

# Product data sheet

Specifications



soft starter for asynchronous motor,  
Altistart 22, control 110V, 230 to  
575V, 15 to 40hp

ATS22D47S6U

Product availability: Stock - 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 phase                                                            |
| [Us] rated supply voltage    | 208...600 V - 15...10 %                                            |
| Maximum Horse Power Rating   | 15 hp 230 V<br>30 hp 460 V<br>40 hp 575 V                          |
| Factory setting current      | 40 A                                                               |
| Power dissipation in W       | 48 W for standard applications                                     |
| Utilisation category         | AC-53A                                                             |
| Type of start                | Start with torque control (current limited to 3.5 In)              |
| IcL starter rating           | 47 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/<br>O<br>Relay outputs R2 230 V running, alarm, trip, stopped, not stopped, starting, ready C/<br>O |
| Minimum switching current    | 100 mA 12 V DC relay outputs)                                                                                                                                                            |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                             |                                                                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Icl 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                      | 10.4 in (265 mm)                                                                                                                                                              |
| Width                       | 5.1 in (130 mm)                                                                                                                                                               |
| Depth                       | 6.7 in (169 mm)                                                                                                                                                               |
| Product Weight              | 15.4 lb(US) (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                             | IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product Certifications                | GOST<br>CSA<br>UL<br>C-tick<br>CCC                                                                                                                                                                                                                                                                                                                                                                                                     |
| Vibration resistance                  | 1 gn (f= 13...200 Hz) conforming to IEC 60068-2-6<br>1.5 mm (f= 2...13 Hz) conforming to IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                 |
| Shock resistance                      | 15 gn 11 ms IEC 60068-2-27                                                                                                                                                                                                                                                                                                                                                                                                             |
| Noise level                           | 45 dB                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Pollution degree                      | Level 2 IEC 60664-1                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Relative humidity                     | 0...95 % without condensation or dripping water IEC 60068-2-3                                                                                                                                                                                                                                                                                                                                                                          |
| Ambient air temperature for operation | 14...104 °F (-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                  | <= 3280.84 ft (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          | US1CP1G22576  |
| Discount Schedule | CP1G          |
| GTIN              | 3606480167393 |
| Returnability     | Yes           |
| Country of origin | ID            |

## Packing Units

|                              |                          |
|------------------------------|--------------------------|
| Unit Type of Package 1       | PCE                      |
| Nbr. of units in pkg.        | 1                        |
| Package 1 Height             | 8.66 in (22.0 cm)        |
| Package 1 Width              | 11.02 in (28.0 cm)       |
| Package 1 Length             | 13.19 in (33.5 cm)       |
| Package weight(Lbs)          | 12.580 lb(US) (5.706 kg) |
| Unit Type of Package 2       | P06                      |
| Number of Units in Package 2 | 10                       |
| Package 2 Height             | 28.94 in (73.5 cm)       |
| Package 2 Width              | 31.50 in (80.0 cm)       |
| Package 2 Length             | 23.62 in (60.0 cm)       |
| Package 2 Weight             | 154.46 lb(US) (70.06 kg) |

## Contractual warranty

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

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Better

|  Materials and Substances |                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging made with recycled cardboard                                                                     | No                                                                                                                                                                                                                                                                                          |
| Packaging without single use plastic                                                                       | No                                                                                                                                                                                                                                                                                          |
| <a href="#">EU RoHS Directive</a>                                                                          | Pro-active compliance (Product out of EU RoHS legal scope)                                                                                                                                                                                                                                  |
| SCIP Number                                                                                                | 7f28cbce-306d-4c94-ba04-b506c5522d63                                                                                                                                                                                                                                                        |
| REACH Regulation                                                                                           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| 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> |

