Soft start/soft stop units Altistart 22

for asynchronous motors

Catalog

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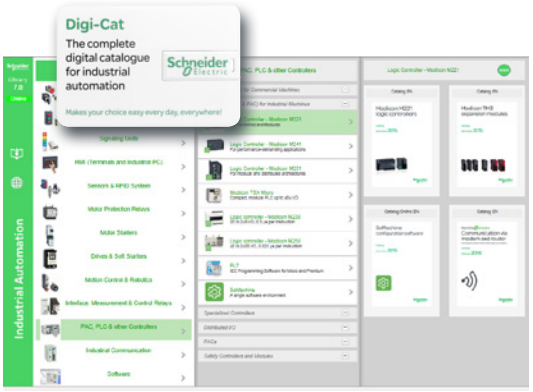

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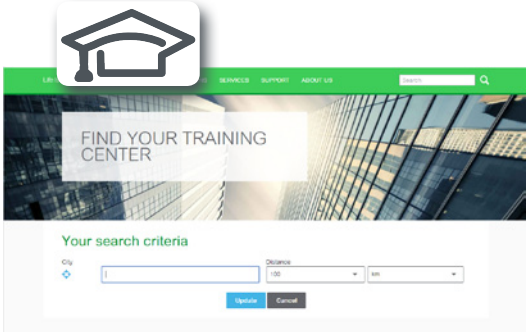

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General contents

Altistart 22 soft start/soft stop units

Soft start/soft stop units and options combinations

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Soft starters for asynchronous motors

Applications		Starting simple machines	Controlled starting and deceleration of simple machines
			
Power range for 50…60 Hz line supply (kW/*HP*) (connection to the motor power supply line)		**0.37…11/*0.5...15***	**0.75…15/*1...20***
	Single-phase 110…230 V (kW)	0.37…2.2	–
	Three-phase 200…240 V (kW/*HP*)	–	0.75…7.5/*1...10*
	Three-phase 200…480 V (kW/*HP*)	0.37…11/*0.5...15*	–
	Three-phase 208…600 V (kW/*HP*)	–	
	Three-phase 208…690 V (kW/*HP*)	–	
	Three-phase 230…415 V (kW)	–	
	Three-phase 230…440 V (kW)	–	
	Three-phase 380…415 V (kW)	–	1.5…15
	Three-phase 440...480 V (*HP*)	–	*2...20*
Drive	Number of controlled phases	1	2
	Type of control	–	
	Operating cycle	–	
Functions Bypass		Integrated	
Number of I/Os	Analog inputs	–	
	Logic inputs	–	
	Analog outputs	–	
	Logic outputs	–	
	Relay outputs	–	
Communication	Integrated	–	
	Available as an option	–	
Standards and certifications		IEC/EN 60947-4-2 CE, UL, CSA, C-Tick, and CCC	
References		**ATS01N1●●●●**	**ATS01N2●●●●**
Pages		Please refer to the Altistart 01 catalog.	

Controlled starting and deceleration of simple and complex machines		
		
4…400/*3...500*	**3…900**	**3...900/*3...1,200***
–		
–		
–		
4…400/*3...500*	–	
–		3…900/*3...1,200*
–	3…630	–
4…355	–	
–		
–		
3		
Configurable voltage ramp	TCS (Torque Control System)	
Standard	Standard and severe	
Integrated	Available as an option	
1 PTC probe		
3	4	
–	1	
–	2	
2 (CO)	3	
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 class A and B CE, UL, CSA, DNV, C-Tick, GOST, CCC, NOM, SEPRO, and TCF	
ATS22●●●●	**ATS48●●●Q**	**ATS48●●●Y**
8	Please refer to the Altistart 48 catalog.	

Altistart 22
soft start/soft stop units

The Altistart 22 soft start/soft stop unit offer

Presentation

Altistart 22 soft start/soft stop units support the controlled starting and stopping, via voltage and torque, of three-phase squirrel cage asynchronous motors for power ratings ranging from 4 to 400 kW.

They are supplied ready for use in standard applications with class 10 motor protection.

Altistart 22 soft start/soft stop units have been designed to meet the performance requirements of applications where ruggedness, security of personnel and equipment, and ease of setup are a priority.

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 starting in order, for example, to limit the starter's heat dissipation.

Altistart 22 soft start/soft stop units have an integrated display terminal that allows the user to change both the programming and the adjustment or monitoring parameters in order to adapt and customize the application in line with customer needs.

