

# Altistart™ 22

## soft start/soft stop units

Catalog  
**2010**





# Altistart™ 22

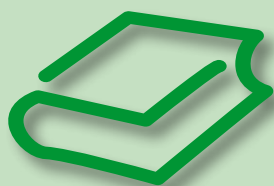
## soft start/soft stop units

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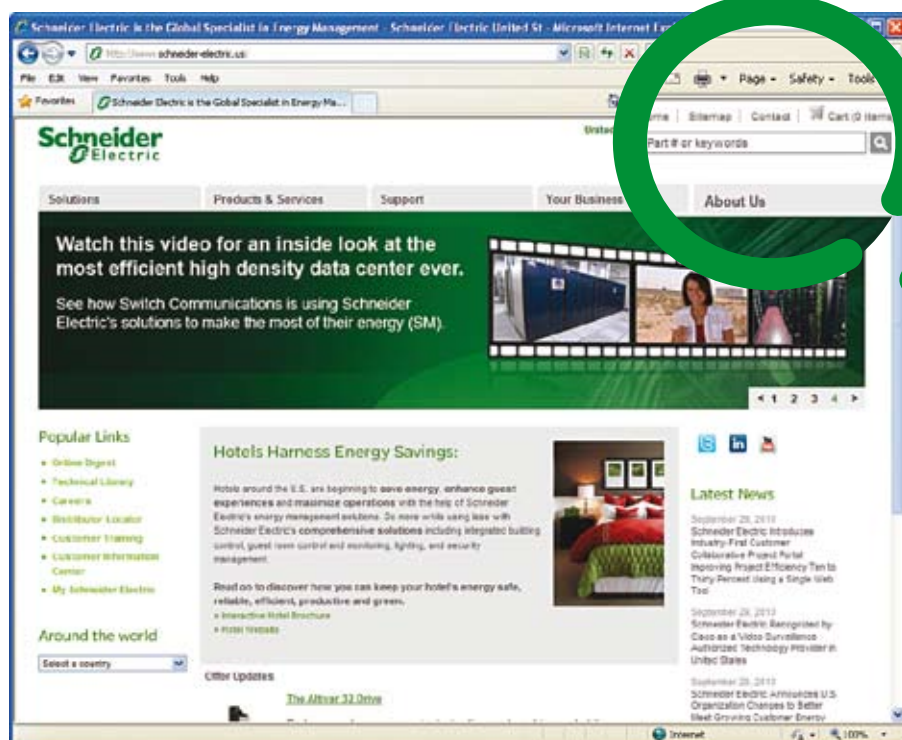
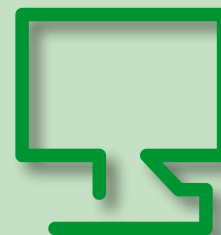
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Go online to [www.schneider-electric.us](http://www.schneider-electric.us) for technical information about products listed in this catalog, including:



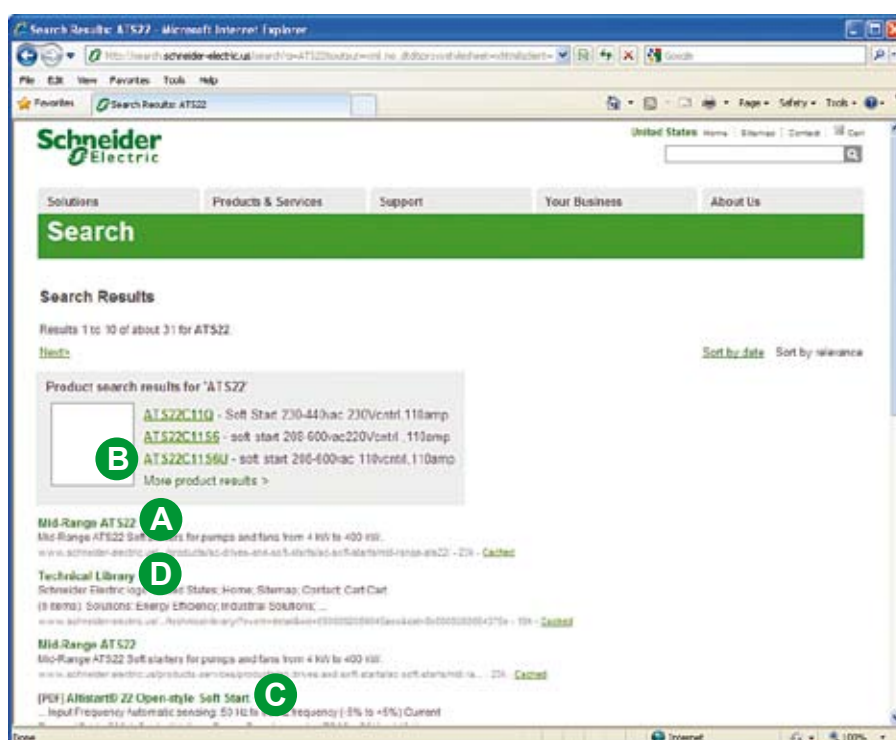
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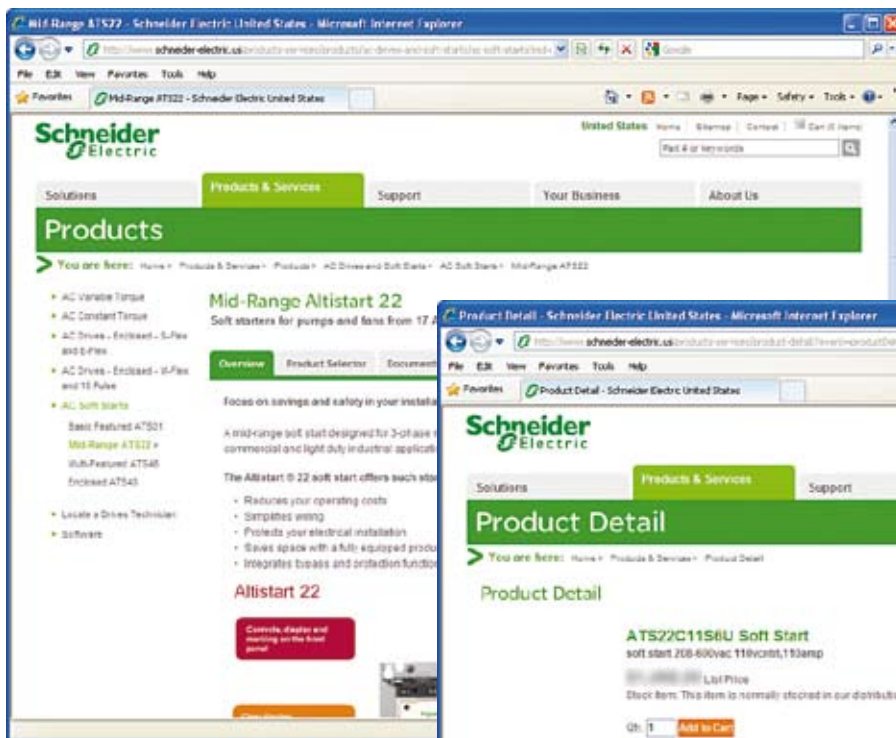


**1** From the home page, type the model number\* into the “Search” box (for example “ATS22”):

\* Type the model number without any spaces, and replace “.” with “\*”.