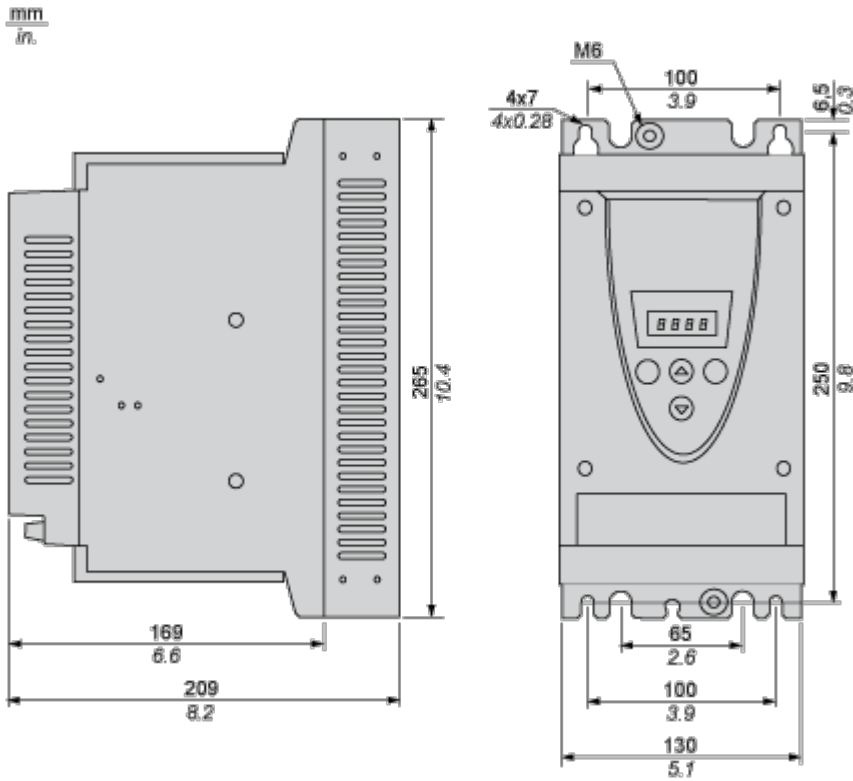
Use Again

|  Repack and remanufacture |                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Take-back                                                                                                    | No                                                                                                                                                                                                               |
| WEEE Label                                                                                                   |  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |

## Dimensions Drawings

### Frame Size A

## Dimensions



Mounting and Clearance

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.



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

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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



