

# Product data sheet

## Characteristics

# ATS22D32S6

## soft starter-ATS22-control 220V-power 230V(7.5kW)/400...440V(15kW)/500V(18.5kW)



### Main

|                                |  |
|--------------------------------|--|
| Range of product               | Altistart 22   |
| Product or component type      | Soft starter   |
| Product destination            | Asynchronous motors  |
| Product specific application   | Pumps and fans   |
| Component name                 | ATS22  |
| Network number of phases       | 3 phases   |
| [Us] rated supply voltage      | 230...600 V - 15...10 %  |
| Motor power kW                 | 15 KW 400 V<br>15 KW 440 V<br>7.5 KW 230 V<br>18.5 kW 500 V            |
| Factory setting current        | 27 A   |
| Power dissipation in W         | 44 W for standard applications   |
| Utilisation category           | AC-53A   |
| Type of start                  | Start with torque control (current limited to 3.5 In)                  |
| I <sub>CL</sub> starter rating | 32 A for connection in the motor supply line for standard applications |
| IP degree of protection        | IP20   |

### Complementary

|   |  |
|---|--|
| Assembly style                            | With heat sink   |
| Function available                        | Internal bypass  |
| Supply voltage limits                     | 195...660 V  |
| Supply frequency                          | 50...60 Hz - 10...10 %   |
| Network frequency                         | 45...66 Hz   |
| Device connection                         | In the motor supply line   |
| [U <sub>c</sub> ] control circuit voltage | 230 V - 15...10 % 50/60 Hz   |
| Control circuit consumption               | 20 W   |
| Discrete output number                    | 2  |
| Discrete output type                      | Relay outputs R1 230 V running, alarm, trip, stopped, not stopped, starting, ready C/O<br>Relay outputs R2 230 V running, alarm, trip, stopped, not stopped, starting, ready C/O |
| Minimum switching current                 | 100 mA at 12 V DC (relay outputs)  |
| Maximum switching current                 | 5 A 250 V AC resistive 1 relay outputs<br>5 A 30 V DC resistive 1 relay outputs<br>2 A 250 V AC inductive 0.4 20 ms relay outputs<br>2 A 30 V DC inductive 7 ms relay outputs    |
| Discrete input number                     | 3  |
| Discrete input type                       | (LI1, LI2, LI3) logic, 5 mA 4.3 kOhm   |
| Discrete input voltage                    | 24 V <= 30 V   |
| Discrete input logic                      | Positive logic LI1, LI2, LI3 at State 0: < 5 V and <= 2 mA at State 1: > 11 V, >= 5 mA   |
| Output current                            | 0.4...1 I <sub>CL</sub> adjustable   |
| PTC probe input                           | 750 Ohm  |
| Communication port protocol               | Modbus   |
| Connector type                            | 1 RJ45   |

|                         |   |
|-------------------------|---|
| Communication data link | Serial  |
| Physical interface      | RS485 multidrop   |
| Transmission rate       | 4800, 9600 or 19200 bps   |
| Installed device        | 31  |
| Protection type         | Phase failure: line<br>Thermal protection: motor<br>Thermal protection: starter |
| Marking                 | CE  |
| Type of cooling         | Forced convection   |
| Operating position      | Vertical +/- 10 degree  |
| Height                  | 265 mm  |
| Width                   | 130 mm  |
| Depth                   | 169 mm  |
| Net weight              | 7 kg  |

