

ComPact 1500 AC/DC

Input: 120/230 VAC, 50/60/400 Hz
Output: 5-34 VDC, 50 A, 1500 W

ComPact family summary

MIL-STD-810G, MIL-STD-461G, MIL-STD-1275D
Power Factor Correction (PFC)
RS-485 bus
Active load sharing
Battery temperature compensated charging
Stand alone or mounted in 19" rack
Alarm relay outputs
RoHS compliant
IP67

Description

The input current of ComPact is power factor corrected and designed for optimum utilization of weak power sources such as portable generators. The efficiency is very high due to soft switching technology. ComPact can operate stand alone or be mounted in 19" rack system. The RS-485 bus can be used for control, monitoring and setup. Detailed status and statistics can be retrieved. The bus is also used for interconnecting multiple units in a redundant or parallel system. The signal connectors provide several signals in addition to the RS-485 bus: alarm relay outputs and input for battery temperature sensor. Temperature compensated charging ensures full battery capacity over the entire temperature range. ComPact can be configured to charge different battery technologies such as Li-Ion, LiPo, lithium iron phosphate and lead-acid. ComPact can be software configured according to customer specification. The firmware is user upgradeable for future battery technologies and facilities. ComPact is protected from overvoltage, overcurrent, short circuit, reversed polarity and over temperature.

Part No.	NSN	Description
P600450	6130-25-162-1734	ComPact 1500 AC/DC, Green



Functions

Over temperature	The unit is protected from over temperature by derating the output current. It shuts down if the temperature continues to rise. The unit automatically starts up again when the temperature drops.
Input circuit breaker	The input circuit breaker is for failure protection and is also used as ON/OFF switch.
Alarms	Status signals are fed to separate potential free outputs, and are indicated in separate LEDs.
Display	The display can be toggled between output voltage, output current and alarm/error codes.
Input voltage	When the input voltage is below the safe operating range, the converter is shut off. When the voltage returns, the converter is turned on again.
Connectors	AC input: MS3102E-16-10P-PCC-622-9 Amphenol or similar DC output: MS3102E-22-2S-622-9 Amphenol or similar Alarm 1: Binder 09-0404-30-02 Alarm 2: Binder 09-0412-30-04 NTC/COM: 2 pieces. Binder 09-0416-30-05
Grounding	Available in the front and back
Acoustic noise	At ambient temperatures below 45°C the acoustic noise is 45 dBA.
Frequency range	45-430 Hz
Cooling	Forced air by temperature controlled fan

Patented

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Specifications

Electrical	
AC Input	
Input voltage	99—276 VAC
Power Factor -Load: 28 VDC, 50 A, Vin: 50/60 Hz	Typical: 0.99
Input current -Load: 1600 W -Vin: 50/60 Hz	Vin: 99 VAC ≤ 19 A Vin: 120 VAC ≤ 15 A Vin: 230 VAC ≤ 8 A
Total Harmonic Distortion -Load: 28 VDC, 40 A -Vin: 115/230 VAC, 50/60 Hz	≤ 14%
Efficiency -Load: 28 VDC, 40 A	Vin: 120 VAC ≥ 86% Vin: 230 VAC ≥ 88%
DC Output	
Default output voltage	28.0 VDC
Adjustable output voltage	5—34 VDC
Oversvoltage protection (OVP)	36.5 V
Default output current limit	50 A
Adjustable current limit	5—52 A
Short circuit current	≤ Setting of current limiter +1 A
Load sharing	≤ 2 A deviation
Output voltage ripple and noise -Bandwidth: 20MHz	≤ 100 mVp-p
Load regulation	Typical: 55 mV
Line regulation	Negligible
Safety	CE marked

EMC (fully qualified unless stated)	
Electromagnetic Interference MIL-STD-461G: CE101, CE102, RE101, RE102, RS103, CS101, CS114, CS115, CS116 and CS118	
Electrical systems in vehicles MIL-STD-1275D: Imported voltage surge 40 V and 100 V and ripple 14 V	
Electrostatic discharge EN 61000-4-2: ESD	

Environmental (fully qualified unless stated)	
High temperature <u>Operational</u> MIL-STD-810G: Method 501.5, Procedure II, +60 °C <u>Storage</u> MIL-STD-810G: Method 501.5, Procedure I, +71 °C	
Low temperature <u>Operational</u> MIL-STD-810G: Method 502.5, Procedure II, -40 °C <u>Storage</u> MIL-STD-810G: Method 502.5, Procedure I, -51 °C	
Temperature shock MIL-STD-810G: Method 503.5, -51—+71 °C, non-operational	
Humidity MIL-STD-810G: Method 507.5, Procedure II, operational	
Vibration MIL-STD-810G: Method 514.6C Table 514.6C-VI. Composite wheeled vehicle vibration exposures figure 514.6C-3 MIL-STD-801G: Method 514.6D, Category 20, Ground Vehicles, Wheeled/Tracked/Trailer, Procedure I	
Shock MIL-STD-810G: Method 516.6, Procedure I, functional Shock, 40 g, 11 ms	
Fungus MIL-HDBK-454: Analysis of the degree of inertness to fungus growth of the components	
Salt Fog MIL-STD 810G: Method 509.5, 24 h spray, 24 h dry, 2 times	
Altitude <u>Operational</u> MIL-STD-810G: Method 500.6, Procedure II, 4572 m (15000 ft) at 57.2 kPa <u>Storage</u> MIL-STD-810G: Method 500.6, Procedure I, 12192 m (40000 ft) at 18.8 kPa	
Encapsulation IP67: Immersion in 1 m water for 30 minutes .	

Mechanical	
Enclosure	Die cast and machined aluminum.
Surface finish	Paint finish. Surface finish consistent with die casting.
Width	220 mm, 8.66"
Depth in rack	390 mm, 15.35"
Depth total	420 mm, 16.54"
Height	88 mm, 3.5", 2U
Weight	11.1 kg, 24.5 lbs

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