

AUTOMATIC ROTARY PHASE CONVERTER FOR SUBMERSIBLE PUMPS & DUPLEX LIFT STATIONS

The World Leader in Single to Three-Phase Electric Power Conversion

DESCRIPTION:

The PHASEMASTER Type DP-A rotary phase converter is a highly reliable source of 3-phase power from a 1-phase supply. It will operate submersible motors, irrigation pumps, sewage lift stations, and most other *unattended* applications which cycle on and off. The converter is ideal for duplex pumps which operate separately or together and is suitable for use with variable frequency drives.

When connected to a 230 volt 1-phase line, it produces a near replica of utility 3-phase at its output terminals with each phase shifted 120 degrees. It also features a completely self-contained control system with fuses and starter to allow the converter to be automatically switched on or off as demanded by the load. When properly sized, it will maintain a voltage between phases within five percent. The converter behaves like a transformer with very little internal loss. System efficiency exceeds 95%.

CONSTRUCTION:

The TYPE DP-A converter is identical to the standard rotary converter in performance. Its chief difference is a side-mounted automatic control panel which enables the converter to be remotely turned on and off as required by the load thus saving energy. The DP-A converter is a *rotary* design in which a spinning armature is used to generate a third voltage leg. Since this is *true* 3-phase power at its output terminals, it is capable of starting and providing a near balanced current into one or more motors simultaneously. The converter does not use electrolytic capacitors, potential relays, brushes, slip rings, or other failure-prone components and does not require adjustments for varying loads. It is built for extra quiet performance.

INSTALLATION & MAINTENANCE:

The DP-A converter can be quickly connected to any existing 1-phase service of sufficient load capacity. The converter can be installed indoors or out and does not have to be bolted down. Inspection of control contacts and bearing lubrication are the only maintenance requirements.

SIZING AND ORDERING INFORMATION:

The sizing table which accompanies this page is for information and estimating purposes only. Motor designs and operational characteristics vary widely among manufacturers. Submersible motors often require a larger converter. It is advisable to consult a factory representative before making a final selection. The following information is required for proper sizing:

- ◆ Pump and motor types and manufacturer
- ◆ HP, voltage rating and motor nameplate data
- ◆ Starting load HP load and running load HP

Refer to the *Sizing and Selection Worksheet* for further discussion of essential information required.

OUTPUT:

All units are factory wired for 230 Volts. 460 Volt units are available on request. Consult factory for 208 volt applications or for 208 volt 4-wire output.

OPTIONAL EQUIPMENT:

- ◆ Enclosures for weather protection
- ◆ Voltage regulated output for variable loads
- ◆ Surge protection
- ◆ Step up transformer 230-460 Volts
- ◆ Non-Automatic style is available as Type DP



10 HP Model DP-2-A Automatic Rotary Phase Converter

