

# Power Supplies

# CXA Series CXA-P1212A-WJL

## DC to AC Inverters

## Connector type, Dimming, 8W, For 2 Bulbs

### FEATURES

- Optimum one-connector, two-output design for thin liquid crystal panel displays.
- This inverter carries a PWM(pulse modulation width) circuit, TDK's unique circuit design. This allows dimming of lighting over a much wider range than is possible using conventional types of dimmer circuits. The type of dimmer control can be selected as desired, either voltage control(Vbr:0 to 1.6V) or resistance control(VR:0 to 10kΩ).
- Built-in overcurrent protection circuit increases safety.
- Monitor brightness is always kept stable since the built-in current feedback illumination stabilization circuit compensates for inverter input voltage variation(±10%).
- The board backside is free of wiring pattern. Cost reduction and simplified mounting are made possible by a design that only uses one side of the board.
- Operational safety is increased by the use of two types of insulation for high voltage components.

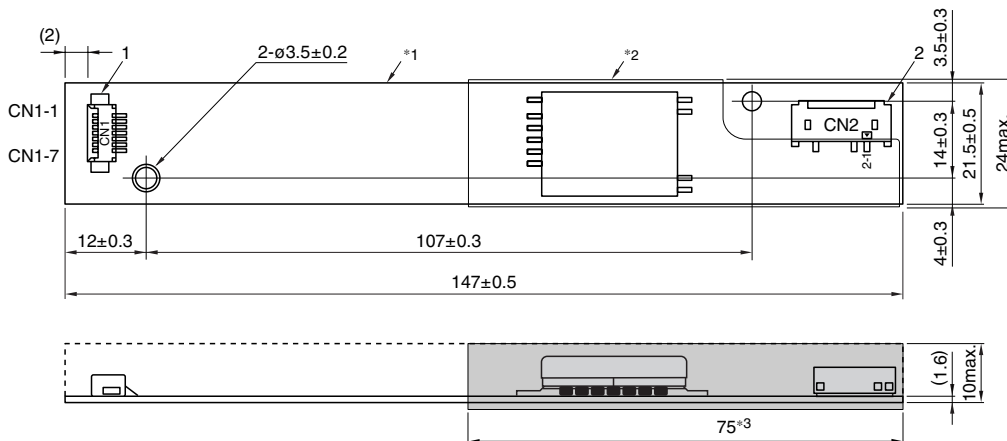
### APPLICATIONS

Various types of color liquid crystal displays, computer touch panels, controllers, medical devices, ATMs, POS terminals, telecommunication terminals, microscope monitors, fishdetectors, ticket sales machines, amusement arcade machines.

### TEMPERATURE AND HUMIDITY RANGES

Temperature range (°C)	Operating	-10 to +70
	Storage	-30 to +85
Humidity range(%)RH	95max. [Maximum wet-bulb temperature 38°C]	

### SHAPES AND DIMENSIONS



\*1 Substrate(PWB: Printed wiring board): Flame retardant material UL 94V-0(FR-4 or CEM-3)

Weight: 24.5g typ.

\*2 Voltage protection insulating cover t=0.38mm

Dimensions in mm

\*3  : High-voltage generator (The entire surface within a range of 75mm away from the end of the base in the output)

	Connector manufacturer's company and type		Symbol
1	Input connector	Morex Japan Co., Ltd. 53261-0790	CN1
2	Output connector	Japan Solderless Terminal Co., Ltd. SM03(7-D1)B-BHS-1	CN2

### TERMINAL NUMBERS AND FUNCTIONS

#### CN1

Terminal No.	Functions	Symbol
CN1-1,-2	Input voltage Edc: 10.8 to 13.2V 12V[nom.]	Vin
CN1-3,-4	0V	GND
CN1-5	Remote voltage Edc 0V: off/5 to 13.2V:on	Vrmt
CN1-6	Brightness dimmer terminal: GND/0 to 10kΩ*	Vbr1/VR1
CN1-7	Brightness dimmer terminal: 0 to 0.6V/0 to 10kΩ* Vbr2/VR2	