They also feature an integrated thermal motor protection function as well as machine monitoring functionality, and offer immediate installation setup capability using SoMove setup software.

Applications

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

- centrifugal pumps, piston pumps
- fans
- screw compressors
- material handling (conveyors, etc.)
- specialist machinery (agitators, mixers, centrifuges)

Altistart 22 soft start/soft stop units offer a truly cost-effective solution by providing:

- a reduction in installation costs through optimum product sizes, integrated bypass function, and faster wiring time
- a reduction in the stress associated with electrical distribution through fewer current peaks and line voltage drops caused by motor starting
- a reduction in machine running costs through reduced mechanical stress

The three phases of the motor windings are controlled to help maintain performance, whatever the situation (with or without load, any voltage or power range, etc.).

Conformity to standards

Description		Performance
Conducted and radiated emissions	Conforming to IEC 60947-4-2	Class A
Vibration resistance	Conforming to IEC 60068-2-6	1.5 mm/*0.06 in.* from 2 to 13 Hz 1 gn from 13 to 200 Hz
Shock resistance	Conforming to IEC 60068-2-27	15 gn for 11 ms
Maximum ambient pollution	Conforming to IEC 60664-1	Degree 2
Relative humidity	Conforming to IEC 60068-2-3	95% non-condensing, no dripping water
Degree of protection	For ATS22D17…C11	IP 20 (IP 00 if no connection)
	For ATS22C14…C59	IP 00

Altistart 22 soft start/soft stop units conform to the RoHS Directive.

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Altistart 22
soft start/soft stop units

Functions

The main functions integrated in the drive are as follows:

Adjustment functions

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

Soft starter performance functions

- Management of the three supply phases
- Option to connect 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 (for the ATS22●●●Q range only)
- Management of the ramp and torque supplied to the motor throughout the acceleration and deceleration stages (significantly smoother)
- Variety of control profiles to suit different applications
- Integrated and automated management of the bypass function at the end of starting (bypass contactor), while preserving electronic protection functions

Protection functions for the motor and machine

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

Functions to facilitate integration into control systems

- 3 programmable logic inputs
- 2 programmable CO relay outputs
- Plug-in I/O connectors
- Second set of motor control parameters
- Modbus serial link via RJ45 connector
- Display of soft start/soft stop unit and machine states
- Display of I/O states and currents
- Detected errors log, diagnostics for soft start/soft stop unit
- Restore factory settings
- 4 LEDs on the front (Ready, Communication, Run, and Trip)

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Altistart 22
soft start/soft stop units

Testing and start-up of the ATS 22 soft start/soft stop unit using SoMove setup software

The offer

The Altistart 22 soft start/soft stop unit offer comprises 2 voltage ranges for motor power ratings ranging from 4 to 400 kW:
- three-phase power supply voltage ranging from 230 V to 440 V, 50/60 Hz (ATS22●●●Q)
- three-phase power supply voltage ranging from 208 V to 600 V, 50/60 Hz (ATS22●●●S6 and ATS22●●●S6U)

Options

The Altistart 22 soft start/soft stop unit range also offers a number of options:
- A remote display terminal can be installed on the front of a floor-standing enclosure with IP 54/UL type 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 setup software
- Protective terminal covers for compliance with IP 20 degree of protection

Selection criteria

Altistart 22 soft start/soft stop units have 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 of 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 in S1 duty
- 3.5 In for 20 seconds in S4 duty with a load factor of 95%

Note: *S1 duty corresponds to a start followed by operation at constant load, making it possible to achieve thermal equilibrium.*
S4 duty corresponds to 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.
ATS22D17Q…C17Q, ATS22D17S6…C17S6, and ATS22D17S6U…C17S6U soft start/soft stop units can be equipped with an additional fan (see options page 11).

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

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

Note: *ATS22C21Q…C59Q, ATS22C21S6…C59S6, and ATS22C21S6U…C59S6U soft start/soft stop units are equipped with a fan as standard.*
The standard number of starts per hour in S4 duty is 4. Anything more would require derating by one power rating.

