

Product DataSheet:

Description:

The AC / DC power supply via a connector accepts a type of service line in input 60Hz, three phase, 115Vac line to line, three wires without neutral, star configured, "as for STANAG 1008 Edition 9" to transform into voltage DC output.

AC / DC is a converter with multiple outputs on different connectors.

REACH compliant, CE Marked.



Key Specifications:

- Input Line type:
60Hz, three phases, 115Vac line to line, without neutral, star configured as for STANAG 1008 Edition 9.
- Power Outputs:

| | | |
|-----------|-----------------------|-----------------------|
| ▪ 28Vdc | $I_{OUT-MAX} = 39A$ | $P_{OUT-MAX} = 1100W$ |
| ▪ 28Vdc | $I_{OUT-MAX} = 19A$ | $P_{OUT-MAX} = 530W$ |
| ▪ 54Vdc | $I_{OUT-MAX} = 9A$ | $P_{OUT-MAX} = 490W$ |
| ▪ 45,5Vdc | $I_{OUT-MAX} = 12,5A$ | $P_{OUT-MAX} = 570W$ |
- Overvoltage; Undervoltage; Overcurrent protection on each single output
- Operating Temperature -5 to 55°C
- Storage Temperature -40 to 85°C
- Light Indicators Input AC Line; Output DC Line; Fail; H.T°;
- EMI/EMC Compliant with MIL-STD-461F
- Environmental conditions compliant with MIL-STD-810G with Change1.
- CE Marked
- REACH compliant with the regulation CE n° 1907/2006
- Dimensions (h x l x d): 265 x 356 x 395mm
- Weight: 25kg

ELECTRICAL CHARACTERISTICS

| Parameter | INPUT CHARACTERISTIC | Min. | Typ. | Max. | UNIT |
|---|--|-------------------|------|------|----------------------|
| Voltage Level | Nominal Voltage Level | | 115V | | V _{RMS} |
| | Steady state Tolerance Limits (due to the combined effects) | 105 | | 125 | V _{RMS} |
| | Transient Tolerance Limits (due to the combined effects) Time=2.00 s | 89 | | 141 | V _{RMS} |
| Voltage | Voltage spike (peak value, includes fundamental) | ±1kV | | | V _{dc} |
| Voltage Waveform | Total harmonic distortion (Maximum) | 5 | | | % |
| | Individual harmonic (Maximum) | 3 | | | |
| | Deviation factor | 5 | | | |
| Frequency | Nominal Frequency | 60 | | | Hz |
| | Frequency tolerance (4) | ±3 | | | % |
| | Frequency modulation (5) | 0.5 | | | % |
| | Frequency transient tolerance (6) | ±4 | | | % |
| | Maximum departure from the nominal frequency due to the combined effects of (4), (5) and (6) | ±5.5 | | | % |
| | Frequency transient tolerance (6) | 2 | | | seconds |
| Parameter | Isolation Characteristics | Min. | Typ. | Max. | UNIT |
| Safety | Isolation Voltage (dielectric strength) | | | 1000 | V _{RMS} |
| | Isolation Resistance @ 500Vdc | 1 | | | MΩ |
| FEATURE CHARACTERISTICS | | Min. | Typ. | Max. | UNIT |
| Switching Frequency | | | 200 | | kHz |
| ON/OFF Control | | | | | |
| Off-State Voltage | | | | | |
| On-State Voltage | | | | | |
| Over-Temperature Shutdown | | | 100 | | °C |
| Over-Temperature Shutdown Restart Hysteresis | | | 10 | | °C |
| Cooling | Forced air by FAN UNIT | | | | |
| MECHANICAL FEATURES | | | | | |
| Dimensions | (H x W x D) | 265 x 356 x 395mm | | | |
| Weight | | 25kg | | | |
| RELIABILITY CHARACTERISTICS | | Min. | Typ. | Max. | UNIT |
| Calculated MTBF MIL-HDBK-217F Notice 2 @ TA=40°C Naval Sheltered (N _s) | | | 45 | | 10 ³ Hrs. |