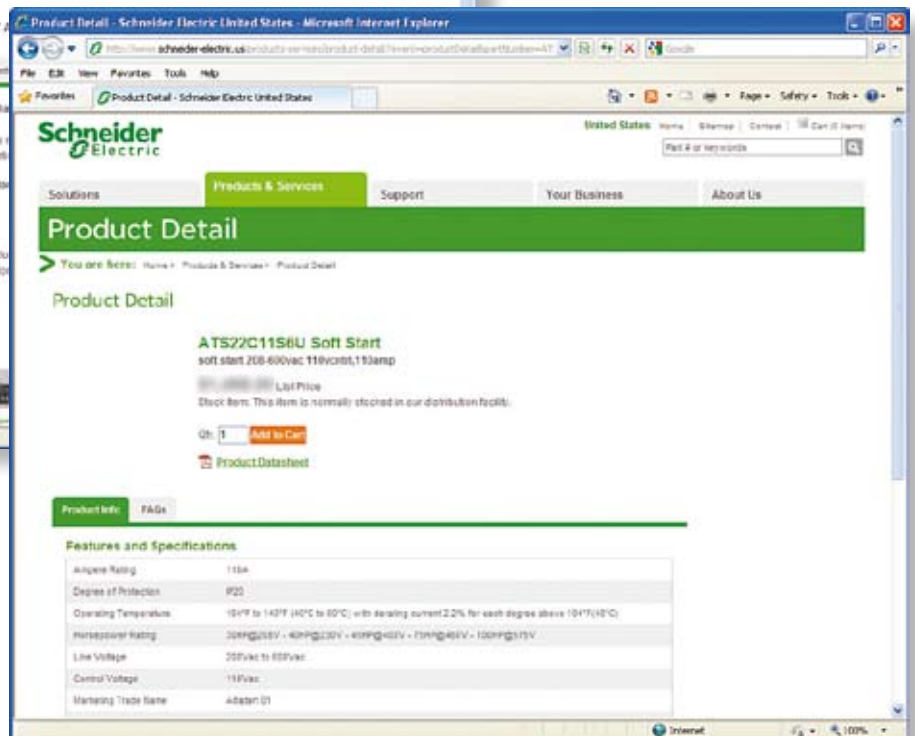
**2** From “Search Results” you may choose several different options for Product Information (see A - D on next page):



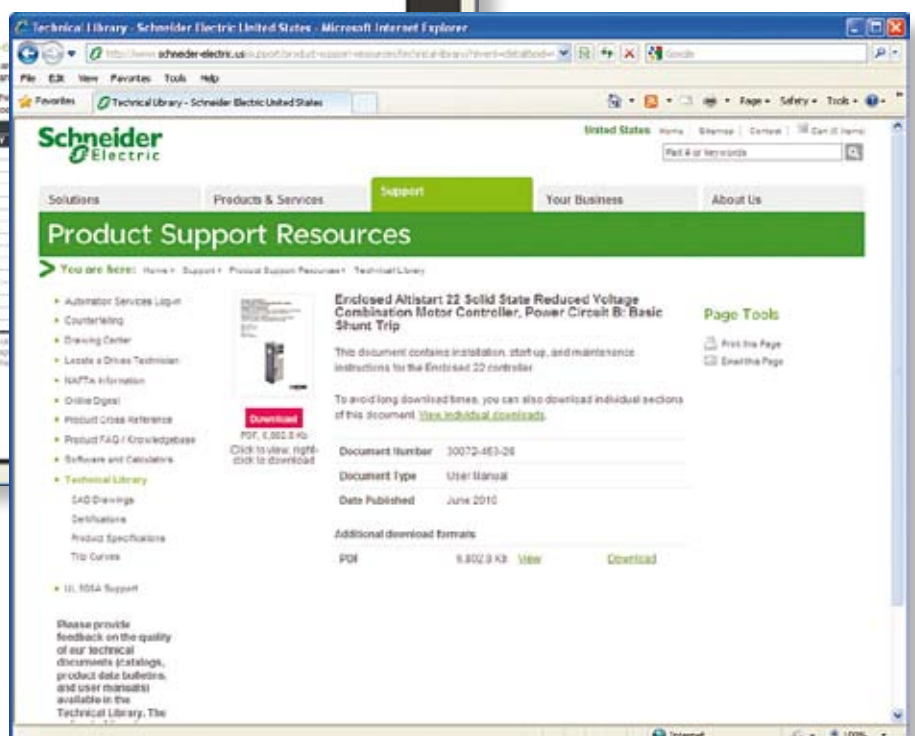
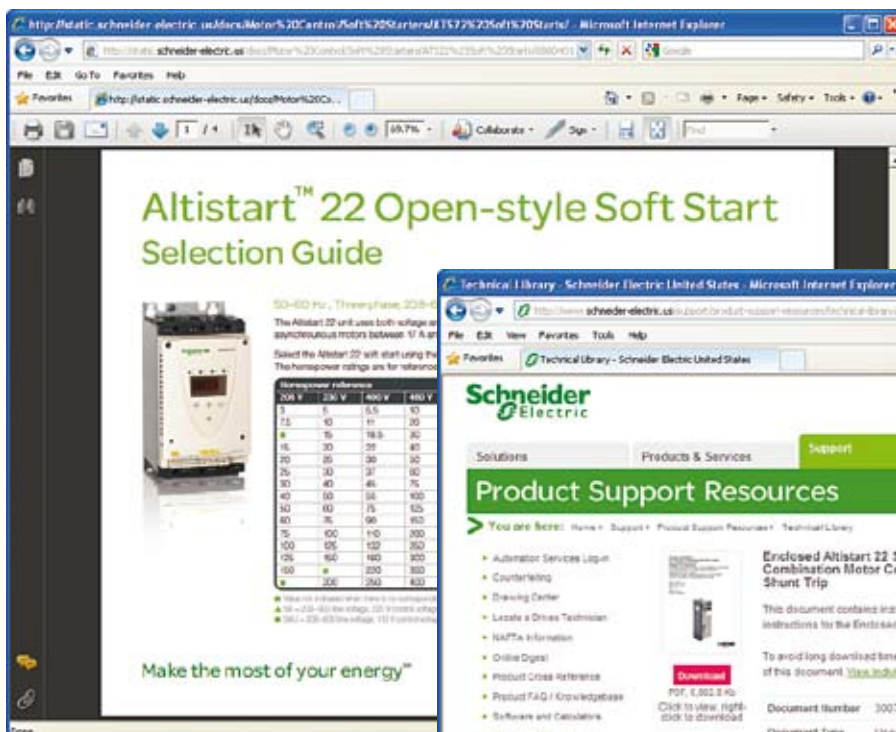


