



NNZ8550402

## 1 Download The ATS480 User Manual

Information below is designed to use for applications with squirrel cage induction motor, no by-pass and class 10 thermal protection. You must have detailed information to be able to carry out the installation and commissioning.

This information can be found in the User manual [NNZ85515](http://www.se.com) on [www.se.com](http://www.se.com) or scan the QR code in front of the Soft starter. The Getting Started manual does not replace the User manual. For other configurations, refer to the User Manual.



[NNZ85515](http://www.se.com)



### DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Only appropriately trained persons who are familiar with and fully understand the contents of the present manual and all other pertinent product documentation and who have received all necessary training to recognize and avoid hazards involved are authorized to work on and with this equipment.
- Installation, adjustment, repair and maintenance must be performed by qualified personnel.
- Verify compliance with all local and national electrical code requirements as well as all other applicable regulations with respect to grounding of all equipment.
- Only use properly rated, electrically insulated tools and measuring equipment.
- Do not touch unshielded components or terminals with voltage present.
- Prior to performing any type of work on the soft starter system, block the motor shaft to prevent rotation.
- Insulate both ends of unused conductors of the motor cable.
- Before performing work on the equipment:
  - Use all required personal protective equipment (PPE).
  - Disconnect all power, including external control power that may be present. Take into account that the circuit breaker or main switch does not de-energize all circuits.
  - Place a "Do Not Turn On" label on all power switches related to the equipment.
  - Lock all power switches in the open position.
  - Verify the absence of voltage using a properly rated voltage sensing device.
- Before applying voltage to the equipment:
  - Verify that the work has been completed and that the entire installation cannot cause hazards.
  - If the mains input terminals and the motor output terminals have been grounded and short-circuited, remove the ground and the short circuits on the mains input terminals and the motor output terminals.
  - Verify proper grounding of all equipment.
  - Verify that all protective equipment such as covers, doors, grids is installed and/or closed.

**Failure to follow these instructions will result in death or serious injury.**

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this product. © 2021 Schneider Electric. All Rights Reserved.

## 2 Verify The Delivery

Unpack the softstarter and verify that it has not been damaged.

Damaged products or accessories may cause electric shock or unanticipated equipment operation.

### DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not use damaged products or accessories.  
**Failure to follow these instructions will result in death or serious injury.**

Contact your local Schneider Electric sales office if you detect any damage whatsoever.

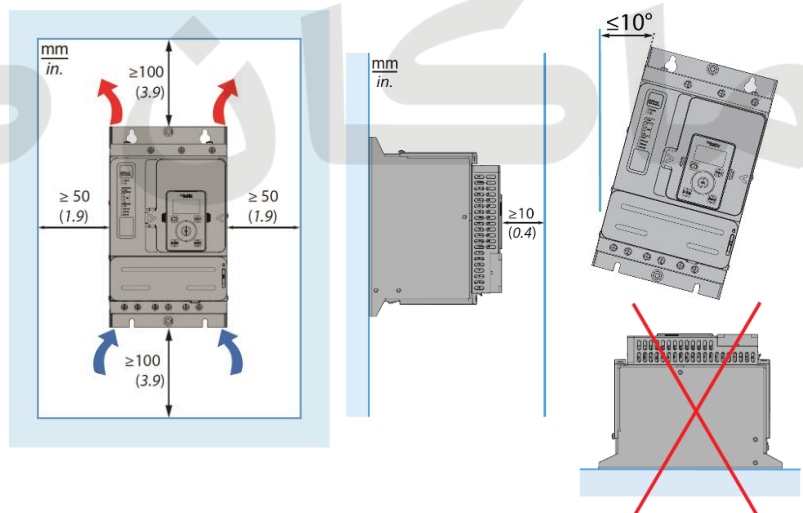
Verify compatibility between your soft starter and your application.

See the ATS480 Catalog [DIA2ED2210602EN](http://www.se.com).