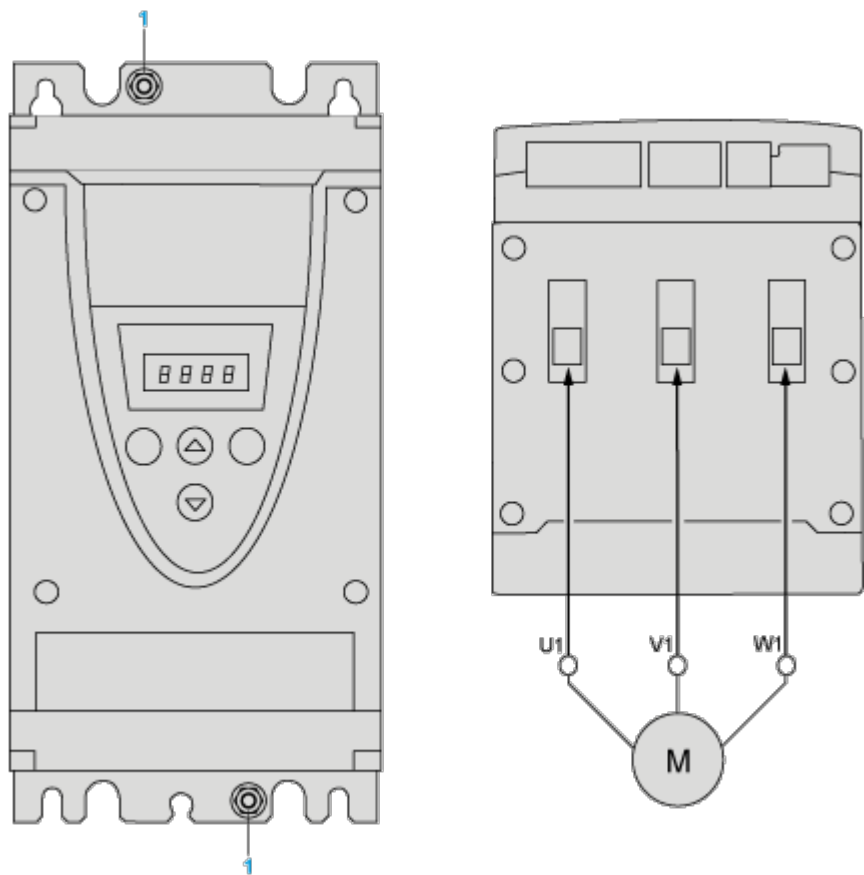
Forced Ventilation Unit



Connections and Schema

Power Terminal

Cage Style



1 Ground connection

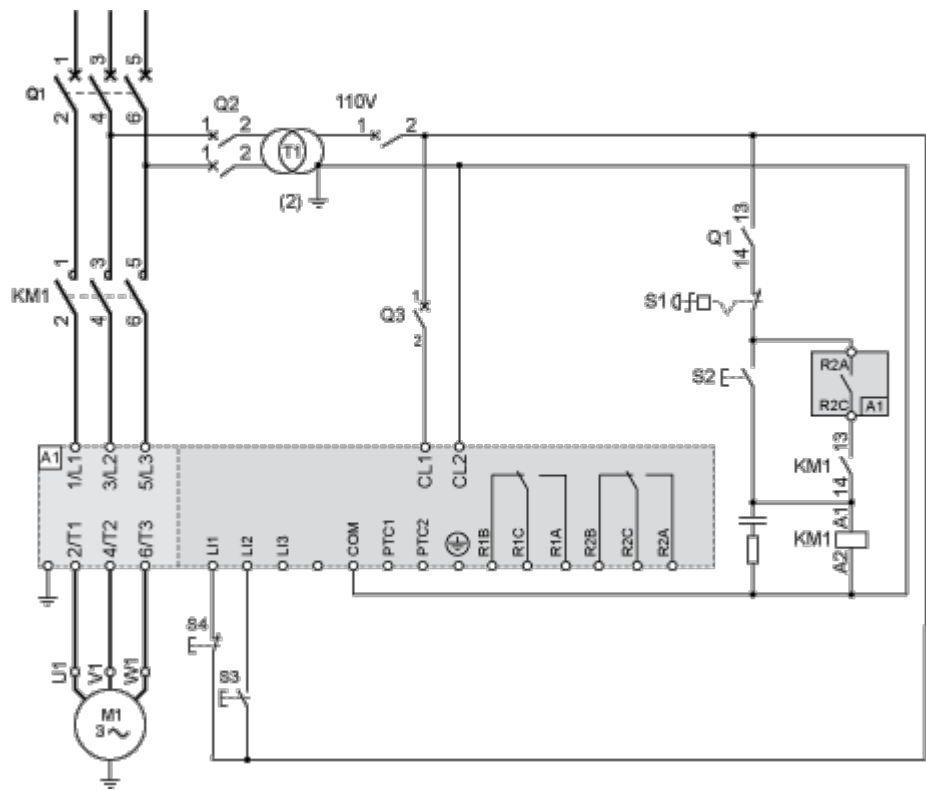
Power connections, minimum and maximum wiring capabilities, tightening torque

|                                  |                   |     | 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.     |

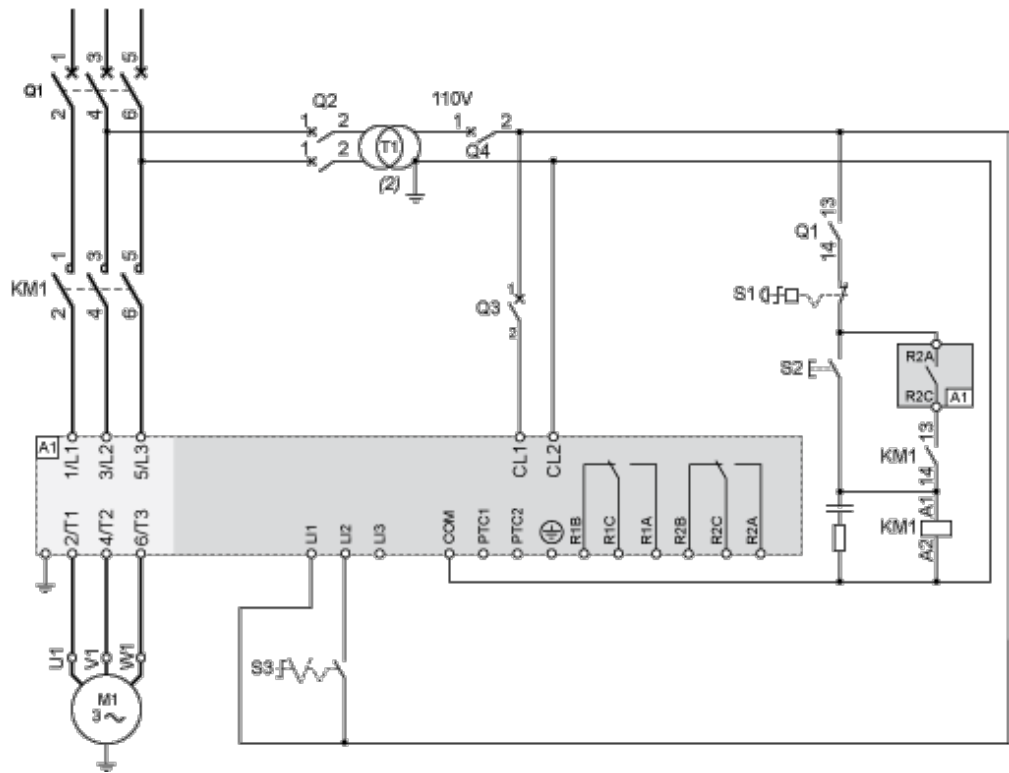
Power connections, minimum required wiring section

