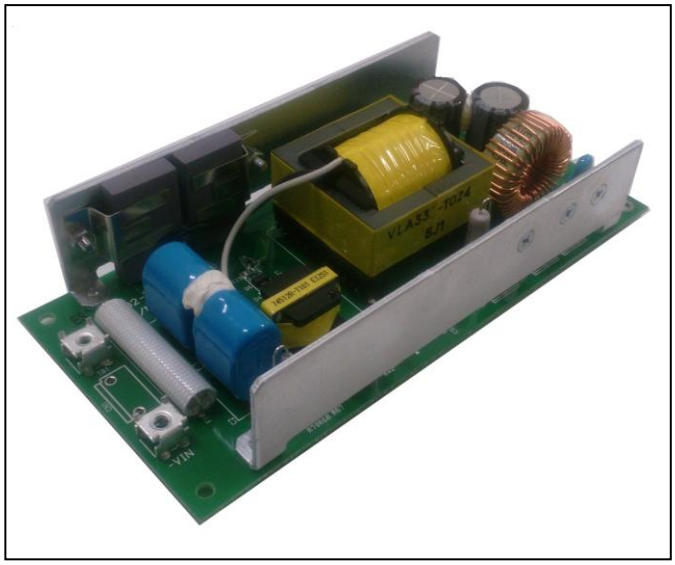
VLA332-15150A

ISOLATED TYPE DC-DC CONVERTER

DESCRIPTION

The VLA332-15150A is an isolated DC-DC converter designed to control the industrial equipment.
It can input the DC400～850V directly and convert to low voltage. Total output power is 150W.