## Environment

|                                       |  |
|---------------------------------------|--|
| Electromagnetic compatibility         | Conducted and radiated emissions level A conforming to IEC 60947-4-2<br>Damped oscillating waves level 3 conforming to IEC 61000-4-12<br>Electrostatic discharge level 3 conforming to IEC 61000-4-2<br>Immunity to electrical transients level 4 conforming to IEC 61000-4-4<br>Immunity to radiated radio-electrical interference level 3 conforming to IEC 61000-4-3<br>Voltage/current impulse level 3 conforming to IEC 61000-4-5 |
| Standards                             | EN/IEC 60947-4-2   |
| Product certifications                | CCC<br>UL<br>CSA<br>GOST<br>C-Tick   |
| Vibration resistance                  | 1 gn (f= 13...200 Hz) conforming to EN/IEC 60068-2-6<br>1.5 mm (f= 2...13 Hz) conforming to EN/IEC 60068-2-6   |
| Shock resistance                      | 15 gn for 11 ms conforming to EN/IEC 60068-2-27  |
| Noise level                           | 45 dB  |
| Pollution degree                      | Level 2 conforming to IEC 60664-1  |
| Relative humidity                     | 0...95 % without condensation or dripping water conforming to EN/IEC 60068-2-3   |
| Ambient air temperature for operation | -10...40 °C (without derating)<br>40...60 °C (with current derating 2.2 % per °C)  |
| Ambient air temperature for storage   | -25...70 °C  |
| Operating altitude                    | <= 1000 m without derating<br>> 1000...< 2000 m with current derating of 2.2 % per additional 100 m  |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 5.795 kg |
| Package 1 Height             | 23.5 cm  |
| Package 1 width              | 31 cm    |
| Package 1 Length             | 36 cm    |
| Unit Type of Package 2       | P06      |
| Number of Units in Package 2 | 10       |
| Package 2 Weight             | 70.95 kg |
| Package 2 Height             | 73.5 cm  |
| Package 2 width              | 80 cm    |
| Package 2 Length             | 60 cm    |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <input checked="" type="checkbox"/> REACH Declaration   |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <input checked="" type="checkbox"/> EU RoHS Declaration          |
| Mercury free               | Yes   |
| RoHS exemption information | <input checked="" type="checkbox"/> Yes   |
| China RoHS Regulation      | <input checked="" type="checkbox"/> China RoHS Declaration  |
| Environmental Disclosure   | <input checked="" type="checkbox"/> Product Environmental Profile   |
| Circularity Profile        | <input checked="" type="checkbox"/> End Of Life Information   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

## Contractual warranty

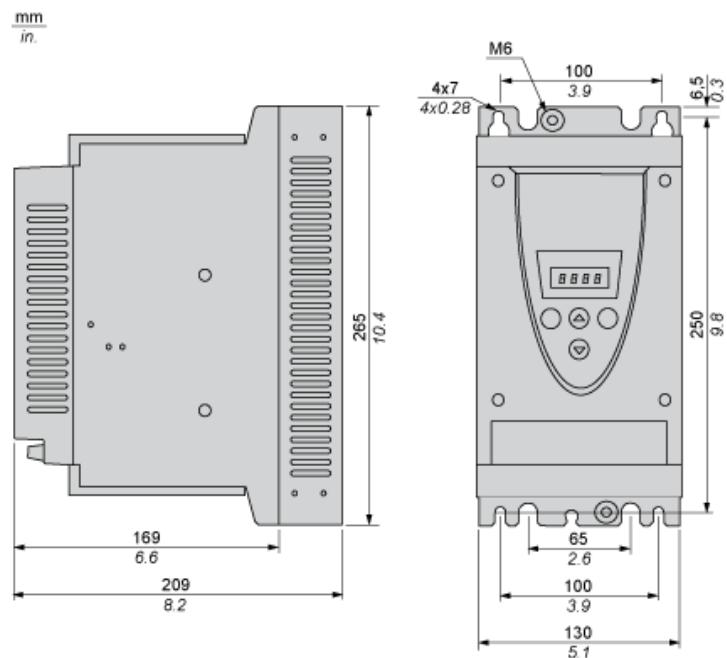
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

---

Frame Size A

---

Dimensions



## Precautions

### Standards

The Altistart 22 soft starter is compliant with pollution Degree 2 as defined in NEMA ICS1-1 or IEC 60664-1.

For environment pollution degree 3, install the Altistart 22 soft starter inside a cabinet type 12 or IP54.