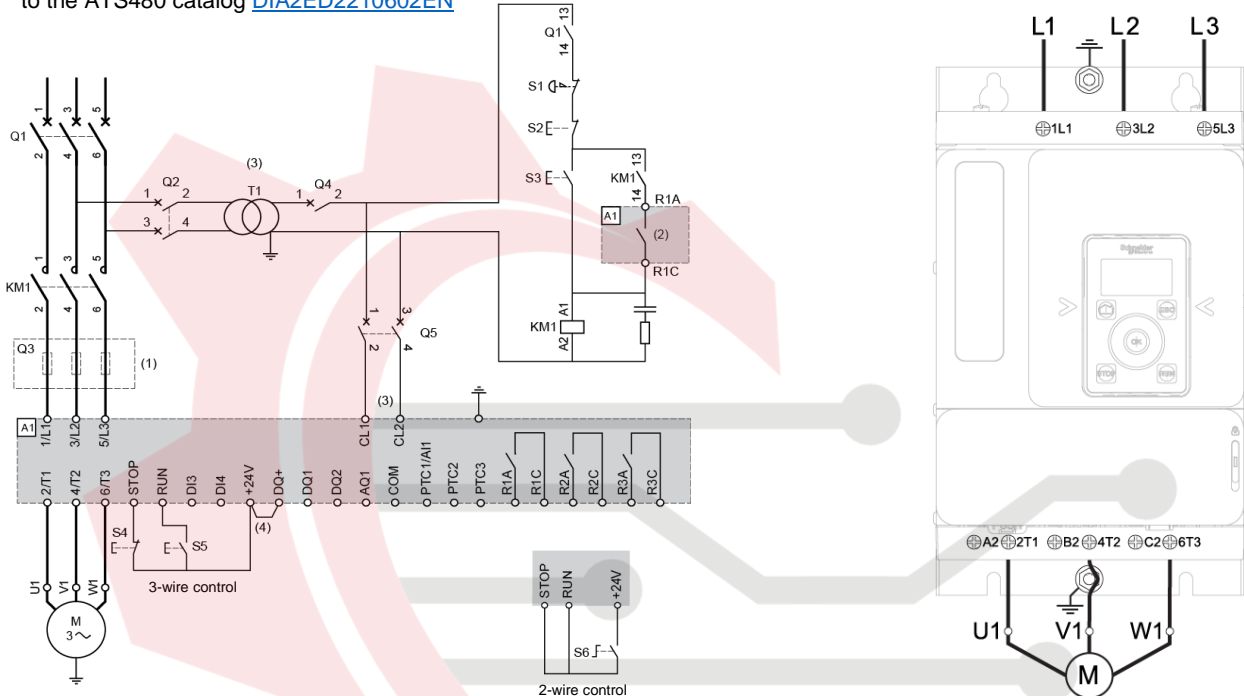
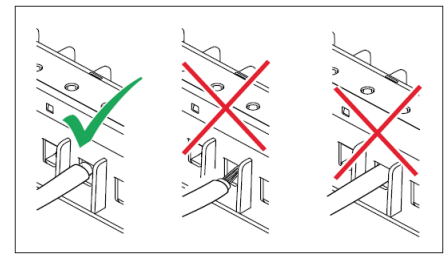
## 3 Mount ATS480 Vertically Inside An Enclosure

For a surrounding air temperature up to 40 °C (104 °F).  
For other thermal conditions, see the User Manual [NNZ85515](http://www.se.com).



## ④ Connect the Soft Starter: Power

- Wire the soft starter to the Ground  $\equiv$
- Wire the motor (2/T1 – 4/T2 – 6/T3)
- Wire the supply mains (1/L1 – 3/L2 – 5/L3)
- Refer to the nameplate for tightening torque and cables section
- Stripping length:
  - ATS480D17Y...D47Y: 9 mm (0.3 in)
  - ATS480D62Y...C11Y: 20 mm (0.8 in)
- For additional information in order to size the protective and control devices, refer to the ATS480 catalog [DIA2ED2210602EN](#)

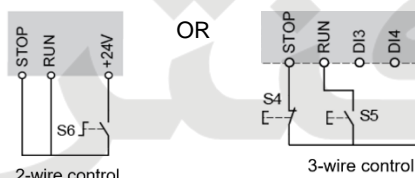


- (1) Installation of additional fast-acting fuses to upgrade to type 2 coordination according to IEC 60947-4-2
- (2) Relays characteristics: 230Vac 24Vdc max
- (3) The transformer "T1" must supply **110...230 Vac +10% -15%**, 50/60Hz
- (4) 24Vdc supply on DQ+ if usage of DQ outputs
- KM1**: Line contactor
- Q1**: Circuit breaker. Protection of the motor
- Q2**: Circuit breaker. Protection for the primary of the transformer

