



DC-DC Isolated Converter

Wide I/P Range : 40Vdc~60Vdc

250W(Fan less) / 300W(Air) Open Frame

WP150D11-30ADJ(+24V) (AKM)**

Features:

- ◆ Convection Cool, High Efficiency > 90%
- ◆ DC Input Range : 40 ~ 60Vdc (With Reverse Protection)
- ◆ OCP, OVP, OTP, UVLO, VDC Input Reverse Protection
- ◆ Mini. Size, Low Profile 5" x 3" x 1.6"
- ◆ Wide Operating Ambient Temp. -40 ~ +85°C
- ◆ Safety Compliant With UL 62368-1
- ◆ Input To Output Isolation: 4242VDC
- ◆ High Power 250W@ 50°C Fan-less (note1)
- ◆ High Power 180W@ 85°C Fan-less (note1)
- ◆ High Power 300W max. With a 20CFM Airflow

Application:

Telecommunication
Industrial Equipment
Network , POE

Safety Certified:



INPUT SPECIFICATIONS

INPUT VOLTAGE	DC Input (40 ~ 60V)
INPUT FREQUENCY	
INPUT CURRENT	9.0A@ 40V/I _P , 6.0A@ 60 V/I _P
INRUSH CURRENT (Typ.)	50A@ 60 V/I _P
POWER FACTOR (Typ.)	
EFFICIENCY (Typ.)	90%
LEAKAGE CURRENT	

OUTPUT SPECIFICATIONS

VOLTAGE	+24V
RATED LOAD(Convection)	0 ~ 10.4A
Max. LOAD	12.5A
RIPPLE & NOISE (note 2)	240mV
REGULATION	±3%
Max. POWER	250W / 300W

PROTECTION SPECIFICATIONS

OCP: (Over Load Protection)	110 ~ 150%
OVP: (Over Voltage Protection)	110 ~ 130%
VDC Input Reverse Protection	Yes
VDC Input UVLO Protection	≥ 40V/ON , ≤ 35V/OFF

GENERAL CHARACTERISTIC

I/O Isolation Voltage (rated)	4242VDC
I/O Isolation Resistance	30MΩ @500V
COOLING	Convection/250W, 20CFM for 300W

SAFETY & ENVIRONMENTAL SPECIFICATIONS

SAFETY APPROVALS REQUIRED :	UL , cUL , CE , FCC , CB
SAFETY STANDARDS	UL 62368-1 , IEC 62368-1:2014
EMC EMISSION (note 3)	EN55032(CISPR22) & FCC Class A.
OPERATING AMBIENT TEMP.	-40 ~ 85°C

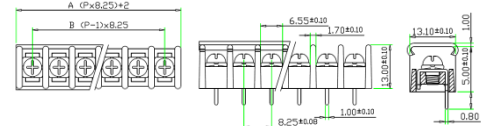
Note 3: Suggested external input filter in order to meet class A in EN55032(CISPR22) and FCC Class A.

a. Between system Inlet and power Vdc-connect CN1 addition a 4 turns EMI Common choke, that spec. is (DC+ & DC-) two wire together 4 turns insert with K5B RC 25x12x15-M clamp EMI core or equ.

Input Connector (CN1) :

HOWDER HD Terminal Block : HD-816-02 or Equ.
Screw : M3.0

Pin	Signal
1	DC+
2	DC-

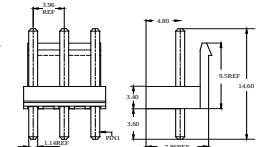


Output Connector (CN2) -6PIN:

JST B*P-VH Series or TKP PVH-XX Series or Equ.
Mates with JST VHR-*N Series or TKP HVH-XX Series or Equ.

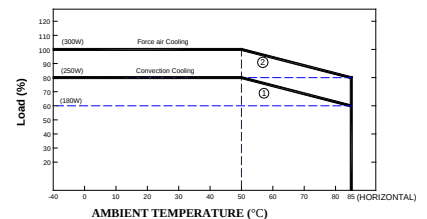
Pin	Signal	Pin	Signal
1	V1	4	GND
2	V1	5	GND
3	V1	6	GND

V1=24V



De-rating Curve

De-rating Curve A1 (Load VS Ambient)

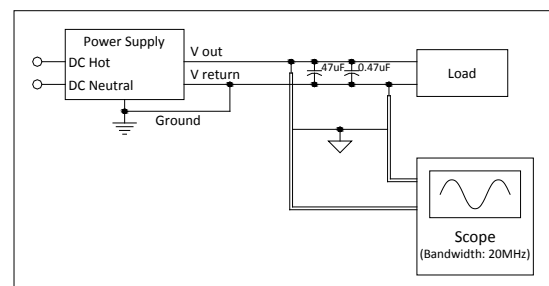


Note: ① Convection (Temperature derating) [-2.0W / degree 50°C to 85°C]
② Fan air (400LFM) [-1.43W / degree 50°C to 85°C]