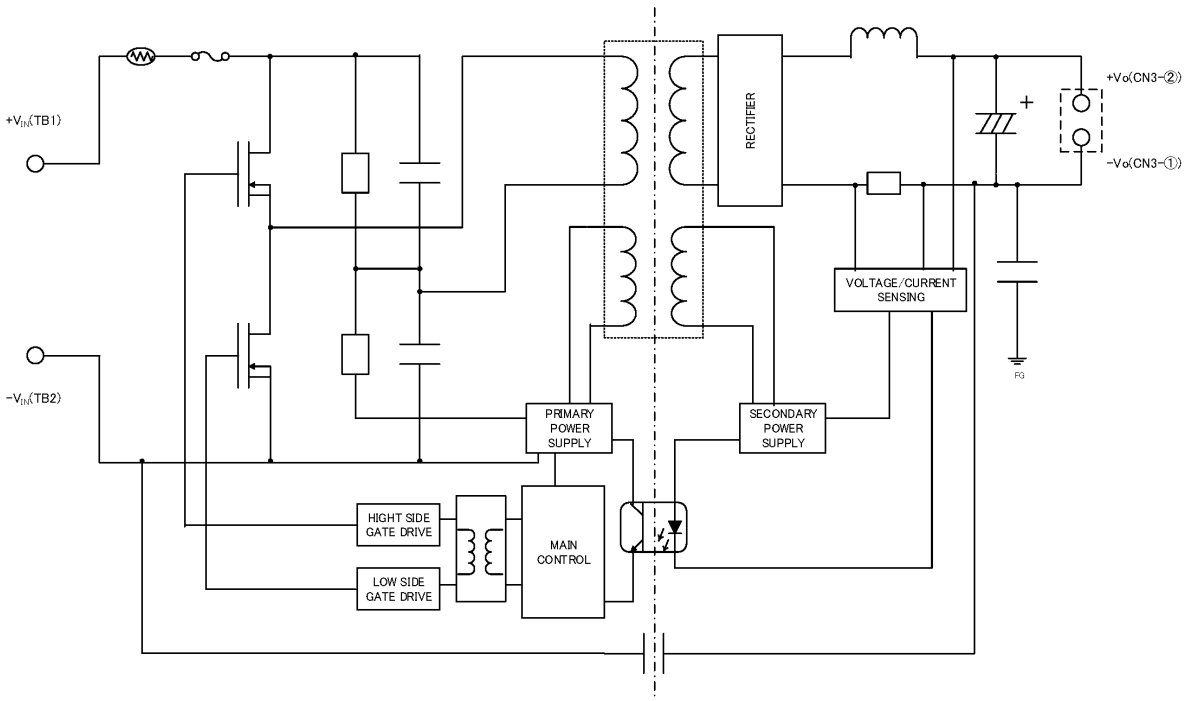
FEATURES

- •Input ---------- 400V to 850V DC
- •Output---------- +15V, 10A (150W)
- •Electrical isolation (between input and output)
  ---------- 2500Vrms 1 minute
- •Over current protection (auto resumption)
- •Over voltage protection
- •Forced-air cooling

APPLICATIONS

On-board pre-regulator for industrial control equipment

BLOCK DIAGRAM



PRODUCT SPECIFICATION (unless otherwise noted, Ta=25°C)

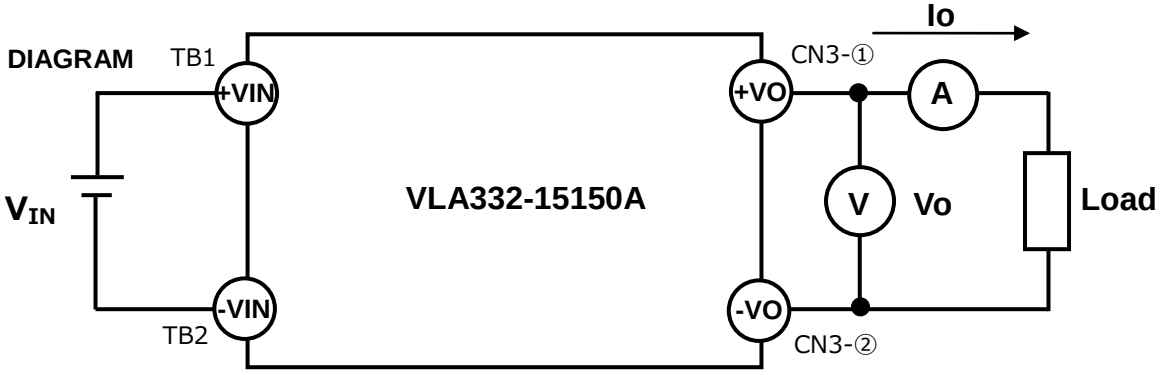
	Parameter		Test conditions	Note
RATING	V_{IN}	Input voltage	DC850V	Maximum rating,TB1-TB2
	V_O	Output voltage	15V	
	I_O	Output current	10A	Maximum rating(Forced-air cooling)
	P_O	Output power	150W	Maximum rating(Forced-air cooling)
INPUT	V_{IN}	Recommended range	DC400～850V	TB1-TB2
	η	Efficiency	85% (typ)	VIN=680V,Io=10A
OUTPUT	Vo	Output voltage range	14.3～15.7V	Rated Input/output,CN3②-①
	Reg-I	Input regulation	300mV (max)	Rated Input/output
	Reg-L	Load regulation	450mV (max)	Rated Input/output
	Vpp	Ripple voltage	200mV (max)	Rated Input/output ＊1
ELECTRICAL ISORATION	Viso	between Input and Output	AC2500V	Sine wave voltage, 60Hz, 1min
		between Input and FG	AC2500V	Sine wave voltage, 60Hz, 1min*2
		between Output and FG	AC1500V	Sine wave voltage, 60Hz,1min *2
WORKING ENVIRONMENT	Topr	Operating temperature /humidity	-10～55℃ /20～90%RH	without dew condensation, (Forced-air cooling)
	Tstg	Storage temperature /humidity	-20～75℃ /20～90%RH	without dew condensation
	Cooling system		Forced-air cooling [1.50mm^3/min]	Refer to Forced-air cooling direction
PROTECTION	Output over current		11A (min)	Output decline, Refer to overload characteristics
	Output over voltage		19V (typ)	Output stop, Return by re-input
OTHERS	Outline dimension		75×160×38.5mm	Including the height of back side part
	Safety approval		IEC60950-1 based	
	Environmental chemicals		RoHS	

*1 Not contain the spike noise. (By measurement board with the capacitor(47uF) separated from output within 150mm.)

