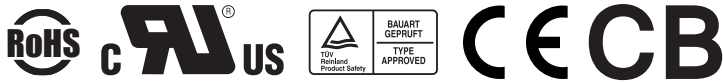


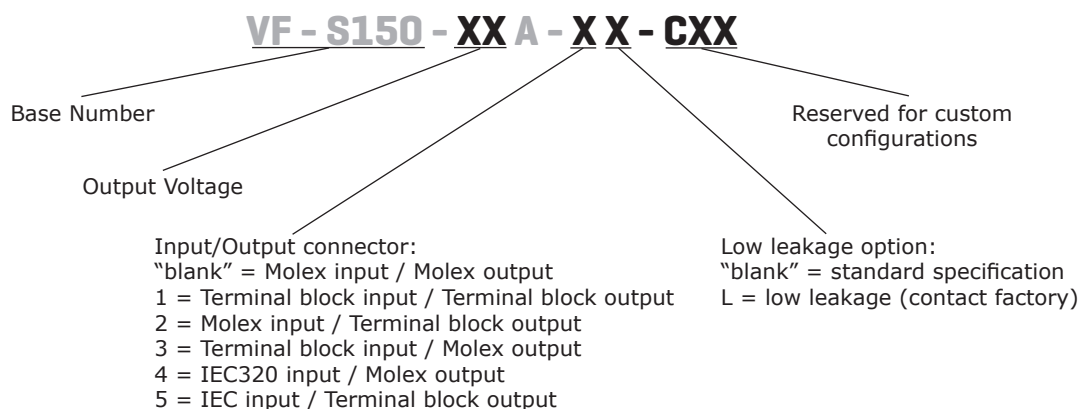
SERIES: VF-S150-XXA | DESCRIPTION: AC-DC POWER SUPPLY
FEATURES

- ac input range auto-selectable
- power factor correction
- remote on/off control
- power good signal
- over load, over voltage, over temperature, and short circuit protections
- providing Peak Power 600W within 500uS duty duration
- UL, cUL, TUV, CE with CB scheme approvals
- high power density: 6.25 watts cu. in.



MODEL	output voltage		output current		output power ⁵	output regulation ⁴	ripple and noise _{3,4}	efficiency
	typ (Vdc)	range ^{1,2} (Vdc)	convection	16 CFM				
VF-S150-03A	3.3	3~4	20	30	120	±1	50	70
VF-S150-05A	5	5~6	20	30	150	±1	50	75
VF-S150-12A	12	12~16	8.3	12.5	150	±1	±1%	80
VF-S150-18A	18	17~23	5.56	8.33	150	±1	±1%	83
VF-S150-24A	24	24~30	4.17	6.25	150	±1	±1%	83
VF-S150-48A	48	35~56	2.08	3.13	150	±1	±1%	83

- Notes:
1. Output is fully isolated.
 2. Output voltage is measured at output power connector.
 3. 1 % minimum load is required to maintain the ripple and regulation.
 4. Ripple and noise is measured from 10 kHz to 20 MHz at output terminals with a 0.1 µF ceramic and a 22 µF electrolytic capacitor in parallel.
 5. Maximum power is 100 W with convection cooling except for VF-S150-03A where power is 80 W max.

PART NUMBER KEY


INPUT

parameter	conditions/description	min	typ	max	units
voltage	auto selectable	90 180		132 264	Vac Vac
frequency		47		63	Hz
current	at 115 Vac, cold start at 230 Vac, cold start			4 2	A A
inrush current	at 115 Vac, full load, cold start at 230 Vac, full load, cold start			35 70	A A
power factor	compliant to EN 61000-3-2 class A				
remote on/off	designated as RMSW on the CN1, requires a low signal to inhibit output, off behavior: hiccup mode				

OUTPUT

parameter	conditions/description	min	typ	max	units
regulation			±1		%
transient response	output voltage returns to within 1% in less than 2.5 ms for a 50% load change peak transient does not exceed 5%.				
overshoot	turn-on and turn-off overshoot shall not exceed 5% over nominal voltage				
start-up time	at 120 Vac			1	s
hold-up time	at 120 Vac, 80% of rated maximum load	20			ms
adjustability	adjustable with built in trim pot		±5		%
LED display	when green (LED1) is on the power supply is operating normally				
switching frequency	fixed		25		kHz
power good	designated as PG on the CN1, signal goes high 100~500 ms after the output reaches regulation, signal goes low at least 1 ms before loss of regulation				
fan drive	12 Vdc / 300 mA for external fan				

