Power Supplies

DC to AC Inverters
Connector type, Dimming, 7W, For 2 Bulbs

CXA Series CXA-M1112-VJ

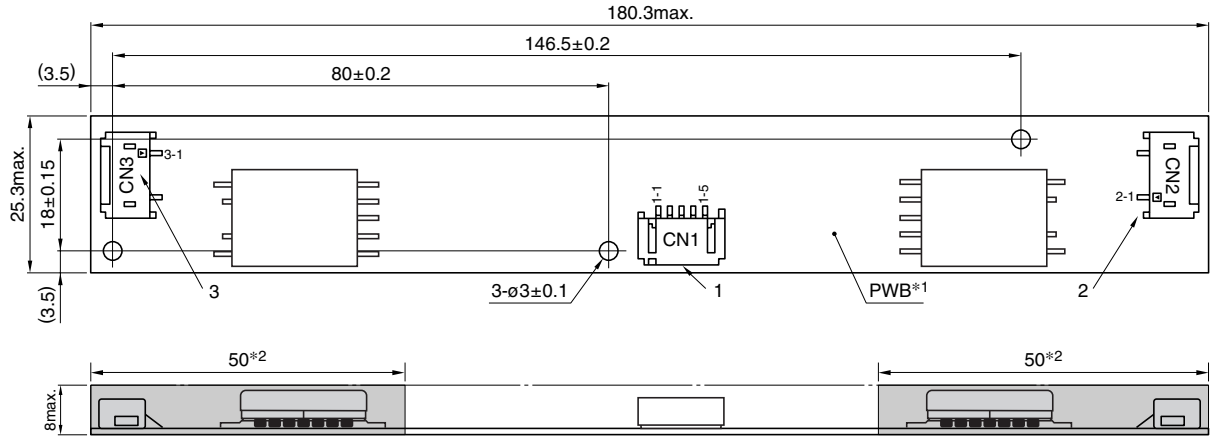
FEATURES

- The CXA-M1112-VJ is an inverter for cold cathode fluorescent lamps and features a built-in dimmer.
- Because they employ advanced output current control, fluctuations in input voltage, load, and distributed capacitance have virtually no effect on brightness.
- Output open and short circuit conditions result in no damage, heat generation, or other difficulties.
- The CXA-M1112-VJ has an overvoltage protection device and a temperature fuse built-in, thereby achieving a safety design.
- An alarm output function mounted on the CXA-M1112-VJ is useful to detect an occurrence of an error in lamps.
- Insulation is simplified due to flat backside surface of board.

TEMPERATURE AND HUMIDITY RANGES

Temperature range (°C)	Operating	0 to +60
	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 UL94V-0(FR-4 or CEM-3) t=1mm

*2 ▭: High-voltage generator (The entire surface within a range of 50mm away from the end of the base in the output)

Weight: 21g typ.

Dimensions in mm

		Connector manufacturer's company and type		Symbol
1	Input connector	Japan Solderless Terminal Co., Ltd.	S5B-PH-SM3	CN1
2	Output connector	Japan Solderless Terminal Co., Ltd.	SM02(8.0)B-BHS-1	CN2
3	Output connector	Japan Solderless Terminal Co., Ltd.	SM02(8.0)B-BHS-1	CN3

TERMINAL NUMBERS AND FUNCTIONS

CN1

Terminal No.	Functions	Symbol
CN1-1	Input voltage Edc: 8 to 20V 12V[nom.]	Vin
CN1-2	0V	GND
CN1-3	Brightness dimmer voltage Edc: 0 to 3.4V (Maximum brightness on 0V)	Vbr
CN1-4	Alarm output: 0V in abnormal state	V_{ST}
CN1-5	Remote voltage Edc 0V: off/5 to 7V:on	Vrmt

CN2

Terminal No.	Functions		Symbol
CN2-1	Output 1[High voltage] Irms	2 to 5.5mA	V_{HIGH1}
CN2-2	—	—	N.C.
CN2-3	Output 1[Low voltage]	(2V)	V_{LOW1}

CN3

Terminal No.	Functions		Symbol
CN3-1	Output 2[High voltage] Irms	2 to 5.5mA	V_{HIGH2}
CN3-2	—	—	N.C.
CN3-3	Output 2[Low voltage]	(2V)	V_{LOW2}

