



# Phase detection transformer box

## <FR-A8VPB-H>

Thank you for choosing this Mitsubishi Electric inverter option. This product is a phase detection transformer box specifically made for the FR-A800/F800 series 400 V class inverters. To wire and set up this product, refer to either of the two Instruction Manuals of the plug-in option FR-A8AVP (Inverter/Converter Switching Function / Phase-Synchronized Bypass Switching Function) according to the application purpose. Incorrect handling might cause an unexpected fault. Before using this product, always read this Instruction Manual carefully to ensure proper use. Please forward this Instruction Manual to the end user.

### Safety instructions

Do not attempt to install, operate, maintain or inspect this product until you have read through this Instruction Manual, the Instruction Manual of the FR-A8AVP, and supplementary documents carefully and can use the equipment correctly. Do not use this product until you have a full knowledge of this product mechanism, safety information and instructions.

Installation, operation, maintenance and inspection must be performed by qualified personnel. Here, qualified personnel means personnel who meets all the following conditions.

- A person who took a proper engineering training. Such training may be available at your local Mitsubishi Electric office. Contact your local sales office for schedules and locations.
- A person who can access operating manuals for the protective devices (e.g. light curtain) connected to the safety control system. A person who has read and familiarized themselves with the manuals.

In this Instruction Manual, the safety instruction levels are classified into "WARNING" and "CAUTION"

**WARNING** Incorrect handling may cause hazardous conditions, resulting in death or severe injury.

**CAUTION** Incorrect handling may cause hazardous conditions, resulting in medium or slight injury, or may cause only material damage.

Note that even the **CAUTION** level may lead to a serious consequence depending on conditions. Be sure to follow the instructions of both levels as they are critical to personal safety.

### Electric shock prevention

**WARNING**

- Do not remove the front cover while the power is ON and do not run this product with the front cover removed, or you may get an electric shock due to the fact that high voltage terminals and charging part are exposed.
- Any person who is involved in wiring or inspection of this product shall be fully competent to do the work.

**WARNING**

- This product body must be installed before wiring. Otherwise you may get an electric shock or be injured.
- Do not touch this product with wet hands. Doing so may cause an electric shock.
- Do not subject the cables to scratches, excessive stress, heavy loads or pinching. Doing so may cause an electric shock.

### Fire prevention

**CAUTION**

- This product must be installed on a nonflammable wall without any through holes. Installing it to or near flammable material may cause a fire.

### Injury prevention

**CAUTION**

- The voltage applied to each terminal must be as specified in the Instruction Manual. Otherwise burst, damage, etc. may occur.
- The cables must be connected to the correct terminals. Otherwise burst, damage, etc. may occur.
- The polarity (+ and -) must be correct. Otherwise burst, damage, etc. may occur.
- While power is ON or for some time after power-OFF, do not touch this product as it will be extremely hot. Doing so may cause a burn.

### Additional instructions

The following instructions must be also followed. If this product is handled incorrectly, it may cause unexpected fault, an injury, or an electric shock.

**CAUTION**

#### Transportation and installation

- This product must be transported in correct method that corresponds to the weight. Failure to do so may lead to injuries.
- Do not stand or place heavy objects on this product.
- Do not stack the boxes containing this product higher than the number recommended.
- When carrying this product, do not hold it by the front cover. Doing so may cause a fall or failure of this product.
- The installing orientation of this product must be correct.
- Do not install or operate this product if it is damaged or has parts missing.
- Prevent conductive items such as screws and metal fragments, or flammable substances such as oil from entering this product.
- As this product is a precision instrument, do not drop or subject it to impact.
- The surrounding air temperature must be between -10 and +50°C (non-freezing) for this product. Otherwise the product may be damaged.
- The ambient humidity must be 95%RH or less (non-condensing) for this product. Otherwise this product may be damaged. (For the details, refer to the Instruction Manual of the FR-A8AVP.)
- The temporary storage temperature (applicable to a short limited time such as a transportation time) must be between -20 and +65°C. Otherwise this product may be damaged.
- This product must be used indoors (without corrosive gas, flammable gas, oil mist, dust and dirt.) Otherwise this product may be damaged.
- This product must be used at an altitude of 2500 m or less, within 5.9 m/s<sup>2</sup> or less vibration at 10 to 55 Hz (directions of X, Y, Z axes). Otherwise the product may be damaged. (For the installation at an altitude above 1000 m, consider a 3% reduction in the rated current per 500 m increase in altitude.)

**CAUTION**

- If halogen-based materials (fluorine, chlorine, bromine, iodine, etc.), included in fumigants to sterilize or disinfect wooden packages, infiltrate into this product, the product may be damaged. Prevent residual fumigant components from being infiltrated into the product when packaging, or use an alternative sterilization or disinfection method (heat disinfection, etc.). Note that sterilization or disinfection of wooden package should also be performed before packaging the product.

**Test operation**

- Before starting operation, confirm or adjust the parameter settings. A failure to do so may cause some machines to make unexpected motions.

**WARNING**

**Usage**

- Do not modify this product.
- Do not remove any part which is not instructed to be removed in the Instruction Manuals. Doing so may lead to a failure or damage of this product.

**CAUTION**

**Disposal**

- This product must be treated as industrial waste.

## Restricted Use of Hazardous Substances in Electronic and Electrical Products

The mark of restricted use of hazardous substances in electronic and electrical products is applied to the product as follows based on the "Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products" of the People's Republic of China.

电器电子产品有害物质限制使用标识要求



本产品中所含有的有害物质的名称、含量、含有部件如下表所示。

• 产品中所含有害物质的名称及含量

部件名称 <sup>*2</sup>	有害物质 <sup>*1</sup>					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件 (包括印刷电路板及其构成的零部件, 如电阻、电容、集成电路、连接器等)、电子部件	×	○	×	○	○	○
金属壳体、金属部件	×	○	○	○	○	○
树脂壳体、树脂部件	○	○	○	○	○	○
螺丝、电线	○	○	○	○	○	○

上表依据SJ/T11364的规定编制。

○: 表示该有害物质在该部件所有均质材料中的含量均在GB/T26572规定的限量要求以下。

×: 表示该有害物质在该部件的至少一种均质材料中的含量超出GB/T26572规定的限量要求。

\*1 即使表中记载为 ×, 根据产品型号, 也可能会有有害物质的含量为限制值以下的情况。

\*2 根据产品型号, 一部分部件可能不包含在产品中。

## Referenced Standard (Requirement of Chinese standardized law)

This Product is designed and manufactured accordance with following Chinese standards.

Electrical safety: GB12668.501

**MITSUBISHI ELECTRIC CORPORATION**

HEAD OFFICE: TOKYO BUILDING 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN