

## 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<sup>2</sup>t Motor Overload Protection
- Built In Remote Keypad
- Energy Monitoring Features

## RS PRO VMX-Synergy Plus 17A-100A

RS Stock No.: 206-123, 206-124, 206-125, 206-127, 206-128, 206-130, 206-131, 206-133, 206-134



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

<b>Device Type</b>	3-phase AC Semiconductor Energy Saving Motor Controller
<b>Function</b>	Soft Starter; Fixed Speed Control; Motor Control
<b>Current (400V / TC10)</b>	17A, 22A, 29A, 35A, 41A, 55A, 66A, 80A, 100A
<b>Power Rating (400V / TC10)</b>	7.5kW, 11kW, 15kW, 18.5kW, 22kW, 30kW, 37kW, 45kW, 55kW
<b>Control Panel / User Interface</b>	Yes - 3.5" Full Colour Touch Screen
<b>External Keypad</b>	Yes - detachable IP65 connected via Cat5e / Cat6 (standard)
<b>Bypass</b>	Internally Bypassed
<b>Communication - standard</b>	Modbus RTU
<b>Communication - options</b>	Ethernet IP, Modbus TCP & Profibus DP via plug-in module
<b>Energy Saving</b>	iERS - intelligent Energy Recovery System
<b>Data Logging</b>	Lifetime Event Logging
<b>Automatic Reset</b>	Can be used to attempt restart following fault
<b>Upload / Download</b>	Via USB Memory Stick
<b>Motor Protection</b>	Full I <sup>2</sup> t Motor Overload with Thermal Memory
<b>Languages</b>	English, Chinese (Mandarin simplified), Dutch, French, German, Greek, Italian, Japanese, Korean, Polish, Portuguese, Russian, Serbian, Spanish, Turkish, Ukrainian, Vietnamese.

## Mechanical Specifications

<b>Overall Dimensions</b>	H283mm x W143mm x D184mm
<b>Weight</b>	4.2kg
<b>Mounting Type</b>	Panel

<b>Supply Phases</b>	3-phase
<b>Supply Voltage</b>	200VAC, 208VAC, 230VAC, 400VAC, 480VAC, 600VAC *
<b>Supply Frequency</b>	45-65 Hz
<b>Control Voltage</b>	24VDC, 110 / 230VAC *
<b>Input / Outputs</b>	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
<b>Rated Starting Capability</b>	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
<b>Connection</b>	In-Line or In-Delta
<b>Terminal Type</b>	Cage Clamp

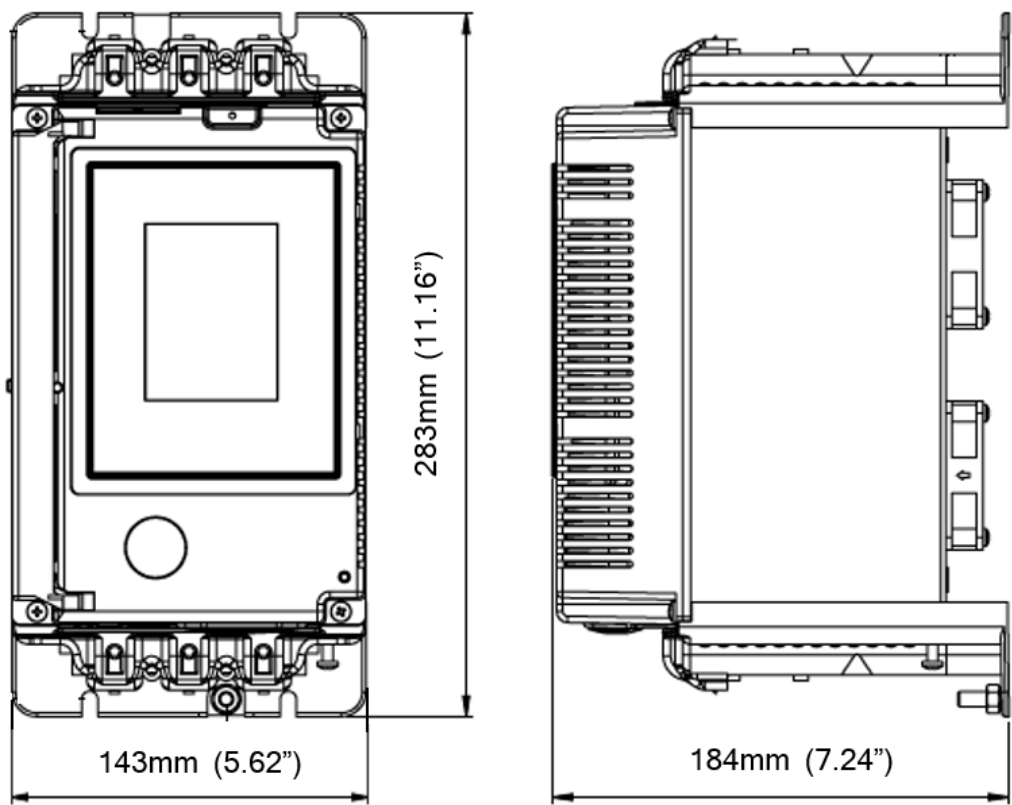
<b>Ambient Temperature</b>	-20°C to +50°C up to +60°C with derating
<b>Storage Temperature</b>	-20°C to +70°C
<b>Altitude</b>	1000m above sea level. 2000m with derating