PROTECTIONS

parameter	conditions/description	min	typ	max	units
input fuse	built-in ac fuse (a blown fuse usually indicates permanent damage to the power supply serviceable by factory only)				
over voltage protection	auto recovery, output shut-down with latch			130	%
over current protection	auto recovery	110		140	%
short circuit protection	continuous, auto recovery				
over temperature protection	output shut-down, auto recovery		85		°C

SAFETY & COMPLIANCE

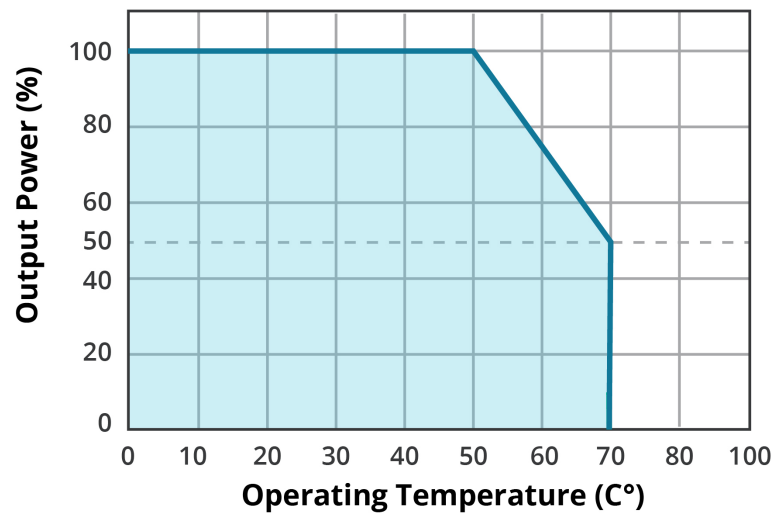
parameter	conditions/description	min	typ	max	units
isolation voltage	for 3 seconds at 10 mA max primary to secondary: primary to transformer core: primary to earth chassis:	3,000 1,500 1,500			Vac Vac Vac
safety approvals	UL 60950(E222889), CSA C22.2 No. 60950, TUV EN 60950 and CB				
EMI/EMC	CISPR 22/EN 55022 class B, EN 61000-3-2, 3, EN 61000-4-2, 3, 4, 5, 6, 8, 11, EN 55024 CE marked (LVD)				
leakage current	at 240 Vac			1.5	mA
RoHS	yes				
MTBF	according to MIL-HDBK-217 at 30°C	100,000			hrs
burn-in	full load, at 45 ± 5 °C, 230 Vac				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	0		70	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	5		90	%
storage humidity	non-condensing	5		95	%
vibration	acceleration ± 7.35 M/(SxS), on X, Y and Z Axis	5		50	Hz

