VMX-agility™

Agile soft starters

Low Voltage
Soft Starters

Game changing
soft starters

17–361 A*

MOTORTRONICS
Solid State AC Motor Control

VMX-agility

modbus
rtu

Start

24V 0V COM D1 D2 13 14 23 24

*For larger motor sizes contact your local distributor.

MOTORTRONICS™
Solid State AC Motor Control

VMX-agility™

Agile soft starters

Fire Mode

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

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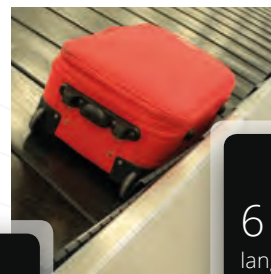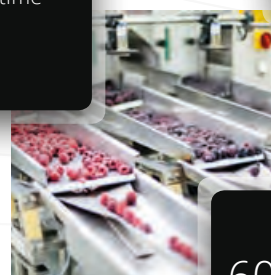### Soft Stopping

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

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MOTORTRONICS
Solid State AC Motor Control

VMX-agility

Start

1

2

3

modbus rtu

24V 0V COM D1 D2 13 14 23 24
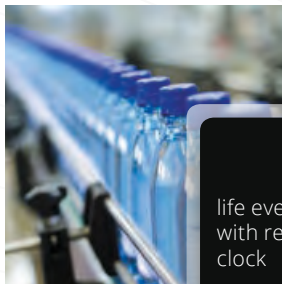
life event logging with real-time clock

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.

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> 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
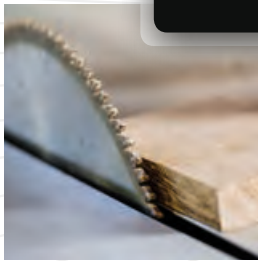communications as standard. No need for optional communication cards.

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.

⌄

Optional Remote Display Keypad

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

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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.

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Full I²t
motor overload protection with 'thermal memory' feature

Control of single or three phase motors

CE UL
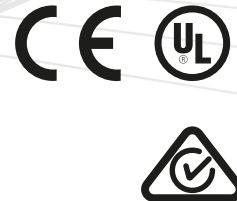
Motor Overload Protection

Protecting the motor and soft starter in the event of an overload situation at full I²t 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.

Control Circuit

A standard 24 VDC control voltage supply with an optional power module which adapts the digital input voltage to accept a 110–230 VAC signal.
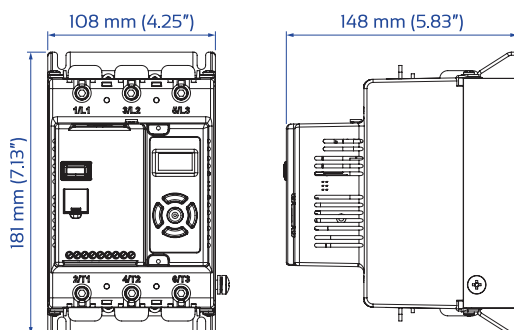
Lowers Panel Production Costs

Three unit frame sizes across the voltage range of 200-600VAC with vertical or horizontal mounting to facilitate efficient panel layout and interconnections to reduce material and panel production time

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.
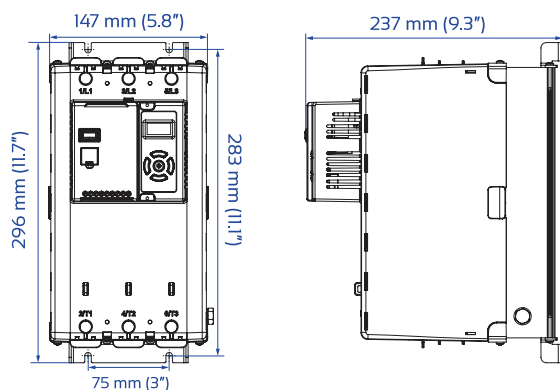
Dimensions - Size 1

VMX-AGY-101 to VMX-AGY-113

108 mm (4.25")   148 mm (5.83")

181 mm (7.13")

