

# Kompakte 24V DC-Versorgung

## ELTEK - Serie CTOS0201.1167

Die Anforderungen an eine moderne Stromversorgung werden immer vielfältiger. Maximale Leistung bei kleinsten Abmessungen, hohe Flexibilität bei Ausgangs- und Meldefunktionen, hohe Verfügbarkeit durch mögliche Redundanzschaltung, optionale Batteriepufferung und eine über Ethernet basierende Kommunikation ermöglichen den Einsatz bei unterschiedlichsten Anwendungen in Industrie und Telekom.



### AUFBAU:

#### SMARTPACK S Controller



#### Key-Features:

- Komplettsystem mit
  - Controller
  - Gleichrichter
  - Lastverteilung mit 7 Abgängen inkl. Ausfallmeldung
  - temperaturgeführte Batterieladung
  - interne Batteriesicherung optional
  - In Betrieb steckbare Powermodule und Controller

#### FLATPACK S Modul (24V und 48V)



- Minimale Abmessungen:  
19" x 1 HE – 262mm Tiefe
- Vielseitige Einstell- und
- Überwachungsmöglichkeiten über Ethernet

# Flatpack S 24V Rectifier



Doc 241122.205.DS3 – v2.1

Model	24/1000 HE
Part number	241122.205
<b>INPUT DATA</b>	
Voltage (nominal range)	185 V <sub>AC/DC</sub> - 305 V <sub>AC</sub> / 300 V <sub>DC</sub>
Voltage (operating range)	85 V <sub>AC/DC</sub> - 305 V <sub>AC</sub> / 300 V <sub>DC</sub>
Frequency (nominal / range)	DC, 45 - 66 Hz / 0-66 Hz
Maximum current	5.9 A <sub>RMS</sub>
Power Factor	> 0.99 at 50% load or more
Protection	Fuse Shutdown above 305 V <sub>AC</sub> / 300 V <sub>DC</sub>
<b>OUTPUT DATA</b>	
Voltage (default)	26.7 V <sub>DC</sub>
Voltage (adjustable range)	21.5 - 28 V <sub>DC</sub>
Max power, nominal input	1000 W
Max power, @ 85 V <sub>AC/DC</sub>	440 W
Max current	41.7 A (@V <sub>OUT</sub> < 24 V <sub>DC</sub> )
Current sharing	±5% of maximum current from 10 to 100% load
Static voltage regulation (10-100% load)	±0.5%
Dynamic voltage regulation	±5.0% for 10-90% or 90-10% load variation, regulation time < 50ms
Hold up time	>20ms; output voltage > 21 V <sub>DC</sub>
Ripple	< 150 mV <sub>PP</sub> , 30 MHz bandwidth
Protection	Blocking OR-ing Diode, Short circuit proof, Over voltage protection and High temperature protection
<b>OTHER SPECIFICATIONS</b>	
Peak Efficiency	92.5 %
Isolation	3.0 kV <sub>AC</sub> – input and output, 1.5 kV <sub>AC</sub> – input earth, 0.5 kV <sub>DC</sub> – output earth
Alarms (Red LED)	Low mains shutdown, High and low temperature shutdown, Rectifier Failure, Overvoltage shutdown on output, Fan failure, Low voltage alarm, CAN bus failure
Warnings (Yellow LED)	Rectifier in power de-rate mode, Remote battery current limit activated, Input voltage out of range, flashing at overvoltage
Normal (Green LED)	Input and output ok
Potential alarm relay (normally closed)	Opens on alarms and mains outage
MTBF (Telcordia SR-332 Iss.I method III (a))	> 300 000 (@ T <sub>ambient</sub> : 25 °C)
Operating temperature (5 - 95% RH non-cond.)	- 40 – 85°C [-40 – 185°F ]
Max output power de-rates above temp / to	45°C [+113°F] / 400 W
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing
Dimensions[WxHxD] / Weight	72 x 41.5 x 217mm (2.83 x 1.63 x 8.54") / < 850 g (1.9 lbs)
<b>DESIGN STANDARDS</b>	
Electrical safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011, UL 60950-1:2011
EMC	EN 61000-6-1:2007, -6-2:2005, -6-3:2007 + A1:2011, -6-4:2007 + A1:2011, TS 61000-6-5, EN 300 386:v1.6.1, FCC CFR 47 Part 15:2013
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) & 2-3 (Class 3.2) 2011/65/EU (RoHS) & 2008/98/EC (WEEE)