**A** Choose “Products” for Product Overview, Product Selector and available Documents & Downloads:

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Make the most of your energy<sup>SM</sup>

# Altistart™ 22

## soft start/soft stop units



Innovative  
Economical  
Compact

- Reduce your operating costs
- Simplify wiring
- Protect your electrical installation
- Save space

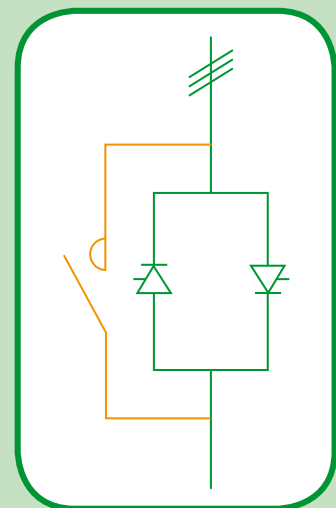
# Altistart 22: Reduce your costs with its integrated bypass function...

## Simple installation and operation

- Save time on wiring (6 terminals instead of 12)
- Optimize the size of your enclosures (Altistart™ 22 soft start/soft stop unit is very compact)
- Keep temperature increases to a minimum (low heat dissipation)
- Reduce the number of components you need to manage (multi-function product)



3 controlled phases



50% reduction in  
wiring time



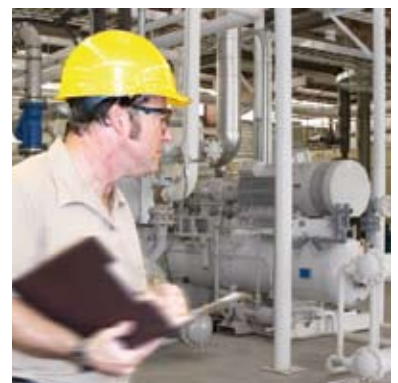
...while you reduce mechanical stress on your machines,  
and increase their service life

## Protect your installations

- By minimizing jolts and shocks, the Altistart™ 22 soft start/soft stop unit reduces mechanical stress on your machines, and increases their service life.
- Altistart 22 helps prevent installation failure by detecting and signalling faults such as a blocked motor, underload, or incorrect grounding of one of the 3 motor phases.
- Cards are coated (standard) to provide enhanced resistance to harsh environments.

## Play it safe with a complete product

- Altistart 22, with its three controlled phases, incorporates all the protection functions required to monitor the motor, the electrical installation and the starter itself.
- Simplify setup and operation with:
  - 4 light emitting diodes (LEDs)
  - 4 navigation keys
  - 4-digit display
  - SoMove™ setup software (common to Altivar®, Lexium® and TeSys® products)



## Applications

## Starting simple machines

## Controlled starting and deceleration of simple machines


**Power range for 50 to 60 Hz (kW) line supply**  
 (connection to the motor's power supply line)

Single-phase 110 to 230 V (kW)  
 Three-phase 200 to 240 V (kW)  
 Three-phase 200 to 480 V (kW)  
 Three-phase 208 to 600 V (kW)  
 Three-phase 208 to 690 V (kW)  
 Three-phase 230 to 415 V (kW)  
 Three-phase 230 to 440 V (kW)  
 Three-phase 380 to 415 V (kW)

## 0.37 to 11

0.37 to 2.2  
 –  
 0.37 to 11  
 –  
 –  
 –  
 –  
 –

## 0.75 to 15

–  
 0.75 to 7.5  
 –  
 –  
 –  
 –  
 –  
 1.5 to 15

## Drive

Number of controlled phases  
 Type of control  
 Operating cycle

1

–

–

2

–

–

## Functions

## Bypass

Number of I/O

Analog inputs  
 Logic inputs  
 Analog outputs  
 Logic outputs  
 Relay outputs

## Integrated

–

–

–

–

–

–

## Communication

Integrated  
 Available as an option

–

–

## Standards and certifications

IEC/EN 60947-4-2  
 CE, UL, CSA, C-Tick and CCC

## References

ATS01N1●●●●

ATS01N2●●●●

## Page



## Controlled starting and deceleration of simple and complex machines



4 to 400	3 to 900	
–	–	–
–	–	–
–	–	–
4 to 400	–	–
–	–	3 to 900
–	3 to 630	–
4 to 355	–	–
–	–	–
3	3	
Configurable voltage ramp	TCS (Torque Control System)	
Standard	Standard and severe	
Integrated	Available as an option	
1 PTC probe	1 PTC probe	
3	4	
–	1	
–	2	
2 ("N/C" / "N/O")	3	
Modbus®	Modbus	
–	FIPIO®, PROFIBUS DP, DeviceNet, Modbus TCP	
IEC/EN 60947-4-2, EMC class A CE, UL, CSA, C-Tick, GOST, CCC	IEC/EN 60947-4-2, EMC classes A and B CE, UL, CSA, DNV, C-Tick, GOST, CCC, NOM, SEPRO and TCF	
<b>ATS22●●●●</b>	<b>ATS48●●●Q</b>	<b>ATS48●●●Y</b>
14		



See more technical information online at [www.schneider-electric.us](http://www.schneider-electric.us)



# Altistart™ 22

## soft start/soft stop units



The Altistart™ 22 soft start/soft stop unit offer

### Introduction

The Altistart™ 22 soft start/soft stop unit supports the controlled starting and stopping – via voltage and torque – of three-phase squirrel cage asynchronous motors for power ratings between 4 and 400 kW. It comes ready-to-use for standard applications with class 10 motor protection.

The Altistart 22 soft start/soft stop unit has been designed to satisfy the performance requirements of applications where ruggedness, the safety of personnel and equipment, and easy commissioning are at a premium.