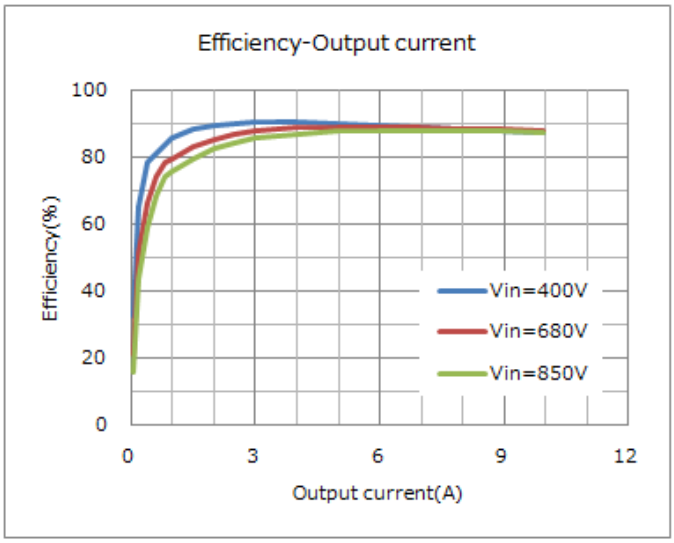
*2 Please refer to outline dimension. (FG:φ3.5-2 through hole)

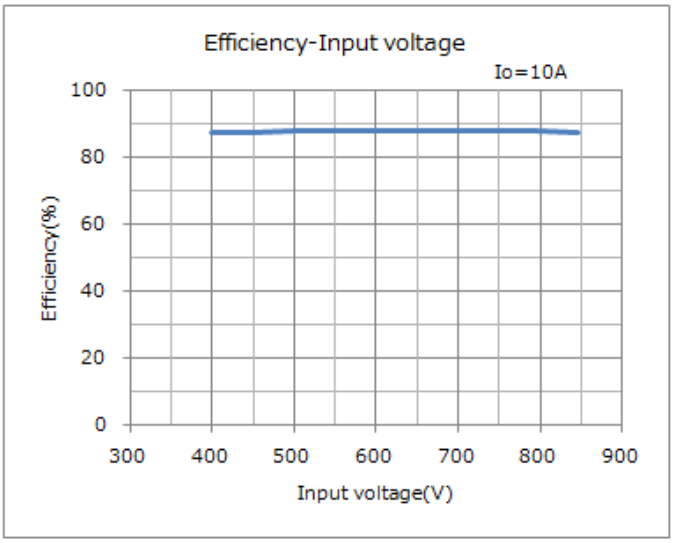
*3 Please be sure to have a load 50mA or more for Vo terminal, in order to stabilize operation of this product.

