Features

- Full Colour Touch Screen
- 45 Smart Application Suite
- iERS - intelligent Energy Recovery System
- Lifetime Event Logging
- Software for Commissioning, Logging and Troubleshooting
- Automatic Reset
- Automatic Load Tuning
- Built in I^2t Motor Overload Protection
- Built In Remote Keypad
- Energy Monitoring Features

RS PRO VMX-Synergy Plus 242A-361A

RS Stock No.: 206-140, 206-142, 206-143

RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

High Performance iERS Energy Saving Soft Starter:

- Reduce mechanical stress on your motor
- Save energy on lightly loaded applications
- Suitable for fixed speed applications with the following pre-set applications built in:
  Agitator, Compressor - Centrifugal, Compressor - Reciprocating, Compressor - Screw, Compressor - Vane, Compressor - Scroll, Ball Mill, Centrifuge, Bow Thruster Zero Pitch, Bow Thruster Loaded, Conveyor Unloaded, Conveyor Loaded, Crusher, Escalator, Fan Low Inertia, Fan High Inertia, Feeder Screw, Grinder, Hammer Mill, Hydraulic Elevator, Lathe Machines, Mills - flour Etc, Mixer Unloaded, Mixer Loaded, Moulding Machine, Pelletisers, Plastic and textile Machines, Press- flywheel, Pump - Submersible Centrifugal, Pump - Submersible Rotodynamic, Pump - Positive Displacement Recip., Pump - Positive Displacement Rotary, Pump Jack, Rolling Mill, Roots Blower, Saw - Band, Saw - Circular, Screen - Vibrating, Shredder, Transformers - Voltage Regulators, Moving Walkway, Tumblers, Woodchipper

General Specifications

Device Type	3-phase AC Semiconductor Energy Saving Motor Controller
Function	Soft Starter; Fixed Speed Control; Motor Control
Current (400V / TC10)	242A, 302A, 361A
Power Rating (400V / TC10)	132kW, 160kW, 200kW
Control Panel / User Interface	Yes - 3.5” Full Colour Touch Screen
External Keypad	Yes - detachable IP65 connected via Cat5e / Cat6 (standard)
Bypass	Internally Bypassed
Communication - standard	Modbus RTU
Communication - options	Ethernet IP, Modbus TCP & Profibus DP via plug-in module
Energy Saving	iERS - intelligent Energy Recovery System
Data Logging	Lifetime Event Logging
Automatic Reset	Can be used to attempt restart following fault
Upload / Download	Via USB Memory Stick
Motor Protection	Full I^2t Motor Overload with Thermal Memory
Languages	English, Chinese (Mandarin simplified), Dutch, French, German, Greek, Italian, Japanese, Korean, Polish, Portuguese, Russian, Serbian, Spanish, Turkish, Ukrainian, Vietnamese.

Mechanical Specifications

Overall Dimensions	H490mm x W205mm x D330mm
Weight	17kg
Mounting Type	Panel

Electrical Specifications

Supply Phases	3-phase
Supply Voltage	200VAC, 208VAC, 230VAC, 400VAC, 480VAC, 600VAC *
Supply Frequency	45-65 Hz
Control Voltage	24VDC, 110 / 230VAC *
Input / Outputs	3 x NO programmable output relays, 1 Amp 1 x NC programmable output relay, 1 Amp 1 x NO programmable output relay, 3 Amps 4 x Programmable digital inputs 1 x PTC thermistor input 1 x 0-10v/4-20mA Analogue input 1 x 0-10v/4-20mA Analogue output 1 x USB 2 x RJ45 (RS 485 / Modbus RTU for Bus network monitoring and control) 1 x Expansion port: Add on Smart Module
Rated Starting Capability	Trip Class 10 - 3 x Motor Current for 23 secs - 3.5 x Motor Current for 17 secs Trip Class 20 - 4 x Motor Current for 19 secs Trip Class 30 - 4 x Motor Current for 29 secs
Connection	In-Line or In-Delta
Terminal Type	Plain Busbar

10% / -15%

Operation Environment Specifications

Ambient Temperature	-20°C to +50°C up to +60°C with derating
Storage Temperature	-20°C to +70°C
Altitude	1000m above sea level. 2000m with derating