The bypass function (based on a bypass contactor) has been made easier to use by integrating it into the starter. This approach suits applications where it may be necessary to bypass the starter at the end of the starting process, in order to limit the starter's heat dissipation.

The Altistart 22 soft start/soft stop unit contains an integrated display terminal which allows the user to change both the programming and the adjustment monitoring parameters, in order to adapt and customize the application to customer needs.

The unit also features thermal protection for motors as well as a monitoring facility for machines, and utilizing the SoMove™ setup software, enables the installation to be commissioned immediately.

### Applications

The integrated functions of the Altistart 22 soft start/soft stop unit are compatible with the more common types of application found in the construction, infrastructure or industrial sectors:

- Centrifugal pumps, piston pumps
- Fans
- Screw compressors, etc.
- Material handling (conveyors, etc.)
- Specialist machines (agitators, mixers, centrifugal machines)

The Altistart 22 soft start/soft stop unit represents a truly cost-effective solution by providing:

- Reduction in installation costs by optimizing product sizes, integrating the bypass function and reducing wiring time
- Reduction in the stress associated with electrical distribution by reducing the current peaks and line voltage drops caused by motors starting
- Reduction in running costs for machines by reducing mechanical stress

Controlling the three phases of the motor windings helps ensure that performance remains satisfactory (with or without a load, all voltage and power ranges, etc.).

### Conformity to standards

Type	Performance	
<b>Conducted and radiated emissions</b>	Conforming to IEC 60947-4-2	Class A
<b>Vibration resistance</b>	Conforming to IEC 60068-2-6	1.5 mm from 2 to 13 Hz, 1 gn from 13 to 200 Hz
<b>Shock resistance</b>	Conforming to IEC 60068-2-27	15 gn for 11 ms
<b>Maximum ambient pollution</b>	Conforming to IEC 60664-1	Step 2
<b>Relative humidity</b>	Conforming to IEC 60068-2-3	95% non-condensing, no dripping water
<b>Degree of protection</b>	For ATS22D17 to C11	IP 20 (IP 00 if no connections)
	For ATS22C14 to C59	IP 00

The Altistart 22 soft start/soft stop unit conforms to the RoHS Directive.

### Functions

The main functions integrated in the drive are as follows:

#### Adjustment functions

- Adjustment of the Altistart™ 22 soft start/soft stop unit's current in line with the motor's nominal current
- Limiting current
- Selection of the type of stop (freewheel or deceleration)

#### Drive performance functions

- Management of the three supply phases
- Option of connecting the starter in the motor delta connection in series with each winding. This supports the use of a soft start/soft stop unit with a lower rating (only applies to the ATS22●●●Q range)
- Management of the ramp and torque supplied to the motor throughout the acceleration and deceleration period (significantly less jerk)
- Variety of control profiles to suit different applications
- Integrated and automated management of the bypass function at the end of the starting process (based on a bypass contactor), while preserving electronic protection features

#### Protection functions for the motor and machine

- Integration of configurable motor thermal protection
- Thermal protection for the Altistart 22 soft start/soft stop unit
- Integrated processing of the PTC thermal probe with electrical isolation (optimum management of motor protection)
- Monitoring of the duration and number of starts (better installation safety)
- Management of stopping time before restart
- Protection against underloads and overcurrents in transient or steady state
- Automatic adjustment to the line frequency
- Detection of phase sequence
- Detection of phase loss
- Detection of imbalances between phases and of leakage currents (for the ATS22●●●S6 and S6U ranges)

#### Functions to ease integration into control systems

- 3 programmable logic inputs
- 2 programmable N/C / N/O relay outputs
- Pluggable connectors for I/O
- Second set of parameters for motor operation
- Modbus serial link via RJ45 connector
- Display of soft start/soft stop unit and machine states
- Display of I/O currents and states
- Error log, diagnostics for soft start/soft stop unit
- Return to factory settings
- 4 LEDs on the front face (Ready, Communication, Run and Trip)

# Altistart™ 22

## soft start/soft stop units



Commissioning the ATS22 soft start/soft stop unit with SoMove lite setup software

### Product range

The Altistart™ 22 soft start/soft stop unit features 2 voltage ranges for motor power ratings from 4 to 400 kW:

- Three-phase power supply voltage from 230 V to 440 V, 50/60 Hz (**ATS22●●●Q**)
- Three-phase power supply voltage from 208 V to 600 V, 50/60 Hz (**ATS22●●●S6** and **ATS22●●●S6U**)

### Options

The Altistart 22 soft start/soft stop unit offers a number of options:

- A remote terminal unit can be installed on the front face of a floor-standing enclosure with IP 54/NEMA 12 or IP 65 protection (depending on the model). It offers the same functions as an integrated display terminal.
- Additional fans to support a greater number of starts
- SoMove lite setup software
- Protection shrouds for terminals to ensure compliance with IP 20 degree of protection

### Selection criteria

The Altistart 22 soft start/soft stop unit has been designed for standard control system applications.

In addition to the chosen application, the choice of starter will depend on the following main criteria:

- The power and nominal current on the motor rating plate
- The load factor for the application

The starting capacity also needs to be considered when selecting an Altistart 22 soft start/soft stop unit:

### Starting capacity

The standard starting capacity for a class 10 motor is:

- 3.5 In for 40 seconds from cold with S1 motor duty
- 3.5 In for 20 seconds with S4 motor duty, based on a load factor of 95%

#### Note:

*S1 motor duty is based on a start followed by operation at constant load, making it possible to achieve thermal equilibrium.*

*S4 motor duty is based on a cycle consisting of a start, operation at constant load and an idle period.*

### Number of starts per hour

Assuming the starting capacity remains the same, the number of starts per hour can be increased by adding a fan.

The ATS22D17Q to C17Q, ATS22D17S6 to C17S6 and ATS22D17S6U to C17S6U soft start/soft stop units can be fitted with an additional fan. Page 60462/5 has details of this option.