ELECTRICAL CHARACTERISTICS (28V 1100W)

| Parameter | Test Condition | Min. | Typ. | Max. | UNIT |
|---|---|------------------|------|------|------------------|
| Nominal Voltage (at nominal input line and within min to max load range) | Measured at output connector pins | 27 | 28 | 29 | V _{dc} |
| Nominal Current load | (See Note 1) | 0 | | 39 | A |
| Total Static Regulation (Line and Load Reg. and Thermal Stability) | | | | 1 | V _{dc} |
| Total Dynamic Regulation Load: (from 50% to 100% load transient) | | | | | |
| Under-Voltage | | | | 0.9 | V _{dc} |
| Over-Voltage | | | | 0.9 | V _{dc} |
| Recovery Time | | | | 3 | ms |
| Ripple: Low Frequency (50Hz to 200MHz) | | | | 500 | mV _{PP} |
| Limiting Current Protection | Converter Shut Down with Automatic Recovery (See Note 3) | | 51 | | |
| Under voltage Protection Threshold | Converter Shut Down with Automatic Recovery | 24 | | | V _{dc} |
| Over voltage Protection Threshold | Converter Shut Down with Automatic Recovery | | | 31.5 | V _{dc} |
| Auto Reset Retry (Hiccup Mode) | Min Interval Between Auto Reset Retry For Limiting Current and Over Voltage Protections | 0.6 | | 1 | s |
| Turn-on Time | Input-Output Voltage Delay | | | 200 | ms |
| Rise Time | | | | 150 | ms |
| Delay Time | (See Note 4) | | | | |
| Isolation Voltage | Vs. chassis | 100 | | | V _{dc} |
| Insulation resistance | | 1 | | | MΩ |
| External load Impedance Max. | | | | 10 | mF |
| Reference Return Ground | (See Note 2) | GND ₁ | | | |

ELECTRICAL CHARACTERISTICS (28V 532W)

| Parameter | Test Condition | Min. | Typ. | Max. | UNIT |
|---|---|------------------|------|------|------------------|
| Nominal Voltage (at nominal input line and within min to max load range) | Measured at output connector pins | 27 | 28 | 29 | V _{dc} |
| Nominal Current load | (See Note 1) | 0 | | 19 | A |
| Total Static Regulation (Line and Load Reg. and Thermal Stability) | | | | 1 | V _{dc} |
| Total Dynamic Regulation Load: (from 50% to 100% load transient) | | | | | |
| Under-Voltage | | | | 0.7 | V _{dc} |
| Over-Voltage | | | | 0.7 | V _{dc} |
| Recovery Time | | | | 3 | ms |
| Ripple: Low Frequency (50Hz to 200MHz) | | | | 500 | mV _{pp} |
| Limiting Current Protection | Converter Shut Down with Automatic Recovery (See Note 3) | | 25 | | |
| Under voltage Protection Threshold | Converter Shut Down with Automatic Recovery | 24 | | | V _{dc} |
| Over voltage Protection Threshold | Converter Shut Down with Automatic Recovery | | | 31.5 | V _{dc} |
| Auto Reset Retry (Hiccup Mode) | Min Interval Between Auto Reset Retry For Limiting Current and Over Voltage Protections | 0.6 | | 1 | s |
| Turn-on Time | Input-Output Voltage Delay | | | 100 | ms |
| Rise Time | | | | 50 | ms |
| Delay Time | (See Note 4) | | | | |
| Isolation Voltage | Vs. chassis | 100 | | | V _{dc} |
| Insulation resistance | | 1 | | | MΩ |
| External load Impedance Max. | | | | 5 | mF |
| Reference Return Ground | (See Note 2) | GND ₂ | | | |

ELECTRICAL CHARACTERISTICS (54V 486W)

| Parameter | Test Condition | Min. | Typ. | Max. | UNIT |
|---|---|------------------|------|------|------------------|
| Nominal Voltage (at nominal input line and within min to max load range) | Measured at output connector pins | 52 | 54 | 56 | V _{dc} |
| Nominal Current load | (See Note 1) | 0 | | 9 | A |
| Total Static Regulation (Line and Load Reg. and Thermal Stability) | | | | 1 | V _{dc} |
| Total Dynamic Regulation Load: (from 50% to 100% load transient) | | | | | |
| Under-Voltage | | | | 0.7 | V _{dc} |
| Over-Voltage | | | | 0.7 | V _{dc} |
| Recovery Time | | | | 3 | ms |
| Ripple: Low Frequency (50Hz to 200MHz) | | | | 500 | mV _{PP} |
| Limiting Current Protection | Converter Shut Down with Automatic Recovery (See Note 3) | | 11.8 | | |
| Under voltage Protection Threshold | Converter Shut Down with Automatic Recovery | 49 | | | V _{dc} |
| Over voltage Protection Threshold | Converter Shut Down with Automatic Recovery | | | 59 | V _{dc} |
| Auto Reset Retry (Hiccup Mode) | Min Interval Between Auto Reset Retry For Limiting Current and Over Voltage Protections | 0.6 | | 1 | s |
| Turn-on Time | Input-Output Voltage Delay | | | 100 | ms |
| Rise Time | | | | 50 | ms |
| Delay Time | (See Note 4) | | | | |
| Isolation Voltage | Vs. chassis | 100 | | | V _{dc} |
| Insulation resistance | | 1 | | | MΩ |
| External load Impedance Max. | | | | 3 | mF |
| Reference Return Ground | (See Note 2) | GND ₃ | | | |

ELECTRICAL CHARACTERISTICS (45.5V 573W)

| Parameter | Test Condition | Min. | Typ. | Max. | UNIT |
|---|---|------------------|------|------|------------------|
| Nominal Voltage (at nominal input line and within min to max load range) | Measured at output connector pins | 44.6 | 45.5 | 46.4 | V _{dc} |
| Nominal Current load | (See Note 1) | 0 | | 12.6 | A |
| Total Static Regulation (Line and Load Reg. and Thermal Stability) | | | | 0.9 | V _{dc} |
| Total Dynamic Regulation Load: (from 50% to 100% load transient) | | | | | |
| Under-Voltage | | | | 0.8 | V _{dc} |
| Over-Voltage | | | | 0.8 | V _{dc} |
| Recovery Time | | | | 3 | ms |
| Ripple: Low Frequency (50Hz to 200MHz) | | | | 500 | mV _{PP} |
| Limiting Current Protection | Converter Shut Down with Automatic Recovery (See Note 3) | 13.9 | | 16.4 | |
| Under voltage Protection Threshold | Converter Shut Down with Automatic Recovery | 36 | | | V _{dc} |
| Over voltage Protection Threshold | Converter Shut Down with Automatic Recovery | | | 48 | V _{dc} |
| Auto Reset Retry (Hiccup Mode) | Min Interval Between Auto Reset Retry For Limiting Current and Over Voltage Protections | 0.6 | | 1 | s |
| Turn-on Time | Input-Output Voltage Delay | | | 200 | ms |
| Rise Time | | | | 150 | ms |
| Delay Time | (See Note 4) | | | | |
| Isolation Voltage | Vs. chassis | 100 | | | V _{dc} |
| Insulation resistance | | 1 | | | MΩ |
| External load Impedance Max. | | | | 7 | mF |
| Reference Return Ground | (See Note 2) | GND ₃ | | | |

STANDARDS & QUALIFICATION

| Parameter | Notes & Conditions | | |
|--|---|---------------|-----------------------------|
| STANDARDS COMPLIANCE | | | |
| CE Marked | | | |
| REACH | with the regulation CE n° 1907/2006 | | |
| QUALIFICATION TESTING | | | |
| MIL-STD-810Gw/Change1 | | | |
| Low Temperature | Operative | -5°C ÷ +55°C | Method 502.6 Proc. II |
| High Temperature | Operative | -5°C ÷ +55°C | Method 501.6 Proc. II |
| Low Temperature | Storage | -40°C ÷ +85°C | Method 502.6 Proc. I |
| High Temperature | Storage | -40°C ÷ +85°C | Method 501.6 Proc. I |
| Humidity | RH 70% -5°C ÷ +55°C | | Method 507.6. |
| Salt Fog | 24 hours + 24 hours Number of cycles : 2 | | Method 509.6. |
| Vibration | Amplit. 1 mm Freq. range from 4 to 14Hz | | Method. 528.1 Three axis |
| | Amplit. 0,8 g Freq. range from 14 to 100Hz | | |
| Shock | Acceleration of 30 g and duration of 6ms | | Method 516.7 Three axis |
| Fungus | Method 508.7 | | |
| MIL-STD-461F Surface Ship Application | | | |
| CE101 | Conducted Emissions, Power Leads, 120Hz to 10kHz | | |
| CE102 | Conducted Emissions, Power Leads, 10kHz to 10MHz | | |
| CS101 | Conducted Susceptibility, Power Leads, 120Hz to 150kHz | | |
| CS106 | Conducted Susceptibility, Transients, Power Leads | | |
| CS114 | Conducted Susceptibility, Bulk Cable Injection, 10kHz to 200MHz | | |
| CS116 | Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz | | |
| RE101 | Radiated Emissions, Magnetic Field, 30 Hz to 100 kHz | | |
| RE102 | Radiated Emissions, Electric Field, 10 kHz to 18 GHz "limit Below Desk" | | |
| RS101 | Radiated Susceptibility, Magnetic Field, 30 Hz to 100 kHz | | |
| RS103 | Radiated Susceptibility, Electric Field, 2 MHz to 40 GHz "Limit 10V/m" | | |