

DC to AC Inverters

Conformity to RoHS Directive

On-board type, Non-dimming, 4.5W, for 1 and 2 Bulbs

CXA Series CXA-L10A/-L10L

FEATURES

- The CXA-L10 series inverters for 2-cold cathode fluorescent lamps support a wide range of CCFL devices and are characterized by highly stable output current.
- Employing a resonance-type push-pull circuit, these inverters deliver sine wave output with very low noise levels.
- Through the use of four different connection methods and combinations of 1 and 2 lamps, different output currents can be selected.
- Compact, lightweight printed circuit board design.
- High efficiency (typically 80%).
- It is a product conforming to RoHS directive.

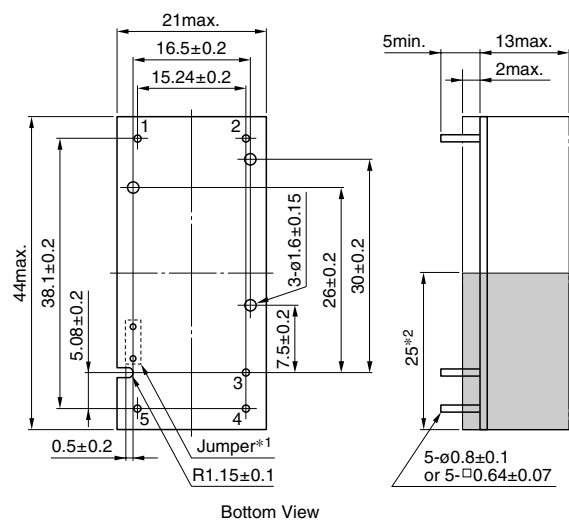
APPLICATIONS

Industrial and other equipment employing LCD panels, products employing small lamps, information terminal devices.

TEMPERATURE AND HUMIDITY RANGES

Temperature range (°C)	Operating	-10 to +60
	Storage	-20 to +85
Humidity range(%)RH		95max.
		[Maximum wet-bulb temperature 38°C]

SHAPES AND DIMENSIONS



Bottom View

*1 Terminal numbers 2 and 5 are connected by the jumper. Cut this jumper to let the secondary side float with respect to the primary side.

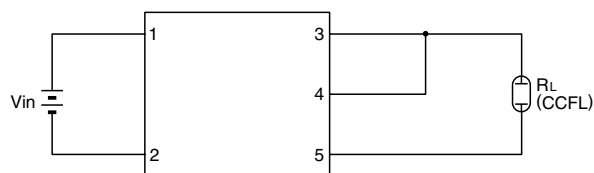
*2 : High-voltage generator (The entire surface within a range of 25mm away from the end of the base in the output)

Weight: 11g typ.

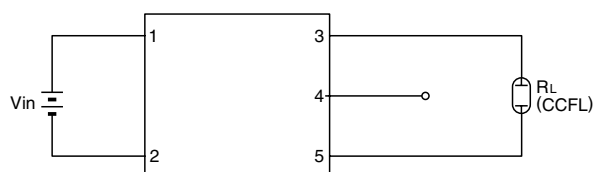
Dimensions in mm

CIRCUIT DIAGRAMS

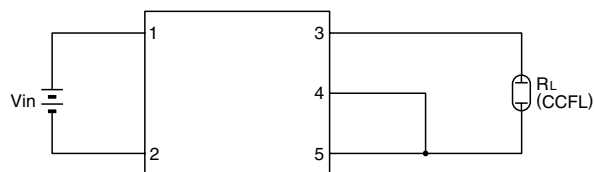
CONNECTION A



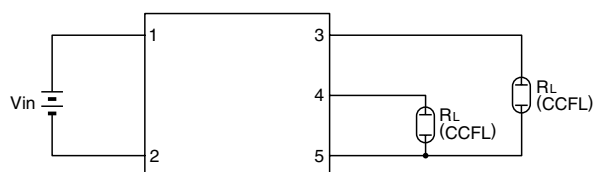
CONNECTION B



CONNECTION C



CONNECTION D



TERMINAL NUMBERS AND FUNCTIONS

Terminal No.	Functions	CXA-L10A	CXA-L10L	Symbol
1	Input voltage Edc	4.75 to 5.25V 5V[nom.]	11.4 to 12.6V 12V[nom.]	V _{in}
2		0V	0V	GND
3	Output 1 [High voltage] I _{rms}	5mA	5mA	V _{HIGH1}
4	Output 2 [High voltage] I _{rms}	5mA	5mA	V _{HIGH2}
5	Output[Low voltage]	0V	0V	V _{Low}

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

CXA-L10A

ELECTRICAL CHARACTERISTICS

5V INPUT TYPE/CXA-L10A

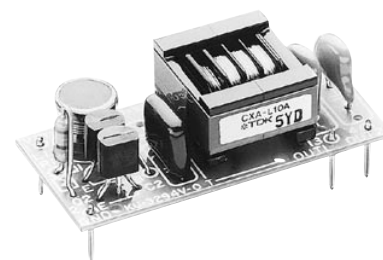
Connections	Items	Unit	Symbol	Specifications			Conditions		
				min.	typ.	max.	Vin(V)	Ta(°C)	RL(kΩ)
A	Output current I _{rms}	mA	I _{out}	9	10	11	5±1%	23±5	30
				8	10	12	5±5%	-10 to +60	23 to 37
	Input current I _{dc}	A	I _{in}	—	0.8	1.2	5±5%	-10 to +60	23 to 37
	Oscillation frequency	kHz	F _L	25	30	35	5±5%	-10 to +60	23 to 37
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	5±5%	-10 to +60	∞
	Output power	W	P _{out}	—	—	4.5	5±5%	-10 to +60	—
B	Output current I _{rms}	mA	I _{out}	5.2	6	6.6	5±1%	23±5	50
				4.6	6	7.2	5±5%	-10 to +60	38 to 62
	Input current I _{dc}	A	I _{in}	—	0.51	0.77	5±5%	-10 to +60	38 to 62
	Oscillation frequency	kHz	F _L	30	35	40	5±5%	-10 to +60	38 to 62
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	5±5%	-10 to +60	∞
	Output power	W	P _{out}	—	—	2.7	5±5%	-10 to +60	—
C	Output current I _{rms}	mA	I _{out}	4.5	5	5.6	5±1%	23±5	60
				4	5	6.1	5±5%	-10 to +60	45 to 75
	Input current I _{dc}	A	I _{in}	—	0.45	0.68	5±5%	-10 to +60	45 to 75
	Oscillation frequency	kHz	F _L	25	30	35	5±5%	-10 to +60	45 to 75
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	5±5%	-10 to +60	∞
	Output power	W	P _{out}	—	—	2.25	5±5%	-10 to +60	—
D	Output current I _{rms}	mA	I _{out1}	4.5	5	5.5	5±1%	23±5	60
			I _{out2}	4.5	5	5.5	5±1%	23±5	60
			I _{out1}	4	5	6	5±5%	-10 to +60	45 to 75
			I _{out2}	4	5	6	5±5%	-10 to +60	45 to 75
	Input current I _{dc}	A	I _{in}	—	0.8	1.2	5±5%	-10 to +60	45 to 75
	Oscillation frequency	kHz	F _L	25	30	35	5±5%	-10 to +60	45 to 75
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	5±5%	-10 to +60	∞
	Output power	W	P _{out}	—	—	2.25×2	5±5%	-10 to +60	—

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CXA-L10L

12V INPUT TYPE/CXA-L10L

Connections	Items	Unit	Symbol	Specifications			Conditions		
				min.	typ.	max.	Vin(V)	Ta(°C)	RL(kΩ)
A	Output current I _{rms}	mA	I _{out}	9	10	11	12±1%	23±5	30
				8	10	12	12±5%	-10 to +60	23 to 37
	Input current I _{dc}	A	I _{in}	—	0.32	0.48	12±5%	-10 to +60	23 to 37
	Oscillation frequency	kHz	F _L	25	30	35	12±5%	-10 to +60	23 to 37
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	12±5%	-10 to +60	∞
Output power	W	P _{out}	—	—	4.5	12±5%	-10 to +60	—	
B	Output current I _{rms}	mA	I _{out}	5.3	6	6.7	12±1%	23±5	50
				4.7	6	7.3	12±5%	-10 to +60	38 to 62
	Input current I _{dc}	A	I _{in}	—	0.2	0.3	12±5%	-10 to +60	38 to 62
	Oscillation frequency	kHz	F _L	30	35	40	12±5%	-10 to +60	38 to 62
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	12±5%	-10 to +60	∞
Output power	W	P _{out}	—	—	2.7	12±5%	-10 to +60	—	
C	Output current I _{rms}	mA	I _{out}	4.5	5	5.6	12±1%	23±5	60
				4	5	6.1	12±5%	-10 to +60	45 to 75
	Input current I _{dc}	A	I _{in}	—	0.18	0.27	12±5%	-10 to +60	45 to 75
	Oscillation frequency	kHz	F _L	25	30	35	12±5%	-10 to +60	45 to 75
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	12±5%	-10 to +60	∞
Output power	W	P _{out}	—	—	2.25	12±5%	-10 to +60	—	
D	Output current I _{rms}	mA	I _{out1}	4.5	5	5.5	12±1%	23±5	60
			I _{out2}	4.5	5	5.5	12±1%	23±5	60
			I _{out1}	4	5	6	12±5%	-10 to +60	45 to 75
			I _{out2}	4	5	6	12±5%	-10 to +60	45 to 75
	Input current I _{dc}	A	I _{in}	—	0.32	0.48	12±5%	-10 to +60	45 to 75
	Oscillation frequency	kHz	F _L	25	30	35	12±5%	-10 to +60	45 to 75
	Open circuit output voltage E _{rms}	V	V _{open}	800	900	—	12±5%	-10 to +60	∞
	Output power	W	P _{out}	—	—	2.25×2	12±5%	-10 to +60	—



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