### DANGER

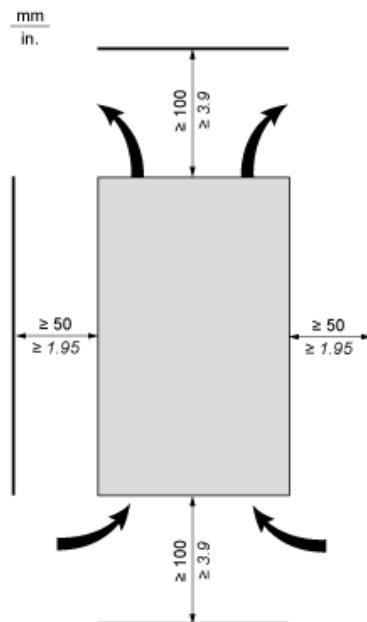
#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

ATS22 soft starters are open devices and must be mounted in a suitable enclosure.

Failure to follow these instructions will result in death or serious injury.

## Air Circulation

Leave sufficient free space to help the air required for cooling purposes to circulate from the bottom to the top of the unit.



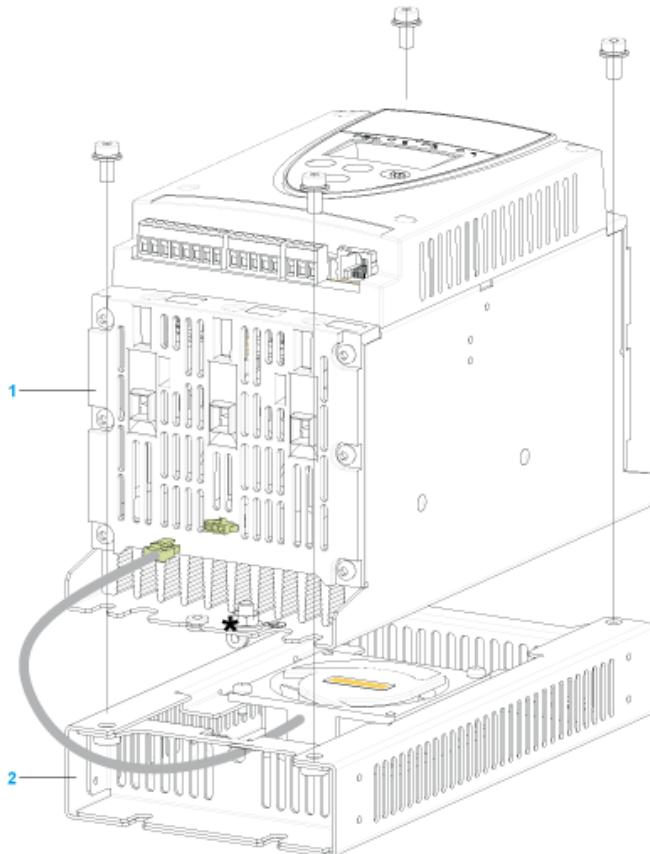
## Overheating

To avoid the soft starter to overheat, respect the following recommendations:

- Mount the Altistart 22 Soft Starter within  $\pm 10^\circ$  of vertical.
- Do not locate the Altistart 22 Soft Starter near heat radiating elements.
- Electrical current through the Altistart 22 Soft Starter will result in heat losses that must be dissipated into the ambient air immediately surrounding the soft starter. To help prevent a thermal fault, provide sufficient enclosure cooling and/or ventilation to limit the ambient temperature around the soft starter.
- If several soft starters are installed in a control panel, arrange them in a row. Do not stack soft starters. Heat generated from the bottom soft starter can adversely affect the ambient temperature around the top soft starter.

## Mounting

## Connection Between the Fan and the Altistart 22 Soft Starter



1 Altistart 22 Soft Starter

2 Fan

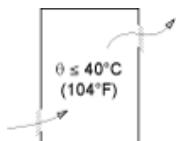
## Wall mounted or Floor-standing Enclosure with IP 23 Degree of protection

---

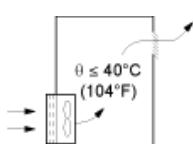
### Introduction

To help proper air circulation in the soft starter, grilles and forced ventilation can be installed.

### Ventilation Grilles

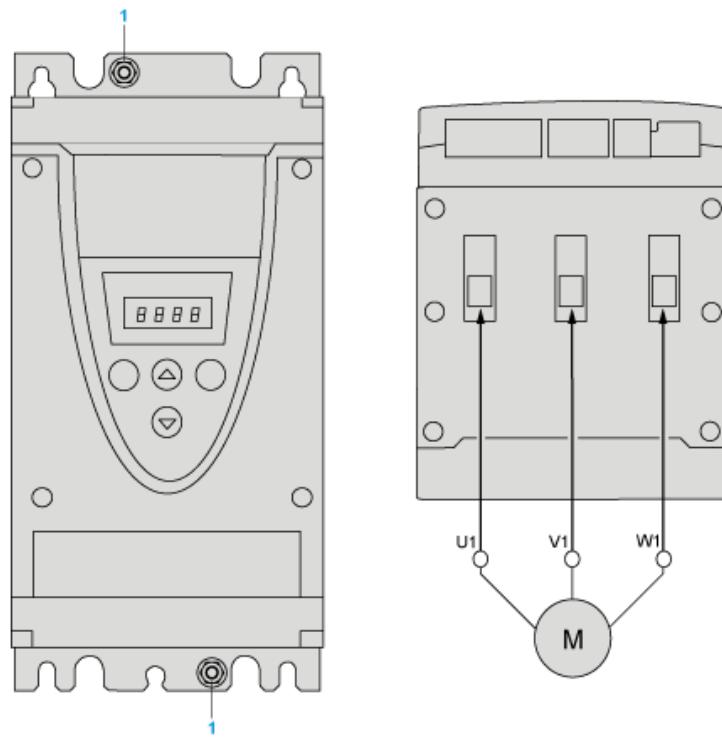


### Forced Ventilation Unit



**Power Terminal**

**Cage Style**



1 Ground connection

**Power connections, minimum and maximum wiring capabilities, tightening torque**

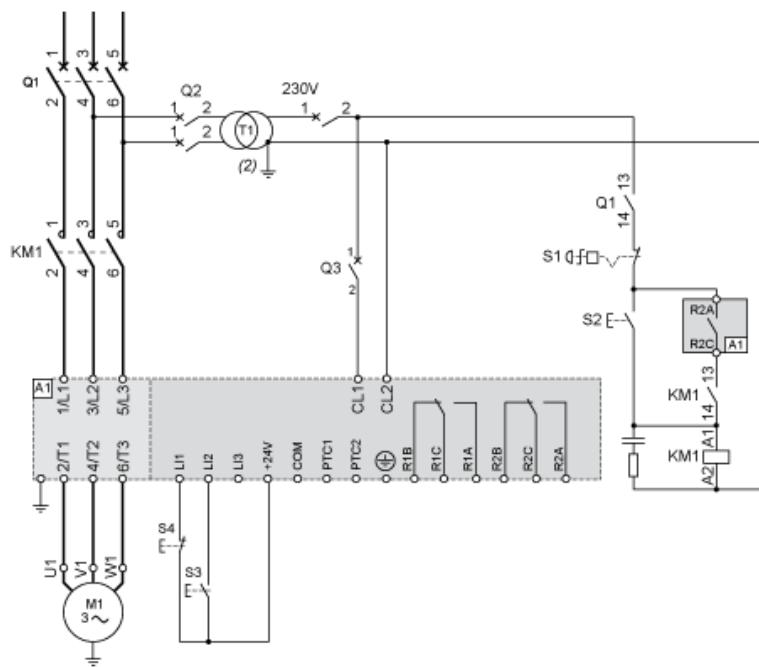
|                                  |            |                | IEC cable   | UL cable |
|----------------------------------|------------|----------------|-------------|----------|
| Power supply and output to motor | Size/gauge | min            | 2.5 mm      | 12 AWG   |
| max                              | 16 mm      | 4 AWG          |             |          |
| Tightening torque                | min        | 3 N.m          | 26.25 lb.in |          |
| max                              | 3 N.m      | 26.25<br>lb.in |             |          |
| Strip length                     |            | 10 mm          | 0.4 in.     |          |