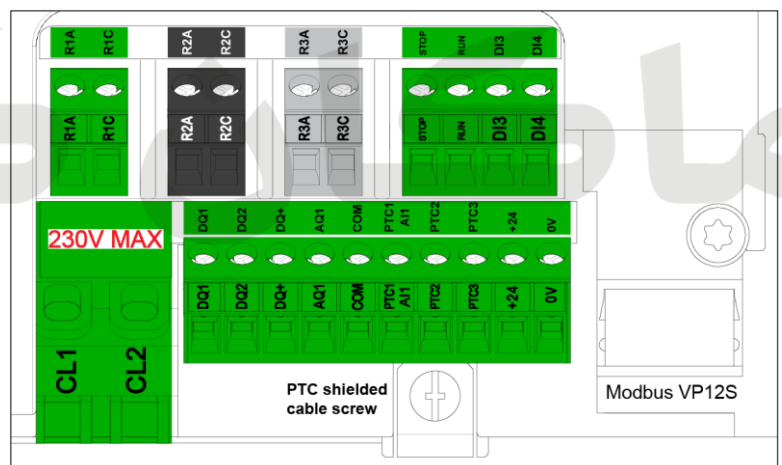
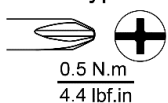
- Q3**: Fast acting fuses. Protection of the soft starter to be used only when type 2 coordination according to IEC 60947-4-2 is required.
- Q4**: Circuit breaker. Protection for the secondary of the transformer
- Q5**: Circuit breaker. Protection for the control part of the soft starter
- S1**: Emergency Stop push-button
- S2**: Normally close push-button. Power OFF motor
- S3**: Normally open push-button. Power ON motor

## ⑤ Connect The Soft Starter: Control

- Wire the control supply (CL1 - CL2) **110...230 Vac +10% -15%**, 50/60 Hz



Screw type



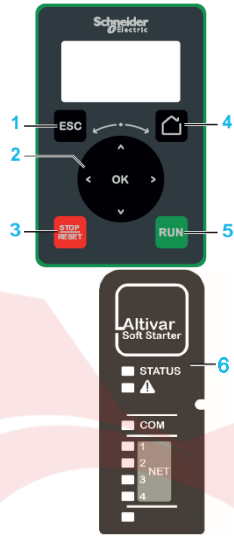
## ⑥ Power-up The Soft Starter

Power up the control part without giving the RUN command:

- Switch-on: Q1, then Q2, then Q4, then Q5.
- The soft starter turns On and displays **[No Mains Voltage]** NLP to indicate it is turned On and the mains supply is absent.

# Plain Text Display Terminal and LEDs: Description

- 1 ESC** Used to quit a menu/parameter or remove the currently displayed value in order to revert to the previous selection
- 2 Touch wheel (OK – arrows)** Used to save the current value or access the selected menu/parameter. The touch wheel is used to scroll fast into the menus. Up/down arrows are used for precise selections, right/left arrows are used to select digits when setting a numerical value of a parameter.
- 3 STOP/RESET** STOP command / apply a Fault Reset (only if configured).
- 4 Home** Access directly the home page.
- 5 RUN** RUN command (only if configured)
- 6 LEDs** Signaling LEDs



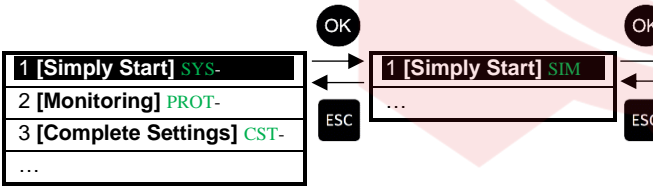
| 6 LED  | Colour       | LED status               | Soft starter Status |
|--------|--------------|--------------------------|---------------------|
| Status | Off          | Off                      | Powered off         |
|        | Green        | Flashing                 | Ready to start      |
|        |              | Blinking                 | Transitory          |
| Yellow | On           | Running                  |                     |
|        | On           | SoMove communication     |                     |
| !      | Red          | Flashing                 | Warning             |
|        |              | On                       | Error               |
| COM    | Yellow       | Flashing                 | Modbus activity     |
| NET 1  | Green/Yellow | Refer to fieldbus manual |                     |
| NET 2  | Green/Red    |                          |                     |
| NET 3  | Green/Red    |                          |                     |
| NET 4  | Green/Yellow |                          |                     |
| -      | Reserved     |                          |                     |

## 7 Initial Setup

- 1- In the **[LANGUAGE] LNG** menu, select the desired language
- 2- In the **[Time Zone] TOP** menu, set the local UTC offset
- 3- In the **[Set Date/Time] DTO** menu, set the local time
- 4- In the **[Initial Setup] ROOT** menu, scroll to **[Go to product] PRDM** and press the **OK** button
- 5- Select **[Minimum Cybersec] CSE** to set no credentials and access the main menu  
Or select **[Advanced Cybersec] CSS** to set credentials then access the main menu

## 8 Simply Start

Select **[Simply Start] SYS-** menu and set parameters. Refer to the recommended values page 3.



