



## 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 phase                                                            |
| [Us] rated supply voltage    | 208...600 V - 15...10 %                                            |
| Maximum Horse Power Rating   | 10 Hp 460 V<br>15 Hp 575 V<br>3 Hp 208 V<br>5 hp 230 V             |
| Factory setting current      | 14 A                                                               |
| Power dissipation in W       | 39 W for standard applications                                     |
| Utilisation category         | AC-53A                                                             |
| Type of start                | Start with torque control (current limited to 3.5 In)              |
| lcl starter rating           | 17 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        | 177...660 V                                                                                                                                                                      |
| Supply frequency             | 50...60 Hz - 10...10 %                                                                                                                                                           |
| Network frequency            | 45...66 Hz                                                                                                                                                                       |
| Device connection            | In the motor supply line                                                                                                                                                         |
| [Uc] control circuit voltage | 110 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 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 20 kOhm                                                                                                                                               |
| Discrete input voltage       | 110 V <= 121 V                                                                                                                                                                   |
| Discrete input logic         | Positive logic LI1, LI2, LI3 < 20 V <= 15 mA > 79 V, <= 2 mA                                                                                                                     |
| Output current               | 0.4...1 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<br>Thermal protection motor<br>Thermal protection starter |
| Marking            | CE                                                                           |
| Type of cooling    | Forced convection                                                            |
| Operating position | Vertical +/- 10 degree                                                       |
| Height             | 10.43 in (265 mm)                                                            |
| Maximum Width      | 5.12 in (130 mm)                                                             |
| Depth              | 6.65 in (169 mm)                                                             |
| Net Weight         | 15.43 lb(US) (7 kg)                                                          |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility         | Conducted and radiated emissions level A IEC 60947-4-2<br>Damped oscillating waves level 3 IEC 61000-4-12<br>Electrostatic discharge level 3 IEC 61000-4-2<br>Immunity to electrical transients level 4 IEC 61000-4-4<br>Immunity to radiated radio-electrical interference level 3 IEC 61000-4-3<br>Voltage/current impulse level 3 IEC 61000-4-5 |
| Standards                             | EN/IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                   |
| Product certifications                | UL<br>GOST<br>CCC<br>CSA<br>C-tick                                                                                                                                                                                                                                                                                                                 |
| Vibration resistance                  | 1 gn 13...200 Hz)EN/IEC 60068-2-6<br>1.5 mm 2...13 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                     | 0...95 % without condensation or dripping water EN/IEC 60068-2-3                                                                                                                                                                                                                                                                                   |
| Ambient air temperature for operation | -10...40 °C (without derating)<br>104...140 °F (40...60 °C) with current derating 2.2 % per °C)                                                                                                                                                                                                                                                    |
| Ambient air temperature for storage   | -13...158 °F (-25...70 °C)                                                                                                                                                                                                                                                                                                                         |
| Operating altitude                    | <= 1000 m without derating<br>> 3280.84...< 6561.68 ft (> 1000...< 2000 m) with current derating of 2.2 % per additional 100 m                                                                                                                                                                                                                     |

## Ordering and shipping details

|                       |                         |
|-----------------------|-------------------------|
| Category              | 22576 - ATS22 ALTISTART |
| Discount Schedule     | CP1G                    |
| GTIN                  | 00785901687238          |
| Nbr. of units in pkg. | 1                       |
| Package weight(Lbs)   | 12.76 lb(US) (5.79 kg)  |
| Returnability         | Yes                     |
| Country of origin     | ID                      |

## Packing Units

|                  |          |
|------------------|----------|
| Package 1 Height | 2.750 dm |
| Package 1 width  | 2.200 dm |
| Package 1 Length | 3.350 dm |