| IEC cable<br>mm² (Cu 70°C/158°F) (1) | UL cable<br>AWG (Cu 75°C/167°F) (1) |
|--------------------------------------|-------------------------------------|
| 10                                   | 6                                   |

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



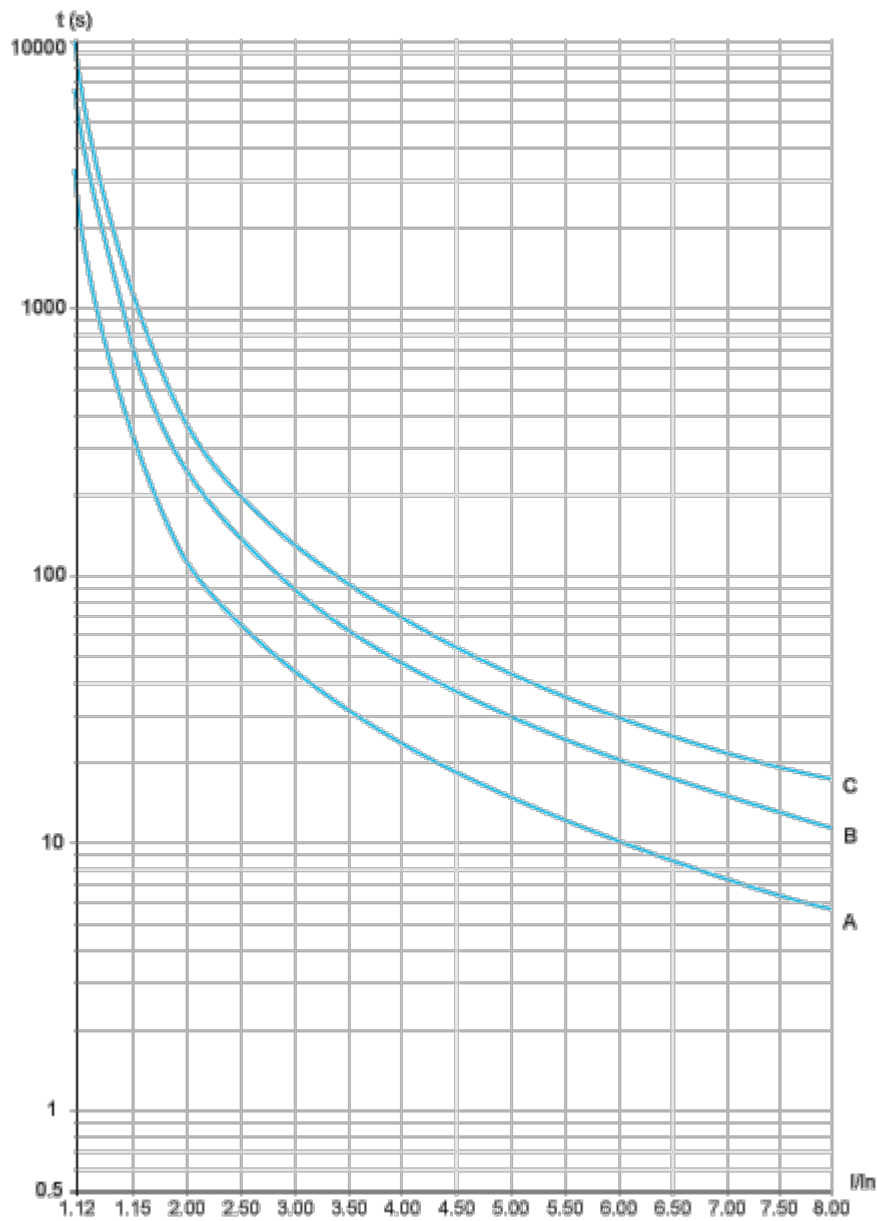
110 Vac control, Logic Inputs (LI) 110 Vac, 2-wire control, freewheelstop



