

DESCRIPTION

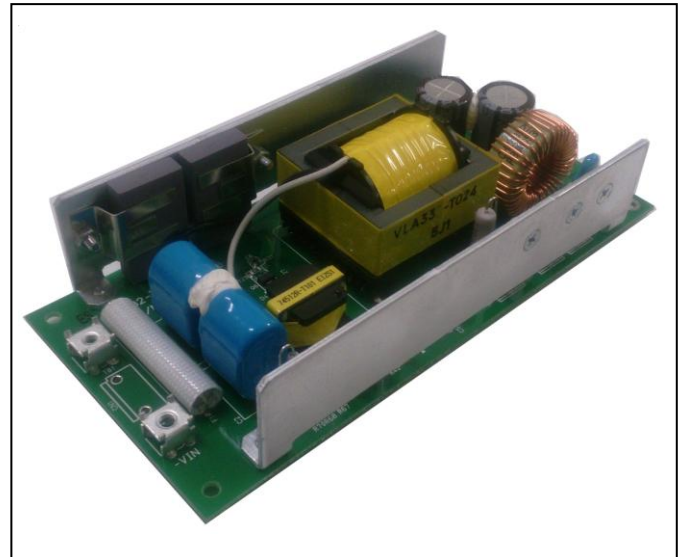
The VLA332-24150A is an isolated DC-DC converter designed to control the industrial equipment. It can input the DC400~850V directly and convert to low voltage. Total output power is 150W.

FEATURES

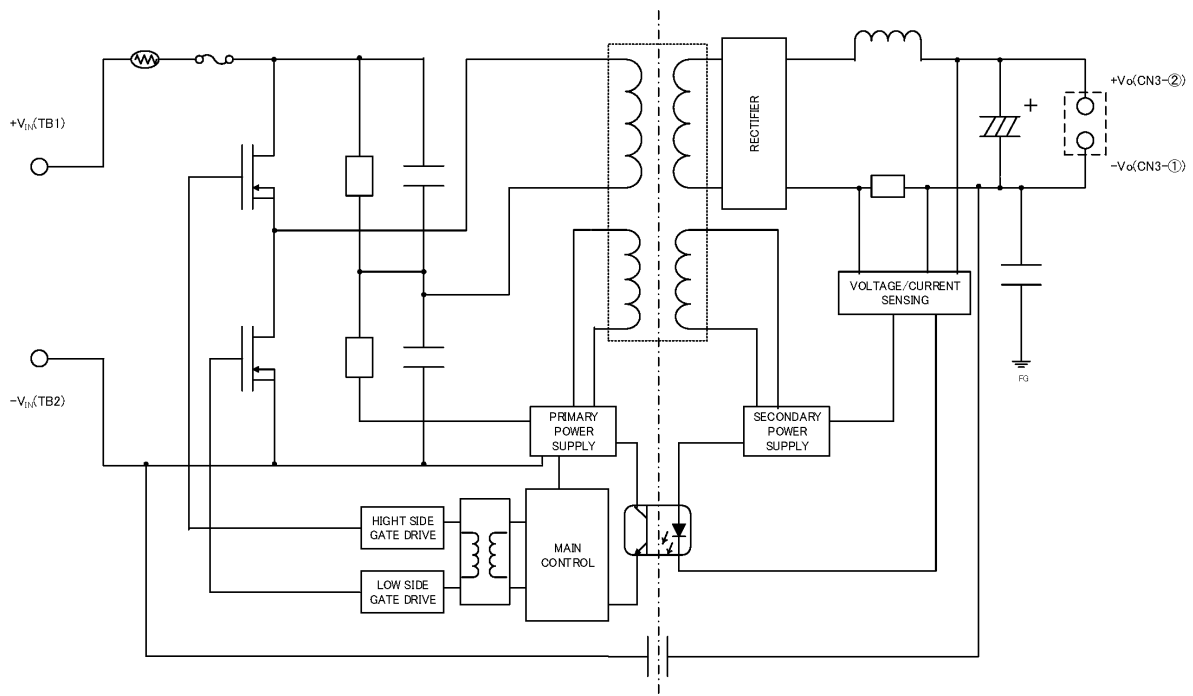
- Input ----- 400V to 850V DC
- Output----- +24V, 6.3A (150W)
- Electrical isolation (between input and output)
 ----- 2500Vrms 1 minute
- Over current protection (auto resumption)
- Over voltage protection
- Forced-air cooling