Possible number of starts per hour based on a capacity of 3.5 In for 20 seconds (S4 motor duty) after adding a fan:

Soft start/soft stop units	Number of starts per hour	
	Without fan	With additional fan
ATS22D17● to D47●	6	10
ATS22D62● to D88●	6	10
ATS22C11● to C17●	4	10

#### Note:

*The ATS22C21Q to C59Q, ATS22C21S6 to C59S6 and ATS22C21S6U to C59S6U soft start/soft stop units come with a fan as standard.*

*The standard number of starts per hour for S4 motor duty is 4. Anything more would require the next lowest rating.*



# Altistart™ 22

## soft start/soft stop units



Example of pumping application using the Altistart 22 soft start/soft stop unit

### Standard application areas

Examples of functions performed by the Altistart™ 22 soft start/soft stop unit depending on the application chosen

Type of machine	Functions performed by the Altistart 22
Centrifugal pump	Controlled slowing-down and stopping (fewer hammer blows) Protection against underload or reversal of phase rotation direction
Piston pump	Control of pump priming and the pump's direction of rotation
Fan	Detection of overloads and underloads (motor/fan transmission broken) Braking torque on stopping
Turbine	Thermal monitoring of motor via electrically isolated PTC probe
Refrigeration compressor	Control of starting characteristics
Screw compressor	Protection against reversal of phase rotation direction Contact for automatic emptying on stopping
Centrifugal compressor	Protection against reversal of phase rotation direction Contact for automatic emptying on stopping
Conveyor	Monitoring of overloads for incident detection or underloads for break detection
Conveyor belt	Second set of motor parameters depending on the load transported
Lifting screw	Monitoring of overloads for hard spot detection or underloads for break detection
Agitator	Displaying the current indicates the density of the material.
Mixer	Displaying the current indicates the density of the material. Boost on start-up
Refiner	Torque control on starting and stopping

### Dedicated applications

The Altistart™ 22 soft start/soft stop unit can be used for applications outside the standard characteristics, but this could involve derating to at least the next lowest level.

Examples of applications outside the standard characteristics:

- Greater number of starts
- Motor thermal protection higher than class 10
- Excess current required at time of start
- Certain ambient temperatures:

For ambient temperatures between +40°C and +60°C, derate the nominal current of the Altistart 22 by 2.2% for each additional degree.

- Certain altitudes:

For altitudes between 1000 and 2000 meters, derate the nominal current of the Altistart 22 by 2% for each additional 100 meters.

# Altistart™ 22

## soft start/soft stop units

Three-phase power supply voltage 230 to 440 V



ATS22D17Q



ATS22D62Q



ATS22C11Q

### Connection to the motor's power supply line

Motor power given in kW in accordance with standard IEC/EN 60947-4-2. 220 V control power supply

Motor			230 to 440 V - 50/60 Hz soft start/soft stop unit					Reference	Weight
Power indicated on rating plate			Nominal current (In) (1)	Factory setting for current (IcL) (1) (2)	Dissipated power at nominal current (4)	Dimensions (W x D x H)			
230 V	400 V	440 V							
kW	kW	kW	A	A	W	mm			kg
4	7.5	7.5	14.8	17	39	130 x 169 x 265	ATS22D17Q		7.000
7.5	15	15	28.5	32	44	130 x 169 x 265	ATS22D32Q		7.000
11	22	22	42	47	48	130 x 169 x 265	ATS22D47Q		7.000
15	30	30	57	62	59	145 x 207 x 295	ATS22D62Q		12.000
18.5	37	37	69	75	63	145 x 207 x 295	ATS22D75Q		12.000
22	45	45	81	88	66	145 x 207 x 295	ATS22D88Q		12.000
30	55	55	100	110	73	150 x 229 x 356	ATS22C11Q		18.000
37	75	75	131	140	82	150 x 229 x 356	ATS22C14Q		18.000
45	90	90	162	170	91	150 x 229 x 356	ATS22C17Q		18.000
55	110	110	195	210	117	206 x 299 x 425	ATS22C21Q		33.000
75	132	132	233	250	129	206 x 299 x 425	ATS22C25Q		33.000
90	160	160	285	320	150	206 x 299 x 425	ATS22C32Q		33.000
110	220	220	388	410	177	206 x 299 x 425	ATS22C41Q		33.000
132	250	250	437	480	218	304 x 340 x 455	ATS22C48Q		50.000
160	315	355	560	590	251	304 x 340 x 455	ATS22C59Q		50.000

### Connection to the motor's delta connection

Motor power given in kW in accordance with the standard IEC/EN 60947-4-2. 220 V control power supply

Motor			230 to 440 V - 50/60 Hz soft start/soft stop unit					Reference	Weight
Power indicated on rating plate			Nominal current (In) (1)	Factory setting for current (IcL) (1) (3)	Dissipated power at nominal current (4)	Dimensions (W x D x H)			
230 V	400 V	440 V							
kW	kW	kW	A	A	W	mm			kg
5.5	11	15	25	17	39	130 x 169 x 265	ATS22D17Q		7.000
11	22	22	48	32	44	130 x 169 x 265	ATS22D32Q		7.000
18.5	45	45	70	47	48	130 x 169 x 265	ATS22D47Q		7.000
22	55	55	93	62	59	145 x 207 x 295	ATS22D62Q		12.000
30	55	75	112	75	63	145 x 207 x 295	ATS22D75Q		12.000
37	75	75	132	88	66	145 x 207 x 295	ATS22D88Q		12.000
45	90	90	165	110	73	150 x 229 x 356	ATS22C11Q		18.000
55	110	110	210	140	82	150 x 229 x 356	ATS22C14Q		18.000
75	132	132	255	170	91	150 x 229 x 356	ATS22C17Q		18.000
90	160	160	315	210	117	206 x 299 x 425	ATS22C21Q		33.000
110	220	220	375	250	129	206 x 299 x 425	ATS22C25Q		33.000
132	250	250	480	320	150	206 x 299 x 425	ATS22C32Q		33.000
160	315	355	615	410	177	206 x 299 x 425	ATS22C41Q		33.000
220	355	400	720	480	218	304 x 340 x 455	ATS22C48Q		50.000
250	400	500	885	590	251	304 x 340 x 455	ATS22C59Q		50.000

(1) In refers to the maximum continuous current for class 10. IcL refers to the starter rating.

(2) The factory setting for the current equates to the nominal current of a standard 4-pole, 400 V, class 10 motor (standard application). It should be adjusted in line with the current indicated on the motor rating plate.

(3) The factory setting for the current should be adjusted in line with the current indicated on the motor rating plate.

