Product datasheet Characteristics

ATS22C48Q

soft starter-ATS22-control 220V-power 230V(132kW)/400...440V(250kW)



Price*: 3173.00 GBP



Main

| Mani | | |
|------------------------------|---|--------|
| Range of product | Altistart 22 | 1 |
| 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 | 230440 V - 1510 % | : : |
| Motor power kW | 132 kW 230 V 250 kW 400 V 250 kW 440 V | |
| Factory setting current | 437 A | |
| Power dissipation in W | 218 W for standard applications | |
| Utilisation category | AC-53A | |
| Type of start | Start with torque control (current limited to 3.5 ln) | |
| IcL starter rating | 480 A connection in the motor supply line for standard applications | 7 |
| IP degree of protection | IP00 | |
| | | |

Complementary

| Assembly style | With heat sink | 0 |
|---|------------------------|----------|
| Function available | Internal bypass | 9 |
| Supply voltage limits | 195484 V | <u>.</u> |
| Supply frequency | 5060 Hz - 1010 % | |
| Network frequency | 4566 Hz | et i |
| 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 | i Li |

| 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 | 455 mm |
| Width | 304 mm |
| Depth | 339.7 mm |
| Product weight | 50 kg |
| Power range | 110220 kW at 200240 V 3 phases 250500 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 | CCC CSA C-Tick GOST UL |
| 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 | 56 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 | -1040 °C without derating > 40< 60 °C with current derating 2.2 % per °C |
| Ambient air temperature for storage | -2570 °C |
| Operating altitude | <= 1000 m without derating > 1000< 2000 m with current derating of 2.2 % per additional 100 m |

Offer Sustainability

| Sustainable offer status | Green Premium product | | |
|----------------------------------|---|--|--|
| RoHS (date code: YYWW) | Compliant - since 0939 - Schneider Electric declaration of conformity | | |
| | Schneider Electric declaration of conformity | | |
| REACh | Reference not containing SVHC above the threshold | | |
| | Reference not containing SVHC above the threshold | | |
| Product environmental profile | Available | | |
| Product end of life instructions | Available | | |

Contractual warranty

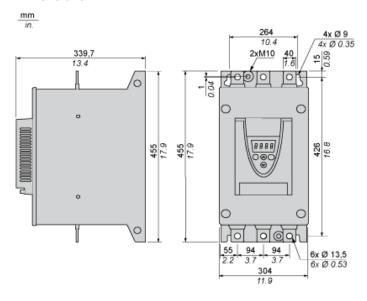
| Warranty period | 18 months |
|-----------------|-----------|
|-----------------|-----------|

Product datasheet Dimensions Drawings

ATS22C48Q

Frame Size E

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

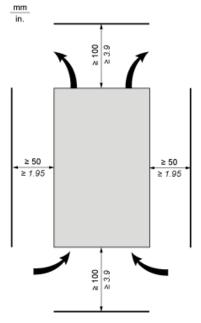
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

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 ± 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
- 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 as

Product datasheet Mounting and Clearance

ATS22C48Q

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

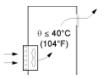
Introduction

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

Ventilation Grilles

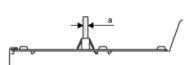


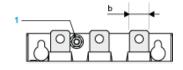
Forced Ventilation Unit



Power Terminal

Bar Style





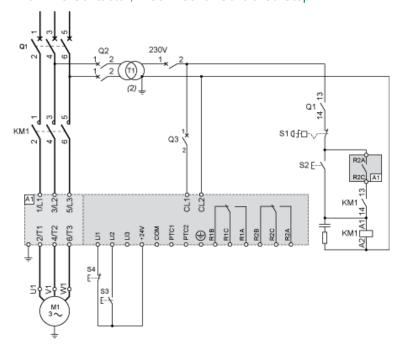
| Power supply and output to motor | Bar | b | 40 mm (1.18 in) |
|----------------------------------|---------------|-----------|-----------------|
| а | 5 mm (0.2 in) | | |
| Bolt | M12 (0.47 in) | | |
| Cable and protective cover | Size | 2X240 mm² | |
| Gauge | 2X500 MCM | | |
| Protective cover | LA9F703 | | |
| Tightening torque | 57 N.m | | |
| 498.75 lb.in | | | |

