Powerpack
# DSP 3/1 Series

ONLINE UPS
10-20kVA
Three Phase / Single Phase

Servers and Other
Networking Equipment




real source of power



1. RS232
2. Fan
3. Input Breaker
4. Terminal Block
5. SNMP Slot
6. Parallel Port
7. Battery Socket
8. Maintenance Switch
9. Active Wheel



- Three Phase in, One Phase Out
- High Frequency and Double Conversion On-line Technology
- Fully Digitized Microprocessor Control
- Wide Input Voltage Range
- LCD Display
- Cold Start
- Parallel Operation Up to 3 Units
- Advanced Battery Management
- Automatic Battery Charge in UPS Off Mode
- Lightning, Surge, Short Circuit and Overload Protection
- Fan Speed Auto Control When Loads Varies
- Optional Extension Battery Pack
- EMI/RFI Noise Filter
- RS232 Com. Port With Monitoring Software
- Optional SNMP Card Slot




1. LCD
2. ON/OFF Button
3. Self-Test / Silence Button
4. Scroll Button
5. Normal
6. Alarm
7. Abnormal

10kVA • 15kVA • 20kVA

MAKELSAN®
Uninterruptible Power Supplies

| MODEL | | | |
|---|---|---|---|
| Capacity | 10kVA / 7KW | 15kVA / 10.5KW | 20kVA / 14kW |
| INPUT | | | |
| Voltage Range | 304±5VAC~478 ±5VAC | | |
| Frequency Range | 46~54Hz ±0.5Hz or 56~64Hz ±0.5Hz auto sensing | | |
| Phase | Three Phase | | |
| Power Factor | [3]0.95 | | |
| OUTPUT | | | |
| Voltage Range | 220Vac ±1% | | |
| Phase | Single Phase | | |
| Frequency Range | 50Hz/60Hz ±0.2% (Battery Mode) | | |
| THD (Linear Load) | <2% | | |
| THD (Non-Linear Load) | <6% | | |
| Overload Capability | 105%~130%, 10min Turn to Bypass Mode; >130% 1s Turn to Bypass Mode | | |
| Short Circuit Protection | 5 Cycles Turn Off Inverter, No Transfer to Bypass, Provide Alarm (AC Mode) | | |
| | 5 Cycles Turn Off Inverter, Provide Alarm (Battery Mode) | | |
| | Input Fuse Blown or Breaker Action (Bypass Mode) | | |
| Waveform | Pure Sine Wave | | |
| Transfer Time | 0ms | | |
| Efficiency | [3]88% | | |
| BATTERY | | | |
| Model | 12V Sealed Lead Acid Maintenance Free | | |
| DC Voltage | 240V DC | | |
| Configuration | 20×12V/7AH | External Battery B ank | |
| Backup Time (Half Load) | 13min | Depends on the External Battery Capacity | |
| Backup Time (Full Load) | 5min | | |
| Charge Current (Standard Unit) | 1A | N/A | |
| Charge Current (Long Time Unit) | 5A-7A | | |
| Recharge Time | 90% Capacity After 8hrs Charging | | |
| COMMUNICATION INTERFACE | RS232; SNMP (Optional) | | |
| Parallel Port | Parallel Availability for Redundancy and Load Sharing up to Three Units | | |
| LCD Indication | 1, Input Voltage/Frequency, Battery Voltage, Output Voltage/Frequency, Load watt/VA Value and Percent, Inverter Temperature | | |
| | 2, Operation Mode Such as "On-line", "On batt", or "On Bypass" | | |
| LED Indication | 1, Green LED For Normal Operation, 2, Yellow LED For Warning Condition 3, Red LED For Abnormal Operation | | |
| Noise Level | <55dB | | |
| ENVIRONMENT | | | |
| Temperature | 0~40°C | | |
| Humidity | 0%~95% (Non-Condensing) | | |
| Altitude | <1500m | | |
| Storage Temperature | 0~40°C | | |
| OTHER | | | |
| Standard Unit Net / Gross Weight (kg) | 95 / 109 | N/A | |
| Long Time Unit Net / Gross Weight (kg) | 39/51 | 60/74 | |
| Dimension (W×D×H) (mm) | 260 x 570 x 717 | 320 x 620 x 950 | |
| Packing (W×D×H) (mm) | 430 x 700 x 845 | 410 x 717 x 1050 | |

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