(4) Includes the power dissipated by the fan

# Altistart™ 22

## soft start/soft stop units

Three-phase power supply voltage 208 to 600 V



ATS22C21S6

Connection to the motor's power supply line						
Motor power given in kW in accordance with standard IEC/EN 60947-4-2. 220 V control power supply						
Motor	230 to 600 V - 50/60 Hz soft start/soft stop unit					
Power indicated on rating plate	Nominal current (In) (1)	Factory setting for current (IcL) (1) (2)	Dissipated power at nominal current (3)	Dimensions (W x D x H)	Reference	Weight
230 V 400 V 440 V 500 V						
kW kW kW kW	A	A	W	mm		kg
4 7.5 7.5 9	14	17	39	130 x 169 x 265	ATS22D17S6	7.000
7.5 15 15 18.5	27	32	44	130 x 169 x 265	ATS22D32S6	7.000
11 22 22 30	40	47	48	130 x 169 x 265	ATS22D47S6	7.000
15 30 30 37	52	62	59	145 x 207 x 295	ATS22D62S6	12.000
18.5 37 37 45	65	75	63	145 x 207 x 295	ATS22D75S6	12.000
22 45 45 55	77	88	66	145 x 207 x 295	ATS22D88S6	12.000
30 55 55 75	96	110	73	150 x 229 x 356	ATS22C11S6	18.000
37 75 75 90	124	140	82	150 x 229 x 356	ATS22C14S6	18.000
45 90 90 110	156	170	91	150 x 229 x 356	ATS22C17S6	18.000
55 110 110 132	180	210	117	206 x 299 x 425	ATS22C21S6	33.000
75 132 132 160	240	250	129	206 x 299 x 425	ATS22C25S6	33.000
90 160 160 220	302	320	150	206 x 299 x 425	ATS22C32S6	33.000
110 220 220 250	361	410	177	206 x 299 x 425	ATS22C41S6	33.000
132 250 250 315	414	480	218	304 x 340 x 455	ATS22C48S6	50.000
160 315 355 400	477	590	251	304 x 340 x 455	ATS22C59S6	50.000



ATS22C48S6U

Motor power given in HP. 110 V control power supply						
Motor	208 to 600 V - 50/60 Hz soft start/soft stop unit					
Power indicated on rating plate	Nominal current (In) (1)	Factory setting for current (IcL) (1) (2)	Dissipated power at nominal current (3)	Dimensions (W x D x H)	Reference	Weight
208 V 230 V 460 V 575 V						
HP HP HP HP	A	A	W	mm		kg
3 5 10 15	14	17	39	130 x 169 x 265	ATS22D17S6U	7.000
7.5 10 20 25	27	32	44	130 x 169 x 265	ATS22D32S6U	7.000
– 15 30 40	40	47	48	130 x 169 x 265	ATS22D47S6U	7.000
15 20 40 50	52	62	59	145 x 207 x 295	ATS22D62S6U	12.000
20 25 50 60	65	75	63	145 x 207 x 295	ATS22D75S6U	12.000
25 30 60 75	77	88	66	145 x 207 x 295	ATS22D88S6U	12.000
30 40 75 100	96	110	73	150 x 229 x 356	ATS22C11S6U	18.000
40 50 100 125	124	140	82	150 x 229 x 356	ATS22C14S6U	18.000
50 60 125 150	156	170	91	150 x 229 x 356	ATS22C17S6U	18.000
60 75 150 200	180	210	117	206 x 299 x 425	ATS22C21S6U	33.000
75 100 200 250	240	250	129	206 x 299 x 425	ATS22C25S6U	33.000
100 125 250 300	302	320	150	206 x 299 x 425	ATS22C32S6U	33.000
125 150 300 350	361	410	177	206 x 299 x 425	ATS22C41S6U	33.000
150 – 350 400	414	480	218	304 x 340 x 455	ATS22C48S6U	50.000
– 200 400 500	477	590	251	304 x 340 x 455	ATS22C59S6U	50.000

(1) In refers to the maximum continuous current for class 10. IcL refers to the starter rating.

(2) The factory setting for the current should be adjusted in line with the current indicated on the motor rating plate.

(3) Includes the power dissipated by the fan



# Altistart™ 22

## soft start/soft stop units

Options: Dialog and configuration tools



SoMove setup software

### SoMove™ setup software

#### Introduction

This software enables the user to configure, set, debug and organize maintenance tasks for the Altistart™ 22 soft start/soft stop unit. It can also be used to customize the integrated display terminal menus. It can be downloaded from our website, "www.schneider-electric.us".

#### Reference

Description	Reference	Weight kg
<b>SoMove lite setup software</b>	—	—
<b>USB/RJ45 cordset</b> equipped with a USB connector and an RJ45 connector. For connecting a PC to the Altistart 22 soft start/soft stop unit. Length: 2.5 m	<b>TCSMCNAM3M002P</b>	0.115
<b>Modbus - Bluetooth adaptor</b> For establishing a Bluetooth wireless connection between the Altivar 12 drive and a PC equipped with a Bluetooth wireless link. Pack contents: ■ 1 Bluetooth adaptor (range 10 m, class 2) with an RJ45 connector ■ 1 x 0.1 m cordset with 2 RJ 45 connectors, to (1) ATV12●●●●●●	<b>VW3A8114</b>	0.155
<b>USB - Bluetooth adaptor for PC</b> Required for a PC which is not equipped with Bluetooth technology. Connects to a USB port on the PC. Range of 10 m (class 2).	<b>VW3A8115</b>	0.200

### Remote display terminal

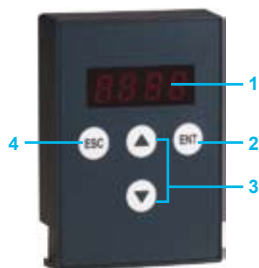
#### Introduction

This terminal enables the human machine interface of the Altistart 22 soft start/soft stop unit to be positioned remotely on the door of an enclosure. It has IP 54/NEMA 12 or IP 65 degree of protection depending on the model. It is used to:

- Set and configure the soft start/soft stop unit remotely
- Display the status and faults of the soft start/soft stop unit remotely
- Maximum operating temperature is 50°C.

#### Description

4-digit display  
Selection/validation key **ENT**: opens a menu or validates the value chosen  
Navigation keys **▲**, **▼**  
Selection key **ESC**: used to exit a menu



VW3G22101

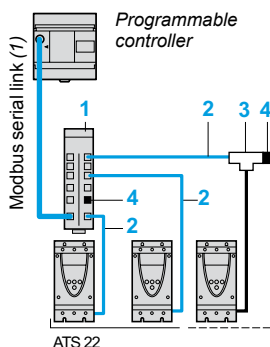
#### References

Description	Degree of protection	Length m	Dimensions W x D x H mm	Reference	Weight kg
<b>Remote display terminals</b> A remote-mounting cordset is also required - VW3A1104R●●	IP 54/NEMA 12	—	50 x 15 x 70	<b>VW3G22101</b>	0.250
	IP 65	—	66 x 19 x 106	<b>VW3G22102</b>	0.275
<b>Remote-mounting cordsets</b> equipped with 2 RJ45 connectors	—	1	—	<b>VW3A1104R10</b>	0.050
	—	3	—	<b>VW3A1104R30</b>	0.150

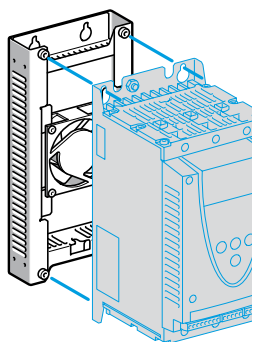
(1) Also includes other components for connecting compatible Schneider Electric devices.

