



### Teknisk informasjon

|                              |                                                                     |
|------------------------------|---------------------------------------------------------------------|
| Produktspekter               | Altistart 22                                                        |
| Produkt eller type komponent | Mykstarter                                                          |
| Produsert i                  | Asynkrone motorer                                                   |
| Produktspesifikk applikasjon | Pumper og vifter                                                    |
| Type komponent               | ATS22                                                               |
| Antall faser i nettverket    | 3 faser                                                             |
| [Us] merkespenning           | 230...440 V - 15...10 %                                             |
| Motoreffekt kW               | 37 KW 400 V<br>37 KW 440 V<br>18,5 kW 230 V                         |
| Fabrikkinnstilt strøm        | 69 A                                                                |
| Effekttap i W                | 63 W for standard applications                                      |
| Driftskategori               | AC-53A                                                              |
| Type of start                | Start med momentkontroll (strøm begrenset til 3,5 In)               |
| lcl starter, nominell effekt | 75 A for kopling i motorforsyningsledning for standard applications |
| IP-grad                      | IP20                                                                |

### Komplementær

|                              |                                                                                                                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monteringsmåte               | Med kjølelegeme                                                                                                                                                                      |
| Mulige funksjoner            | Intern forbikopler                                                                                                                                                                   |
| Spenningsgrenser             | 195...484 V                                                                                                                                                                          |
| Nettfrekvens                 | 50...60 Hz - 10...10 %                                                                                                                                                               |
| Nettverksfrekvens            | 45...66 Hz                                                                                                                                                                           |
| Tilkopling av utstyr         | I motorforsyningsledningen<br>Til motordeltaterminaler                                                                                                                               |
| Styrespenning                | 230 V - 15...10 % 50/60 Hz                                                                                                                                                           |
| Kontrollkretsforbruk         | 20 W                                                                                                                                                                                 |
| Antall digitale utganger     | 2                                                                                                                                                                                    |
| Digitale utganger            | Reléutganger R1 230 V kjører, alarm, utløs, stoppet, ikke stoppet, starter, klar C/<br>O<br>Reléutganger R2 230 V kjører, alarm, utløs, stoppet, ikke stoppet, starter, klar C/<br>O |
| Minimum brytestrøm           | 100 mA på 12 V DC ( reléutganger)                                                                                                                                                    |
| Maximum svitsjestrøm         | 5 A 250 V AC Ohmsk 1 reléutganger<br>5 A 30 V DC Ohmsk 1 reléutganger<br>2 A 250 V AC Induktiv 0,4 20 ms reléutganger<br>2 A 30 V DC Induktiv 7 ms reléutganger                      |
| Digital inngangsnummer       | 3                                                                                                                                                                                    |
| Digital inngangstype         | ( LI1, LI2, LI3) logikk, 5 mA 4.3 kOhm                                                                                                                                               |
| Digital inngangsspenning     | 24 V <= 30 V                                                                                                                                                                         |
| Diskrét inngangs logikk      | Positiv logikk LI1, LI2, LI3 ved Tilstand 0: < 5 V og <= 2 mA ved Tilstand 1: > 11 V, >= 5 mA                                                                                        |
| Utgangsstrøm                 | 0.4...1 lcl Justrbar                                                                                                                                                                 |
| PTC-sensorinngang            | 750 Ohm                                                                                                                                                                              |
| Kommunikasjonsport protokoll | Modbus                                                                                                                                                                               |
| Tilkoblingstype              | 1 RJ45                                                                                                                                                                               |
| Kommunikasjonsdatalink       | Serie                                                                                                                                                                                |
| Fysisk interface             | RS485 flerpunkt                                                                                                                                                                      |

|                        |                                                                                |
|------------------------|--------------------------------------------------------------------------------|
| Overføringshastighet   | 4800, 9600 eller 19200 bps                                                     |
| Installert utstyr      | 31                                                                             |
| Beskyttelsestype       | Fase feil: ledning<br>Thermal protection: Motor<br>Thermal protection: Starter |
| Merking                | CE                                                                             |
| Kjølemetode            | Tvangsstyrt konveksjon                                                         |
| Driftsposisjon         | Vertikal +/- 10 grader                                                         |
| Høyde                  | 295 mm                                                                         |
| Bredde                 | 145 mm                                                                         |
| Dybde                  | 207 mm                                                                         |
| Vekt                   | 12 kg                                                                          |
| Motor power range AC-3 | 15...25 kW på 200...240 V 3 faser<br>30...50 kW på 380...440 V 3 faser         |
| Motor starter typen    | Myk starter                                                                    |

## Miljø

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elektromagnetisk kompatibilitet  | Strålt og ledet elektromagnetisme nivå A i samsvar med IEC 60947-4-2<br>Dempede oscillerende bølger nivå 3 i samsvar med IEC 61000-4-12<br>Elektrostatisk utlading nivå 3 i samsvar med IEC 61000-4-2<br>Immunitet til elektriske overgangsspenninger nivå 4 i samsvar med IEC 61000-4-4<br>Immunitet til rettet radioelektrisk interferens nivå 3 i samsvar med IEC 61000-4-3<br>Spenningsstrømpuls nivå 3 i samsvar med IEC 61000-4-5 |
| Standarder                       | IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Produktsertifikater              | CSA[RETURN]UL[RETURN]GOST[RETURN]CCC[RETURN]C-Tick                                                                                                                                                                                                                                                                                                                                                                                      |
| Vibrasjonsmotstand               | 1 gn (f= 13...200 Hz) i samsvar med IEC 60068-2-6<br>1,5 mm (f= 2...13 Hz) i samsvar med IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                  |
| Støtmotstand                     | 15 gn for 11 ms i samsvar med IEC 60068-2-27                                                                                                                                                                                                                                                                                                                                                                                            |
| Støynivå                         | 45 dB                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Forurensninggrad                 | Nivå 2 i samsvar med IEC 60664-1                                                                                                                                                                                                                                                                                                                                                                                                        |
| Relativ fuktighet                | 0...95 % uten kondensering eller dryppvann i samsvar med IEC 60068-2-3                                                                                                                                                                                                                                                                                                                                                                  |
| Omgivelsestemperatur for drift   | -10...40 °C (uten lastreduksjon)<br>40...60 °C (med strømlastreduksjon på 2,2 % per °C)                                                                                                                                                                                                                                                                                                                                                 |
| Omgivelsestemperatur for lagring | -25...70 °C                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Driftshøyde                      | <= 1000 m uten lastreduksjon<br>> 1000...< 2000 m med strømlastreduksjon på 2,2 % per ytterligere 100 m                                                                                                                                                                                                                                                                                                                                 |

## Forpakkingsinformasjon

|                          |           |
|--------------------------|-----------|
| Enhetstype pakke 1       | PCE       |
| Antall enheter i pakke 1 | 1         |
| Pakke 1 Høyde            | 31,0 cm   |
| Pakke 1 Bredde           | 23,5 cm   |
| Pakke 1 Vekt             | 36,0 cm   |
| Package 1 Weight         | 8,221 kg  |
| Enhetstype pakke 2       | P06       |
| Antall enheter i pakke 2 | 6         |
| Pakke 2 Høyde            | 73,5 cm   |
| Pakke 2 Bredde           | 80,0 cm   |
| Pakke 2 Lengde           | 60,0 cm   |
| Pakke 2 Vekt             | 63,136 kg |

## Bærekraftig

|                            |                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------|
| REACH-regelverk            |  <a href="#">REACH-erklæring</a>          |
| EU RoHS-direktiv           | Proaktivt i samsvar (Produktet inngår ikke i EUs RoHS direktivet)                                                          |
| Kvikksølvfri               | Ja                                                                                                                         |
| Kinas RoHS-forskrift       |  <a href="#">Kinas RoHS-Erklæring</a>     |
| Informasjon om RoHS-unntak |  <a href="#">Ja</a>                       |
| WEEE                       | Innen EU må produktet avhendes i henhold til bestemte regler for avfallshåndtering og aldri kastes som husholdningsavfall. |