Power connections, minimum required wiring section

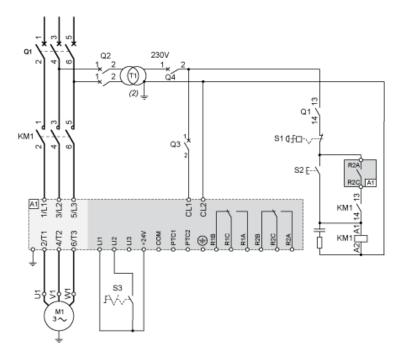
| IEC cable | UL cable |
|-------------------------|-------------------------|
| mm² (Cu 70°C/158°F) (1) | AWG (Cu 75°C/167°F) (1) |
| 2 X 150 | 3 X 350 MCM |

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

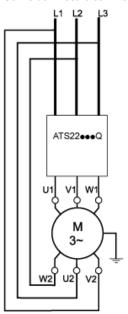


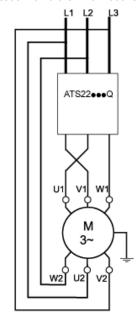
Connection in the motor delta winding in series with each winding

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.



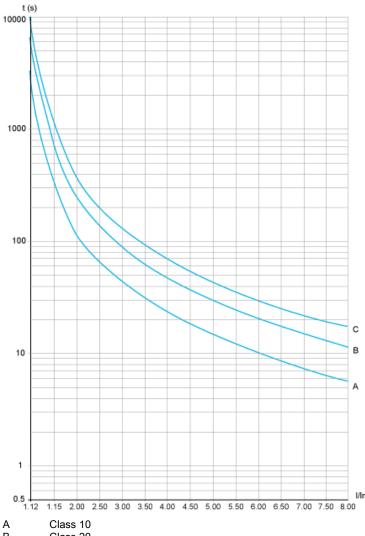


Example

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.

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

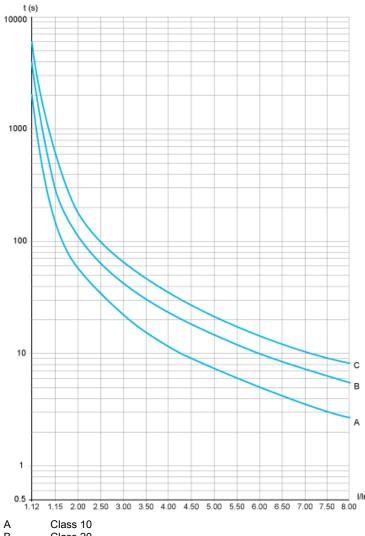
63 s

Trip time for a Severe Application (Class 30)

| 3.5 ln | |
|--------|--|
| 95 s | |

Motor Thermal Protection - Warm Curves

Curves



A Class 10 B Class 20 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)

| | ` | <u>, </u> |
|--------|-------|--|
| 3.5 ln | | |
| 48 s | | |

Our Proposal: Circuit Breaker + Contactor + Soft starter for Motor Power 250 kW and 400 VAC

| Motor power | ICU | Breaker | Contactor (*) | Instantaneous auxiliary conta | Motor Starter |
|-------------|------|----------|---------------|-------------------------------|---------------|
| (kW) | (kA) | | | | |
| 250 | 36 | | | | |
| | | LV432948 | LC1F500P7 | LADN22 | ATS22C48Q |

Non contractual pictures.

| Motor power kW | Coil voltage VDC | 24 | 48 | 110 | 125 | 220 | 230 | Other |
|----------------|---------------------|----|----|-----|-----|-----|-----|-------------------|
| 250 | LC1F500 | - | ED | FD | GD | MD | - | Complete Offer |

(*) You can select the contactor proposed or variants. Please consider examples hereafter or follow the link to the complete offer.

| Motor power kW | Coil voltage VAC 40400 Hz | 24 | 48 | 110 | 115 | 120 | 220 | 230 | 240 | 400 | Other |
|-------------------|------------------------------|----|----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| 250 | LC1F500 | - | E7 | F7 | FE7 | G7 | M7 | P7 | U7 | V7 | Complete Offer |

(**) You can select the breaker proposed or variants. Please consider examples hereafter or follow the link to the complete offer.

| Motor power | ICU (| Breaker with capacity level | ICU (| Breaker with capacity level | ICU (| Breaker with capacity level | Other |
|-------------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|----------------|
| kW | F | F | Н | Н | N | N | |
| 250 | 36 | LV432948 | 70 | LV432950 | 50 | LV432949 | Complete Offer |