



# MOTORTRONICS™

*Solid State AC Motor Control*

## *Green Energy Management*



# VMX2

*Compact soft starter*

Ratings from 18 to 1250A  
(up to 1200HP)



### **Reduce mechanical wear and tear, and lower peak energy charges**

- Integrated bypass contractor
- Advanced motor protection
- Narrow-width for MCC mounting
- Low-profile for use in pump panels
- Remote keypad mounting
- Unique built-in features



# VMX2 Specifications

## POWER COMPONENTS

6 SCRs in inverse parallel pairs for full phase angle soft start control  
1600V PIV minimum rating on all units  
RC snubber for dv/dt protection of each SCR pair

## LINE VOLTAGE RANGE

200 to 600 VAC, 3 phase +10% -15% on all units, 50/60Hz

## CURRENT RATINGS

18 - 1250A depending on unit selection  
Range of each unit is 50-100% of maximum current rating based on 1.0 service factor

## AC SUPPLY VOLTAGE

User supplied 110/120VAC +10% -15%, 50/60Hz  
Optional 240VAC 50/60Hz control available

## OVERLOAD CAPACITY (% OF MOTOR FLA)

500% for 60 seconds

## BYPASS CONTACTOR

Standard on all units

## START/STOP CONTROL CHOICES

2-wire Run-Stop using dry contacts  
3-wire Start/Stop with built-in seal in contact  
N.C. Interlock input (dry contact) for remote devices

## RAMP CONTROL CHOICES (4 BUILT-IN)

Voltage Ramp, Voltage Ramp with Current Limit,  
CLT© Closed Loop Torque Ramp (Current Ramp)  
Current Step (current limit only)  
Ramp times adjustable 1 - 120 seconds  
Current Limit adjustable 200 - 600% of FLA

## DUAL RAMPS

Select via dry contact closure between any combinations of the above

## JOG

Dry contact closure selects a non-ramping Jog function at an adjustable torque

## INPUTS

External Lockout and Reset Input

## KICK START

10 - 100% starting voltage for 0.1 - 2 seconds

## PUMP-FLEX DECELERATION RAMP

Fully adjustable to match field conditions:  
Begin Decel setting, 0 - 100% of line voltage  
Decel ramp time, 1 - 60 seconds  
End Decel setting (Off), 0 - 1% of begin setting

## START & RUN PROTECTION

Two programmable overload trip curves allow for the thermal capacity required to start the load while providing motor overload protection needed during the run time.

## RESTART DELAY TIMER (SEQUENTIAL START DELAY)

Programmable time delay 1 - 999 seconds after loss of control power for staggered restarts

## REAL-TIME CLOCK (RTC)

24 hr/7 day real-time clock to provide automatic restart after powerloss

## REAL-TIME THERMAL MODELING

Continuously calculates motor operating temperature even when the motor is not running

## RETENTIVE THERMAL MEMORY

Remembers the thermal condition of the motor even in the event of a power brown-out or black-out when power is restored. Extrapolates motor temperature using a real-time clock

## ANALOG OUTPUT

Programmable Analog Output 4-20mA

## PROTECTION

Equipment ground fault, Phase Current Imbalance/Loss Protection, Phase Rotation, Electronic Shear Pin, Motor Duty Cycle, Short Circuit, Shorted SCR

## METERING

Monitors phase current, ground current, motor thermal capacity, line voltage, power factor and kilowatts

## RS-485 SERIAL COMMUNICATIONS

Up to 247 starters per link, Modbus RTU protocol built-in  
Full programming over the serial link, Remote starter control

## OPERATOR INTERFACE

Tactile feedback keypad, Easy to read LED display, Run and fault, status indicators

## USA HEADQUARTERS

### Motortronics / Phasetronics

1600 Sunshine Drive  
Clearwater, Florida 33765  
USA  
Tel: + 727-573-1819 / 888-767-7792  
Fax: + 727-573-1803 / 800-548-4104  
E-mail: sales@motortronics.com

[www.motortronics.com](http://www.motortronics.com)

## UNITED KINGDOM

### Motortronics UK

Bristow House,  
Gillard Way, Ivybridge,  
Devon, PL21 9GG,  
United Kingdom  
Tel: +44 (0)1752-894554

[www.motortronics-uk.co.uk](http://www.motortronics-uk.co.uk)

## SOUTH KOREA

### Motortronics Int'l Korea Co Ltd

#1607, 128 Gasan digital 1-ro,  
Gasan digital 1-ro,  
Geumcheon-gu,  
Seoul 08507, Republic of Korea  
Tel: 82-2-867-5808  
Fax: 82-2-867-6004

[www.motortronics-korea.com](http://www.motortronics-korea.com)

## CHINA

### M & P Machinery & Electronics Control

Part of the Motortronics Group  
32 Jiaxin Road,  
Jimo,  
Qingdao, China 266229  
Tel: 86-532-81725028  
Fax: 86-532-81725038

[www.mp-cn.com](http://www.mp-cn.com)

## UNITED ARAB EMIRATES

### Motortronics MEA, LLC

Sharjah Media City,  
Sharjah,  
United Arab Emirates  
Tel: +1 971-50 763 4920

[www.motortronics.com](http://www.motortronics.com)

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