## Logistisk informasjon

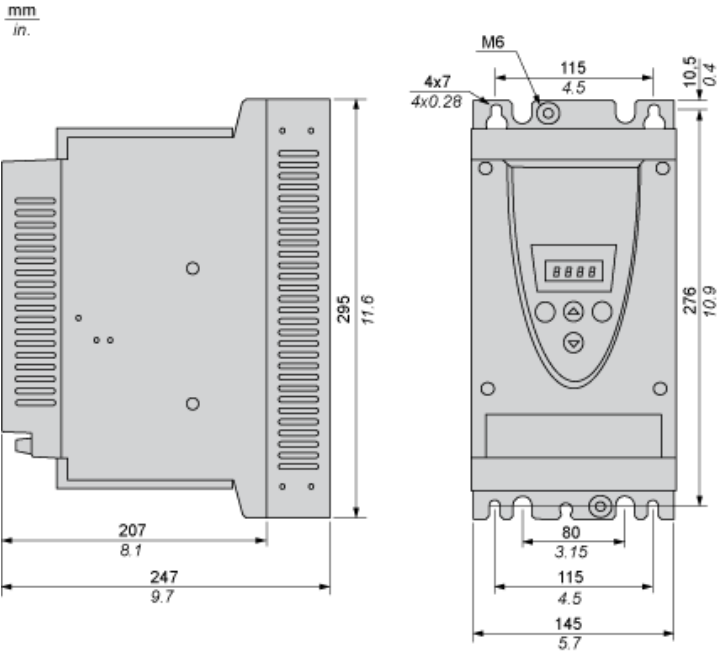
|                  |    |
|------------------|----|
| Opprinnelsesland | ID |
|------------------|----|

## Garantiperiode

|         |           |
|---------|-----------|
| Garanti | 18 months |
|---------|-----------|

Frame Size B

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

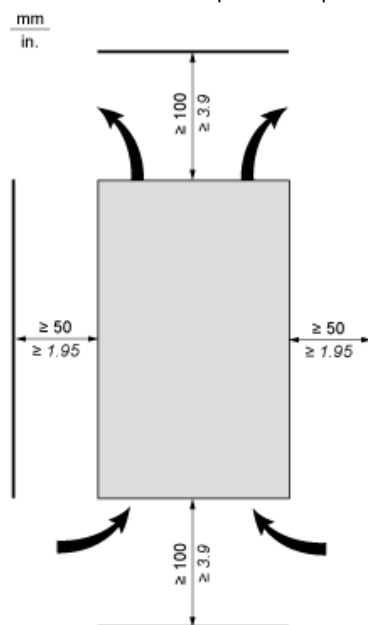
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

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.



