Operation temperature from -20 to 45 °C

*Injected harmonics less than 20%

Pulse strenght 1,2/50 µs 3,5 kVp

Dielectric strenght 2,5 kV RMS

Insulation resistance 100 MΩ at 500 Vcc

Ringling wave disturbance 1 kVp at 1MHz

Reference for CE marking EN50081-1/50082-2

Products range

Model	Dual converter	Input voltage 50 Hz B=230 C=400	Instruments	Forced ventilation	Inverter IM03= 300VA IM06= 600VA IM12= 1200VA	Output voltage	Approx. Power to loads (W) reservoir = 6 hours
SETB-1000-2	R	B/C	S4	V2		48	700
SETB-1000-2	R	B/C	S4	V2		60	700
SETB-1500-6	R	B/C	S4	V2		48	870
SETB-1500-6	R	B/C	S4	V2		60	870
SETB-2000-2	R	B/C	S4	V2	IM03/IM06	48	1200
SETB-2000-6	R	B/C	S4	V2	IM03/IM06	60	1200
SETB-2500-2	R	B/C	S4	V2	IM03/IM06	48	1400
SETB-2500-6	R	B/C	S4	V2	IM03/IM06	60	1400
SETB-3000-2	R	B/C	S4	V2	IM06/IM12	48	1700
SETB-3000-6	R	B/C	S4	V2	IM06/IM12	60	2100
SETB-4000-2	R	B/C	S4	V2	IM06/IM12	48	2000
SETB-4000-6	R	B/C	S4	V2	IM06/IM12	60	2500



Power energy station SETB 2000-6-R