## Offer Sustainability

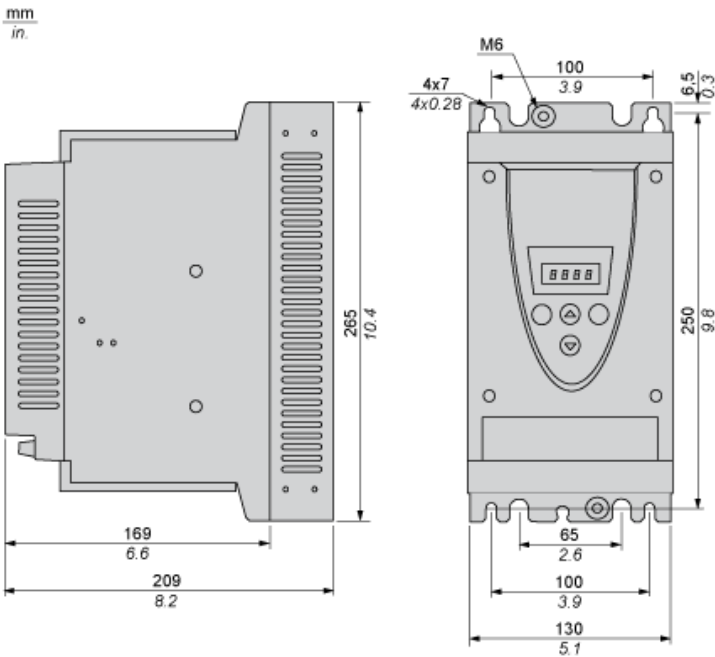
|                            |                                                                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                                                       |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                              |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                         |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                                                      |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                                               |
| Circularity Profile        | <a href="#">End Of Life Information</a>                                                                                                                                                                                                                                                     |
| 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

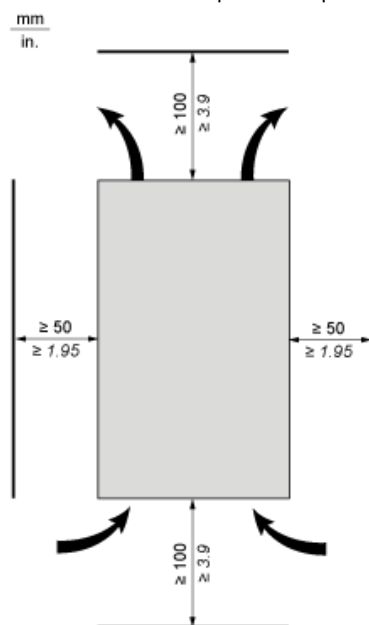
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

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.