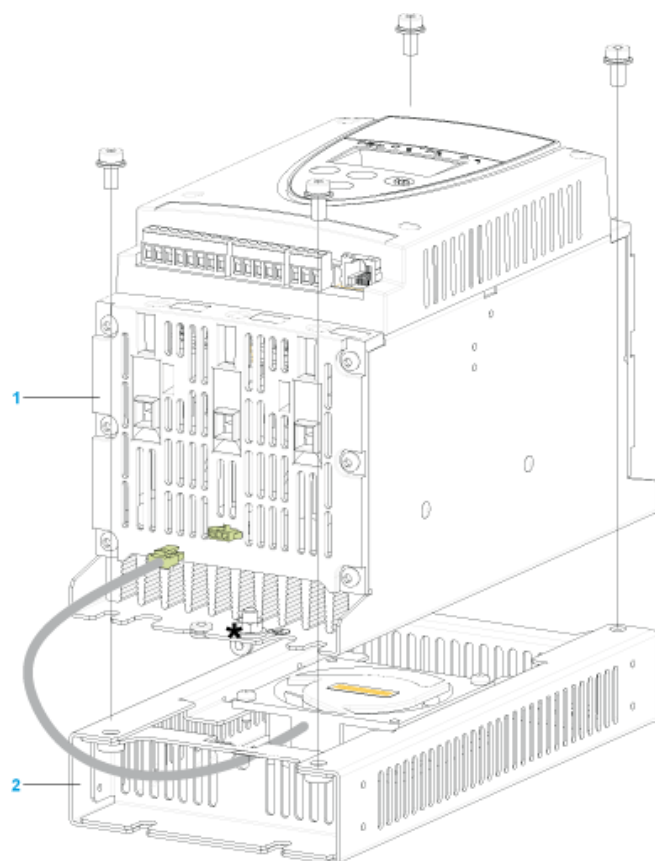
### Overheating

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



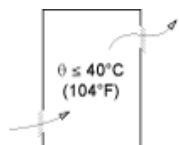
- 1 Altistart 22 Soft Starter
- 2 Fan

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

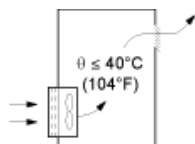
### Introduction

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

### Ventilation Grilles

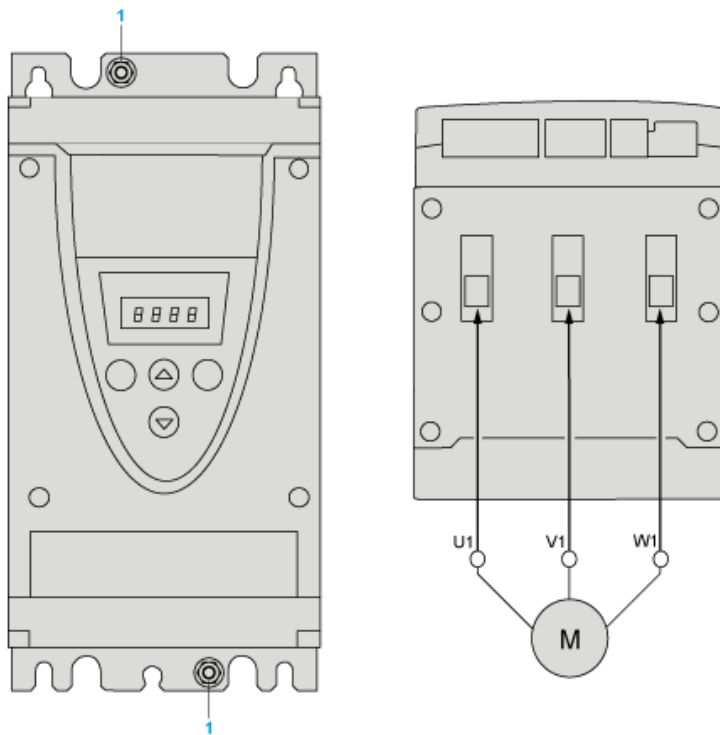


### Forced Ventilation Unit



## Power Terminal

### Cage Style



1 Ground connection

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

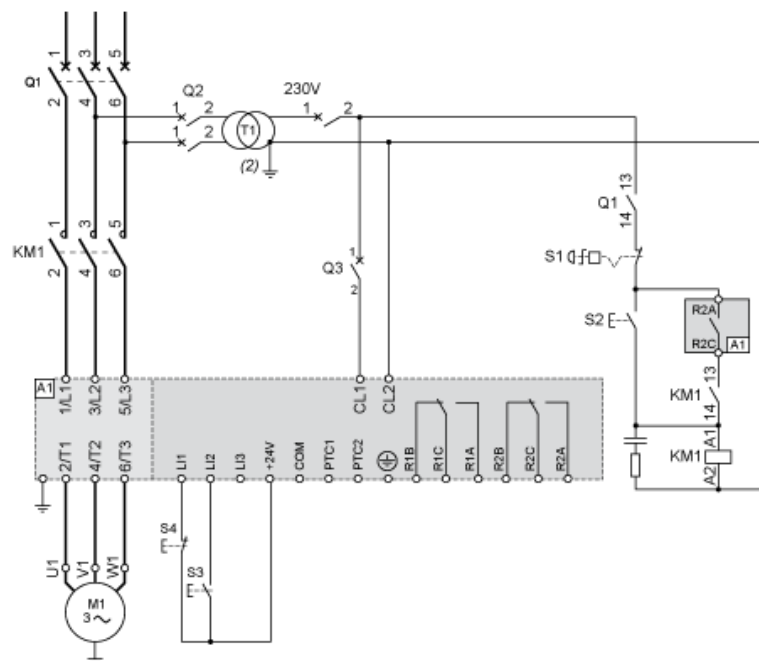
|                                  |            |          | IEC cable | UL cable   |
|----------------------------------|------------|----------|-----------|------------|
| Power supply and output to motor | Size/gauge | min      | 4 mm (a)  | 10 AWG (a) |
| max                              | 50 mm      | 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