Weight = 1.97 kg (4.34 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 I²t 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 2

VMX-AGY-201 to VMX-AGY-209

147 mm (5.8")   237 mm (9.3")

296 mm (11.7")   283 mm (11.1")

75 mm (3")

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

Dimensions - Size 3

VMX-AGY-301 to VMX-AGY-305

205 mm (8.1")   332 mm (13.1")

490 mm (19.3")   435 mm (17.1")

60 mm (2.4")
160 mm (6.3")   162.9 mm (6.4")
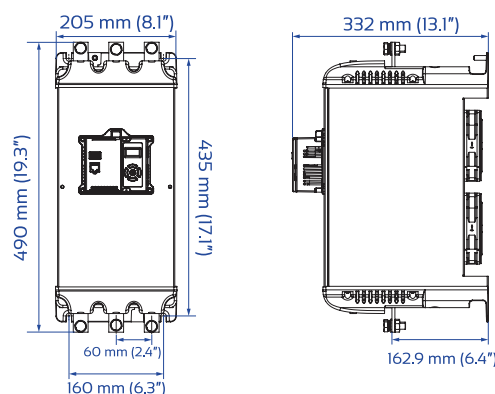
Weight = 15 kg (33 lbs)

Model Selection

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

See manual for de-rating and other conditions.

	Trip Class 10	Trip Class 20	Trip Class 30
Rated Starting Capability	3 × Motor Current – 23 secs 3.5 × Motor Current – 17 secs	4 × Motor Current – 19 secs	4 × Motor Current – 29 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	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

Motor Rating

Ie A	kW 230 V	kW 400 V	kW 500 V	FLA A	HP 200 V	HP 208 V	HP 220–240 V	HP 440–480 V	HP 550–600 V	Select Model TC10	Select Model TC20	Select Model TC30
										5 starts/hour @ 40°C	5 starts/hour @ 40°C	5 starts/hour @ 40°C
17	4	7.5	7.5	17	3	5	5	10	15	VMX-AGY-101	VMX-AGY-103	VMX-AGY-105
22	5.5	11	11	22	5	5	7.5	15	20	VMX-AGY-103	VMX-AGY-105	VMX-AGY-107
29	7.5	15	15	27	7.5	7.5	7.5	20	25	VMX-AGY-105	VMX-AGY-107	VMX-AGY-109
35	7.5	18.5	22	34	10	10	10	25	30	VMX-AGY-107	VMX-AGY-109	VMX-AGY-111
41	11	22	22	41	10	10	10	30	40	VMX-AGY-109	VMX-AGY-111	VMX-AGY-113
55	15	30	37	52	15	15	15	40	50	VMX-AGY-111	VMX-AGY-113	VMX-AGY-201
66	18.5	37	45	65	20	20	20	50	60	VMX-AGY-113	VMX-AGY-201	VMX-AGY-203
80	22	45	55	77	20	25	25	60	75	VMX-AGY-201	VMX-AGY-203	VMX-AGY-205
106	30	55	75	100	30	30	30	75	100	VMX-AGY-203	VMX-AGY-205	VMX-AGY-207
132	37	75	90	125	40	40	40	100	125	VMX-AGY-205	VMX-AGY-207	VMX-AGY-209
160	45	90	110	156	50	50	60	125	150	VMX-AGY-207	VMX-AGY-209	↓
195	55	110	132	192	60	60	60	150	200	VMX-AGY-209	↓	↓
										3 starts/hour @ 40°C	3 starts/hour @ 40°C	3 starts/hour @ 40°C
160	45	90	110	156	50	50	60	125	150	↓	↓	VMX-AGY-301
195	55	110	132	192	60	60	60	150	200	↓	VMX-AGY-301	VMX-AGY-303
242	75	132	160	242	75	75	75	200	250	VMX-AGY-301	VMX-AGY-303	VMX-AGY-305
302	90	160	200	302	100	100	100	250	300	VMX-AGY-303	VMX-AGY-305	—
361	110	200	250	361	125	125	150	300	350	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 sizing with single phase motors contact your local distributor.