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Altistart 22
soft start/soft stop units

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

Standard applications

Examples of functions performed by Altistart 22 soft start/soft stop units depending on the application:

Type of machine	Functions performed by the Altistart 22
Centrifugal pump	Controlled deceleration and stopping (reduces water hammer) Protection against underloads or reversal of phase rotation direction
Piston pump	Control of pump priming and direction of rotation
Fan	Detection of under/overloads (motor/fan transmission broken) Braking torque on stopping
Turbine	Thermal monitoring of motor via electrically isolated PTC probe
Refrigeration compressor	Control of starting characteristics Automatic restart management
Screw compressor	Protection against reversal of phase rotation direction Contact for automatic draining on stopping
Centrifugal compressor	Protection against reversal of phase rotation direction Contact for automatic draining on stopping
Conveyor	Overload monitoring for incident detection or underload monitoring for break detection
Conveyor belt	Second set of motor parameters depending on the load transported
Lifting screw	Overload monitoring for hard spot detection or underload monitoring for break detection
Agitator	Display of the current to indicate the density of the material
Mixer	Display of the current to indicate the density of the material Boost on starting
Refiner	Torque control on starting and stopping

Special applications

ATS 22 soft start/soft stop units can be used for applications outside the standard characteristics, but this may involve derating by at least one power rating.
Examples of applications outside the standard characteristics:

- Greater number of starts
- Motor thermal protection higher than class 10
- Excess current required on starting
- Certain ambient temperatures:

For ambient temperatures between + 40 °C/+ *104 °F* and + 60 °C/+ *140 °F*, derate the nominal current of the Altistart by 2.2% for each additional degree.

- Certain altitudes:

For altitudes between 1,000 m/*3,280.83 ft* and 2,000 m/*6,561.66 ft*, derate the nominal current of the Altistart by 2% for each additional 100 m/*328.08 ft*.

- …

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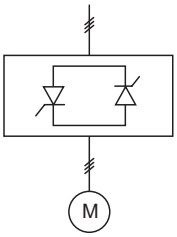
Altistart 22
soft start/soft stop units
Three-phase power supply voltage 230…440 V



Connection in the motor power supply line

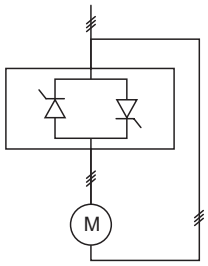
PF600043

ATS22D17●●●
ATS22D32●●●
ATS22D47●●●

Connection in the motor power supply line

Motor power given in kW in accordance with standard IEC/EN 60947-4-2. 220 V control power supply on CL1, CL2

Motor			Soft start/soft stop unit, 230…440 V - 50/60 Hz					
Power indicated on rating plate			Factory-set current (In) *(1)*	Nominal current (IcL) *(2)*	Power dissipated at nominal current	Dimensions W x D x H	Reference	Weight
230 V	400 V	440 V						
kW	kW	kW	A	A	W	mm/ *in.*		kg/ *lb*
4	7.5	7.5	14.8	17	39	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D17Q**	7.000/ *15.432*
7.5	15	15	28.5	32	44	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D32Q**	7.000/ *15.432*
11	22	22	42	47	48	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D47Q**	7.000/ *15.432*
15	30	30	57	62	59	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D62Q**	12.000/ *26.455*
18.5	37	37	69	75	63	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D75Q**	12.000/ *26.455*
22	45	45	81	88	66	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D88Q**	12.000/ *26.455*
30	55	55	100	110	73	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C11Q**	18.000/ *39.683*
37	75	75	131	140	82	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C14Q**	18.000/ *39.683*
45	90	90	162	170	91	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C17Q**	18.000/ *39.683*
55	110	110	195	210	117	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C21Q**	33.000/ *72.752*
75	132	132	233	250	129	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C25Q**	33.000/ *72.752*
90	160	160	285	320	150	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C32Q**	33.000/ *72.752*
110	220	220	388	410	177	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C41Q**	33.000/ *72.752*
132	250	250	437	480	218	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C48Q**	50.000/ *110.231*
160	315	355	560	590	251	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C59Q**	50.000/ *110.231*