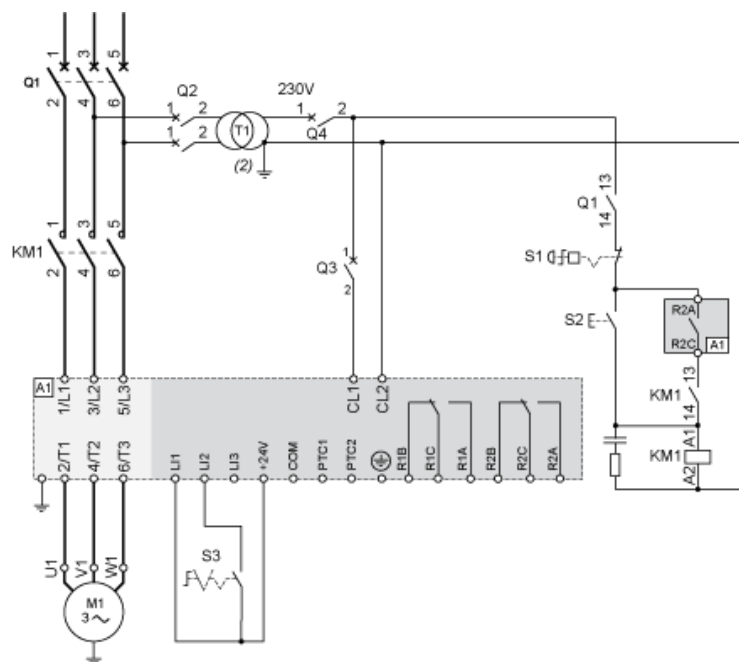
| IEC cable<br>mm <sup>2</sup> (Cu 70°C/158°F) (1) | UL cable<br>AWG (Cu 75°C/167°F) (1) |
|--------------------------------------------------|-------------------------------------|
| 25                                               | 3                                   |

### 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



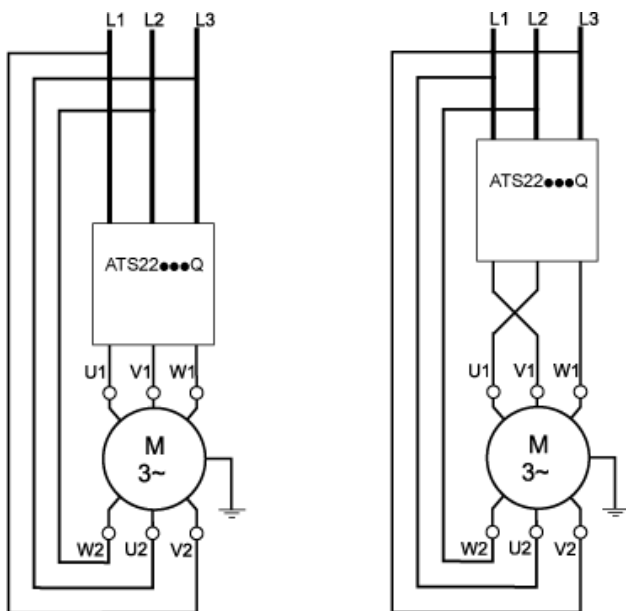
Connection in the motor delta winding in series with each winding

## Wiring

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

The following wiring requires 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.



