

## Model Selection

For standard operating conditions of 40°C and 1000 m above sea level.

See manual for de-rating and other conditions.



### Rated Starting Capability

3 × Motor Current – 23 secs  
3.5 × Motor Current – 17 secs

### Typical Applications

Agitator  
Compressor  
Rotary Vane  
Unloaded  
Scroll  
Conveyor  
Unloaded  
Bow Thruster  
Zero Pitch  
Fan  
Low Inertia or <85A  
Feeder  
Screw  
Lathe Machines  
Mixer  
Unloaded  
Moulding Machine  
Plastic and Textile Machines  
Pump  
Submersible - Centrifugal  
Submersible - Rotodynamic  
Saw  
Band  
Transformers  
Voltage Regulators

Trip Class 10	Trip Class 20	Trip Class 30
3 × Motor Current – 23 secs 3.5 × Motor Current – 17 secs	4 × Motor Current – 19 secs	4 × Motor Current – 29 secs
Agitator Compressor Rotary Vane Unloaded Scroll Conveyor Unloaded Bow Thruster Zero Pitch Fan Low Inertia or <85A Feeder Screw Lathe Machines Mixer Unloaded Moulding Machine Plastic and Textile Machines Pump Submersible - Centrifugal Submersible - Rotodynamic Saw Band Transformers Voltage Regulators	Compressor Centrifugal Reciprocating Rotary Screw Ball Mill Bow Thruster Loaded Conveyor Loaded Grinder Hammer Mill Mills Flour etc. Mixer Loaded Pelletizers Press, Flywheel Positive Displacement Pump Reciprocating Rotary Pump Jack Rolling Mill Roots Blower Saw Circular Screen Vibrating Tumblers	Crusher* Shredder Wood Chipper Fan* High Inertia or > 85 A  * start time > 30 secs

# VMX-agility™

Agile soft starters

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Low Voltage  
Soft Starters

Game changing  
soft starters

17-361 A\*



### Motor Rating

I <sub>n</sub> A	kW				FLA A	HP				
	230 V	400 V	500 V			200 V	208 V	220-240 V	440-480 V	550-600 V
17	4	7.5	7.5		17	3	5	5	10	15
22	5.5	11	11		22	5	5	7.5	15	20
29	7.5	15	15		27	7.5	7.5	7.5	20	25
35	7.5	18.5	22		34	10	10	10	25	30
41	11	22	22		41	10	10	10	30	40
55	15	30	37		52	15	15	15	40	50
66	18.5	37	45		65	20	20	20	50	60
80	22	45	55		77	20	25	25	60	75
106	30	55	75		100	30	30	30	75	100
132	37	75	90		125	40	40	40	100	125
160	45	90	110		156	50	50	60	125	150
195	55	110	132		192	60	60	60	150	200
3 starts/hour @ 40°C					3 starts/hour @ 40°C					
160	45	90	110		156	50	50	60	125	150
195	55	110	132		192	60	60	60	150	200
242	75	132	160		242	75	75	75	200	250
302	90	160	200		302	100	100	100	250	300
361	110	200	250		361	125	125	150	300	350

Select Model	Select Model	Select Model
5 starts/hour @ 40°C	5 starts/hour @ 40°C	5 starts/hour @ 40°C
VMX-AGY-101	VMX-AGY-103	VMX-AGY-105
VMX-AGY-103	VMX-AGY-105	VMX-AGY-107
VMX-AGY-105	VMX-AGY-107	VMX-AGY-109
VMX-AGY-107	VMX-AGY-109	VMX-AGY-111
VMX-AGY-109	VMX-AGY-111	VMX-AGY-113
VMX-AGY-111	VMX-AGY-113	VMX-AGY-201
VMX-AGY-113	VMX-AGY-201	VMX-AGY-203
VMX-AGY-201	VMX-AGY-203	VMX-AGY-205
VMX-AGY-203	VMX-AGY-205	VMX-AGY-207
VMX-AGY-205	VMX-AGY-207	VMX-AGY-209
VMX-AGY-207	VMX-AGY-209	↓
VMX-AGY-209	↓	↓
3 starts/hour @ 40°C	3 starts/hour @ 40°C	3 starts/hour @ 40°C
↓	↓	VMX-AGY-301
↓	VMX-AGY-301	VMX-AGY-303
VMX-AGY-301	VMX-AGY-303	VMX-AGY-305
VMX-AGY-303	VMX-AGY-305	—
VMX-AGY-305	—	—

### Product Options

- VMX-AGY-021** External Control Power Supply Module 110V-230VAC
- VMX-AGY-012** Remote Keypad Kit Modbus Master
- VMX-AGY-030** External Fan for AGY-101 to 113
- VMX-AGY-031** External Fan for AGY-201 to 209
- VMX-AGY-061** Terminal Cover Kit for VMX-AGY-301 to 305
- VMX-AGY-036** Modbus Splitter RJ45 to RJ45

