

## Install a Booster™ converter

During start-up, the converter may draw up to 400% of the maximum nominal input current. These inrush currents last for fractions of a second. A similar current is required when it has to start a large motor. Depending on the mass to be accelerated, this may last several seconds.

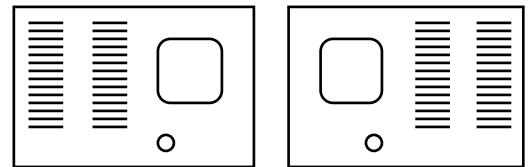
To prevent voltage drops and light dimming, install the Booster close to the switchboard or fusebox and install a heavy single phase supply cable for currents twice the fuse size below. This reduces inrush losses.

Install a motor-rated fuse or overload circuit breaker in the customers fuse box. Install an industrial single-phase wall switch and, if wanted, a three pin single phase wall socket combination. Install a flexible power cord to the Booster. Make sure phases 1 - 2 - 3 in all connected three-phase sockets match the Booster output phases 1 - 2 - 3.

Max. continuous input current:      240V supply    415V and 480V supply

Booster 2kW	12A	-
Booster 3kW	15A	-
Booster 4kW	18A	-
Booster 8kW	36A	2x 18A
Booster 12kW	54A	2x 27A
Booster 16kW	72A	2x 36A
Booster 24kW	108A	2x 54A
Booster 32kW	-	2x 72A

Single phase input side    Three phase output side



### Test:

Switch on. The Booster works well if the internal motor-generator accelerates fast (< 0.5 sec) and runs quietly with the humming noise of a free running motor on soft motor mounts.

Measure phase to phase voltages. Depending on incoming voltage and Booster type, they should be:

Booster E: 390-450V. Booster T4 and T8: 400-430V + - 6% symmetry. Booster T12 - 40: 400-430V + - 3% symmetry. Phases are separated by 120 degrees. Because phases do not rotate around Neutral, you will find voltages to Neutral of about L1: 180V L2: 360V L3: 240V. This is acceptable because motors and machines use phase-phase voltages.

### Control transformers and single phase loads in machines:

Machines often have a 415V to 24V control transformer. Make sure the machine is connected to the converter's output phases 1 and 3 only. Do not use phase 2, fluctuations during motor starts can cause a contactor to disconnect.

How to find these two phases: Unplug. Put machine's switch in ON position. Find the two phases by measuring the coil resistance on the machine's power plug.

Some machines use a 240V to 24V control transformer between one phase and Neutral: Find the transformer coil resistance on the machine's plug. Connect to L3 and Neutral only. Do not use any other phase.

Connect a motor or a machine and start it briefly. Check for correct motor rotation.

If wrong, swap L1 and L3 in the machine's plug.

### Welders:

A welder up to 300A requires at least a Booster T8. A welder up to 450A requires a Booster T12.

Some transformer-type welders use two of the three phases.

Make sure you connect these two phases to Booster output L1 and L3.

Three-phase transformer-type and inverter-type welders: find the control transformer connection as with machines.

### Noise:

New Booster converters may produce a squealing noise in the first weeks of operation. This is from tight rubber seals protecting the bearings. This noise will disappear after some time of operation. A Booster will make a quiet humming noise of a motor sitting on soft motor mounts. Airflow may also be heard produced by a small fan.

### Service:

No maintenance is required. A converter should only be opened by trained electrical service personal.

### Danger:

Do not run a Booster when open. Disconnect from power and wait for at least ten minutes until the internal capacitors are fully discharged. Measure the DC voltage on all capacitors first before touching anything.