
MINIPHASE I

STATIC PHASE CONVERTER

INSTALLATION INSTRUCTIONS

BEFORE YOU START

The **Miniphase I** is designed to be installed simply and quickly by any installer with minimal electrical knowledge. If you have any doubts about how to install this unit from these instructions, we suggest you request the assistance of a licensed electrician. Nothing in these instructions should be construed to modify or supersede any applicable sections of the National Electric Code or other existing local codes.

1. Turn all power off at the main panel.
2. If your machine has a magnetic starter, you must determine which two of the three wires operate the starter. You may be able to tell by tracing the wiring in your machine. Otherwise, the simplest way to determine this is to connect your 220 volt line to any two of the three wires of your machine and then press the start button to see if the starter pulls in. When you determine which two wires are the ones, connect them to the T-1 and T-2 terminals of the **Miniphase I**.
3. When fusing the Miniphase I put the fuses in the single-phase line only. The fuse or breaker rating should not be less than the single-phase amp rating shown on the **Miniphase I** nameplate.
4. Supply cable should be run in conduit. For short runs of six feet or less, flexible conduit may be used. Terminate the conduit in the knockouts provided in each side of the **Miniphase I** enclosure.
5. The **Miniphase I** is designed to operate on 208, 220, 230 or 240 volts. It may be used on either 50 or 60 Hertz systems. Refer to the factory for 460 volt applications.
6. The **Miniphase I** is designed for most light duty single motor applications requiring no more than 80% of nameplate horsepower. It is guaranteed to perform properly when used in such applications. The **Miniphase I** is not designed for:
 - Submersible pumps or motors
 - Multi-speed motors
 - Resistance or rectifier loads
 - Loads which require frequent starting (more than 6 per hour)If you are attempting to operate one of these loads with the **Miniphase I**, we suggest you consult the factory to discuss an alternative phase converter. You will save yourself time and money.
7. Do not attempt to start and/or run a motor outside of the range stamped on the **Miniphase I** nameplate unless specifically recommended by the factory.
8. We recommend using ring type terminals for all connections

INSTALLATION

1. Mount the **Miniphase I** in the **UPRIGHT** position near the equipment being operated using the holes provided.
2. Open the junction box by removing the two screws on the top of the unit and sliding the box cover outward. Inside are two terminal strips marked *SINGLE-PHASE INPUT* and *THREE-PHASE OUTPUT*.
3. Terminate the conduit in the knockout holes provided.
4. Connect the incoming ground wire to the input terminal marked *GROUND*.
5. Connect the 220/230/240 volt single-phase supply line to the terminals marked L-1 and L-2 on the input terminal strip.
6. Connect your 220/230/240 volt three-phase load motor wires to the terminals marked T-1, T-2, and T-3 respectively. Remember to first be certain which lines supply power to your magnetic starter. These lines must be connected to T-1 and T-2. After all connections have been made, check them for accuracy and replace the junction box cover.

OPERATION

Start your equipment. The red pilot lamp on the converter should light briefly while the motor is starting. This should take no more than three to five seconds. The lamp should go out after the motor is up to speed.

The lamp may light periodically for a few seconds if the motor is loaded down. This is normal. If the lamp remains on longer than five seconds, stop the motor immediately and refer to the factory.

IN CASE OF TROUBLE	
Motor fails to start - Lamp remains on	Miniphase I may be too large or too small for the load. Consult factory for possible exchange.
Motor tries to start but fails to reach full speed. Clicking noise heard in converter or starter.	Magnetic starter may be connected to line T-3. Reverse T-1 or T-2 with T-3 and retry. Make certain Miniphase I is mounted upright .
Circuit breaker trips	Motor is excessively loaded during starting cycle. Reduce load if possible. Converter may be incorrect size for the application. Consult factory.
Wrong motor rotation	Reverse T-1 and T-2 connections.
No voltage measured between T-2 and T-3	This is normal when the load is not running.



Warranty

The Kay Industries **Miniphase I** Static Phase Converter is manufactured to strict quality standards and is thoroughly inspected and tested prior to shipment. It is warranted to be free from defects in material and workmanship under normal use and service for a period of two years from the date of purchase.

If any defect appears during this period, the purchaser must advise Kay Industries in writing, by fax or by phone within ten days of the first appearance of the problem. Upon notification, Kay Industries will issue authorization for return of the **Miniphase I** converter, freight prepaid. After receipt Kay Industries will immediately inspect the defective unit and will at its sole discretion repair or replace the converter. In the event of a product failure or non-performance for *any* reason within 30 days after initial start up, Kay Industries will accept return of the **Miniphase I** for **full credit** against the purchase price of the appropriately sized rotary phase converter.

The liability of Kay Industries will be limited to the repair or replacement of parts or the exchange of the entire converter. Under no circumstances will Kay Industries be responsible for incidental or consequential damage or loss arising from interruption of service or labor expense required to remove or replace the defective unit. Any tampering or unauthorized repair will void this warranty.

This warranty is limited to the original end use purchaser **unless** the new owner notifies Kay Industries in writing of the change of ownership and description of the new application. If Kay Industries determines the new application is acceptable, the remaining unused portion of the warranty will apply. In no case will the warranty extend beyond two years from the date of original purchase from an authorized Kay Industries reseller or twenty six months from the original date of factory shipment, whichever is less.

Thank you for choosing the **Miniphase I** from Kay Industries.



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