



SPECIFICATION

ESD08064743

INV18-2001

Released Date:2009/5/12-10:13:15

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1.0 Application & Notice

This DC to AC inverter is designed for the backlight of LCD Panel with 2 CCFLs (Cold Cathode Fluorescent Lamp) . And, it is used in AUO M185XW01 V0 18.5" Panel and other low profile application.

Notice:

- 1.1 For Safety Issue, please keep 4.0mm at least from the metal parts of the system to the inverter. Or, put a high-voltage insulator between the inverter and the metal parts to avoid the situation of Hi-POT failure or arcing---etc.
- 1.2 Don't twist , deform , drop or knock the inverter during assembly.
- 1.3 The inverter is usually designed without the case. Please take care about ESD at anytime.
- 1.4 Due to the characteristic of Panels, the brightness is sensitive about Temperature. You must measure it in the same condition and waiting for power on 10~30 minutes.

2.0 Environment Characteristics

2.1 Temperature:

Storage : -20°C ~ 70°C.
Operating : 0°C ~ 60°C

2.2 Humidity:

Storage : 10% ~ 95% RH , non-condensing
Operating : 10% ~ 95% RH , non-condensing

2.3 MTBF: 60'000 Hrs @ 25°C

3.0 General Requirements

3.1 Input characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	REMARK
INPUT VOLTAGE	Vin	10.8	12.0	13.2	V	
INPUT CURRENT	Iin	-	1.2	1.5	A	Vin=12V,Von/off=5V Vadj=4.5V LOAD=PANEL
INPUT POWER	Pin	-	14.4	18.0	W	Vin=12V,Von/off=5V Vadj=4.5V LOAD=PANEL
INPUT VOLTAGE	Von/off	- 3.0	0 5.0	1.0 5.5	V	Off State On State
INPUT VOLTAGE	Vadj	0.5	-	4.5	V	
EFFICIENCY	η	75	-	-	%	Vin=12V,Von/off=5V Vadj=4.5V LOAD: PANEL

3.2 Output Characteristics

3.2.1 With 18.5" Panel

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	REMARK
LAMP CURRENT	IL	7.0	7.5	8.0	mA	Vin=12V, Von/off=5V Vadj=4.5V LOAD=PANEL
LAMP CURRENT	IL	3.0	3.5	4.0	mA	Vin=12V, Von/off=5V Vadj=0.5V LOAD=PANEL
LAMP VOLTAGE	VL(Ref.)	---	700	---	Vrms	Vin=12V,Von/off=5V Vadj=4.5V (Ref. Value)
FREQUENCY	FL	40	--	80	KHz	Vin=12V,Von/off=5V Vadj=0.5~4.5V
OUTPUT OPEN VOLTAGE	Vs	1650	---	---	Vrms	Vin=12V,Von/off=5V Vadj =4.5V RL: ∞ ,Time>1sec
OUTPUT OPEN	VL	LATCH				Vin=12V,Von/off=5V Vadj =4.5V RL: ∞
OUTPUT SHORT	VL	LATCH				Vin=12V,Von/off=5V Vadj =4.5V High Voltage short to GND

3.2.2 Without Resister RL=90K Ω

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	REMARK
LAMP CURRENT	IL	5.7	6.5	7.2	mA	Vin=12V, Von/off=5V Vadj =4.5V LOAD=RL
LAMP CURRENT	IL	2.6	3.2	3.8	mA	Vin=12V, Von/off=5V Vadj =0.5V LOAD=RL
LAMP VOLTAGE	VL(REF.)	---	700	---	Vrms	Vin=12V, Von/off=5V Vadj =4.5V LOAD=RL
FREQUENCY	FL	40	---	80	KHz	Vin=12V, Von/off=5V Vadj=0.5~4.5V
OUTPUT OPEN VOLTAGE	Vs	1650	---	---	Vrms	Vin=12V, Von/off=5V Vadj =4.5V RL : ∞
OUTPUT OPEN	VL	LATCH				Vin=12V, Von/off=5V Vadj =4.5V RL : ∞
OUTPUT SHORT	VL	LATCH				Vin=12V, Von/off=5V Vadj =4.5V High Voltage short to GND

3.3 Pin Assignments

DC Input : Location: CN1

Connector type: JOWLE CONNECT, 2mm6PIN, 90° A2001WR2-6P or Equivalent

Pin No.	Symbol	Description
1,2	Vin	12V
3	Von/off	On/off Control
4	Vadj	Brightness
5	Gnd	GROUND

AC Output: Location: CN2, CN4 or CN3 CN5

Connector type: FCN WH2-085D0-022L or JST SM02(8.0)B-BHS-1-TB (Equivalent)

Pin No.	Symbol	Description
1	Vout -H	High Voltage
2	Vout -L	RETURN

3.4 Test Equipment

Oscilloscope : Tektronix TDS3012B , High Voltage Probe : Tektronix P6015A

Multi-Meter : FLUKE45

4.0 Mechanical Characteristics

Item	L*W*H (mm)	For use with
Dimension	134*44*16.9	18.5" LCD's

Tolerance: ±0.5mm