**Power connections, minimum required wiring section**

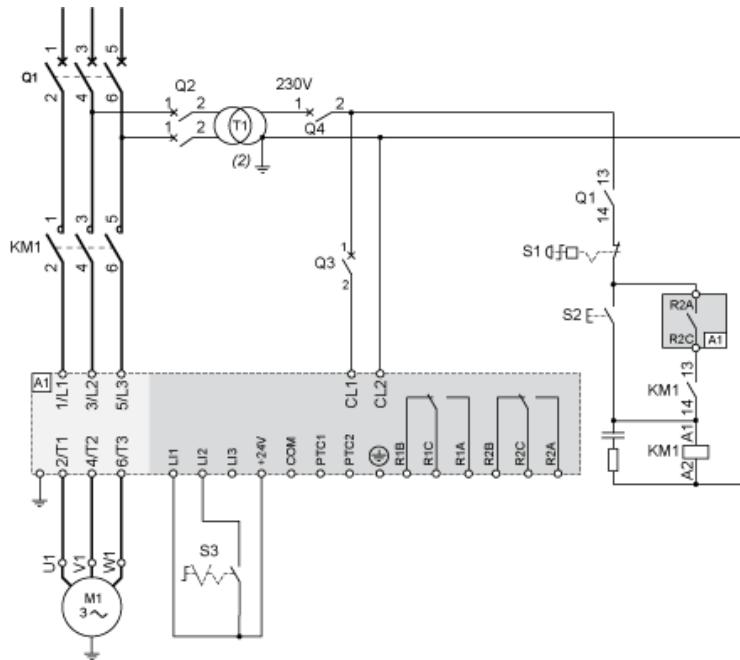
| IEC cable<br>mm <sup>2</sup> (Cu 70°C/158°F) (1) | UL cable<br>AWG (Cu 75°C/167°F) (1) |
|--|-------------------------------------|
| 6  | 8                                   |