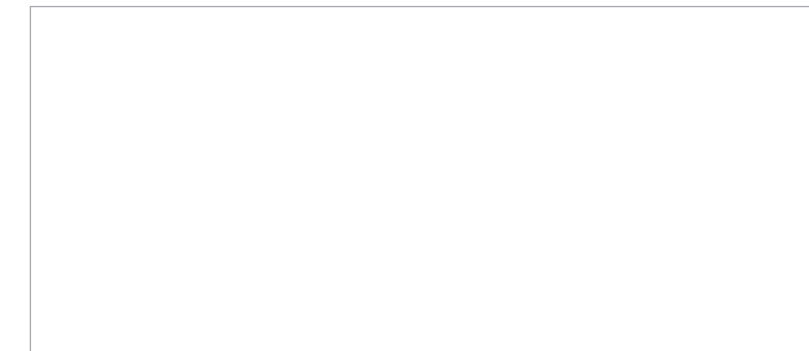
- VMX-AGY-035** Modbus Terminating Resistor RJ45
- VMX-AGY-015** Communications Cable RJ45 3m

### Product Spares

- VMX-AGY-005** Finger Guard Kit IP20 for VMX-AGY-101 to 113
- VMX-AGY-009** Finger Guard Kit IP20 for VMX-AGY-201 to 209

For more information on VMX-agility™ contact your local distributor

+ 44 (0)1752 894554  
[www.motortronics-uk.co.uk](http://www.motortronics-uk.co.uk)



Motortronics reserves the right to change or update, without notice, any technical information contained in this brochure. Motortronics also reserves the right, without notice, to change the design or construction of the product and to discontinue.

For sizing with single phase motors contact your local distributor.

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VMX-AGY-001-V04

\*For larger motor sizes contact your local distributor.



# VMX-agility™

Agile soft starters

## Soft Stopping

Current is limited during soft stopping and gives greater control against water hammer.



life event logging with real-time clock



6 language menu



600 V max. operating voltage

## Automatic Reset

Automatically resets trips in defined situations. Reduces the requirement to send a service technician to reset nuisance trips.

## Fire Mode

External input signal overriding normal controls allowing the motor to continue running in emergency situations.

## Frequent Number of Starts

Optional cooling fan for frequent duty applications with up to 40 starts per hour - size 1, and from 10 to 40 starts per hour (rating dependent) - size 2.



Full I<sup>2</sup>t motor overload protection with 'thermal memory' feature



Control of single or three phase motors

## Optional Remote Display Keypad

Plug in remote mounting unit keypad mimics the VMX-agility™ display and keypad function.



## Optional Power Supply Unit Module

Unique to VMX-agility™ this module enables control voltage options in one standard product unit, no need to purchase separate soft starters for different control voltages.



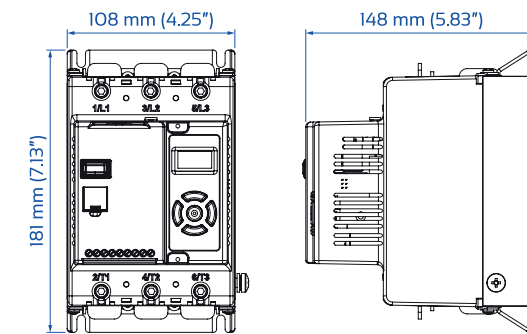
## i23

### Optimised application setup

A suite of pre-programmed application 'complete setup' profiles facilitate a quick and comprehensive commission process to give freedom and independence to engineers. Typical VMX-agility™ setup takes less than 1 minute whereas a comparable competitive product commission could be 60 to 120 minutes for only a partial setup. Access to an advanced setup menu is provided as standard for special application requirements.

### Dimensions - Size 1

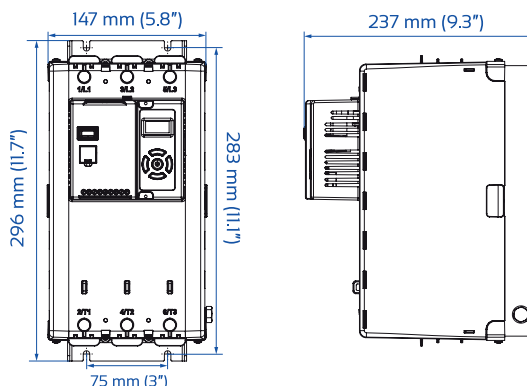
VMX-AGY-101 to VMX-AGY-113



Weight = 1.97 kg (4.34 lbs)