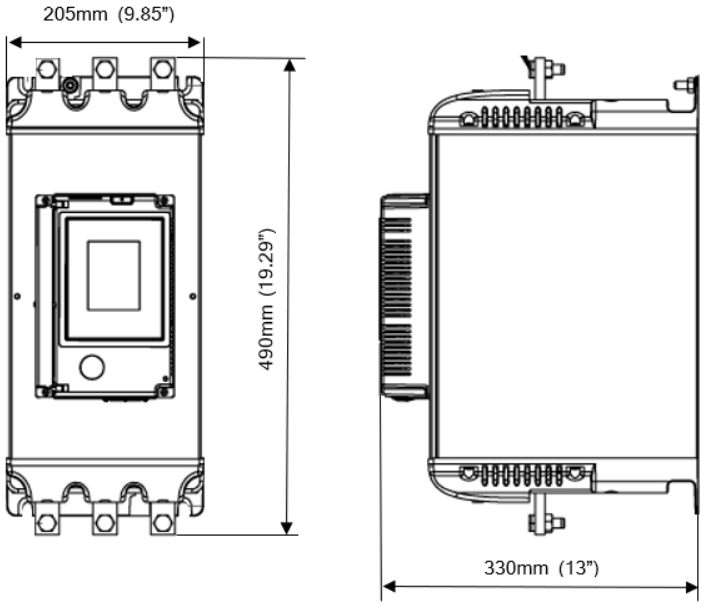
Protection Category

IP Rating	IP00

Approvals

Standards	CE, UL, cUL
Legislation	**Directives:** 2014/35/EU - Electrical equipment designed for use within certain voltage limits [Low Voltage Directive - LVD]. 2014/30/EU - Electromagnetic compatibility [EMC] 2011/65/EU - Restriction of the use of certain hazardous substances in electrical and electronic equipment [RoHS] and amending Commission Delegated Directive (EU) 2015/863 with effect from 22 July 2019. **Harmonised Standards:** EN 60947-4-2:2012 - Low Voltage switchgear and controlgear. Part 4: Controlgear and motor-starters. Section 2. AC Semiconductor motor controllers and starters. EN IEC 63000: 2018 - Technical documentation for the assessment of electrical and electronic products with respect to RoHS.
Environmental	Products comply to RoHS and REACH

Dimensional Drawing



Rated Power and Current

Step 1 - Select the application from the list and follow that column down.

Typical Applications	Standard Duty	Medium Duty	Heavy Duty
	Default Agitator Compressor (Rotary Vane, Unloaded) Conveyor (Unloaded) Bow Thruster (Zero Pitch) Fan (Low Inertia <85A) Feeder (Screw) Lathe Machines Mixer (Unloaded) Moulding Machine Plastic and Textile Machines Pump - Submersible (Centrifugal, Rotodynamic) Saw (Band) Transformers or Voltage Regulators Escalator Moving Walkway	Heavy Compressor (Centrifugal, Reciprocating, Rotary Screw) Ball Mill Bow Thruster (Loaded) Conveyor (Loaded) Grinder Hammer Mill Mills (Flour etc..) Mixer (Loaded) Pelletisers 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 >85A) ***For a Hydraulic Elevator Application Please Contact RS PRO.*** ***For a Centrifuge Application make selection at I(A) = motor FLA x 2.3 at Trip Class 30***

Step 2 - Confirm the rated starting capability of the soft start against the application.

	Standard Duty	Medium Duty	Heavy Duty
Trip Class **Rated Starting Capability** **Max Starts per Hour**	**Trip Class 10** 3x Motor Current - 23secs 3.5x Motor Current - 17secs 5 starts/hour or 3 starts/hour	**Trip Class 20** 4x Motor Current - 19secs 5 starts/hour or 3 starts/hour	**Trip Class 30** 4x Motor Current - 29secs 5 starts/hour or 3 starts/hour

Step 3 - Consider the operating environment and make the model selection on a higher horsepower rating.

Height Above Sea Level

Standard operating height is 1000m, for every 100m increase motor Amps/kW/HP by 1%,up to 2000m.

Example: For a 100A motor at 1500m make model selection based on 105A (5% higher)

Operating Temperature

Standard operating temperature is 50degC, for every 1degC above, increase motor Amps/kW/HP by 4%, up to 60degC.

Example: For a 100A motor at 55degC make model selection based on 120A (20% higher)

Step 4 - Select your motor Voltage and Horsepower and select model.

Motor Rating In Line								Motor Rating In Delta								Select Model 5 starts/hour @ 50°C	Select Model 5 starts/hour @ 50°C	Select Model 5 starts/hour @ 50°C
IEC				UL				IEC				UL						
I_e(A)	230V kW	400V kW	500V kW	I_e(A)	230V HP	440V HP	600V HP	I_e(A)	230V kW	400V kW	500V kW	I_e(A)	230V HP	440V HP	600V HP			
160	45	90	110	156	60	125	150	277	75	150	185	270	100	200	250	See Size 2	See Size 2	206-140 (242A)
195	55	110	132	192	75	150	200	338	90	185	220	312	125	250	300	See Size 2	206-140 (242A)	206-142 (302A)
242	75	132	160	242	75	200	250	419	132	220	300	419	150	350	450	206-140 (242A)	206-142 (302A)	206-143 (361A)
302	90	160	200	302	100	250	300	523	160	300	375	523	200	450	500	206-142 (302A)	206-143 (361A)	206-145 (430A) (110VAC Control Voltage) 206-146 (430A) (230VAC Control Voltage)
361	110	200	250	361	150	300	350	625	200	355	425	625	250	500	600	206-143 (361A)	206-145 (430A) (110VAC Control Voltage) 206-146 (430A) (230VAC Control Voltage)	206-147 (500A) (110VAC Control Voltage) 206-149 (500A) (230VAC Control Voltage)
430	132	250	250	414	150	350	450	745	220	425	530	717	250	500	700	206-145 (430A) (110VAC Control Voltage) 206-146 (430A) (230VAC Control Voltage)	206-147 (500A) (110VAC Control Voltage) 206-149 (500A) (230VAC Control Voltage)	
500	150	280	355	480	200	400	500	866	280	500	630	831	300	600	800	206-147 (500A) (110VAC Control Voltage) 206-149 (500A) (230VAC Control Voltage)		