| Parameter                                       | Factory Setting                       | Customer Setting |
|---|---------------------------------------|------------------|
| <b>[Motor Nom Current] IN</b>                   | 0.4...1.3 of Soft Starter rating      |                  |
| <b>[Limiting Current] ILT</b>                   | 400% of <b>[Motor Nom Current] IN</b> |                  |
| <b>[Mains Voltage] ULN</b>                      | 400 Vac                               |                  |
| <b>[Acceleration] ACC</b>                       | 15 s                                  |                  |
| <b>[Initial Starting Torque] TQ0</b>            | 20% of nominal torque                 |                  |
| <b>[Type Of Stop] STT</b>                       | <b>[Freewheel] F</b>                  |                  |
| If [Type Of Stop] STT = <b>[Deceleration] D</b> |                                       |                  |
| <b>[Deceleration] DEC</b>                       | 15 s                                  |                  |
| <b>[End Of Deceleration] EDC</b>                | 20% of nominal torque                 |                  |
| If [Type Of Stop] STT = <b>[Braking] B</b>      |                                       |                  |
| <b>[Braking Level] BRC</b>                      | 50%                                   |                  |
| <b>[DC Braking To Stop] EBA</b>                 | 20%                                   |                  |

# Recommended Values, To Adapt To Customer Requirements

| Application            | [Limiting Current] <i>ILT</i><br>(% of <i>IN</i> ) | [Acceleration] <i>ACC</i><br>(seconds) | [Initial Starting Torque] <i>TQ0</i><br>(% of nominal torque) | [Type Of Stop] <i>STT</i>                  |
|------------------------|--|--|---|--|
| Centrifugal pump       | 300  | 5 to 15                                | 0   | [Deceleration] <i>D</i>                    |
| Submersible pump       | 300  | Up to 2                                | 0   | [Deceleration] <i>D</i>                    |
| Piston pump            | 350  | 5 to 10                                | 30  | [Deceleration] <i>D</i>                    |
| Fan                    | 300  | 10 to 40                               | 0   | [Freewheel] <i>F</i> or [Braking] <i>B</i> |
| Cold compressor        | 300  | 5 to 10                                | 30  | [Deceleration] <i>D</i>                    |
| Screw compressor       | 300  | 3 to 20                                | 30  | [Deceleration] <i>D</i>                    |
| Centrifugal compressor | 350  | 10 to 40                               | 0   | [Freewheel] <i>F</i>                       |
| Piston compressor      | 350  | 5 to 10                                | 30  | [Deceleration] <i>D</i>                    |
| Conveyor, transporter  | 300  | 3 to 10                                | 30  | [Deceleration] <i>D</i>                    |
| Lifting screw          | 300  | 3 to 10                                | 30  | [Deceleration] <i>D</i>                    |
| Drag lift              | 400  | 2 to 10                                | 0   | [Deceleration] <i>D</i>                    |
| Product elevator       | 350  | 5 to 10                                | 20  | [Deceleration] <i>D</i>                    |
| Circular saw, band saw | 300  | 10 to 60                               | 0   | [Braking] <i>B</i>                         |
| Pulper, butchery knife | 400  | 3 to 10                                | 20  | [Freewheel] <i>F</i>                       |
| Agitator               | 350  | 5 to 20                                | 10  | [Deceleration] <i>D</i>                    |
| Mixer                  | 350  | 5 to 10                                | 50  | [Deceleration] <i>D</i>                    |
| Grinder                | 450  | 5 to 60                                | 0   | [Braking] <i>B</i>                         |
| Crusher                | 400  | 10 to 40                               | 50  | [Freewheel] <i>F</i>                       |
| Refiner                | 300  | 5 to 30                                | 40  | [Deceleration] <i>D</i>                    |
| Press                  | 400  | 20 to 60                               | 20  | [Deceleration] <i>D</i>                    |

## Start And Stop The Motor

Refer to step 4 diagram.

If you are in 3-wire control:

- To start the motor push S3 and S5
- To stop the motor push S4

If you are in 2-wire control:

- To start the motor push S3 and switch S6
- To stop the motor switch back S6

## Soft Starter Displayed Status :

| Displayed Value | Condition   |
|-----------------|---|
| Error message   | Triggered error, refer to the Troubleshooting below   |
| <b>NLP</b>      | Soft starter without run command and mains not supplied   |
| <b>RDY</b>      | Soft starter without run command and mains supplied   |
| <b>RUN</b>      | Motor running at rated speed  |
| <b>ACC</b>      | Soft starter in acceleration phase  |
| <b>DEC</b>      | Soft starter in deceleration phase  |
| <b>TBS</b>      | Minimum delay between one stop and one start not elapsed  |
| <b>BRL</b>      | Soft starter in braking phase   |
| <b>CLI</b>      | Soft starter in current limitation. When current limitation is active, the displayed value flashes. |

## Troubleshooting

Scan the QR code in front of the soft starter to get the error codes explanations in the *Diagnostics* section:

