

AUcontrols.

DIY-KIT Rotary Phase Converters.

CAUTION: Read the following carefully before attempting installation.
Phase Converters MUST BE INSTALLED by a Qualified Technician.
Follow the wiring Diagram and DO NOT connect it different than showed.

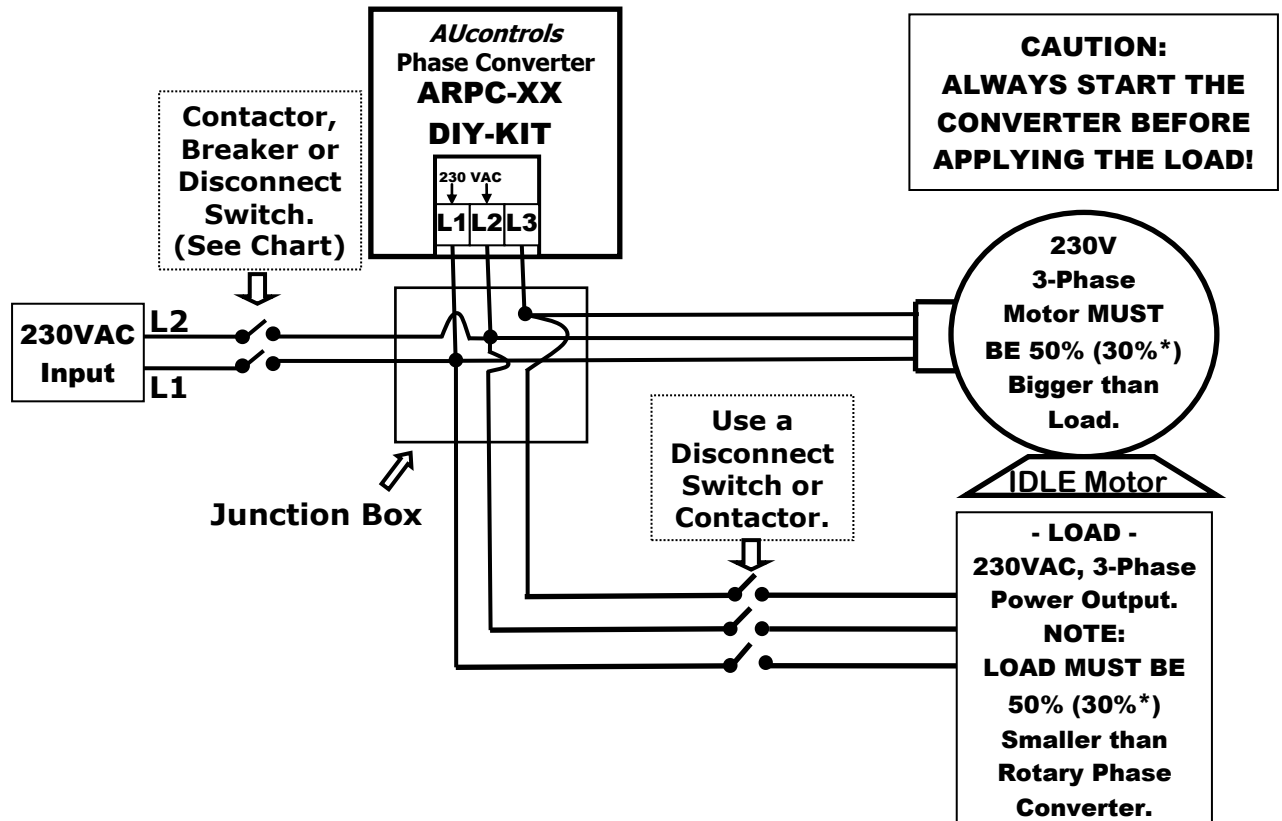
Rotary Phase Converters DIY-KIT are designed for you to make your own 230V full power rotary phase converter, with Single Phase 230 VAC power. Rotary Phase Converters give FULL power*** (Tech. Info.)

All you need is a 3-Phase, 230 VAC Motor 1750 or 3600 RPM to be used as your 3-Phase Generator.

Rotary Phase Converters provide inexpensive 3-Phase power for Home Workshops and Industrial use.

Due to the high in-rush currents required to start a motor (5 to 10 times the normal running current). **Most applications require sizing the HP of the Rotary Converter 50% larger, or more** than the horsepower of the largest motor, or any combination of motors started at exactly the same time.

3-phase motors, when used with rotary phase converters, have great advantage over single-phase motors. Current drawn on starting is approximately 6~8 times less. This enables the use of higher HP motors where previously not thought possible. Rotary Phase Converters are devoid of the Harmonic Effect; they DO NOT generate or induce "Electric Noise" to the power lines.



WARNING:

Connect motor according to the Diagram,
Apply 230 VAC power ONLY in L1 and L2.
Do NOT connect L3 to ground! It will severely damage the Converter.

Properly Ground ALL Electrical Equipment!
Use a Contactor or a Disconnect Switch to Start Motor.
Always make sure the motor is wired for 230 VAC!

*** NOT FULLY LOADED**

NOTE: Voltage in L3 could be up to 18% higher than single phase voltage with NO LOAD.

3-Phase Rotary Motor MUST start within 5 seconds maximum, if motor fails to start or it hums **turn power OFF** and check the wiring and/or the motor's bearings.

- IF you have magnetic controls or single-phase loads (including electronics, microprocessors, etc.), they must always be energized by lines L1 and L2.
- It is essential that careful consideration be given to your wiring length and size to prevent slow starting due to a voltage drop. Consult the National Electrical Code for proper wire sizing.
- Due to the high starting current (in-rush current) common to electric motors, a drop of starting torque may occur when using a converter that is too small. Because of this, it is NOT advised to size an application HP for HP. The vast majority of applications require sizing the converter 50% larger or more than the largest HP rated motor of your equipment.

Contact us at: info@electronicotrols.com we can help you with your needs.

Recommended Breakers and Wires size for Rotary Phase Converters.										
Refer to NEC code #430 C (- 230 Volts AC -)										
HP	1	2	3	5	7.5	10	15	20	25	30
Breaker Amps.	15	15	20	30	40	60	100	125	160	200
Wire Size Gauge to Motor	14	14	12	10	8	6	3	1	1/0	3/0
Wire for Converter	14	14	14	12	10	10	8	3	3	1
Fuses*	10	10	15	30	40	45	60	80	100	125
Conduit size	1/2	1/2	1/2	1/2	1/2	3/4	3/4	1	1-1/4	1-1/2

*Fuses (If used) must be TIME DELAY, and use them ONLY for the Input Power L1 & L2.

Uses Includes:

Lathes, Mills, Grinders, Saws, Drill Press, Metal Working Machines, Woodworking Machines and equipment, Printing Machines & equipment, Sewing Machines, Garbage Disposals, Food Processing Equipment, Meat Grinders, Dough Mixers, Food Blenders, Elevators Belts, Farm equipment, pumps, compressors, elevators, transmitters, computers, sewing machines, air conditioners, hoists, extractors, wheel balancers, EDM machines, rectifiers, lasers, conveyors and just about any 3-phase equipment.

Electronic Controls also manufactures DC Motor Speed Controllers from: 1/20 HP to 5 HP, for Single Phase Power 115 / 230 VAC (or bigger sizes up to 30 HP), which have FULL POWER and Better TORQUE than AC Motors, we can help you with your applications and will save you time and money. Let us know about the problem you are trying to solve and we may be able to help.

230V Model	Rotary Converter IDLE Amps.	Time Delay Fuses Amps.	NEMA Starter Size	Single Phase Line Amps. Needed.	Minimum Single-Phase Breaker Amps.*
ARPC-5	3	30	1	30	30
ARPC-7	5	40	1	50	40
ARPC-10	7	45	2	60	60
ARPC-15	8	60	3	100	100
ARPC-20	10	80	3	125	125
ARPC-30	12	125	3	200	200

* Single-phase supply shown is for absolute maximum output of the Rotary Converter. Most of the time the converter is oversized to provide the high starting current for the motor. It is not always necessary to size the single-phase breakers this large.

Contact us at: info@aucontrols.com or Visit us at: www.aucontrols.com

*** Technical Information.					
230V Model	Approx. Idle Amps. Input Single Phase Input (No load)	Max. Single Phase Input Amps:	Max. 3-Phase Amps Output Full Load:	Motor's HP to BE USE as Rotary Phase Converter:	Max. Motor's HP to RUN with Rotary Phase Converter (KIT) @ Full Load.
ARPC-5	2.2 ~ 3	21	13.9	5 HP	2 ~ 3* HP
ARPC-7	4 ~ 5	35	23.0	7.5 HP	3 ~ 5* HP
ARPC-10	5 ~ 7	42	28.0	10 HP	5 ~ 7.5* HP
ARPC-15	5 ~ 8	63	42.0	15 HP	7.5 ~ 10* HP
ARPC-20	7.5 ~ 10	82	55.0	20 HP	10 ~ 15* HP
ARPC-30	7.8 ~ 12	123	82.0	30 HP	15 ~ 20* HP
					*NOT Fully Loaded