230 Vac control, logic Inputs (LI) 24 Vdc, 3-wire control

#### With Line Contactor, Freewheel or Controlled Stop

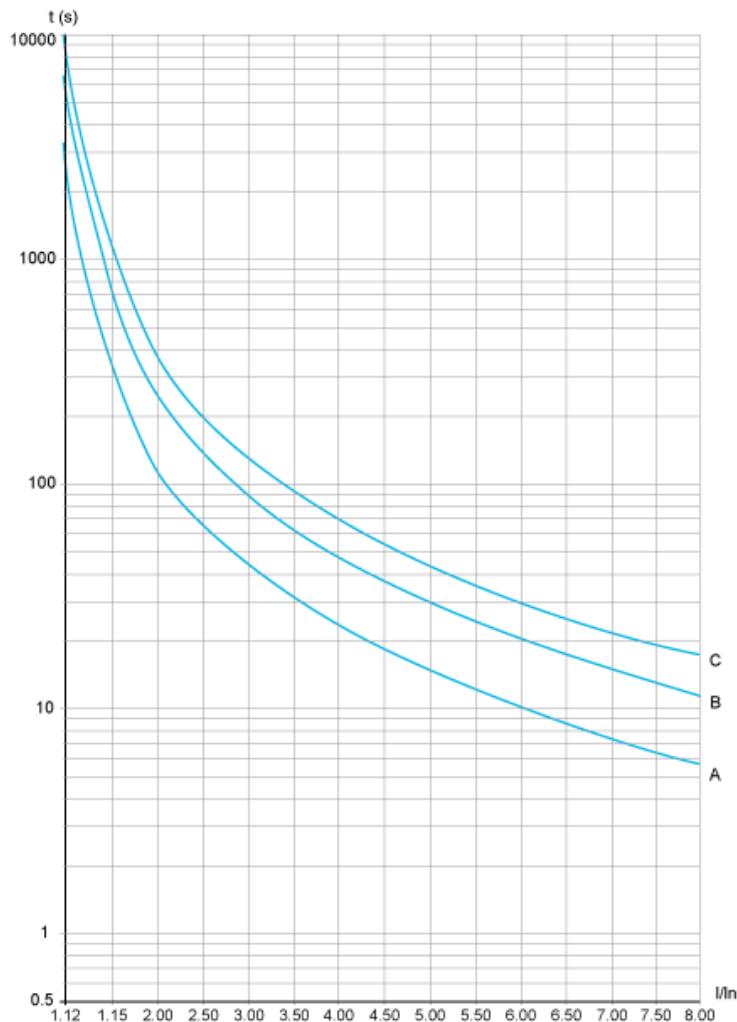


230 Vac control, logic Inputs (LI) 24 Vdc, 2-wire control, freewheel stop



Motor Thermal Protection - Cold Curves

Curves



A Class 10  
B Class 20  
C Class 30

Trip time for a Standard Application (Class 10)

|        |
|--------|
| 3.5 In |
| 32 s   |

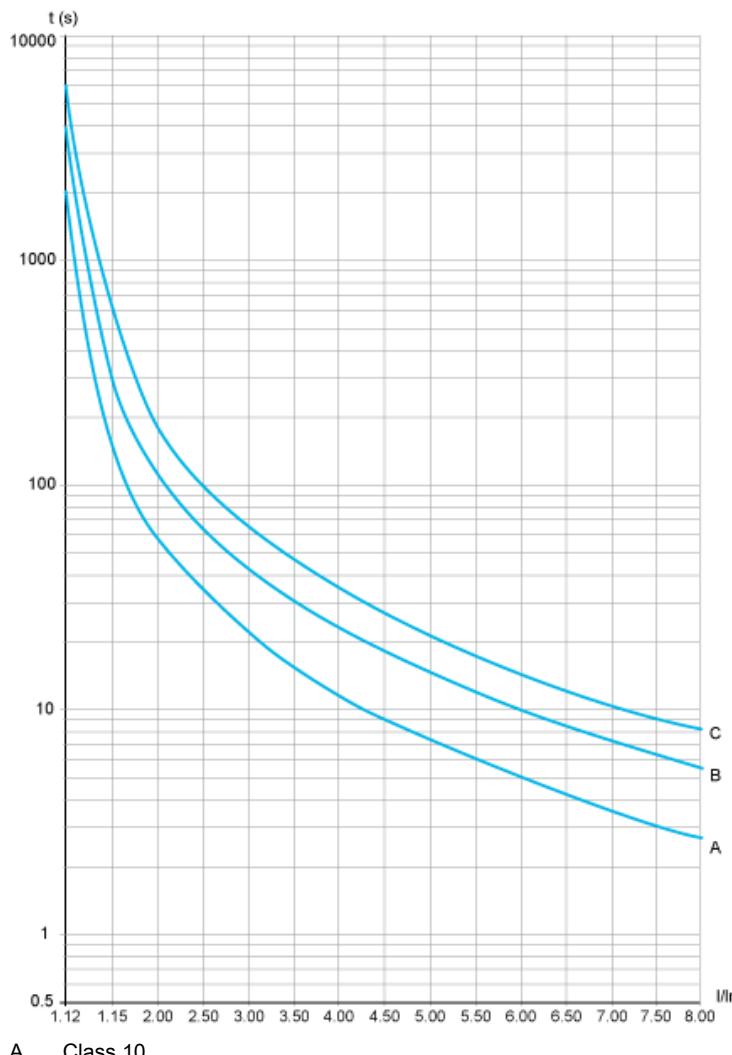
Trip time for a Severe Application (Class 20)

|        |
|--------|
| 3.5 In |
| 63 s   |

Trip time for a Severe Application (Class 30)

|        |
|--------|
| 3.5 In |
| 95 s   |

### Curves



A Class 10  
B Class 20  
C Class 30

### Trip time for a Standard Application (Class 10)

|           |
|-----------|
| 3.5 $I_n$ |
| 16 s      |

### Trip time for a Severe Application (Class 20)

|           |
|-----------|
| 3.5 $I_n$ |
| 32 s      |

### Trip time for a Severe Application (Class 30)

|           |
|-----------|
| 3.5 $I_n$ |
| 48 s      |