APPLICATIONS

On-board pre-regulator for industrial control equipment



BLOCK DIAGRAM



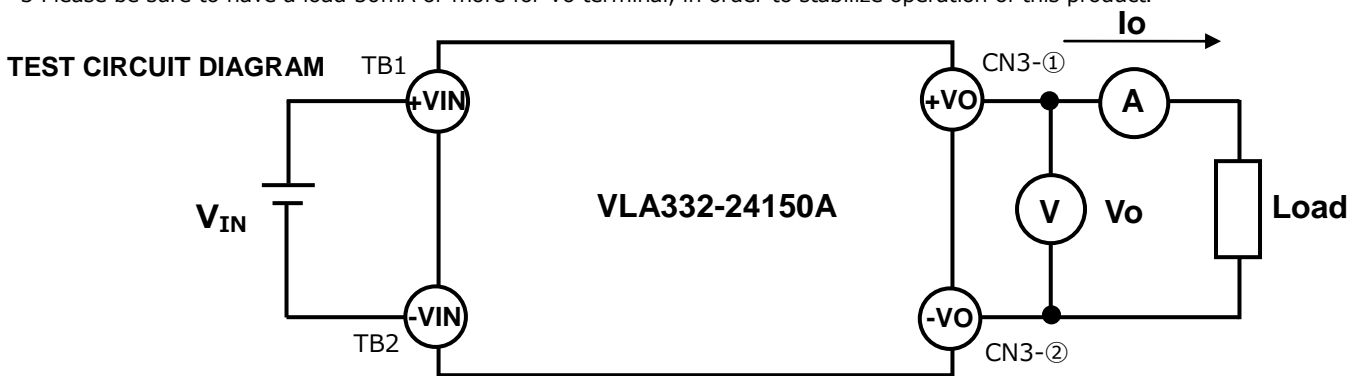
PRODUCT SPECIFICATION (unless otherwise noted, Ta=25°C)

| | Parameter | | Test conditions | Note |
|----------------------|-------------------------|---------------------------------|---|---|
| RATING | V _{IN} | Input voltage | DC850V | Maximum rating, TB1-TB2 |
| | V _o | Output voltage | 24V | |
| | I _o | Output current | 6.3A | 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 | 88% (typ) | V _{IN} =680V, I _o =6.3A |
| OUTPUT | V _o | Output voltage range | 22.8~25.2V | Rated Input/output, CN3②-① |
| | Reg-I | Input regulation | 480mV (max) | Rated Input/output |
| | Reg-L | Load regulation | 720mV (max) | Rated Input/output |
| | V _{pp} | Ripple voltage | 240mV (max) | Rated Input/output * 1 |
| ELECTRICAL ISORATION | V _{iso} | 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 | T _{opr} | Operating temperature /humidity | -10~55°C /20~90%RH | without dew condensation, (Forced-air cooling) |
| | T _{stg} | Storage temperature /humidity | -20~75°C /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 | | 7A (min) | Output decline, Refer to overload characteristics |
| | Output over voltage | | 30V (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 | |