Specifications are subject to change without notice

# Flatpack S 48V Rectifiers



Doc 241122.1x5.DS3 – v2.3

Model	48/1000 HE	48/1800 HE
Part number	241122.105	241122.125
<b>INPUT DATA</b>		
Voltage (nominal)	185 - 270 V <sub>AC</sub> / 185 - 250 V <sub>DC</sub> <sup>1)</sup>	195 <sup>2)</sup> - 277 V <sub>AC</sub> / 195 <sup>2)</sup> - 250 V <sub>DC</sub> <sup>1)</sup>
Voltage (operating range)	85 - 300 V <sub>AC</sub> / 85 - 250 V <sub>DC</sub> <sup>1)</sup>	85 <sup>2)</sup> - 305 V <sub>AC</sub> / 85 <sup>2)</sup> - 250 V <sub>DC</sub> <sup>1)</sup>
Current (maximum) @ nominal input, full load	5.9 A <sub>RMS</sub>	9.9 A <sub>RMS</sub>
Frequency	45 - 66 Hz / 0 Hz <sup>1)</sup>	
Power Factor	> 0.99 at 50% load or more	
Protection	Fuse in L & N, Varistor, Shutdown when input voltage is out of operating range	
<b>OUTPUT DATA</b>		
Voltage (default)	53.5 V <sub>DC</sub>	
Voltage (adjustable range)	43.5 - 57.6 V <sub>DC</sub>	
Power (maximum) @ nominal input	1000 W	1800 W
Power @ 85 VAC	420 W	700 W <sup>2)</sup>
Current (maximum) @ nominal input	20.9 A (@V <sub>OUT</sub> < 48V <sub>DC</sub> )	37.5 A (@V <sub>OUT</sub> < 48V <sub>DC</sub> )
Hold up time, maximum output power	>20ms; output voltage > 41 V <sub>DC</sub>	>10ms; output voltage > 42 V <sub>DC</sub>
Current sharing (10 - 100% load)	±5% of maximum current from 10 to 100% load	
Static Voltage regulation (10 - 100% load)	±0.5%	
Dynamic Voltage regulation	±5.0% for 10-90% or 90-10% load variation, regulation time < 50ms	
Ripple	< 150 mV <sub>PP</sub> , 30 MHz bandwidth	
Protection	ORing FET, Short circuit proof, High temperature protection, Over voltage Shutdown	
<b>OTHER SPECIFICATIONS</b>		
Efficiency	Up to 95.5 %	Up to 95.8 %
Isolation	3.0 kV <sub>AC</sub> - input to output, 1.5 kV <sub>AC</sub> - input to earth, 710 V <sub>DC</sub> - output to earth	
Alarms: Red LED	Low / high input voltage shutdown, High / low temperature shutdown, Rectifier Failure, Overvoltage shutdown on output, Fan failure, Low output voltage alarm, CAN bus failure	
Warnings: Yellow LED	Rectifier in power de-rate mode, Remote output current limit activated, Input voltage out of range, flashing at overvoltage, Loss of CAN communication with controller	
Normal operation: Green LED		
MTBF (Telcordia SR-332 Iss.I method III (a))	>315 000 (@ T <sub>ambient</sub> : 25 °C)	>300 000 (@ T <sub>ambient</sub> : 25 °C)
Operating temp. (5-95% RH n.cond. hum.)	-40 to + 85°C [-40 to +185°F]	
Max output power de-rates above temp / to	45°C [113°F] / 600W @ 85°C[185°F]	45°C [113°F] / 1000W @ 85°C[185°F]
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing	
Dimensions[WxHxD] / Weight	72 x 41.5 x 217mm (2.83 x 1.63 x 8.54") / < 850 g (1.9 lbs)	
<b>DESIGN STANDARDS</b>		
Electrical safety	UL 60950-1, EN 60950-1	
EMC	ETSI EN 300 386 EN 61000-6-1 / -2 / -3 / -4 TS 61000-6-5 FCC CFR 47 Part 15	
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) & 2-3 (Class 3.2) RoHS (2011/65/EU) and WEEE (2002/96/EC) compliant	
<p>1) DC input only allowed when up-stream breaker is rated for the applicable DC input voltage and has a maximum current rating of 32A</p> <p>2) For HW revisions 1 - 1.31, nominal range is 207 - 277 V<sub>AC</sub> / 207 - 250 V<sub>DC</sub>, maximum output power at 176 V<sub>AC/DC</sub> is 1180 W with further linear de-rating to 90W at 122 V<sub>AC/DC</sub>. Not to be used in applications with 110/120 V<sub>AC</sub> mains.</p>		

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