Connection in the motor delta connection

PF600044

ATS22D62●●●
ATS22D75●●●
ATS22D88●●●

Connection in the motor delta connection

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

Motor			Soft start/soft stop unit, 230…440 V - 50/60 Hz					
Power indicated on rating plate *(4)*			Factory-set current (In) *(1) (3)*	Nominal current (IcL) *(2)*	Power dissipated at nominal current	Dimensions W x D x H	Reference	Weight
230 V	400 V	440 V						
kW	kW	kW	A	A	W	mm/ *in.*		kg/ *lb*
5.5	11	15	14.8	17	39	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D17Q**	7.000/ *15.432*
11	22	22	28.5	32	44	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D32Q**	7.000/ *15.432*
18.5	45	45	42	47	48	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D47Q**	7.000/ *15.432*
22	55	55	57	62	59	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D62Q**	12.000/ *26.455*
30	55	75	69	75	63	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D75Q**	12.000/ *26.455*
37	75	75	81	88	66	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D88Q**	12.000/ *26.455*
45	90	90	100	110	73	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C11Q**	18.000/ *39.683*
55	110	110	131	140	82	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C14Q**	18.000/ *39.683*
75	132	132	162	170	91	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C17Q**	18.000/ *39.683*
90	160	160	195	210	117	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C21Q**	33.000/ *72.752*
110	220	220	233	250	129	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C25Q**	33.000/ *72.752*
132	250	250	285	320	150	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C32Q**	33.000/ *72.752*
160	315	355	388	410	177	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C41Q**	33.000/ *72.752*
220	355	400	437	480	218	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C48Q**	50.000/ *110.231*
250	400	500	560	590	251	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C59Q**	50.000/ *110.231*

(1) In corresponds to the maximum continuous current for class 10 motors. It equates to the nominal current of a standard 4-pole, 400 V, class 10 motor (standard application).
(2) IcL corresponds to the starter rating.
(3) In = motor current/√ 3.
(4) When connected in the delta configuration, starters allow the use of motors of a larger rating relative to that of the starter. In this configuration, the nominal motor current should not exceed 1.5 IcL.

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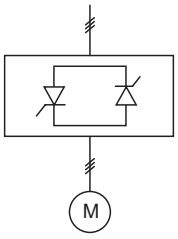
Schneider Electric

Altistart 22
soft start/soft stop units
Three-phase power supply voltage 208…600 V



Connection in the motor power supply line

PF600045

ATS22C1●●●●

PF600046

ATS22C2●●●●
ATS22C32●●●
ATS22C41●●●

PF600047

ATS22C48●●●
ATS22C59●●●

Connection in the motor power supply line

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

Motor				Soft start/soft stop unit, 230…600 V - 50/60 Hz					
Power indicated on rating plate				Factory-set current (In) *(1)*	Nominal current (IcL) *(2)*	Power dissipated at nominal current	Dimensions (W x D x H)	Reference	Weight
230 V	400 V	440 V	500 V						
kW	kW	kW	kW	A	A	W	mm/ *in.*		kg/ *lb*
4	7.5	7.5	9	14	17	39	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D17S6**	7.000/ *15.432*
7.5	15	15	18.5	27	32	44	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D32S6**	7.000/ *15.432*
11	22	22	30	40	47	48	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D47S6**	7.000/ *15.432*
15	30	30	37	52	62	59	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D62S6**	12.000/ *26.455*
18.5	37	37	45	65	75	63	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D75S6**	12.000/ *26.455*
22	45	45	55	77	88	66	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D88S6**	12.000/ *26.455*
30	55	55	75	96	110	73	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C11S6**	18.000/ *39.683*
37	75	75	90	124	140	82	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C14S6**	18.000/ *39.683*
45	90	90	110	156	170	91	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C17S6**	18.000/ *39.683*
55	110	110	132	180	210	117	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C21S6**	33.000/ *72.752*
75	132	132	160	240	250	129	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C25S6**	33.000/ *72.752*
90	160	160	220	302	320	150	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C32S6**	33.000/ *72.752*
110	220	220	250	361	410	177	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C41S6**	33.000/ *72.752*
132	250	250	315	414	480	218	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C48S6**	50.000/ *110.231*
160	315	355	400	477	590	251	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C59S6**	50.000/ *110.231*

