Spica Back-up Unit

Buffer Module with Ultra Capacitors

Features:

- Compact design in single housing
- Extremely vibration-resistant
- Maintenance-free
- Operation in extreme temperatures (-40° to + 60°)
- No gas emission – can be used in sealed environments
- Short recharge time = fast availability

Description

The Spica buffer module uses Ultra Capacitors as energy storage inside the housing. The capacitors are charged in normal operation from an external, regulated DC-power supply. In the event of power loss, the stored capacity of the ultra capacitors become distantly energised and supplies power until they are discharged. Backup time depends on the ultra capacitor's level of charge and the discharge current.

Back-up time

Compared to traditional buffer modules with capacitors the new Spica back-up provides longer back-up times. With full charged capacitors, back-up time can be calculated as follows:

back-up time : $\frac{\text{energy} * 0{,}9}{\text{voltage x current}}$ = sec.

with full charged capacitors : $\frac{12000 \text{ Joule x } 0{,}9}{24\text{V x } 1{,}25\text{A}}$ = 360 sec. (approx. 6 min.)

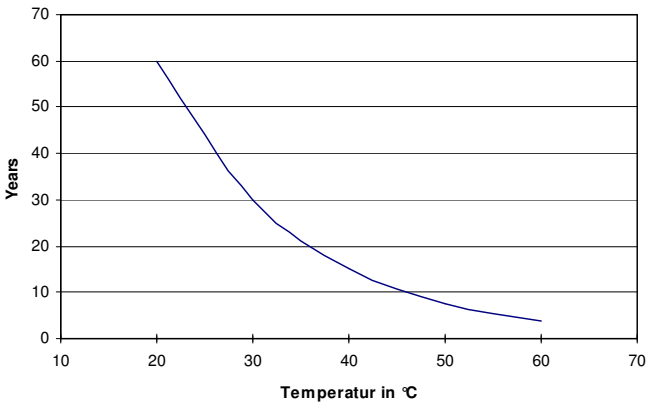
$\frac{12000 \text{ Joule x } 0{,}9}{24\text{V x } 10\text{A}}$ = 45 sec.

Technical data:

Type	9501SPT -165 -170 -175
Input	
nominal input voltage	24V
input voltage range	24 VDC +/- 10%
nominal inrush current	10,0A
max. inrush current	35A / 2ms
fusing	15A (FK2) (internal)
Output	
output voltage in buffer-operation system voltage 24V	23,5V DC +/-2%
nominal output current	10 A
limiting current control	10,3A DC +/-0,1A
switch off when limiting current is exceeded	after 1,5 secondes
current limitation	1,05...1,2xI_{Nom}
efficiency Ua=23,5V DC, Ia=Inom	> 90%
stored energy	12kJ +0 /-15%
fusing DC-output circuit	15A (FK2) (internal)
fusing capacitor circuit	25A (FK2) (internal)
General Data	
type of connection input	spring clips max. 2,5mm^2
type of connection output	spring clips max. 2,5mm^2
type of connection measurements"I/O"	spring clips max. 2,5mm^2
type of protection	IP 20 and EN 60529
weight	2,4 kg
storage temperature	- 40℃ - +60℃
operation temperature	- 40℃ - +60℃
dimensions (without brackets)	295x172x83

Display and Signalling outputs	LED illuminates when:	Potentialfree relays-contact
Power on, LED green	system voltage present at supply terminal	
Supply OK, LED green	external supply present, Input supply > system supply	normally open contact, max. contact load 30V DC / 0,5A
Capacitors charged , LED green	Energy in the capacitor > 80%, expires when: energy in the capacitor < 30%	normally open contact max. contact load 30V DC / 0,5A
Alarm, LED red	over- or under voltage at the terminal "Supply" overvoltage at interal capacitor overcurrent at the output	two-way-contact, max. contact load 30V DC/0,5 A
Signalling input		
Shut-down input	Stop of the UPS operation	potentialfree gate input, switch level: 24V DC (6-45V DC)

Life duration depending on temperature



Life duration is depending on the time which capacity amounts to 70%.

Mounting options

The Spica Backup unit can be mounted in 3 different ways for various applications

Mounting option 1

P/N : 9501SPT165

Mounting option 2

P/N : 9501SPT170

Mounting option 3

P/N : 9501SPT175