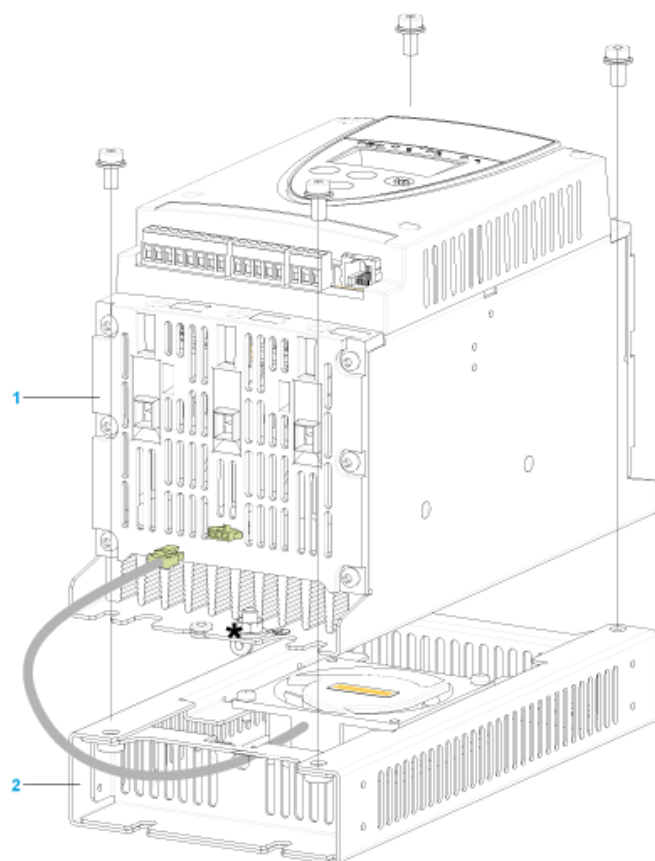
### Overheating

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



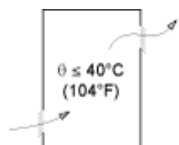
- 1 Altistart 22 Soft Starter
- 2 Fan

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

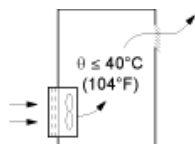
### Introduction

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

### Ventilation Grilles

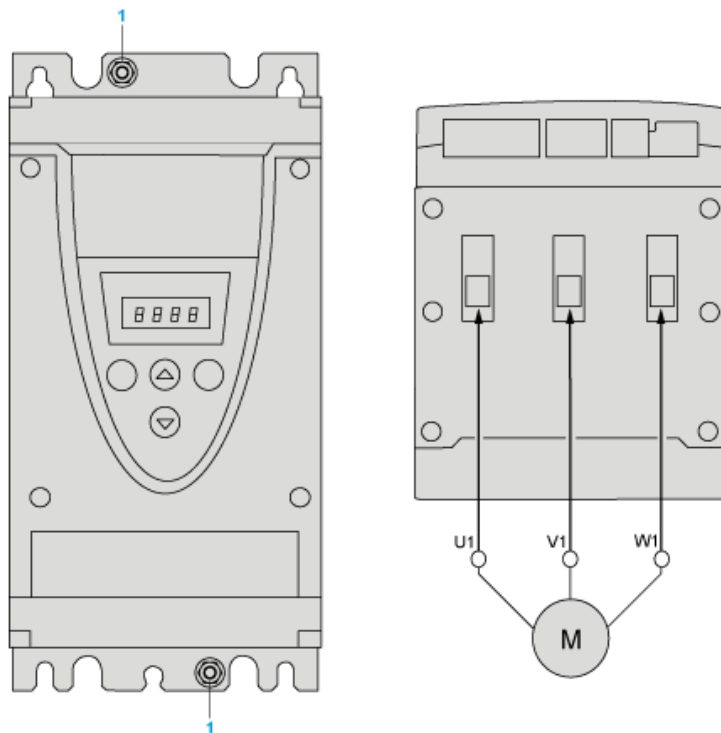


### Forced Ventilation Unit



## Power Terminal

### Cage Style



1 Ground connection

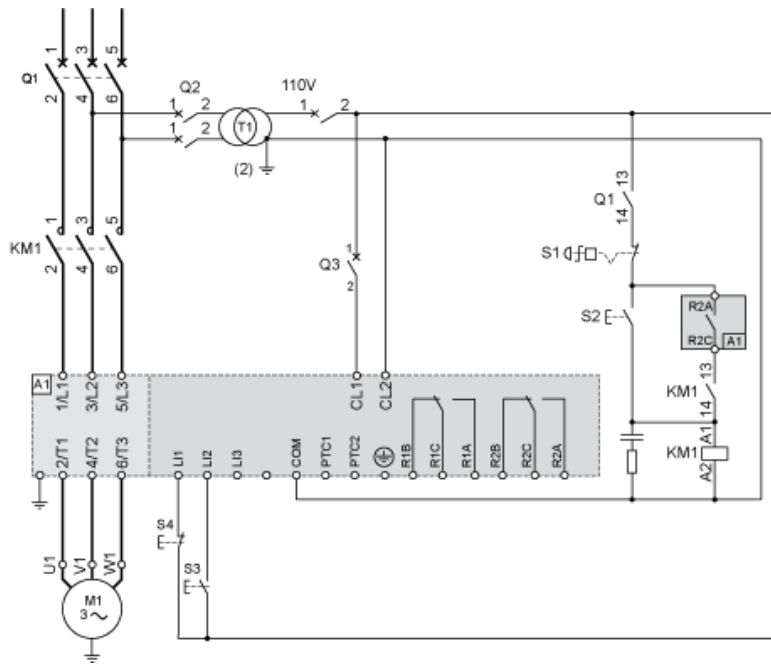
### Power connections, minimum and maximum wiring capabilities, tightening torque

|                                  |            |             | 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 lb.in |             |          |
| Strip length                     |            | 10 mm       | 0.4 in.     |          |

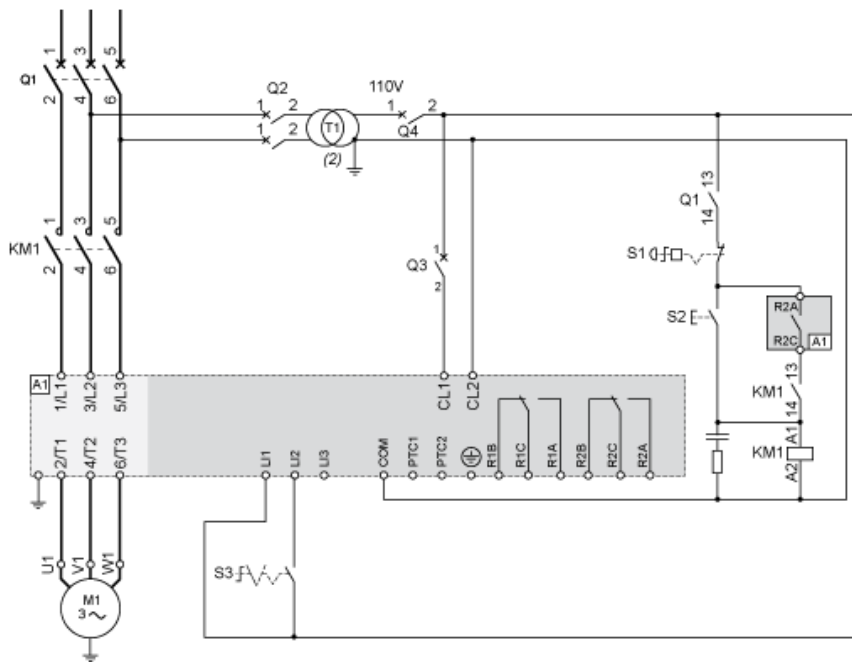
### Power connections, minimum required wiring section

| IEC cable<br>mm <sup>2</sup> (Cu 70°C/158°F) (1) | UL cable<br>AWG (Cu 75°C/167°F) (1) |
|--------------------------------------------------|-------------------------------------|
| 2.5                                              | 10                                  |

### 110 Vac control, Logic Inputs (LI) 110 Vac, 3-wire control



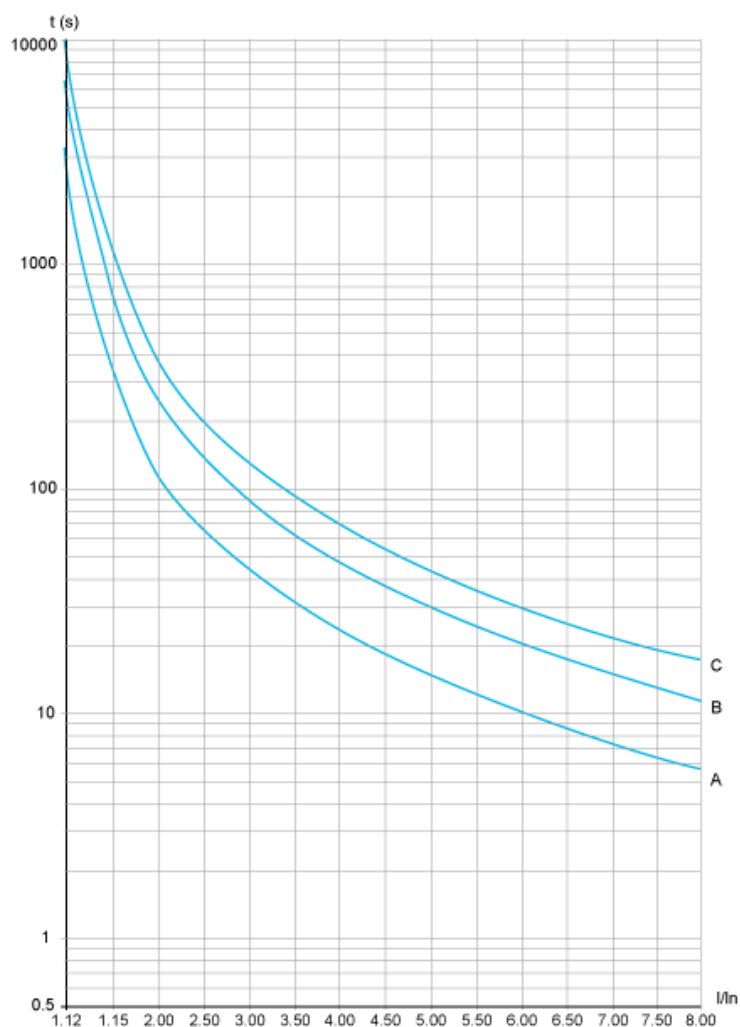
110 Vac control, Logic Inputs (LI) 110 Vac, 2-wire control, freewheelstop