DERATING CURVE

TEMPERATURE DERATING CURVE

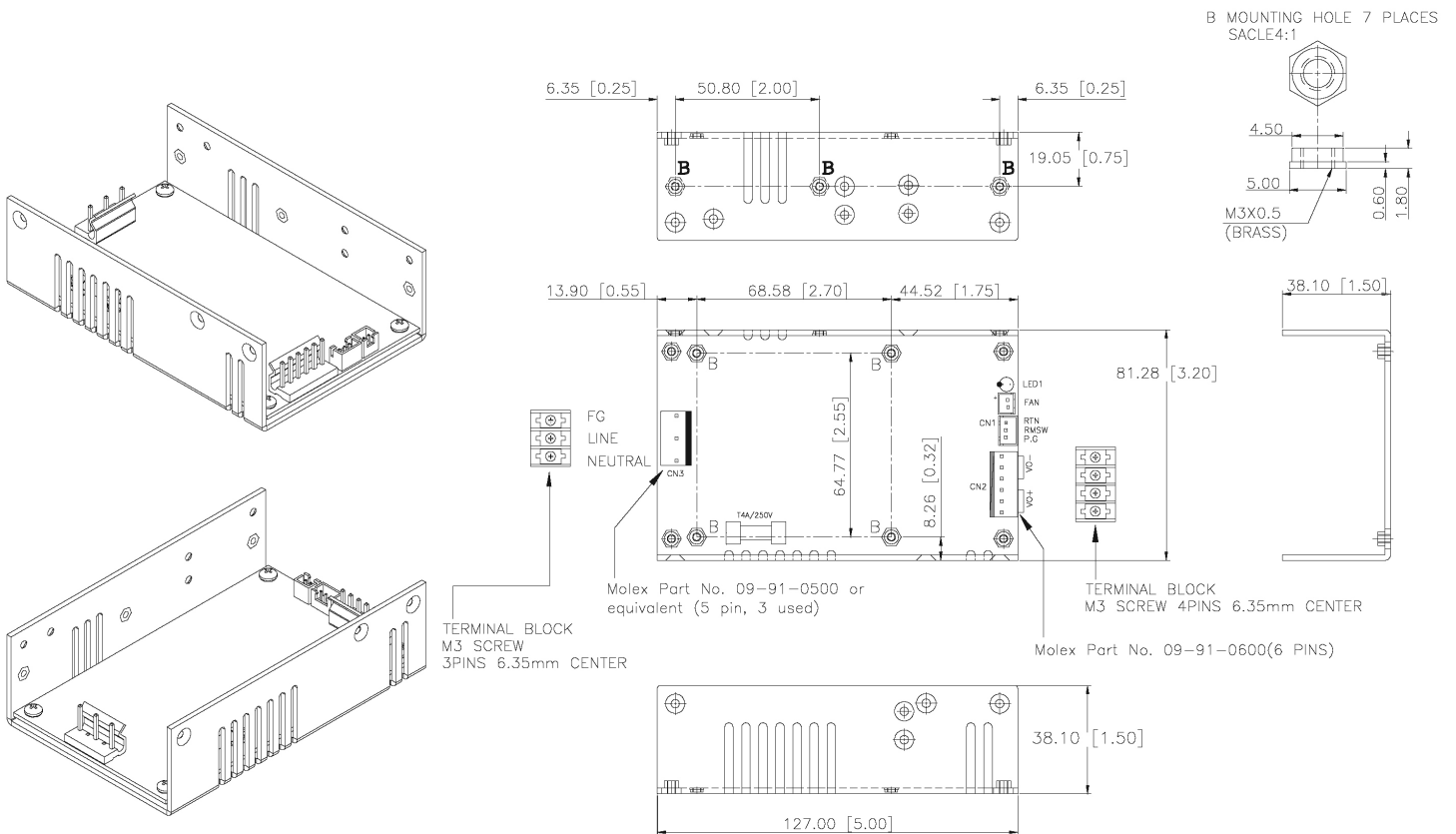


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	127.00 x 81.28 x 38.10 (5 x 3.2 x 1.5 inch)				mm
weight			400		g

MECHANICAL DRAWING

units: mm



LOGIC CONNECTOR (CN-1)

parameter	conditions/description	min	typ	max	units
logic	JS B7B-XH-A				
pin assignment	suggested mating connector: JST XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03) 1. power good 2. remote switch 3. RTN				

FAN DRIVER CONNECTOR (FAN)

parameter	conditions/description	min	typ	max	units
fan	suggested mating connector: JST XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02)				

OUTPUT CONNECTOR (CN-2)

parameter	conditions/description	min	typ	max	units
output (option 1)	Molex part no. 26-48-1061 or similar (6 pin) output pin assignment, V+ (pins 1-3), V- (pins 4-6) suggested mating connector: Molex part no. 09-91-0600 or equivalent (6)				
output (option 2)	Howder terminal block part no. HD-601-4P (4 pin, M3.5 Screw) 6.35 mm spacing output pin assignment, V+ (Pins 1-2), V- (Pins 3-4) suggested mating connector: Molex 19198-0045 or similar				

INPUT CONNECTOR (CN-3)

parameter	conditions/description	min	typ	max	units
ac input (option 1)	Molex part no. 26-48-1051 or similar (5 pin, 3 used). suggested mating plug: Molex part no. 09-91-0500 or equivalent (5 pin, 3 used)				
ac input (option 2)	Howder terminal block part no. HD-601-3P (3 pin, M3.5 Screw) 6.35 mm spacing suggested mating connector: Molex 19198-0045 or similar				

REVISION HISTORY

rev.	description	date
1.0	initial release	11/01/2009
1.01	specification updated to a new template	04/29/2021

The revision history provided is for informational purposes only and is believed to be accurate.



CUI INC

a bel group

Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.