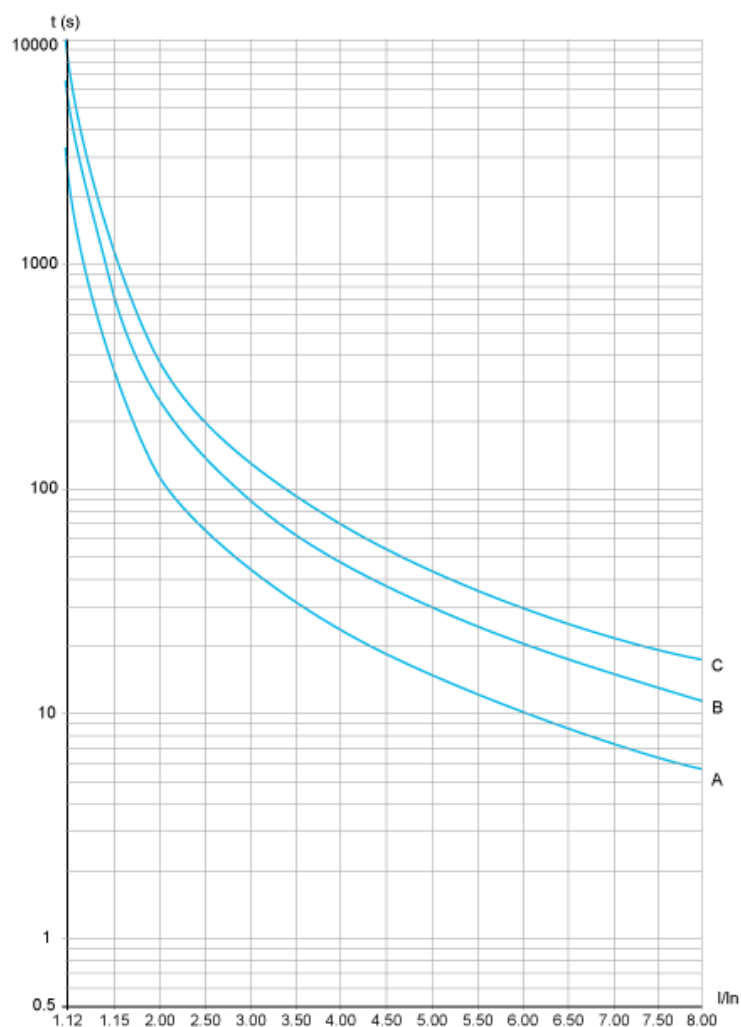


### Example

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 $I_n$ |
| 32 s      |

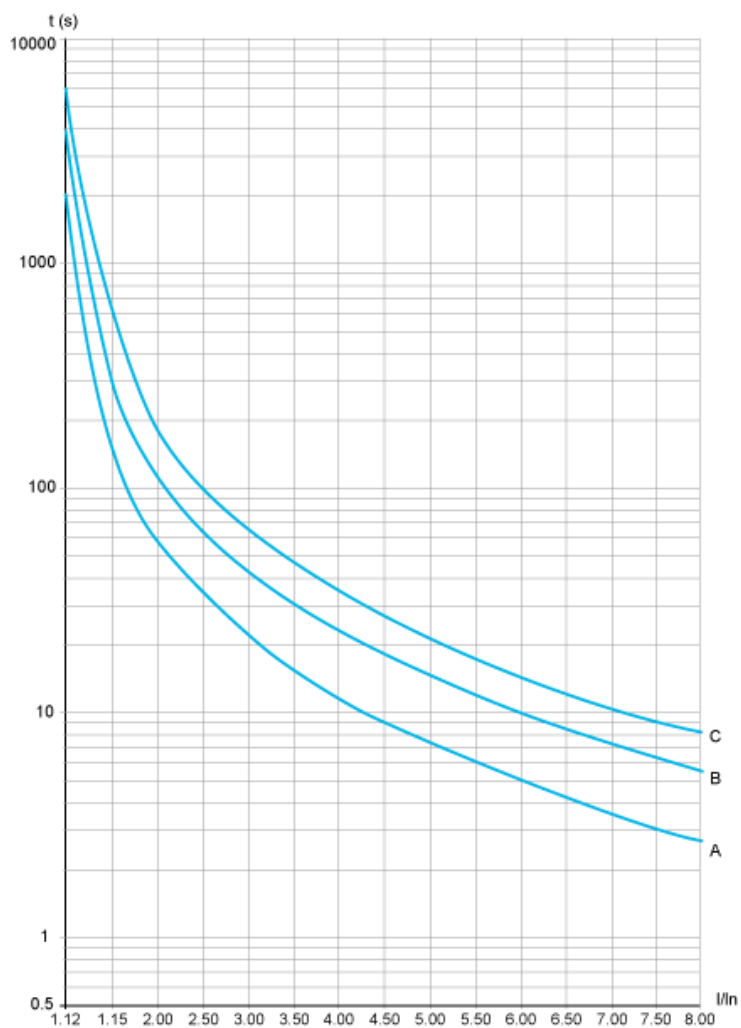
### Trip time for a Severe Application (Class 20)

|           |
|-----------|
| 3.5 $I_n$ |
| 63 s      |

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

|           |
|-----------|
| 3.5 $I_n$ |
| 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      |