Motor power given in *HP*. 110 V control power supply

Motor				Soft start/soft stop unit, 208…600 V - 50/60 Hz					
Power indicated on rating plate				Factory-set current (In) *(1)*	Nominal current (IcL) *(2)*	Power dissipated at nominal current	Dimensions (W x D x H)	Reference	Weight
208 V	230 V	460 V	575 V						
HP	*HP*	*HP*	*HP*	A	A	W	mm/ *in.*		kg/ *lb*
3	*5*	*10*	*15*	14	17	39	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D17S6U**	7.000/ *15.432*
7.5	*10*	*20*	*25*	27	32	44	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D32S6U**	7.000/ *15.432*
–	*15*	*30*	*40*	40	47	48	130 x 169 x 265/ *5.12 x 6.65 x 10.43*	**ATS22D47S6U**	7.000/ *15.432*
15	*20*	*40*	*50*	52	62	59	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D62S6U**	12.000/ *26.455*
20	*25*	*50*	*60*	65	75	63	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D75S6U**	12.000/ *26.455*
25	*30*	*60*	*75*	77	88	66	145 x 207 x 295/ *5.71 x 8.15 x 11.61*	**ATS22D88S6U**	12.000/ *26.455*
30	*40*	*75*	*100*	96	110	73	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C11S6U**	18.000/ *39.683*
40	*50*	*100*	*125*	124	140	82	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C14S6U**	18.000/ *39.683*
50	*60*	*125*	*150*	156	170	91	150 x 229 x 356/ *5.91 x 9.02 x 14.02*	**ATS22C17S6U**	18.000/ *39.683*
60	*75*	*150*	*200*	180	210	117	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C21S6U**	33.000/ *72.752*
75	*100*	*200*	*250*	240	250	129	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C25S6U**	33.000/ *72.752*
100	*125*	*250*	*300*	302	320	150	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C32S6U**	33.000/ *72.752*
125	*150*	*300*	*350*	361	410	177	206 x 299 x 425/ *8.11 x 11.77 x 16.73*	**ATS22C41S6U**	33.000/ *72.752*
150	–	*350*	*400*	414	480	218	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C48S6U**	50.000/ *110.231*
–	*200*	*400*	*500*	477	590	251	304 x 340 x 455/ *11.97 x 13.39 x 17.91*	**ATS22C59S6U**	50.000/ *110.231*

(1) In corresponds to the maximum continuous current for class 10 motors. It equates to the nominal current of a standard 4-pole, 400 V, class 10 motor (standard application).
(2) IcL corresponds to the starter rating.

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Altistart 22
soft start/soft stop units
Options: dialog and configuration tools

SoMove setup software

SoMove setup software

Presentation

SoMove software incorporates various functions for setting up Schneider Electric motor control devices, including:
- configuration preparation
- setup
- maintenance

To facilitate setup and maintenance, SoMove software can use a direct USB/RJ45 cable link TCSMCNAM3M002P or a Bluetooth® link.
Visit our website www.schneider-electric.com to download the SoMove software and catalog.

References

Description	For soft start/ soft stop unit	Reference	Weight kg/ *lb*
SoMove setup software	ATS 22	–	–
USB/RJ45 cable 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/*8.20 ft*	ATS 22	**TCSMCNAM3M002P**	0.115/ *0.254*

PF600051

VW3G22101

Remote display terminal

Presentation

This terminal enables the human machine interface of the Altistart 22 soft start/soft stop unit to be positioned remotely on the door of a floor-standing enclosure. It provides IP 54/UL type 12 or IP 65 protection depending on the model.
It is used to:
- set and configure the soft start/soft stop unit remotely
- display the soft start/soft stop unit status and detected errors remotely

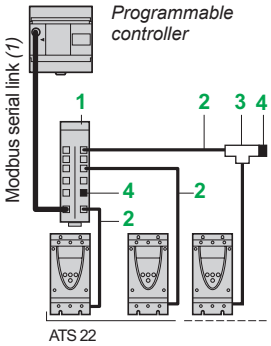
Its maximum operating temperature is 50 °C/*122 °F*. Please refer to our website “www.schneider-electric.com” if the temperature exceeds this value.

Description

1 4-digit display
2 Selection/validation key **ENT**: opens a menu or validates the selected value
3 Navigation keys ▲, ▼
4 Selection key **ESC**: used to exit a menu

References

Description	Degree of protection	Length m/ *ft*	Dimensions W x D x H mm/ *in.*	Reference	Weight kg/ *lb*
Remote display terminals A remote-mounting cordset is also required VW3A1104R●●	IP 54/UL type 12	–	50 x 15 x 70/ *1.97 x 0.59 x 2.76*	**VW3G22101**	0.250/ *0.551*
	IP 65	–	66 x 19 x 106/ *2.60 x 0.75 x 4.17*	**VW3G22102**	0.275/ *0.606*
Remote-mounting cordsets with 2 RJ45 connectors	–	1/ *3.28*	–	**VW3A1104R10**	0.050/ *0.110*
	–	3/ *9.84*	–	**VW3A1104R30**	0.150/ *0.331*