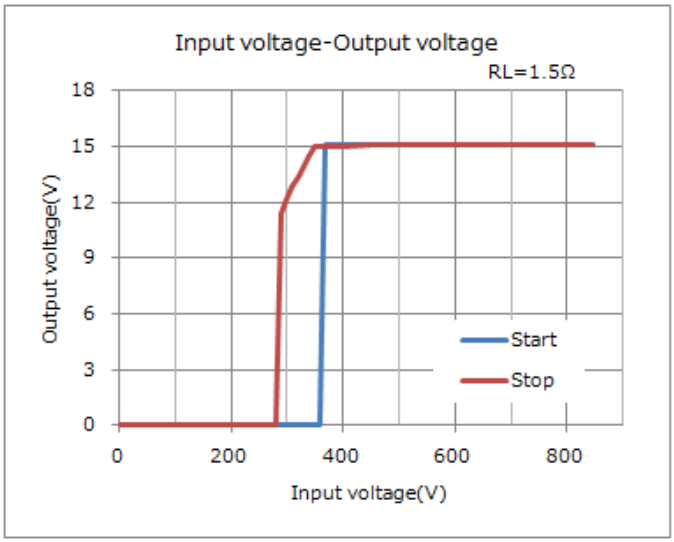
TEST CIRCUIT DIAGRAM

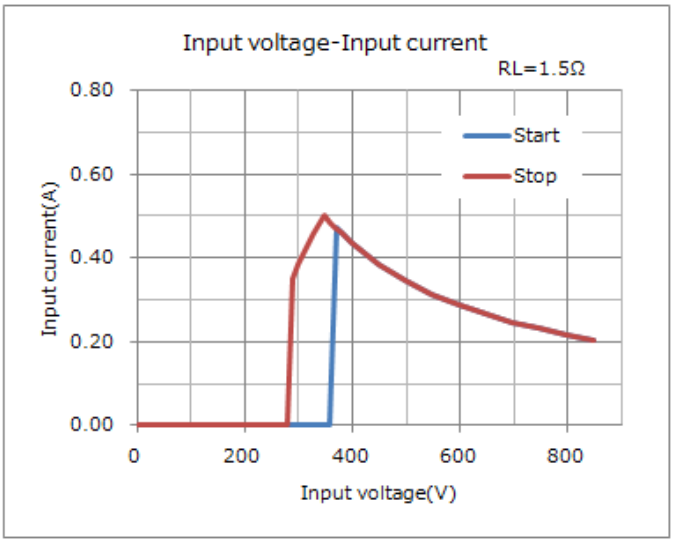


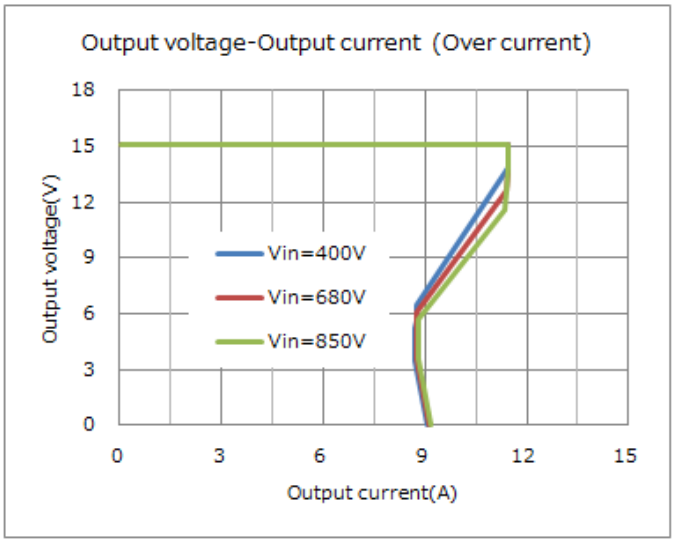
TYPCAL CHARACTERISTICS (Topr=25℃)