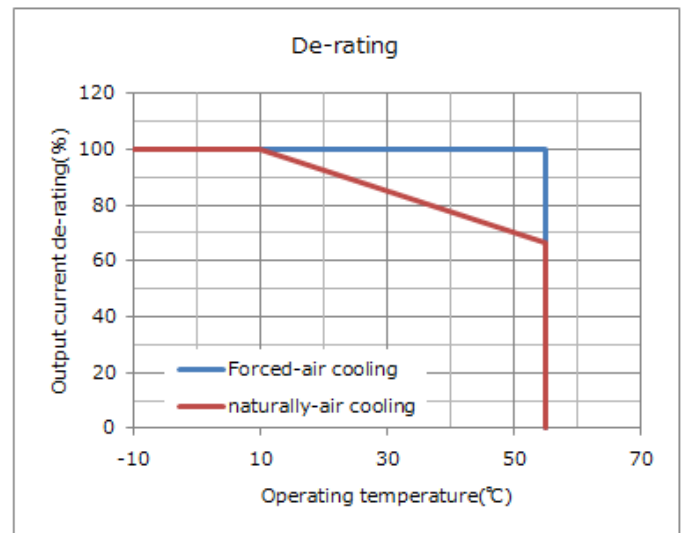
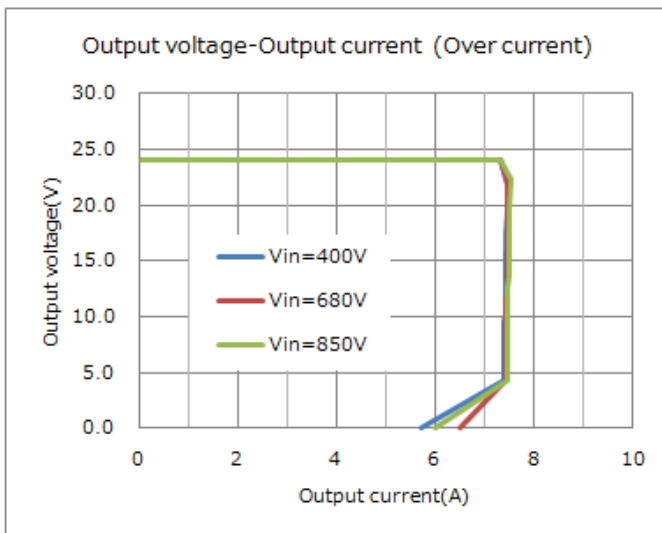
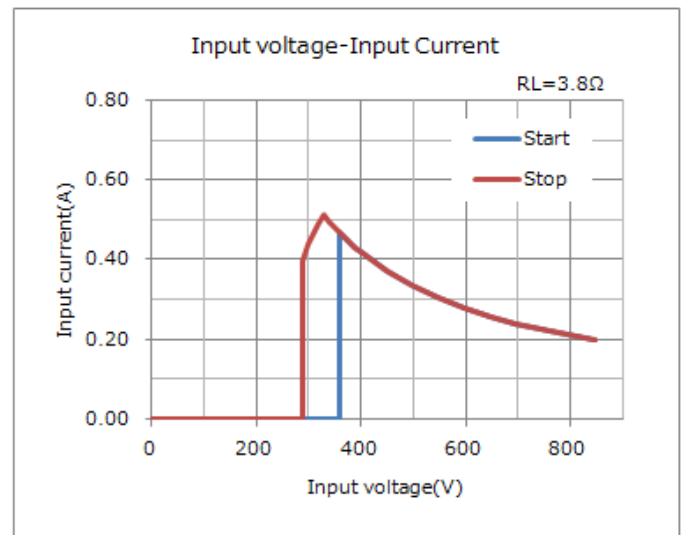
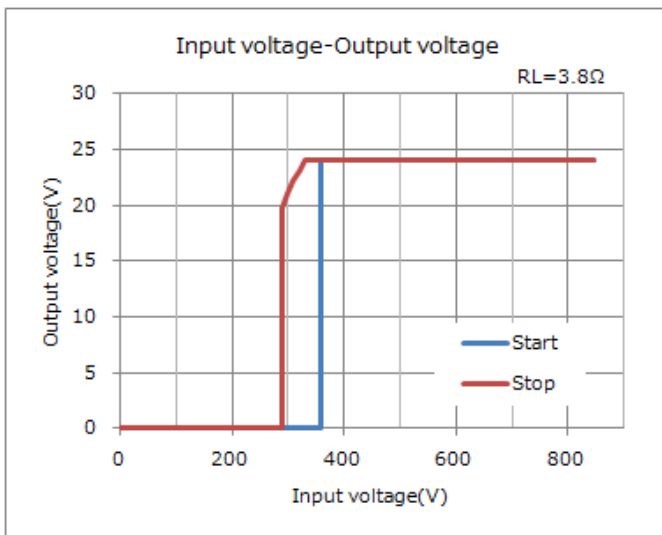
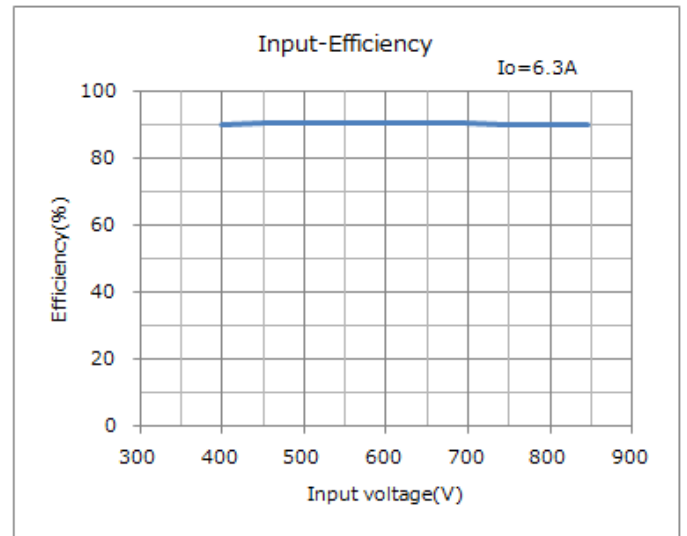
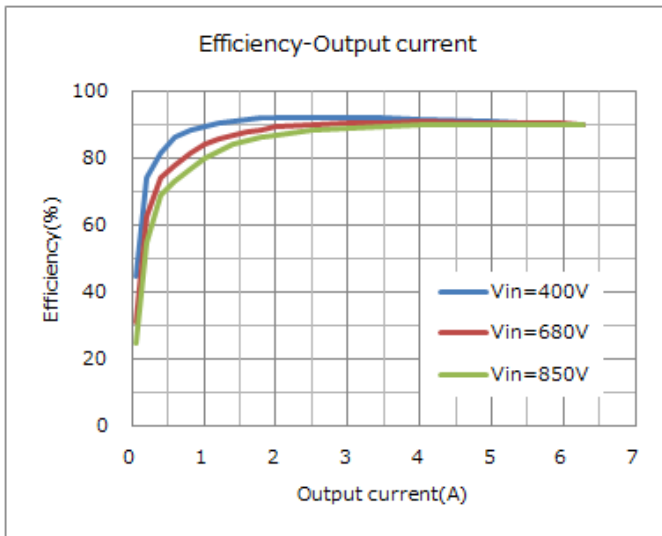
*1 Not contain the spike noise. (By measurement board with the capacitor(47uF) separated from output within 150mm.)

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

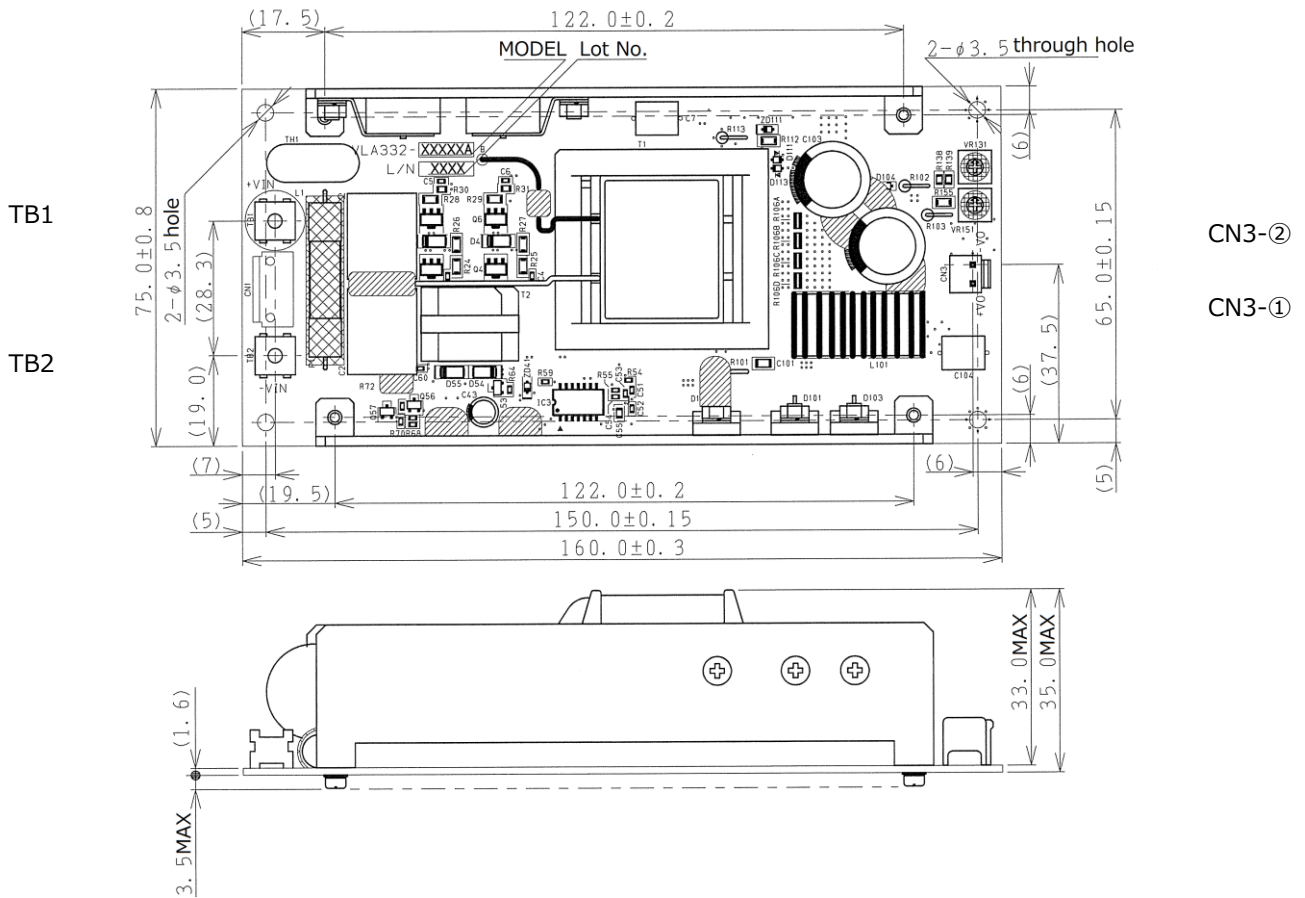
*3 Please be sure to have a load 50mA or more for V_o terminal, in order to stabilize operation of this product.