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

Modbus serial link

Connection via splitter box with RJ45 connectors

Description	Item	Length m/ *ft*	Unit reference	Weight kg/ *lb*
Modbus splitter box with 10 RJ45 connectors	1	–	**LU9GC3**	0.500/ *1.102*
Cordsets for Modbus serial link with 2 RJ45 connectors	2	0.3/ *0.98*	**VW3A8306R03**	0.025/ *0.055*
		1/ *3.28*	**VW3A8306R10**	0.060/ *0.132*
		3/ *9.84*	**VW3A8306R30**	0.130/ *0.287*
Modbus T-junction boxes (with integrated cable)	3	0.3/ *0.98*	**VW3A8306TF03**	0.190/ *0.419*
		1/ *3.28*	**VW3A8306TF10**	0.210/ *0.463*
Line terminators *(2) (3)* R = 120 Ω C = 1 nf	4	–	**VW3A8306RC**	0.010/ *0.022*
R = 120 Ω	4	–	**VW3A8306R**	0.010/ *0.022*

(1) Cable depends on the type of controller or PLC.
(2) Sold in lots of 2.
(3) Depends on the bus architecture.

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Altistart 22
soft start/soft stop units
Options: fans and accessories
Replacement parts

ATS22D17Q + VW3G2240●

Fans

Presentation

ATS22C21Q…C59Q, ATS22C21S6…C59S6, and ATS22C21S6U…C59S6U soft start/soft stop units have an integrated fan.
ATS22D17Q…C17Q, ATS22D17S6…C17QS6, and ATS22D17S6U…C17S6U soft start/soft stop units are ventilated by means of natural convection.
To meet the needs of 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 are mounted on the back of the device.
The fan noise level is less than 60 dBA.

References

Description	Control supply voltage	For soft start/ soft stop unit	Dimensions W x D x H	Reference	Weight
	V		mm/ *in.*		kg/ *lb*
Fans	220	ATS22D17Q…D47Q, ATS22D17S6…D47S6	130 x 40 x 265/ *5.11 x 1.57 x 10.43*	**VW3G22400**	1.200/ *2.646*
		ATS22D62Q…D88Q, ATS22D62S6…D88S6	145 x 40 x 295/ *5.71 x 1.57 x 11.61*	**VW3G22401**	1.400/ *3.086*
		ATS22C11Q…C17Q, ATS22C11S6…C17S6	150 x 40 x 350/ *5.91 x 1.57 x 13.78*	**VW3G22402**	1.600/ *3.527*
	110	ATS22D17S6U…D47S6U	130 x 40 x 265/ *5.11 x 1.57 x 10.43*	**VW3G22U400**	1.200/ *2.646*
		ATS22D62S6U…D88S6U	145 x 40 x 295/ *5.71 x 1.57 x 11.61*	**VW3G22U401**	1.400/ *3.086*
		ATS22C11S6U…C17S6U	150 x 40 x 350/ *5.91 x 1.57 x 13.78*	**VW3G22U402**	1.600/ *3.527*

PB111592

LA9F70●

Protective covers for power terminals (for use with eyelet connectors)

ATSC11Q…C59Q, ATSC11S6…C59S6, and ATSC11S6U…C59S6U soft start/soft stop units have 6 unprotected power terminals. These terminals can be equipped with protective covers.

Description	For soft start/ soft stop unit	Reference	Weight kg/ *lb*
Set of 6 protective covers	ATS22C11Q…C17Q, ATS22C11S6…C17S6, ATS22C11S6U…C17S6U	**LA9F702**	0.250/ *0.551*
	ATS22C21Q…C59Q, ATS22C21S6…C59S6, ATS22C21S6U…C59S6U	**LA9F703** *(1)*	0.250/ *0.551*

PF095021A

VZ3V22D1220V

PF095023A

VZ3V22E1110V

Replacement parts

References

Description	Control supply voltage	For soft start/ soft stop unit	Reference	Weight
	V			kg/ *lb*
Fans	220	ATS22C21Q...C41Q ATS22C21S6..C41S6	**VZ3V22D1220V**	1.145/ *2.524*
		ATS22C48Q…C59Q ATS22C48S6…C59S6	**VZ3V22E1220V**	2.195/ *4.839*
	110	ATS22C21S6U...C41S6U	**VZ3V22D1110V**	1.145/ *2.524*
		ATS22C48S6U...C59S6U	**VZ3V22E1110V**	2.195/ *4.839*

(1) For use with M10 x 35 mm/1.38 in. screws (not supplied).