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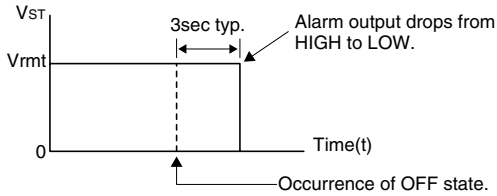
Connector type, Dimming, 7W, For 2 Bulbs

ELECTRICAL CHARACTERISTICS

Items	Unit	Symbol	Specifications min.	typ.	max.	Conditions Vin(V)	Vrmt(V)	Vbr(V)*1	Ta(°C)	RL1(kΩ)	RL2(kΩ)	Brightness
Output current Irms	mA	Iout1/Iout2	4.6	5.5	6.3	8 to 20	5±0.25	0	0 to 60	90 to 120	90 to 120	Maximum
		Iout1/Iout2	4.9	5.5	6	12±1.2	5±0.25	0	25±5	110	110	Maximum
		Iout1/Iout2	—	2	2.5	8 to 20	5±0.25	3.5	0 to 60	335	335	Minimum
Input current Idc	A	Iin	—	0.71	1.37	8 to 20	5±0.25	0 to 3.5	0 to 60	90 to 120	90 to 120	
Oscillation frequency	kHz	FL	30	35	40	8 to 20	5±0.25	0	0 to 60	110	110	
Open circuit output voltage Erms	V	Vopen	1400	1500	—	8 to 20	5±0.25	0 to 3.5	0 to 60	∞	∞	
Alarm output Edc	V	VST	Vrmt-0.5	Vrmt	—	8 to 20	5±0.25	0 to 3.5	0 to 60	90 to 335	90 to 335	When lamps are normally turned on
			—	0	0.5	8 to 20	5±0.25	0 to 3.5	0 to 60	∞	∞	When lamps are abnormal (OFF state)
			—	0	0.5	8 to 20	5±0.25	0 to 3.5	0 to 60	90 to 335	∞	When lamps in one side only are turned on
			—	0	0.5	8 to 20	5±0.25	0 to 3.5	0 to 60	∞	90 to 335	When lamps in one side only are turned on
Alarm output delay time sec			—	3*2	11	—	—	—	—	—	—	

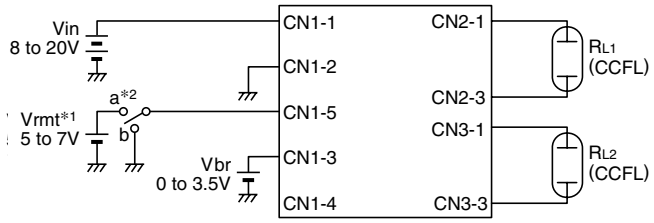
*1 Vbr also operates as a remote function as follows:
0 to 3.5V: Operated
4.5V or higher: Operation stopped

*2 An alarm output is a detection terminal for detecting an OFF state of the lamps, with a delay time from an occurrence of the OFF state (See the diagram).
For details of the alarm output, see the individual specifications.

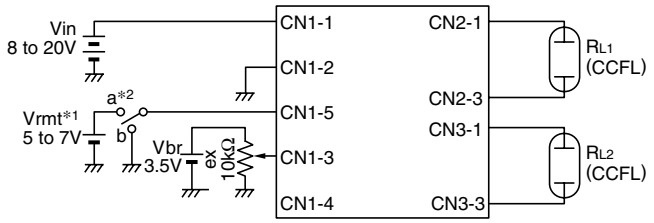


TYPICAL CONNECTIONS

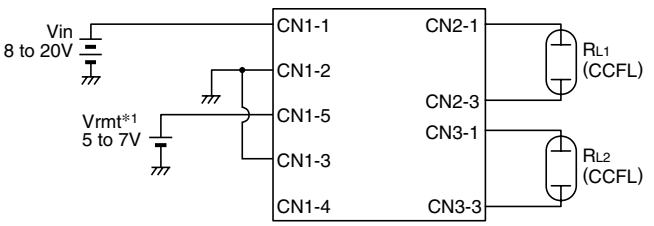
EXAMPLE OF VOLTAGE DIMMER CONTROL



EXAMPLE OF POTENTIOMETER DIMMER CONTROL



NO DIMMER CONTROL



*1 Vrmt (remote voltage) shall be ON after Vin was ON.
*2 SW a:on, b:off

BRIGHTNESS DIMMER VOLTAGE-OUTPUT CURRENT CHARACTERISTICS

