

# OPAL pro MS6 Series

Microprocessor-Based Reduced Voltage Soft Starters



SAF Drives is one of North America's leading manufacturers of drive solutions and solid-state starters. The SAF team boasts 150-years of combined drives manufacturing and industry experience and a commitment to maintain and grow the SAF brand's unrivalled quality.

For over three decades, SAF's Reduced Voltage Starters have been designed and manufactured with enhancements that reflect the latest technology. Each series has been produced with ease of use, ruggedness and reliability in mind.

SAF puts our "Seal of Assurance" on every product we make. It means, *we promise to deliver and we deliver what we promise.*

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*(Replies given within 24 hours)*



# OPAL pro Series

Communication made simple.



## OPAL PRO - A SMOOTH OPERATOR

A solid state starter provides a step-less, thus smooth current ramp to the motor. This characteristic eliminates current surges and mechanical torque transients. Since these units are solid state, we now eliminate the maintenance of moving contacts, which are involved in almost any other method of starting an AC induction motor.

**'Anyone can install it, anyone can operate it.'**

The OPAL Pro series is a microprocessor controlled line of solid state reduced voltage starters for use with 3 phase induction motors. The OPAL Pro has been developed to provide the flexibility and features that today's soft starter market demands, with the reliability and ease of use that customers want. Programming of the OPAL Pro can be done via the included keypad with as few as 4 parameter settings. Customers can use other multiple parameter settings and options, including various communication networks, to custom match the OPAL Pro to any soft starter application.



## WHAT SETS US APART...

The OPAL Pro series of reduced voltage soft starters offer an **uncomplicated solid state design** that makes installation easy, set-up even easier, and simple operation that takes it easy on your machinery - and your bottom line.

The OPAL Pro is fully featured on every unit with:

- Traditional SAF "Rugged" Design
- 500% Overload For 30 Sec Standard
- Standard Keypad Display
- Reduced Footprint for MCC Applications
- 1600 PIV SCR's
- Jog Speed
- Multiple Communication Networks

MODEL	DIMENSIONS			
	HEIGHT	WIDTH	DEPTH	WEIGHT
MS6-30-N1	17"	12"	10.5"	30 lbs.
MS6-50-N1	17"	12"	10.5"	30 lbs.
MS6-80-N1	17"	12"	10.5"	30 lbs.
MS6-125-CH	15"	15"	11.5"	40 lbs.
MS6-250-CH	15"	15"	11.5"	40 lbs.
MS6-420-CH	19.5"	15"	12.25"	50 lbs.
MS6-500-CH	19.5"	18"	13"	93 lbs.
MS6-600-CH	19.5"	18"	13"	93 lbs.
MS6-800-CH	27"	24"	15.5"	125 lbs.
MS6-1000-CH	27"	24"	15.5"	125 lbs.



## STANDARD FEATURES

- 200 - 600 VAC 3 phase universal voltage, 50/60Hz (+/- 10%)
- Jog Speed:
  - 14% of full speed forward,
  - 20% of full speed reverse
- 500% overload for 30 sec. 115% continuous
- Single control card throughout complete range
- Class 10, 15, 20, or 30 electronic motor overload
- Current regulated closed loop
- Fault Display actual text
- Dual operation modes to match any application:
  - Constant Current mode for light loads or limited power supplies
  - Current Ramp mode for high inertia or heavy loads
- Soft stop
- Two or three wire control
- 120 VAC control inputs for: Start, Stop, Jog, Reverse, Reset, Enable
- Keypad and LCD display for starter setup, status and diagnostics.
- Hardware for Remote Panel mounting of keypad.
- MOVs and Incoming / Outgoing Connection Lugs.
- Bypass Lugs
- Simple user setup
- Single phase protection
- Phase rotation insensitive
- Instantaneous over-current trip
- Shorted SCR Fault output *\*Enabled Upon Request*
- Shear pin Fault
- Dry contact relay outputs for:
  - Fault, By-pass, Shorted SCR, Running, Reverse
- CSA and UL Approved
- **5 Year Warranty**

## OPTIONAL FEATURES

- Solid State Full Speed Reversing
- DC Injection Braking
- Communication Networks:
  - Modicon TCP
  - Ethernet IP
- NEMA 1, 3R, 4, 4X, 12
- Combination Starter (Fused, Non-Fused Disconnect, or Circuit Breaker)
- HP Rated Up to Speed
- Bypass Contactor
- Control Power Transformer

## MODEL RATINGS

MODEL	HORSEPOWER		
	240V	460V	575V
MS6-30	10	20	30
MS6-50	20	40	50
MS6-80	30	60	75
MS6-125	50	100	125
MS6-250	100	200	250
MS6-420	150	350	400
MS6-500	200	400	500
MS6-600	250	500	600
MS6-800	350	700	800
MS6-1000	400	800	1000

**'Start Slowly. Save Quickly.'**

## APPLICATIONS:



Conveyors



Mixers



Wood Chippers



Car Dumpers



Traveling Grab Cranes



Grinders

### Others include:

- Shredders & Exteriors
- Rock Crushers
- Bridge Controls
- Snow Making
- Wood Saws & Planers
- Presses/Stamping
- Pumps & Fans
- Hammer Mills
- Irrigation Systems
- Pumping Stations