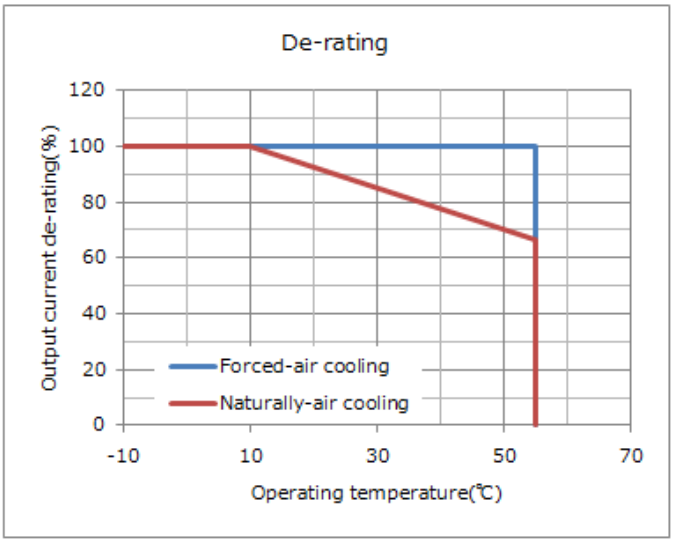




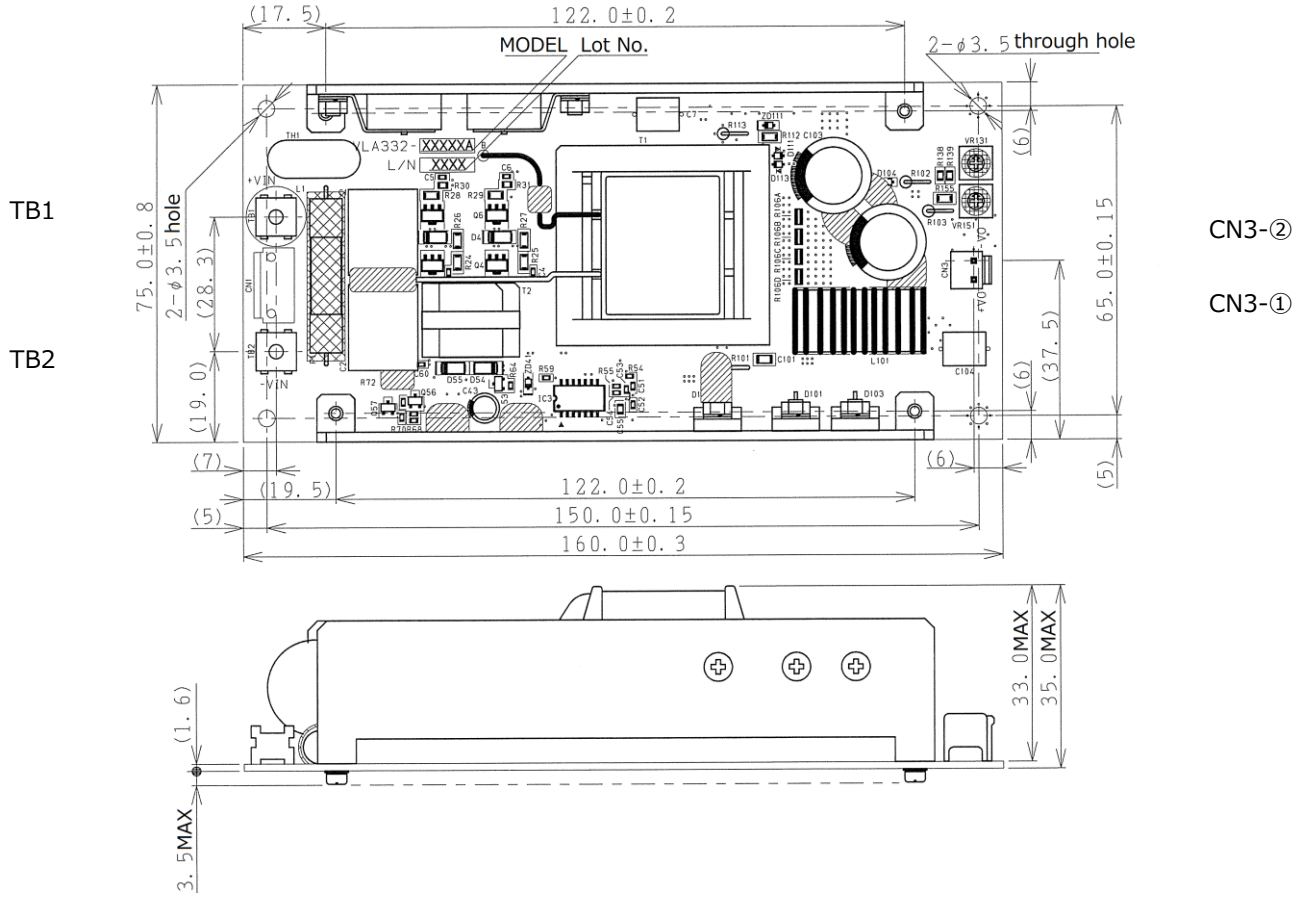






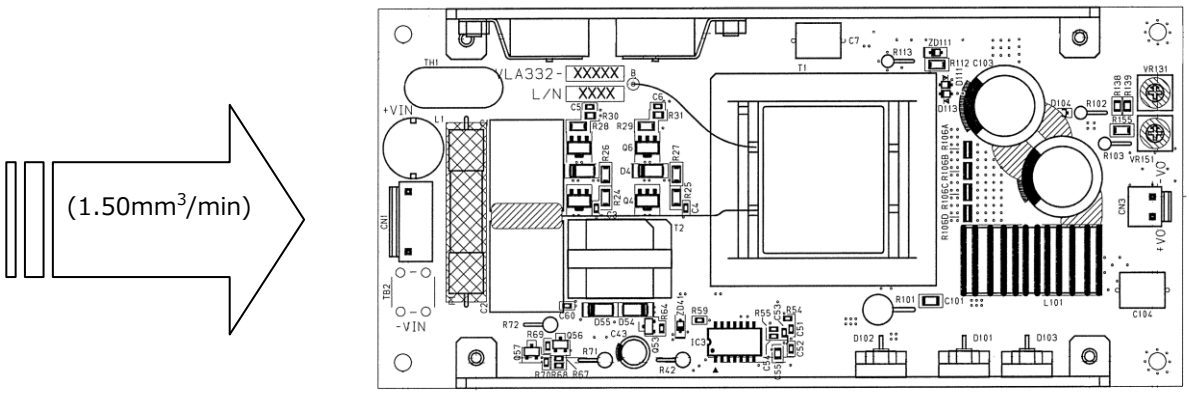


OUTLINE DIMENSIONS AND CONNECTOR, TERMINAL



	TB1	TB2	CN3
Parts No.	OT-047 M3, OSADA	OT-047 M4, OSADA	B2P-VH JST
Polarity	$+V_{IN}$	$-V_{IN}$	①+Vo ②-Vo

FORCED-AIR COOLING DIRECTION



FOR SAFETY USING

Great detail and careful attention are given to the production activity of Hics, such as the development, the quality of production, and in it's reliability. However the reliability of Hics depends not only on their own factors but also in their condition of usage. When handling Hics, please note the following cautions.

CAUTIONS	
Packing	The materials used in packing Hics can only withstand normal external conditions. When exposed to outside shocks, rain and certain environmental contaminators, the packing materials will deteriorates. Please take care in handling.
Carrying	1) Don't stack boxes too high. Avoid placing heavy materials on boxes. 2) Boxes must be positioned correctly during transportation to avoid breakage. 3) Don't throw or drop boxes. 4) Keep boxes dry. Avoid rain or snow. 5) Minimal vibration and shock during transportation is desirable.
Storage	When storing Hics, please observe the following notices or possible deterioration of their electrical characteristics, risk of solderability, and external damage may occur. 1) Devices must be stored where fluctuation of temperature and humidity is minimal, and must not be exposed to direct sunlight. Store at the normal temperature of 5 to 30 degrees Celsius with humidity at 40 to 60%. 2) Avoid locations where corrosive gasses are generated or where much dust accumulates. 3) Storage cases must be static proof. 4) Avoid putting weight on boxes.
Extended storage	When extended storage is necessary, Hics must be kept non-processed. When using Hics which have been stored for more than one year or under severe conditions, be sure to check that the exterior is free from flaw and other damages.
Maximum ratings	To prevent any electrical damages, use Hics within the maximum ratings. The temperature, current, voltage, etc. must not exceed these conditions.
Polarity	To protect Hics from destruction and deterioration due to wrong insertion, make sure of polarity in inserting leads into the board holes, conforming to the external view for the terminal arrangement.