# Altistart™ 22 soft start/soft stop units

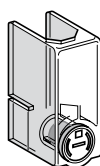
Options: Modbus® serial link, fans, accessories and documentation



Example of a connection using a Modbus serial link via a splitter box with RJ45 connectors



VW3G2240●



LA9 F70●

## Modbus serial link

### Connection via splitter box and RJ45 connectors

Description	Number	Length m	Unit reference	Weight kg
<b>Modbus splitter box</b> with 10 RJ45 connectors	1	–	LU9GC3	0.500
<b>Cordsets for Modbus serial link</b> with 2 RJ45 connectors	2	0.3	VW3A8306R03	0.025
		1	VW3A8306R10	0.060
		3	VW3A8306R30	0.130
<b>Modbus T-junction boxes</b> (with integrated cable)	3	0.3	VW3A8306TF03	0.190
		1	VW3A8306TF10	0.210
<b>Line terminators</b> (2) (3)	4	R = 120 Ω	VW3A8306RC	0.010
		C = 1nf	VW3A8306R	0.010
	4	R = 120 Ω	VW3A8306R	0.010

## Fans

The ATS22C21Q to C59Q, ATS22C21S6 to C59S6 and ATS22C21S6U to C59S6U soft start/soft stop units come with an integrated fan.

The ATS22D17Q to C17Q, ATS22D17S6 to C17QS6 and ATS22D17S6U to C17S6U soft start/soft stop units are ventilated by means of natural convection.

For more demanding applications, such as those with a greater number of starts, the Altistart 22 range offers fans as an option. These are driven by the soft start/soft stop unit and attached to the back of the device.

The fan's noise level is less than 60 dBA.

## References

Description	Power supply voltage for control V	For soft start - soft stop units	Dimensions W x D x H mm	Reference	Weight kg
<b>Fans</b>	220	ATS22D17Q to D47Q, ATS22D17S6 to D47S6	130 x 40 x 265	VW3G22400	1.200
		ATS22D62Q to D88Q, ATS22D62S6 to D88S6	145 x 40 x 295	VW3G22401	1.400
		ATS22C11Q to C17Q, ATS22C11S6 to C17S6	150 x 40 x 350	VW3G22402	1.600
	110	ATS22D17S6U to D47S6U	130 x 40 x 265	VW3G22U400	1.200
		ATS22D62S6U to D88S6U	145 x 40 x 295	VW3G22U401	1.400
		ATS22C11S6U to C17S6U	150 x 40 x 350	VW3G22U402	1.600

## Protection shrouds for power terminals (to be used with eyelet connections)

The ATS22C11Q to C59Q, ATS22C11S6 to C59S6 and ATS22C11S6U to C59S6U soft start/soft stop units have 6 unprotected power terminals. These terminals can be fitted with protection shrouds.

Description	For soft start - soft stop units	Reference	Weight kg
<b>Set of 6 power terminal protection shrouds</b>	ATS22C11Q to C17Q, ATS22C11S6 to C17S6, ATS22C11S6U to C17S6U	LA9F702	0.250
	ATS22C21Q to C59Q, ATS22C21S6 to C59S6, ATS22C21S6U to C59S6U	LA9F703	0.250

## Documentation

Description	Reference	Weight kg
<b>"Description of the Motion &amp; Drives Offer" DVDROM (4)</b>	VW3A8200	0.100

It consists of:

- Technical documentation (programming manuals, installation manuals, quick reference guides)
- SoMove lite setup software
- Brochures, catalogs.

The documentation relating to the Altistart 22 product is also available on our website, "www.schneider-electric.us".

(1) Cable depends on the type of controller or PLC

(2) Sold in lots of 2

(3) Depends on the bus architecture

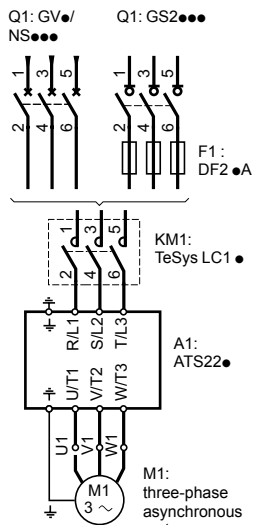
(4) Updated version including the Altistart 22 range available 1<sup>st</sup> quarter 2010

# Altistart™ 22 soft start/soft stop units

Motor starters:

400 to 440 V three-phase power supply voltage

Type 1 coordination



Motor starter with protection by circuit breaker or switch disconnector

## Compatible components in accordance with standard IEC/EN 60947-4-2

Use the contactor and starter with either a circuit breaker or a fuse switch disconnector.

Three-phase, 4-pole motor 50/60 Hz			Class 10 starter (1)	Circuit breaker		TeSys® Contactor (3)	Fuse switch disconnecter (for front and side control)	aM fuse		
				Reference	Rating			Unit reference (4)	Size	Rating
					A				mm	A
400 V kW	440 V kW	A								
M1	M1	A1	Q1	KM1		F1				
7.5	7.5	14.8	ATS22D17●	GV3L20	–	LC1D18●●	GS1DD3	DF2CA16	10 x 38	16
				NS80H6-MA	25					
15	15	28.5	ATS22D32●	GV3L32	–	LC1D32●●	GS1DD3	DF2CA32	10 x 38	32
				NS80H6-MA	50					
22	22	42	ATS22D47●	GV3L50	–	LC1D50A●●	GS2F3	DF2EA50	14 x 51	50
				NS80H6-MA	50					
30	30	57	ATS22D62●	GV3L65	–	LC1D65A●●	GS2J3	DF2FA63	22 x 58	63
				NS80H6-MA	80					
37	37	69	ATS22D75●	NS80H6-MA	80	LC1D80●●	GS2J3	DF2FA80	22 x 58	80
45	45	81	ATS22D88●	NSX100●MA (2)	100	LC1D115●●	GS2J3	DF2FA100	22 x 58	100
55	55	100	ATS22C11●	NSX160●MA (2)	150	LC1D115●●	GS2K3	DF2FA125	22 x 58	125
75	75	131	ATS22C14●	NSX160●MA (2)	150	LC1D150●●	GS2L3	DF2GA1161 0		160
90	90	162	ATS22C17●	NSX250●MA (2)	220	LC1F185●●	GS2N3	DF2HA1201 1		200
110	110	195	ATS22C21●	NSX250●MA (2)	220	LC1F225●●	GS2N3	DF2HA1251 1		250
132	132	233	ATS22C25●	NSX400● Micrologic® 1.3-M (2)	320	LC1F265●●	GS2N3	DF2HA1251 1		250
160	160	285	ATS22C32●	NSX400● Micrologic 1.3-M (2)	320	LC1F330●●	GS2QQ3	DF2JA1311 2		315
220	220	388	ATS22C41●	NSX630● Micrologic 1.3-M (2)	500	LC1F400●●	GS2S3	DF2KA1401 3		400
250	250	437	ATS22C48●	NSX630● Micrologic 1.3-M(2)	500	LC1F500●●	GS2S3	DF2KA1501 3		500
315	355	560	ATS22C59●	NS630b● Micrologic 5.0 (2)	500	LC1F630●●	GS2S3	DF2KA1631 3		630

