

# SINGLE PHASE CONVERTER

## CLEAN, EFFICIENT VARIABLE SPEED MOTOR CONTROL WITH SINGLE-PHASE POWER

The Single Phase Converter addresses the common issues with AC motors powered from single-phase input:

- Limited and expensive single-phase motor options
- Inefficient use of power due to choppy current harmonics
- Increased maintenance of rotating parts and tuned circuits

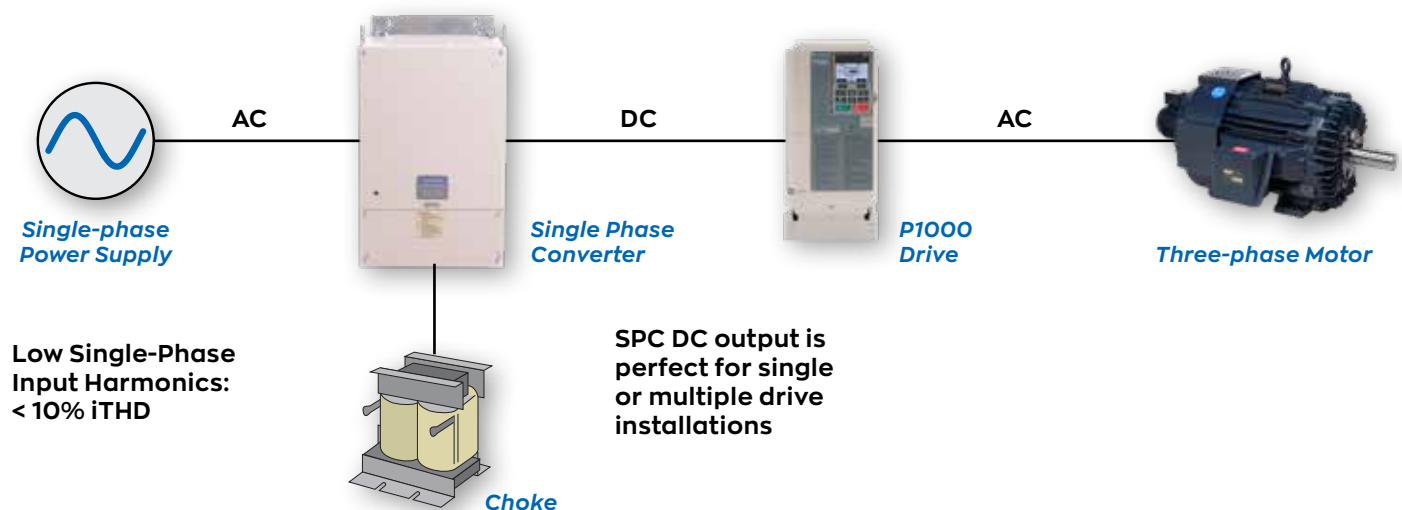
### BENEFITS

Yaskawa's industry-leading Single Phase Converter (SPC) cleanly converts single-phase AC power to DC power for Yaskawa variable frequency drives. The SPC marries Yaskawa reliability and drive technology with motor control solutions for businesses in areas where three-phase power is not available.

The SPC eliminates the need to oversize variable frequency drives for single-phase applications while reducing distortion to less than 10% iTHD. With lower input harmonics and near unity power factor, the SPC also eliminates the need to significantly oversize transformers in single-phase applications, reducing overall installation costs.



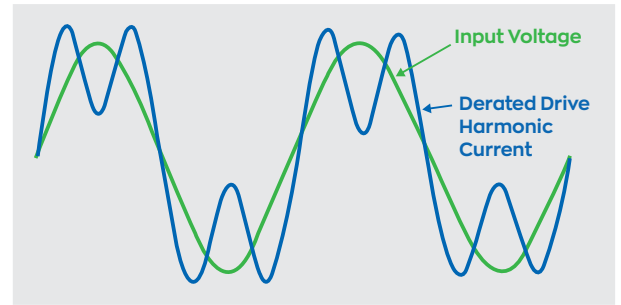
### SYSTEM DIAGRAM



# SINGLE PHASE CONVERTER TECHNICAL DATA

## SYSTEM ADVANTAGES

- Less than 10% iTHD reduces installation costs
- Eliminates the need for drive oversizing
- Three-phase motors are more efficient and less expensive than single-phase motors
- No rotating parts needed for phase conversion



SPC provides power for three phase systems and eliminates the drive's low harmonic currents

## SPECIFICATIONS

Item	Specification
<b>Power Range</b>	230 VAC: 20-60 HP 460 VAC: 30-125 HP
<b>Input Voltage Tolerance</b>	230-240 VAC, Single-Phase 460-480 VAC, Single-Phase Tolerance -5/+10% <sup>1</sup>
<b>Power Factor</b>	0.99
<b>Ambient Operating Temperature</b>	-10° to 50°C (14° to 122°F) Open Chassis -10° to 40° (14° to 104°F) UL Type 1
<b>Global Certifications</b>	UL, RoHS 2
<b>User Interface</b>	4 LED indicators: Power, Ready, Run, Fault

1: -10% minimum input voltage for 60 seconds at rated power



## MODELS AND RATINGS

Power Supply	System Kit Number <sup>1</sup>	Rated Power <sup>2</sup> HP	Input Current Amps (rms)	Output Current Amps (DC)	Height inches (cm)	Width inches (cm)	Depth inches (cm)
230 to 240 VAC	SPBC-240-20HP	20	79	57	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-240-30HP	30	116	84	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-240-40HP	40	154	112	17 (43.2)	12 (30.5)	10.5 (26.7)
	SPBC-240-50HP	50	191	139	24 (61.0)	12.4 (31.5)	11.4 (29.0)
	SPBC-240-60HP	60	228	166	24 (61.0)	12.4 (31.5)	11.4 (29.0)
460 to 480 VAC	SPBC-480-30HP	30	58	42	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-480-40HP	40	77	56	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-480-50HP	50	96	69	17 (43.2)	12 (30.5)	10.5 (26.7)
	SPBC-480-60HP	60	114	83	17 (43.2)	12 (30.5)	10.5 (26.7)
	SPBC-480-75HP	75	142	103	24 (61.0)	12.4 (31.5)	11.4 (29.0)
	SPBC-480-125HP	125	234	170	24 (61.0)	12.4 (31.5)	11.4 (29.0)

1: Kit includes open type/protected chassis Single Phase Converter and DC link choke

2: Larger power Single Phase Converter unit may be used on lower power motors