Performance Curves

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)

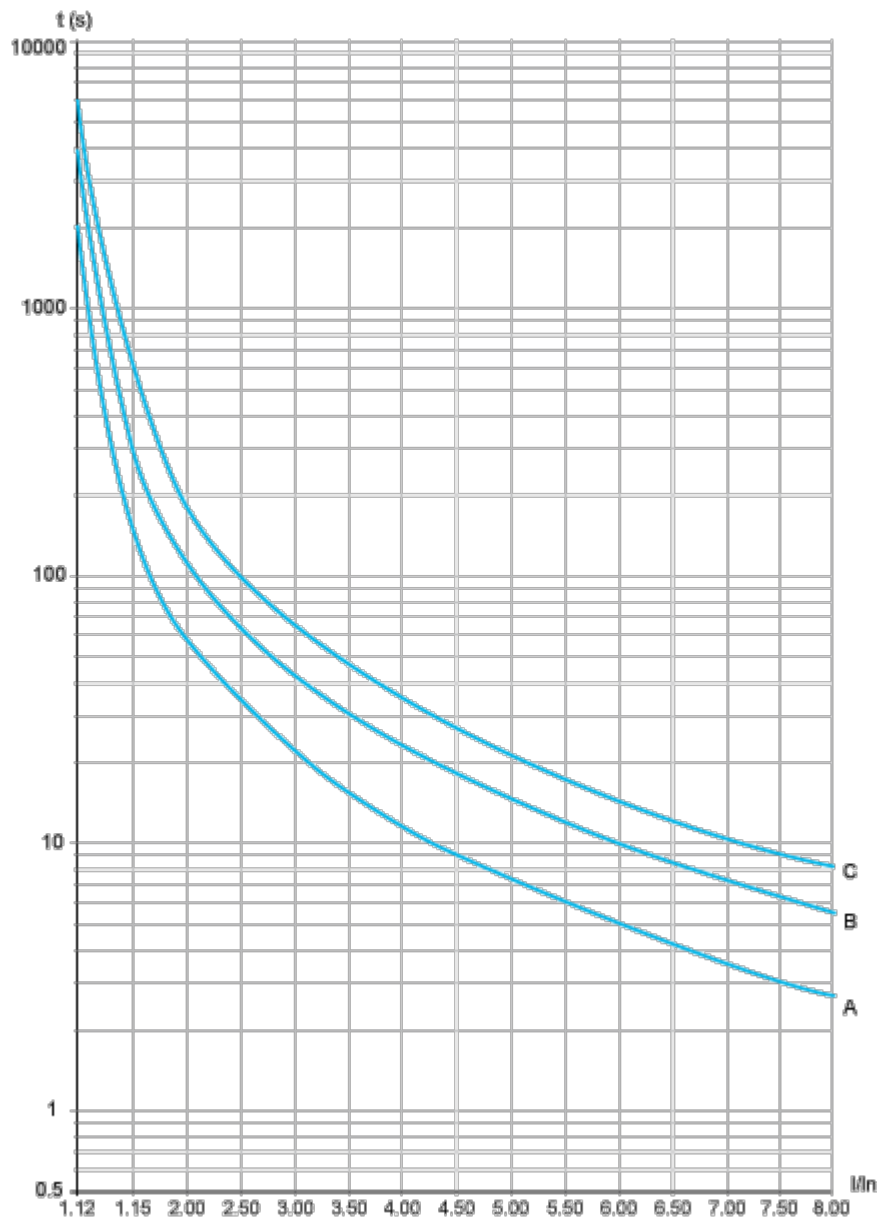
|        |
|--------|
| 3.5 In |
| 63 s   |

Trip time for a Severe Application (Class 30)

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

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 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

Image of product / Alternate images

Alternative

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