#### CN2

Terminal No.	Functions		Symbol
CN2-1	Output 1[High voltage] Irms	2 to 6mA	V <sub>HIGH1</sub>
CN2-2	Output 2[High voltage] Irms	2 to 6mA	V <sub>HIGH2</sub>
CN2-3	—	—	N.C.
CN2-4	Output[Low voltage]	(2V)	V <sub>LOW</sub>

\* According to a connection method, either a voltage control brightness adjustment or a resistance control brightness adjustment can be selected as follows:

Voltage control brightness adjustment: 0V → Maximum brightness adjustment (Maximum light volume), 0.6V → Minimum brightness adjustment (Minimum light volume)

Resistance control brightness adjustment: 0Ω → Maximum brightness adjustment (Maximum light volume), 10kΩ → Minimum brightness adjustment (Minimum light volume)

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### ELECTRICAL CHARACTERISTICS

Items	Unit	Symbol	Specifications			Conditions				Brightness		
			min.	typ.	max.	Vin(V)	Vrmt(V)	Vbr(V)*1	VR(kΩ)*2		Ta(°C)	RL1/RL2
Output current Irms	mA	lout1/lout2	5.3	6	6.7	12±1.2	5±0.25	0	0	-10 to +70	95 to 116	Maximum
		lout1/lout2	5.5	6	6.5	12±0.6	5±0.25	0	0	23±5	106	Maximum
		lout1/lout2	1.1	2	2.9	12±1.2	5±0.25	0.6	10	-10 to +70	95 to 116	Minimum
		lout1/lout2	1.2	2	2.8	12±0.6	5±0.25	0.6	10	23±5	106±0.5	Minimum
Input current Idc	A	lin1	—	0.8	1	12±0.6	5±0.25	0	0	23±5	106	
	mA	lin2	—	—	1	12±0.6	0 to 0.4	0	0	23±5	95 to 116	
	mA	lin3*3	—	—	1	12±1.2	5±0.25	0 to 0.6	0 to 10	-10 to +70	∞	3sec typ.
Oscillation frequency	kHz	FL	35	40	45	12±0.6	5±0.25	0	0	-10 to +70	95 to 116	
Open circuit output voltage Erms	V	Vopen	1500	1700	—	10.8	5±0.25	0	0	-10 to +70	∞	

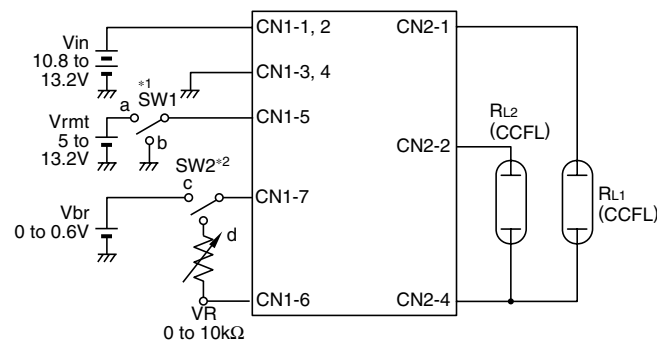
• This product permits a selection between the voltage control brightness adjustment and the resistance control brightness adjustment according to a connection method.

\*1 When voltage control brightness adjustment is selected.

\*2 When resistance control brightness adjustment is selected.

\*3 This inverter has a built-in feature which stops an operation in approx. 3 sec when the RL1 and the RL2 are open at the start-up of the inverter or when they are opened during the inverter operation.

### TYPICAL CONNECTION



\*1 SW1 Remote function a: on, b: off

\*2 SW2 Dimmer control method c: voltage dimmer control, d: resistance dimmer control

### Vbr vs. Iout CHARACTERISTICS VR vs. Iout CHARACTERISTICS