Note 1:

It is recommended that the bottom side of U-type heat sink of the power unit can be directly attached to the system iron case or the system heat sink to help the power unit to dissipate heat and achieve the maximum rating power on ambient temperature from 50°C to 85°C condition.
Please reference to De-Rating Curve A1 (Load VS Ambient)

Ripple & Noise Voltage Test Circuit



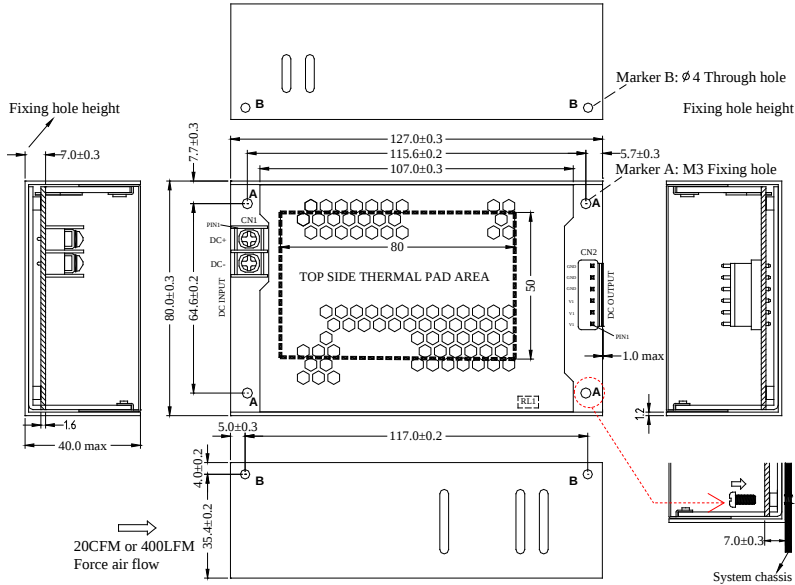
Note 2: The ripple noise voltage of the output shall be measured at end of the output pins connector of the length 100 mm output wire cable. Ripple and noise are measured at the connectors with a 0.47uF ceramic capacitor and a 47uF electrolytic capacitor to simulate system loading.
(Please reference Ripple & Noise Voltage Test Circuit).

Mechanism of Fixing hole code : M → M50, M52**

Typical Mechanical Drawing :

WP150D11-30ADJ-(+24V)UVAK01M50 (Connector code→AK)

Fix hole: marker A are $\phi 3.5$ through holes, Case dimension (L*W*H): 127*80*40 mm

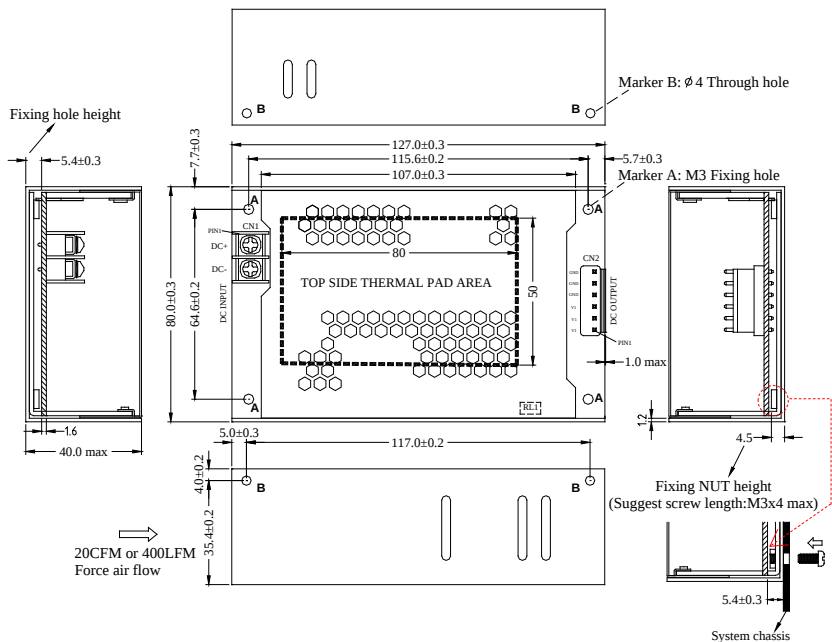


Marker C: 7.0x8.0mm±0.2mm



WP150D11-30ADJ-(+24V)UVAK01M52 (Connector code→AK)

Fix hole: marker A are M3 fixing NUT, Case dimension (L*W*H): 127*80*40 mm



Marker C: 7.0x8.0mm±0.2mm