(1) Replace ● with Q or S6 depending on the starter's voltage range.

To find more information on combinations for motor power supply voltages of 230 V (ATS22●●●Q starters) or 500 V (ATS22●●●S6 starters), please visit our website at "www.schneider-electric.us".

(2) Replace ● with F, N, H, S or L depending on the breaking capacity; see table below.

(3) Replace ●● with the control circuit voltage reference: please consult our "Motor starter solutions. Control and protection components" catalog.

(4) DF2 CA, EA, FA: sold in lots of 10.

DF2 GA, HA, JA, KA: sold in lots of 3.

## Maximum prospective short-circuit current of the starter according to standard IEC/EN 60947-4-2

Starter	Iq (kA) in 500 V
ATS22D17● to ATS22D75●	25
ATS22D88● to ATS22C59●	50

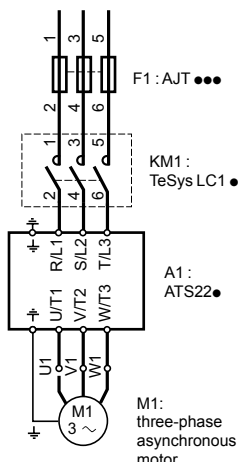
## Breaking capacity of circuit-breakers according to standard IEC/EN 60947-4-2

Circuit-breaker	Icu (kA) in 400 V					Icu (kA) in 440 V				
	F	N	H	S	L	F	N	H	S	L
GV3L	50					50				
NS80H6-MA	70					65				
NSX100 to NSX630	36	50	70	100	150	35	50	65	90	130
NS630b	–	50	70	–	150	–	50	65	–	130

# Altistart™ 22 soft start/soft stop units

Motor starters:

208 to 575 V three-phase power supply voltage



Motor starter with protection by fuse

## Compatible components

### Product without enclosure

Three-phase, motor 50/60 Hz					Class 10 starter	Maximum short-circuit current (SCC) at 600 V	TeSys® Contactor (1)	Time delay fuse (sold by Ferraz Fuses)	
208V HP	230V HP	460 V HP	575 V HP	A				Class J	
M1	M1	M1	M1		A1		KM1	F1	
3	5	10	15	14	ATS22D17S6U	5	LC1D18●●	AJT40	
7.5	10	20	25	27	ATS22D32S6U	5	LC1D32●●	AJT70	
–	15	30	40	40	ATS22D47S6U	5	LC1D50A●●	AJT100	
15	20	40	50	52	ATS22D62S6U	10	LC1D65A●●	AJT125	
20	25	50	60	65	ATS22D75S6U	10	LC1D80A●●	AJT175	
25	30	60	75	77	ATS22D88S6U	10	LC1D115●●	AJT200	
30	40	75	100	96	ATS22C11S6U	10	LC1D115●●	AJT250	
40	50	100	125	124	ATS22C14S6U	10	LC1D150●●	AJT300	
50	60	125	150	156	ATS22C17S6U	10	LC1F185●●	AJT400	
60	75	150	200	180	ATS22C21S6U	18	LC1F225●●	AJT500	
75	100	200	250	240	ATS22C25S6U	18	LC1F265●●	AJT600	
100	125	250	300	302	ATS22C32S6U	18	LC1F330●●	2 x AJT350	
125	150	300	350	361	ATS22C41S6U	18	LC1F400●●	2 x AJT400	
150	–	350	400	414	ATS22C48S6U	18	LC1F500●●	2 x AJT500	
–	200	400	500	477	ATS22C59S6U	30	LC1F630●●	2 x AJT600	

## Compatible components in accordance with standard UL508

### Enclosed product

Three-phase, 4-pole motor 50/60 Hz					Class10 starter	Maximum short-circuit current (SCC) at 600V	Minimum enclosure volume		Contactor (1)	Time delay fuse	
208V HP	230 V HP	460 V HP	575 V HP	A			dm³	inch³		Class J A	Class L A
M1	M1	M1	M1		A1				KM1	F1	
3	5	10	15	14	ATS22D17S6U	100	40	2406	LC1D18●●	30	–
7.5	10	20	25	27	ATS22D32S6U	100	40	2406	LC1D32●●	60	–
–	15	30	40	40	ATS22D47S6U	100	40	2406	LC1D50A●●	90	–
15	20	40	50	52	ATS22D62S6U	100	52	3149	LC1D65A●●	110	–
20	25	50	60	65	ATS22D75S6U	100	52	3149	LC1D80A●●	150	–
25	30	60	75	77	ATS22D88S6U	100	52	3149	LC1D115●●	175	–
30	40	75	100	96	ATS22C11S6U	100	125	7630	LC1D115●●	200	–
40	50	100	125	124	ATS22C14S6U	100	125	7630	LC1F150●●	250	–
50	60	125	150	156	ATS22C17S6U	100	125	7630	LC1F185●●	300	–
60	75	150	200	180	ATS22C21S6U	100	130	7892	LC1F225●●	400	–
75	100	200	250	240	ATS22C25S6U	100	130	7892	LC1F265●●	450	–
100	125	250	300	302	ATS22C32S6U	100	130	7892	LC1F330●●	600	–
125	150	300	350	361	ATS22C41S6U	100	130	7892	LC1F400●●	600	–
150	–	350	400	414	ATS22C48S6U	100	195	11,869	LC1F500●●	–	800
–	200	400	500	477	ATS22C59S6U	100	195	11,869	LC1F630●●	–	800

(1) Replace ●● with the control circuit reference: please consult our "Motor starter solutions. Control and protection components" catalog.



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