IP Rating	IP20 (with fingerguards)
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Approvals

Standards	CE, UL, cUL
Legislation	<p><b>Directives:</b></p> <p>2014/35/EU - Electrical equipment designed for use within certain voltage limits [Low Voltage Directive - LVD].</p> <p>2014/30/EU - Electromagnetic compatibility [EMC]</p> <p>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.</p> <p><b>Harmonised Standards:</b></p> <p>EN 60947-4-2:2012 - Low Voltage switchgear and controlgear. Part 4: Controlgear and motor-starters. Section 2. AC Semiconductor motor controllers and starters.</p> <p>EN IEC 63000: 2018 - Technical documentation for the assessment of electrical and electronic products with respect to RoHS.</p>
Environmental	Products comply to RoHS and REACH

Dimensional Drawing



# Soft Starters



## 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)  <div>For a Hydraulic Elevator Application Please Contact RS PRO.</div>  <div>For a Centrifuge Application make selection at I(A) = motor FLA x 2.3 at Trip Class 30</div>															
Step 2 - Confirm the rated starting capability of the soft start against the application.	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 <sub>e</sub> (A)	230V kW	400V kW	500V kW	I <sub>e</sub> (A)	230V HP	440V HP	600V HP	I <sub>e</sub> (A)	230V kW	400V kW	500V kW	I <sub>e</sub> (A)	230V HP	440V HP	600V HP												
	17	4	7.5	7.5	17	5	10	15	29	7.5	15	18.5	29	10	20	25	206-123 (17A)				206-124 (22A)				206-125 (29A)			
	22	5.5	11	11	21	5	15	20	38	11	18.5	22	36	10	25	30	206-124 (22A)				206-125 (29A)				206-127 (53A)			
	29	7.5	15	15	27	7.5	20	25	50	11	22	30	47	15	30	40	206-125 (29A)				206-127 (53A)				206-128 (41A)			
	35	7.5	18.5	22	34	10	25	30	61	18.5	30	37	59	20	40	50	206-127 (53A)				206-128 (41A)				206-130 (55A)			
	41	11	22	22	40	10	30	40	71	18.5	37	45	69	25	50	60	206-128 (41A)				206-130 (55A)				206-131 (66A)			
	55	15	30	37	52	15	40	50	95	22	45	55	90	30	60	75	206-130 (55A)				206-131 (66A)				206-133 (80A)			
	66	18.5	37	45	65	20	50	60	114	30	55	75	113	40	75	100	206-131 (66A)				206-133 (80A)				206-134 (100A)			
	80	22	45	55	77	25	60	75	139	37	75	90	133	50	100	125	206-133 (80A)				206-134 (100A)							
	100	30	55	55	96	30	75	100	173	55	90	110	166	60	125	150	206-134 (100A)											