TYPICAL CHARACTERISTICS (Topr=25°C)

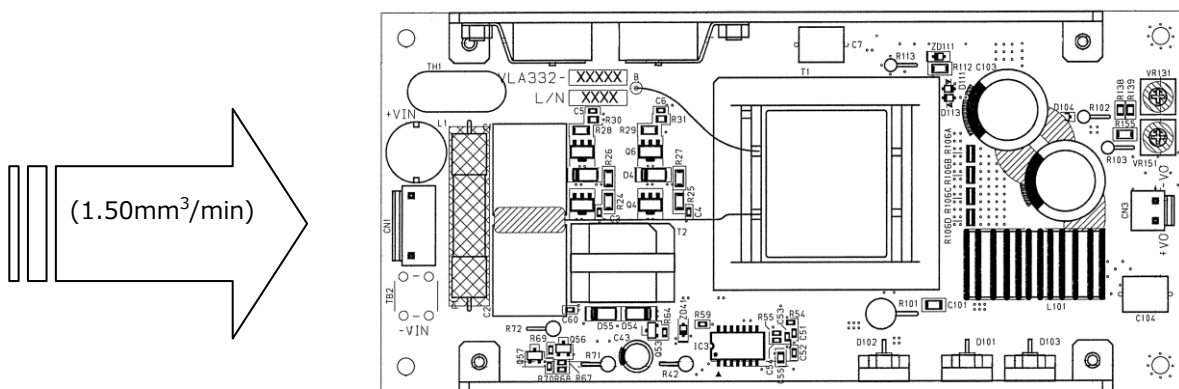


OUTLINE DIMENSIONS AND CONNECTOR, TERMINAL



| | TB1 | TB2 | CN3 |
|-----------|---------------------|---------------------|-----------------------------------|
| Parts No. | OT-047 M3, OSADA | OT-047 M4, OSADA | B2P-VH JST |
| Polarity | +V _{IN} | -V _{IN} | ①+V _o ②-V _o |

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 its 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 | <ol style="list-style-type: none"> 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 | <p>When storing Hics, please observe the following notices or possible deterioration of their electrical characteristics, risk of solderability, and external damage may occur.</p> <ol style="list-style-type: none"> 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. |

Keep safety first in your circuit designs!

- ISAHAYA Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (1)placement of substitutive, auxiliary circuits, (2)use of non-flammable material or (3)prevention against any malfunction or mishap.

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