### Dimensions - Size 2

VMX-AGY-201 to VMX-AGY-209



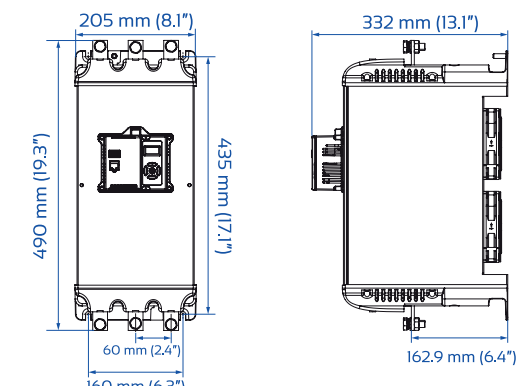
Weight = VMX-AGY-201-207 = 6 kg (13.2 lbs)  
VMX-AGY-209 = 6.3 kg (13.9 lbs)

## Specification

Operational Voltage	200-600 VAC
Rated Frequency	50-60 Hz ± 5 Hz
Index Rating	Trip Class 10: 3.5-17; 90-5 (Trip Class 20 & 30 available)
Starts per Hour	Standard VMX-AGY-101 to VMX-AGY-209 - 5 starts/stops per hour VMX-AGY-301 to VMX-AGY-305 - 3 starts/stops per hour With Optional Fan VMX-AGY-101 to VMX-AGY-203 - 40 starts/stops per hour VMX-AGY-205 - 30 starts/stops per hour VMX-AGY-207 - 20 starts/stops per hour VMX-AGY-209 - 10 starts/stops per hour
Internally Bypassed	Yes
Screen	OLED
Control Supply	Standard 24 VDC With Optional Power Supply 110 to 230 VAC
Inputs	2 Digital Inputs, Both Programmable
Outputs	2 Digital Outputs, 1 Programmable
Overload	Full Pt Motor Overload
Communications	Modbus RTU
Full Logging functionality for use with StarterView	Yes
IP/NEMA rating	Size 1 IP20/NEMA Class 1 with finger guard fitted (VMX-AGY-005) Size 2 IP20/NEMA Class 1 with finger guard fitted (VMX-AGY-009) Size 3 IP00 as standard
Ambient Temperature	-20 °C to 40 °C without de-rating 60 °C with de-rating
Transport and Storage	-25 °C to 60 °C -25 °C to 75 °C (not exceeding 24 hours)
Altitude	1,000 m Above 1,000 m de-rate linearly by 1% of unit FLC per 100 m to a maximum altitude of 2,000 m Above 2,000 m contact Motortronics
Humidity	Max. 85% non-condensing, not exceeding 50% at 40 °C
Standards	CE, UL, RCM
Languages	English, French, German, Spanish, Portuguese, Italian
Warranty	2 Years

### Dimensions - Size 3

VMX-AGY-301 to VMX-AGY-305



Weight = 15 kg (33 lbs)

VMX-agility™ has been developed to exceed the exacting demands of industrial automation motor control clients. VMX-agility™ delivers stable, structured start and stop ramps for smooth, efficient performance. Three standard frame sizes cover all typical applications from 7.5kW to 250kW at 500VAC, 15 - 350HP at 600VAC.

### i23 smart application pre-program suite

Optimise VMX-agility™ for your specific application at the touch of a button. Select any of the 23 pre-programmed setup profiles and you are up and running in under 1 minute.

### 3S Technology

Automatic ramp control profiles ensure smooth start and stop performance, delivering stable acceleration and deceleration in all operating conditions.

**1 OLED display**  
Full text messages enabling fast programming and rapid fault finding with no codes and real-time value monitoring. Local display of recent logged events.

**2 USB**  
for field firmware upgrades and downloading of the event logging data.

**3 Modbus RTU**  
communications as standard. No need for optional communication cards.

### Motor Overload Protection

Protecting the motor and soft starter in the event of an overload situation at full IPt motor overload with intelligent thermal memory retention feature. Continually monitoring overloads to ascertain the reduction in overload levels even when VMX-agility™ is in the 'off' state. This is combined with protection and diagnostics giving the operator peace of mind during the motor running phase.

### Life Event Logging

VMX-agility™ life event logging is a unique feature that records the last 1600 events to enable fast accurate fault analysis and their resolution. Recording multiple activities including start, stop, top of ramp, faults, application parameters (time, overload level, currents, frequency) and the device information. The data is collated in StarterView programme and provides the operator with the advantage to undertake a detailed analysis of performance and equipment conditioning in an active predictive and preventative maintenance strategy to avoid unwanted breakdowns and any costly downtime.

**Loss Reduction**  
An integral bypass is initiated at the top of ramp and reduces losses in the soft starter.

**Start Delay Feature**  
Intentional start delay allowing pump actuators to engage before start.

### Single & Three Phase Motors

VMX-agility™ Soft Starters may be used with Three Phase and Single Phase motors - adjustment via keypad.

