

SOLID 650 / 650 (M)

Specifications

AC INPUT

Parameter	Minimum	Normal	Maximum	Max. Current
Voltage (115V)	90 Vac	100-120Vac	132 Vac	10A
Voltage (230V)	180 Vac	200-240Vac	264Vac	5A
Frequency	47 Hz	50 / 60 Hz	63 Hz	

DC OUTPUT

Single rail for +12V

Output Voltage	+5V	+3.3V	+12V (Single Rail)	-12V	+5VSB
Max. Load	30A	24A	54A	0.5A	4A
Min. Load	1.0A	0A	3A	0A	0.1A
Max. Combined	180W		54A		
Total Output	630W			6W	20W

Multiple rails for +12V

Output Voltage	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5VSB
Max. Load	30A	24A	18A	18A	18A	18A	0.5A	4A
Min. Load	1.0A	0A	0.8A	0.8A	0.8A	0.8A	0A	0.1A
Max. Combined	180W		54A					
Total Output	630W						6W	20W

Note 1: Maximum continuous total DC output power should not exceed 650 W.

Note 2: Single / Multiple rail(s) for +12V is adjustable by a switch.

DC Voltage Regulation, Ripple and Noise

Output Voltage	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5VSB
Load Reg.	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-5%	+/-5%
Line Reg.	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Ripple & Noise	50mV	50mV	120mV	120mV	120mV	120mV	120mV	50mV

Over Current Protection

Voltage	Minimum	Maximum	Shutdown Mode
+5V	110%	160%	Latch Off
+3.3V	110%	160%	Latch Off
+12V	110%	160%	Latch Off

Over Voltage Protection

Voltage	Minimum	Maximum	Shutdown Mode
+5V	+5.7V	+6.5V	Latch Off
+3.3V	+3.9V	+4.5V	Latch Off
+12V1,2,3,4	+13.3V	+14.5V	Latch Off
5VSB	5.7V	6.5V	Auto recovery

Temperature

Operating Temperature Range:	0°C ~ 50°C (32°F~ 122°F)
Non-Operating Temperature Range:	-40°C ~ 70°C (-40°F~ 158°F)

Humidity

Operating Humidity Range:	20% ~ 90%RH non-condensing
Non-Operating Humidity Range:	5% ~ 95%RH non-condensing

Safety Certification.

Product Safety:	UL 60950-1 2000Edition, IEC60950-1, 3 rd Edition EU Low Voltage Directive (73/23/EEC) (CB) TUV, CCC
RFI Emission:	FCC Part15 (Radiated & Conducted Emissions) CISPR 22,3 rd Edition / EN55022: 1998 + A1: 2000)
PFC Harmonic:	EN61000-3-2:2000
Flicker:	EN61000-3-3: 1995 + A1: 2002
Immunity against:	EN55024: 1998 + A1: 2001 and A2: 2003
-Electrostatic discharge:	-IEC 61000-4-2
-Radiated field strength:	-IEC 61000-4-3
-Fast transients:	-IEC 61000-4-4
-Surge voltage:	-IEC 61000-4-5
-RF Conducted	-IEC 61000-4-6
-Voltage Dips and Interruptions	-IEC 61000-4-11

MISCELLANEOUS:

- MTBF:>100,000 Hours
- Warranty: 3 years
- Production Dimension: 150(W) x 86 (H) x 150 (D) mm-650W
- Production dimension : 150(w) x 86(H) x 180 (D) mm- 650W – Modulated cables

SOLID 750 / 750 (M)

SPECIFICATIONS

AC INPUT

Parameter	Minimum	Norminal	Maximum	Max. Current
Voltage (115V)	90 Vac	100-120Vac	132 Vac	12A
Voltage (230V)	180 Vac	200-240Vac	264Vac	6A
Frequency	47 Hz	50 / 60 Hz	63 Hz	

DC OUTPUT

Single rail for +12V

Output Voltage	+5V	+3.3V	+12V (Single Rail)	-12V	+5VSB
Max. Load	30A	28A	60A	0.5A	4A
Min. Load	1.0A	0A	3A	0A	0.1A
Max. Combined	180W		60A		
Total Output	730W			6W	20W

Multiple rails for +12V

Output Voltage	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5VSB
Max. Load	30A	28A	18A	18A	18A	18A	0.5A	4A
Min. Load	1.0A	0A	0.8A	0.8A	0.8A	0.8A	0A	0.1A
Max. Combined	180W		60A					
Total Output	730W						6W	20W

Note 1: Maximum continuous total DC output power should not exceed 750 W.

Note 2: Single / Multiple rail(s) for +12V is adjustable by a switch.

DC Voltage Regulation, Ripple and Noise

Output Voltage	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5VSB
Load Reg.	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-5%	+/-5%
Line Reg.	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Ripple & Noise	50mV	50mV	120mV	120mV	120mV	120mV	120mV	50mV

OVER CURRENT PROTECTION

Voltage	Minimum	Maximum	Shutdown Mode
+5V	110%	160%	Latch Off
+3.3V	110%	160%	Latch Off
+12V	110%	160%	Latch Off

OVER VOLTAGE PROTECTION

Voltage	Minimum	Maximum	Shutdown Mode
+5V	+5.7V	+6.5V	Latch Off
+3.3V	+3.9V	+4.5V	Latch Off
+12V1,2,3,4	+13.3V	+14.5V	Latch Off
5VSB	5.7V	6.5V	Auto recovery

ENVIRONMENT REQUIREMENTS

Temperature

Operating Temperature Range:	0°C ~ 50°C (32°F~ 122°F)
Non-Operating Temperature Range:	-40°C ~ 70°C (-40°F~ 158°F)

Humidity

Operating Humidity Range:	20% ~ 90%RH non-condensing
Non-Operating Humidity Range:	5% ~ 95%RH non-condensing

Safety Certification.

Product Safety:	UL 60950-1 2000Edition, IEC60950-1, 3 rd Edition EU Low Voltage Directive (73/23/EEC) (CB) TUV, CCC
RFI Emission:	FCC Part15 (Radiated & Conducted Emissions) CISPR 22,3 rd Edition / EN55022: 1998 + A1: 2000)
PFC Harmonic:	EN61000-3-2:2000
Flicker:	EN61000-3-3: 1995 + A1: 2002
Immunity against: -Electrostatic discharge: -Radiated field strength: -Fast transients: -Surge voltage: -RF Conducted -Voltage Dips and Interruptions	EN55024: 1998 + A1: 2001 and A2: 2003 -IEC 61000-4-2 -IEC 61000-4-3 -IEC 61000-4-4 -IEC 61000-4-5 -IEC 61000-4-6 -IEC 61000-4-11

MISCELLANEOUS:

- MTBF:>100,000 Hours
- Warranty: 3 years
- Production Dimension: 150(W) x 86 (H) x 150 (D) mm-750W
- Production dimension : 150(w) x 86(H) x 180 (D) mm- 750W – Modulated cables

SOLID 850 / 850 (M)

SPECIFICATIONS

AC INPUT

Parameter	Minimum	Norminal	Maximum	Max. Current
Voltage (115V)	90 Vac	100-120Vac	132 Vac	14A
Voltage (230V)	180 Vac	200-240Vac	264Vac	7A
Frequency	47 Hz	50 / 60 Hz	63 Hz	

DC OUTPUT

Single rail for +12V

Output Voltage	+5V	+3.3V	+12V (Single Rail)	-12V	+5VSB
Max. Load	30A	28A	70A	0.5A	4A
Min. Load	1.0A	0A	3A	0A	0.1A
Max. Combined	180W		70A		
Total Output	830W			6W	20W

Multiple rails for +12V

Output Voltage	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5VSB
Max. Load	30A	28A	18A	18A	18A	18A	0.5A	4A
Min. Load	1.0A	0A	0.8A	0.8A	0.8A	0.8A	0A	0.1A
Max. Combined	180W		70A					
Total Output	830W						6W	20W

Note 1: Maximum continuous total DC output power should not exceed 850 W.

Note 2: Single / Multiple rail(s) for +12V is adjustable by a switch.

DC VOLTAGE RETULATION, RIPPLE AND NOISE

Output Voltage	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5VSB
Load Reg.	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-5%	+/-5%
Line Reg.	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Ripple & Noise	50mV	50mV	120mV	120mV	120mV	120mV	120mV	50mV

OVER CURRENT PROTECTION

Voltage	Minimum	Maximum	Shutdown Mode
+5V	110%	160%	Latch Off
+3.3V	110%	160%	Latch Off
+12V	110%	160%	Latch Off

OVER VOLTAGE PROTECTION

Voltage	Minimum	Maximum	Shutdown Mode
+5V	+5.7V	+6.5V	Latch Off
+3.3V	+3.9V	+4.5V	Latch Off
+12V1,2,3,4	+13.3V	+14.5V	Latch Off
5VSB	+5.7V	+6.5V	Auto recovery

ENVIRONMENTAL REQUIREMENTS

TEMPERATURE

Operating Temperature Range:	Exceed limit with derating
Input 100Vac	0°C ~ 45°C (32°F~ 113°F)
Input 90Vac	0°C ~ 40°C (32°F~ 104°F)
Non-Operating Temperature Range:	-40°C ~ 70°C (-40°F~ 158°F)

HUMIDITY

Operating Humidity Range:	20% ~ 90%RH non-condensing
Non-Operating Humidity Range:	5% ~ 95%RH non-condensing

SAFETY CERTIFICATION

Product Safety:	UL 60950-1 2000Edition, IEC60950-1, 3 rd Edition EU Low Voltage Directive (73/23/EEC) (CB) TUV, CCC
RFI Emission:	FCC Part15 (Radiated & Conducted Emissions) CISPR 22,3 rd Edition / EN55022: 1998 + A1: 2000)
PFC Harmonic:	EN61000-3-2:2000
Flicker:	EN61000-3-3: 1995 + A1: 2002
Immunity against:	EN55024: 1998 + A1: 2001 and A2: 2003
-Electrostatic discharge:	-IEC 61000-4-2
-Radiated field strength:	-IEC 61000-4-3
-Fast transients:	-IEC 61000-4-4
-Surge voltage:	-IEC 61000-4-5
-RF Conducted	-IEC 61000-4-6
-Voltage Dips and Interruptions	-IEC 61000-4-11

MISCELLANEOUS:

- MTBF:>100,000 Hours
- Warranty: 3 years
- Production Dimension: 150(W) x 86 (H) x 150 (D) mm-850W
- Production dimension : 150(w) x 86(H) x 180 (D) mm- 850W – Modulated cables