# soft starter-ATS22-control 220V-power 230V(22kW)/400...440V(45kW)



Product availability: Non-Stock - Not normally stocked in distribution facility



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
Phase	3 phases
[Us] rated supply voltage	230440 V - 1510 %
Motor power kW	22 kW 230 V 45 kW 400 V 45 kW 440 V
Factory setting current	81 A
Power dissipation in W	66 W for standard applications
Utilisation category	AC-53A
Type of start	Start with torque control (current limited to 3.5 ln)
IcL starter rating	88 A 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	195484 V	
Supply frequency	5060 Hz - 1010 %	
Network frequency	4566 Hz	
Device connection	In the motor supply line To the motor delta terminals	
[Uc] control circuit voltage	230 V -1510 % 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 Relay outputs R2 230 V running, alarm, trip, stopped, not stopped, starting, ready C/O	
Minimum switching current	100 mA 12 V DC relay outputs	
Maximum switching current	5 A 250 V AC resistive 1 relay outputs 5 A 30 V DC resistive 1 relay outputs 2 A 250 V AC inductive 0.4 20 ms relay outputs 2 A 30 V DC inductive 7 ms relay outputs	
Discrete input number	3	
Discrete input type	Logic LI1, LI2, LI3 5 mA 4.3 kOhm	
Discrete input voltage	24 V <= 30 V	
Discrete input logic	Positive logic LI1, LI2, LI3 < 5 V and <= 2 mA > 11 V >= 5 mA	
Output current	0.41 lcl 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 Thermal protection starter Thermal protection motor	
Marking	CE	
Type of cooling	Forced convection	
Operating position	Vertical +/- 10 degree	
Height	11.61 in (295 mm)	
Width	5.71 in (145 mm)	
Depth	8.15 in (207 mm)	
Product weight	26.46 lb(US) (12 kg)	
Motor power range AC-3	1525 kW at 200240 V 3 phases 3050 kW at 380440 V 3 phases	
Motor starter type	Soft starter	

#### Environment

Electromagnetic compatibility	Conducted and radiated emissions level A IEC 60947-4-2 Damped oscillating waves level 3 IEC 61000-4-12 Electrostatic discharge level 3 IEC 61000-4-2 Immunity to electrical transients level 4 IEC 61000-4-4 Immunity to radiated radio-electrical interference level 3 IEC 61000-4-3 Voltage/current impulse level 3 IEC 61000-4-5	
Standards	EN/IEC 60947-4-2	
Product certifications	UL CSA C-Tick GOST CCC	
Vibration resistance	1.5 mm 213 Hz EN/IEC 60068-2-6 1 gn 13200 Hz EN/IEC 60068-2-6	
Shock resistance	15 gn 11 ms EN/IEC 60068-2-27	
Noise level	45 dB	
Pollution degree	Level 2 IEC 60664-1	
Relative humidity	095 % without condensation or dripping water EN/IEC 60068-2-3	
Ambient air temperature for operation	14104 °F (-1040 °C) without derating > 104< 140 °F (> 40< 60 °C) with current derating 2.2 % per °C	
Ambient air temperature for storage	-13158 °F (-2570 °C)	
Operating altitude	<= 3280.84 ft (1000 m) without derating > 3280.84< 6561.68 ft (> 1000< 2000 m) with current derating of 2.2 % per additional 100 m	

## Ordering and shipping details

167232

## Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0938 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

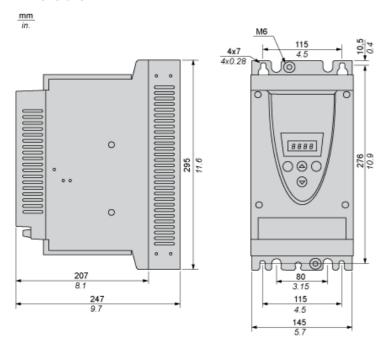
California proposition 65	WARNING: This product can expose you to chemicals including:
Substance 1	Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm.
Substance 2	Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm.
More information	For more information go to www.p65warnings.ca.gov

Warranty period	18 months

# ATS22D88Q

#### Frame Size B

#### **Dimensions**



## Product data sheet Mounting and Clearance

## ATS22D88Q

#### **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

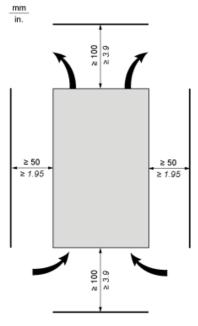
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

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.



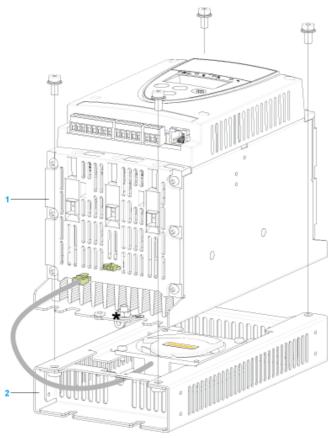
#### Overheating

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

- Mount the Altistart 22 Soft Starter within ± 10° 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

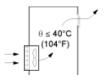
#### Introduction

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

#### **Ventilation Grilles**

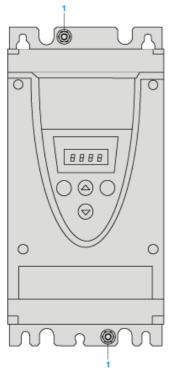


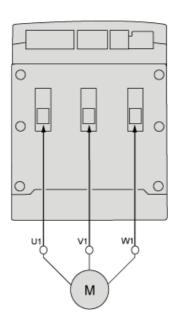
#### Forced Ventilation Unit



#### **Power Terminal**

#### Cage Style





1 Ground connection

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

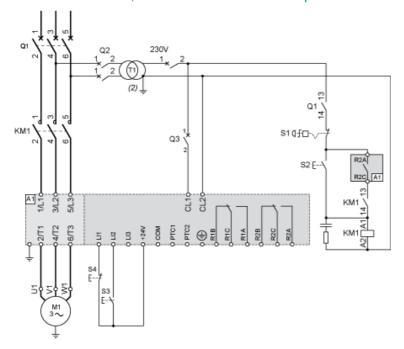
			IEC cable	UL cable
Power supply and output to motor	Size/gauge	min	4 mm (a)	10 AWG (a)
max	50 mm	1/0 AWG		
Tightening torque	min	8 N.m	70 lb.in	
max	8 N.m	70 lb.in		•
Strip length		15 mm	0.6 in.	

### Power connections, minimum required wiring section

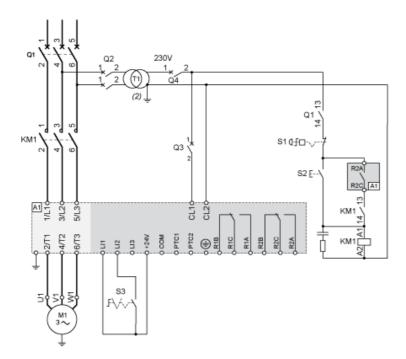
IEC cable	UL cable
mm² (Cu 70°C/158°F) (1)	AWG (Cu 75°C/167°F) (1)
35	2

## 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

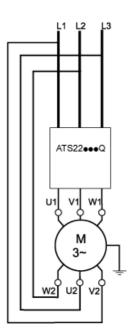


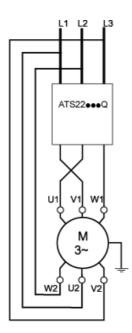
## Connection in the motor delta winding in series with each winding

#### Wiring

ATS22 soft starters connected to motors with the delta connections can be inserted in series in the motor windings.

The following wiring requieres particular attention. It is documented in the Altistart 22 Soft start - soft stop unit user manual. Please contact Schneider Electric commercial organisation for further informations.





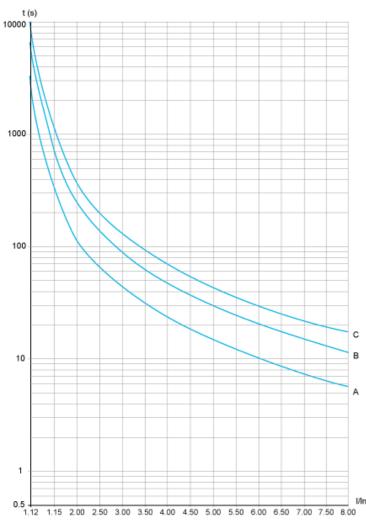
## Example

A 400 V - 110 kW motor with a line current of 195 A (nominal current for the delta connection). The current in each winding is equal to 195/1.5 or 130 A. The rating is determined by selecting the soft starter with a permanent nominal current (ICL) just above this current.

# ATS22D88Q

#### 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 ln

32 s

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

3.5 ln

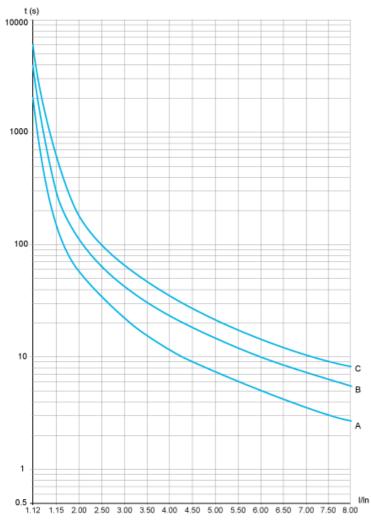
63 s

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

3.5 ln

95 s





- Class 10 Class 20 A B C
- Class 30

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

3.5 ln	
16 s	

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

3.5 ln	
32 s	

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

3.5 ln	
48 s	

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