## 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      |

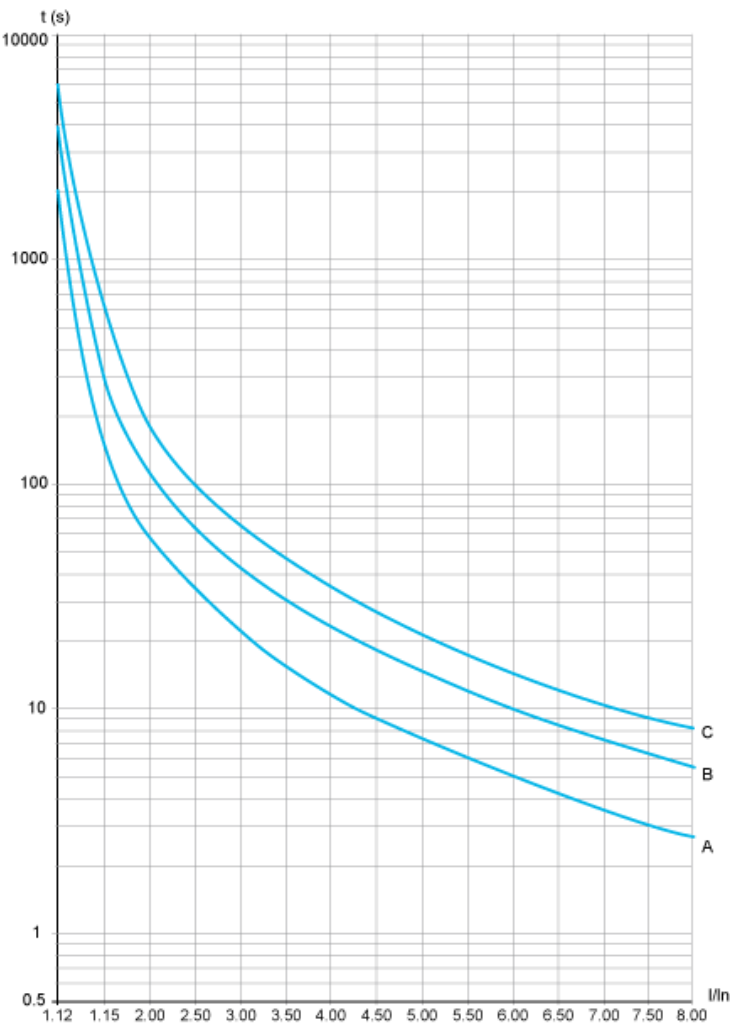
### Trip time for a Severe Application (Class 20)

|           |
|-----------|
| 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 In |
| 16 s   |

Trip time for a Severe Application (Class 20)

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

Trip time for a Severe Application (Class 30)

|        |
|--------|
| 3.5 In |
| 48 s   |