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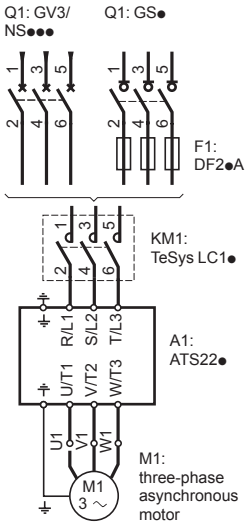
Altistart 22
soft start/soft stop units
Motor starters:
three-phase supply voltage 400…440 V
Type 1 coordination



Motor starter with protection via circuit breaker or disconnect switch

Compatible components according to standard IEC/EN 60947-4-2

Use the contactor and starter with either a circuit breaker or a fused disconnect switch

Three-phase 4-pole motor 50/60 Hz			Class 10 starter *(1)*	Circuit breaker		Contactor *(3)*	Fused disconnect switch (for front and side-mounted operator)	aM fuse		
400 V	440 V			Reference	Rating			Unit reference *(4)*	Size	Rating
kW	kW	A			A				mm/ *in.*	A
M1	M1		A1	Q1		KM1	Q1	F1		
7.5	7.5	14.8	**ATS22D17●**	**GV3L20**	–	**LC1D18●●**	**GS1DD3**	**DF2CA16**	10 x 38/ *0.39 x 1.50*	16
				NS80H-MA	25					
15	15	28.5	**ATS22D32●**	**GV3L32**	–	**LC1D32●●**	**GS1DD3**	**DF2CA32**	10 x 38/ *0.39 x 1.50*	32
				NS80H-MA	50					
22	22	42	**ATS22D47●**	**GV3L50**	–	**LC1D50A●●**	**GS2F3**	**DF2EA50**	14 x 51/ *0.55 x 2.00*	50
				NS80H-MA	50					
30	30	57	**ATS22D62●**	**GV3L65**	–	**LC1D65A●●**	**GS2J3**	**DF2FA63**	22 x 58/ *0.87 x 2.28*	63
				NS80H-MA	80					
37	37	69	**ATS22D75●**	***NS80H-MA***	80	**LC1D80●●**	**GS2J3**	**DF2FA80**	22 x 58/ *0.87 x 2.28*	80
45	45	81	**ATS22D88●**	***NSX100●MA*** *(2)*	100	**LC1D115●●**	**GS2J3**	**DF2FA100**	22 x 58/ *0.87 x 2.28*	100
55	55	100	**ATS22C11●**	***NSX160●MA*** *(2)*	150	**LC1D115●●**	**GS2K3**	**DF2FA125**	22 x 58/ *0.87 x 2.28*	125
75	75	131	**ATS22C14●**	***NSX160●MA*** *(2)*	150	**LC1D150●●**	**GS2L3**	**DF2GA1161**	Size 0	160
90	90	162	**ATS22C17●**	***NSX250●MA*** *(2)*	220	**LC1F185●●**	**GS2N3**	**DF2HA1201**	Size 1	200
110	110	195	**ATS22C21●**	***NSX250●MA*** *(2)*	220	**LC1F225●●**	**GS2N3**	**DF2HA1251**	Size 1	250
132	132	233	**ATS22C25●**	***NSX400● Micrologic 1.3-M*** *(2)*	320	**LC1F265●●**	**GS2N3**	**DF2HA1251**	Size 1	250
160	160	285	**ATS22C32●**	***NSX400● Micrologic 1.3-M*** *(2)*	320	**LC1F330●●**	**GS2QQ3**	**DF2JA1311**	Size 2	315
220	220	388	**ATS22C41●**	***NSX630● Micrologic 1.3-M*** *(2)*	500	**LC1F400●●**	**GS2S3**	**DF2KA1401**	Size 3	400
250	250	437	**ATS22C48●**	***NSX630● Micrologic 1.3-M*** *(2)*	500	**LC1F500●●**	**GS2S3**	**DF2KA1501**	Size 3	500
315	355	560	**ATS22C59●**	***NS630b● Micrologic 5.0*** *(2)*	500	**LC1F630●●**	**GS2S3**	**DF2KA1631**	Size 3	630

(1) Replace ● with Q or S6 depending on the starter voltage range.
To find out more about compatible combinations for 230 V (ATS22●●●Q starters) or 500 V (ATS22●●●S6 starters) motor supply voltages, visit our website "www.schneider-electric.com".
(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 refer to our "Control and protection components" catalog.
(4) DF2CA, EA, FA: sold in lots of 10.
DF2GA, HA, JA, KA: sold in lots of 3.

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

Starter	Iq (kA) at 500 V
ATS22D17●… ATS22D75●	25
ATS22D88●… ATS22C59●	50

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

Circuit breaker	Icu (kA) at 400 V					Icu (kA) at 400 V				
GV3L	50					50				
NS80H-MA	70					65				
Circuit breaker	**Icu (kA) at 400 V**					**Icu (kA) at 400 V**				
	F	**N**	**H**	**S**	**L**	**F**	**N**	**H**	**S**	**L**
NSX100…NSX630	36	50	70	100	150	35	50	65	90	130
NS630B	–	50	70	–	150	–	50	65	–	130

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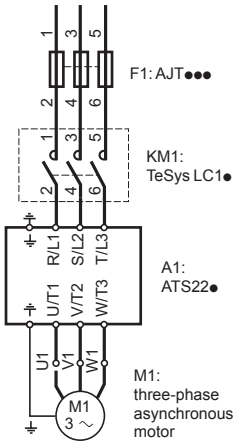
Altistart 22
soft start/soft stop units
Motor starters:
three-phase supply voltage 208…575 V



Motor starter with fuse protection

Compatible components in accordance with standard UL 508

Product without enclosure

Three-phase 4-pole motor 50/60 Hz					Class 10 starter	Maximum short-circuit current (SCC) at 600 V	Contactor *(1)*	Time delay fuse (sold by Ferraz Shawmut)	
208 V *HP*	230 V *HP*	460 V *HP*	575 V *HP*	A		kA		Class J	Class L A
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●●**	**–**	**500**
75	*100*	*200*	*250*	240	**ATS22C25S6U**	18	**LC1F265●●**	**–**	**600**
100	*125*	*250*	*300*	302	**ATS22C32S6U**	18	**LC1F330●●**	**–**	**700**
125	*150*	*300*	*350*	361	**ATS22C41S6U**	18	**LC1F400●●**	**–**	**800**
150	*–*	*350*	*400*	414	**ATS22C48S6U**	18	**LC1F500●●**	**–**	**1,000**
–	*200*	*400*	*500*	477	**ATS22C59S6U**	30	**LC1F630●●**	**–**	**1,200**

Enclosed product

Three-phase 4-pole motor 50/60 Hz					Class 10 starter	Maximum short-circuit current (SCC) at 600 V	Minimum enclosure volume		Contactor *(1)*	Time delay fuse	
208 V *HP*	230 V *HP*	460 V *HP*	575 V *HP*	A		kA	cm^3	$in.^3$		Class J A	Class L A
M1	M1	M1	M1		A1				KM1	F1	
3	*5*	*10*	*15*	14	**ATS22D17S6U**	100	40	2.406	**LC1D18●●**	**30**	**–**
7.5	*10*	*20*	*25*	27	**ATS22D32S6U**	100	40	2.406	**LC1D32●●**	**60**	**–**
–	*15*	*30*	*40*	40	**ATS22D47S6U**	100	40	2.406	**LC1D50A●●**	**90**	**–**
15	*20*	*40*	*50*	52	**ATS22D62S6U**	100	52	3.149	**LC1D65A●●**	**110**	**–**
20	*25*	*50*	*60*	65	**ATS22D75S6U**	100	52	3.149	**LC1D80A●●**	**150**	**–**
25	*30*	*60*	*75*	77	**ATS22D88S6U**	100	52	3.149	**LC1D115●●**	**175**	**–**
30	*40*	*75*	*100*	96	**ATS22C11S6U**	100	125	7.630	**LC1D115●●**	**200**	**–**
40	*50*	*100*	*125*	124	**ATS22C14S6U**	100	125	7.630	**LC1F150●●**	**250**	**–**
50	*60*	*125*	*150*	156	**ATS22C17S6U**	100	125	7.630	**LC1F185●●**	**300**	**–**
60	*75*	*150*	*200*	180	**ATS22C21S6U**	100	130	7.892	**LC1F225●●**	**400**	**–**
75	*100*	*200*	*250*	240	**ATS22C25S6U**	100	130	7.892	**LC1F265●●**	**450**	**–**
100	*125*	*250*	*300*	302	**ATS22C32S6U**	100	130	7.892	**LC1F330●●**	**600**	**–**
125	*150*	*300*	*350*	361	**ATS22C41S6U**	100	130	7.892	**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 voltage reference: please refer to our "Control and protection components" catalog.

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Product reference index

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