ENGLISH

# Getting Started With ATV340

NVE3764301

## 1 Download the manuals

You must have detailed information to be able to carry out the installation and commissioning.
This information can be found in the following manuals that can be downloaded on www.schneider-electric.com.
- The ATV340 Installation manual (NVE61069)
- The ATV340 Programming manual (NVE61643)

## 2 Verify the delivery of the drive

**⚠ ⚠ DANGER**

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

- Only appropriately trained persons who are familiar with and understand the contents of this manual and all other pertinent product documentation and who have received safety training to recognize and avoid hazards involved are authorized to work on and with this drive system. Installation, adjustment, repair and maintenance must be performed by qualified personnel.
- The system integrator is responsible for compliance with all local and national electrical code requirements as well as all other applicable regulations with respect to grounding of all equipment.
- Many components of the product, including the printed circuit boards, operate with mains voltage. Do not touch. Use only electrically insulated tools.
- Do not touch unshielded components or terminals with voltage present.
- Motors can generate voltage when the shaft is rotated. Prior to performing any type of work on the drive system, block the motor shaft to prevent rotation.
- AC voltage can couple voltage to unused conductors in the motor cable. Insulate both ends of unused conductors of the motor cable.
- Do not short across the DC bus terminals or the DC bus capacitors or the braking resistor terminals.
- Before performing work on the drive system:
  - Disconnect all power, including external control power that may be present.
  - Place a "Do Not Turn On" label on all power switches.
  - Lock all power switches in the open position.
  - Wait 15 minutes to allow the DC bus capacitors to discharge. The DC bus LED is not an indicator of the absence of DC bus voltage that can exceed 800 Vdc.
  - Measure the voltage on the DC bus between the DC bus terminals (PA/+, PC/-) using a properly rated voltmeter to verify that the voltage is < 42 Vdc.
  - If the DC bus capacitors do not discharge properly, contact your local Schneider Electric representative.
- Install and close all covers before applying voltage.

**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 material.

Information below is designed to use **single drive** connected to **single asynchronous motor with a shielded motor cable length less than 20 m (65 ft).**

- Unpack the drive and verify that it has not been damaged.

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

**⚠ ⚠ DANGER**

**ELECTRIC SHOCK OR UNANTICIPATED EQUIPMENT OPERATION**

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.

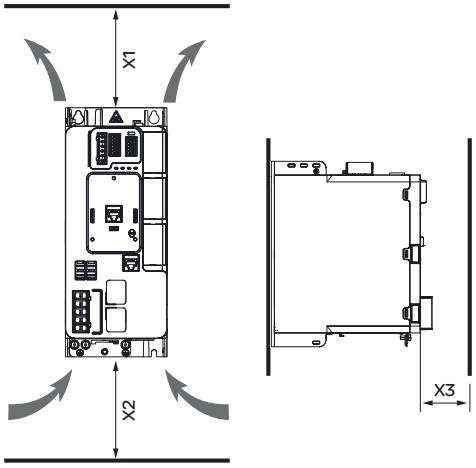
- Verify that the drive catalog number printed on the label is the same as that on the delivery note corresponding to the purchase order.

- Write the drive Model:
  - Catalog number: _____
  - Serial Number: _____

## 3 Verify The Supply Mains Compatibility

- Verify that the **supply mains** is compatible with the drive.
  **Drive range:** ATV340●●●N4● = 380/480 V three-phase

# ❹ Mount The Drive Vertically

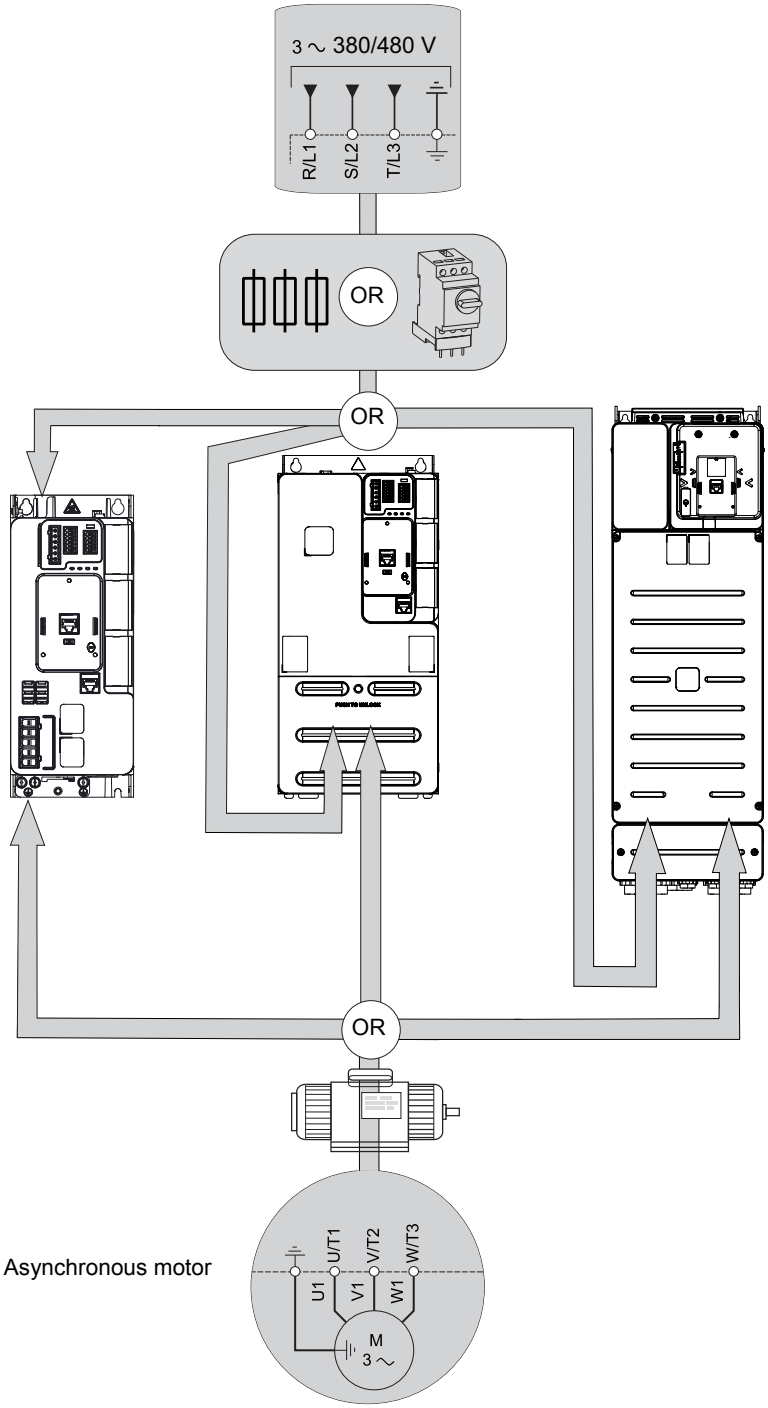



| Catalog Number | X1 | X2 | X3 |
|---|---|---|---|
| ATV340U07N4●...ATV340D22N4● | ≥ 100mm (3.9 in.) | ≥ 100mm (3.9 in.) | ≥ 60mm (2.36 in.) |
| ATV340D30N4E...ATV340D75N4E | ≥ 100mm (3.9 in.) | ≥ 100mm (3.9 in.) | ≥ 10mm (0.39 in.) |

Minimum values corresponding to thermal contrainst for a surrounding air temperature up to 50°C (122°F).
For other thermal conditions, or installation use cases (side by side, flush mounting ...) see ATV340 Installation Manual (NVE61069) on www.schneider-electric.com.

Example given for ATV340U40N4●.

# ❺ Connect The Drive: Power




Asynchronous motor

- Connect the drive to ground ⏚
- Verify circuit breaker rating or fuse rating. (See SCCR annex NVE37641)
- Verify that the nominal motor voltage is compatible with the drive voltage. Nominal motor voltage _____volts.
- Connect the drive to the motor (U / V / W / PE).
- Connect the drive to the supply mains (L1 / L2 / L3 / PE).

... N·m
... lb.in

See ATV340 Installation Manual (NVE61069) on www.schneider-electric.com.

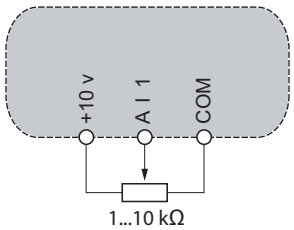
**⚠⚠ DANGER**

**HAZARD OF FIRE OR ELECTRIC SHOCK**
Wire cross sections and tightening torques must comply with the specifications provided in the installation manual.

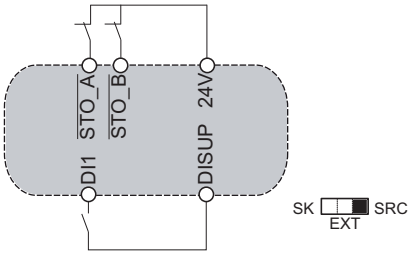
**Failure to follow these instructions will result in death or serious injury.**

# ❻ Connect The Drive: Control

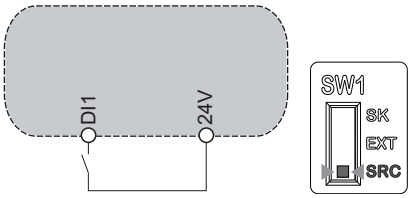
- Connect the reference frequency AI1:




ATV340U07N4●...ATV340D22N4●:
- Connect the command DI1
- Connect the STO_A and STO_B inputs




ATV340D30N4E...ATV340D75N4E:
- Connect the command DI1

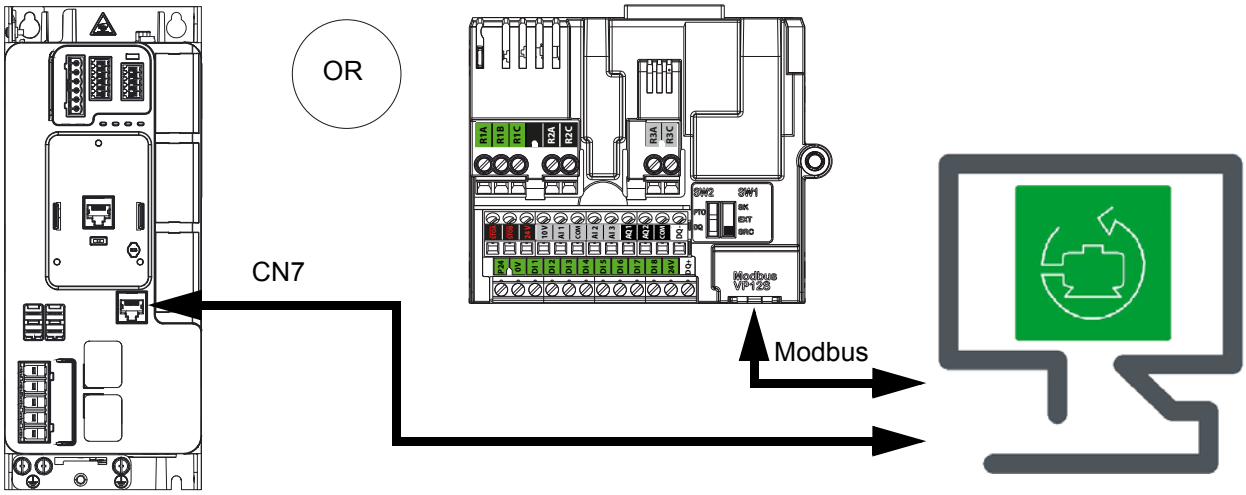



# ❼ [Simply Start]

Steps to follow to access [Simply Start]:

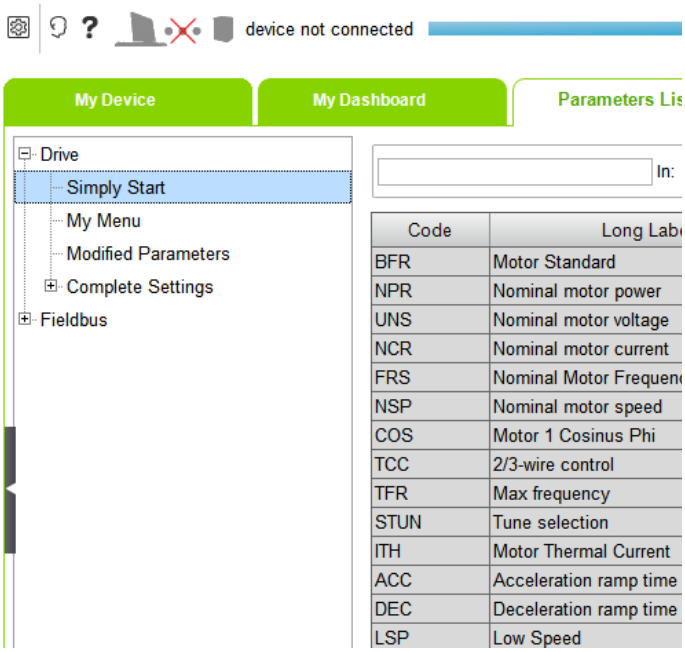
7.1 Download and Install **SoMove FDT** and **Altivar 340 DTM** on www.schneider-electric.com.

7.2 Connect to the drive with SoMove using a USB to RS485 converter (TCSMCNAM3M002P) between PC and drive:




7.3 Power up the drive:
- Verify that digital input is not active (DI1, see step ❻ diagram)
- Apply power to the drive

7.4 Access [Simply Start] menu:
- by clicking on Parameters List tab on DTM based PC software.




OR

- For ATV340●●●N4**E** products, [Simply Start] menu can also be accessed using the embedded **Webserver**.
  For more information, refer to the ATV340 Programming Manual (NVE61643).

# ❽ Set motor parameters for asynchronous motor

- Refer to the motor Nameplate to set the following.

| Menu | Parameter | Factory setting | Customer setting |
|---|---|---|---|
| [Simply Start] | [Motor Standard] bFr :<br>Standard motor frequency (Hz) | [50Hz IEC] 50 | |
| | [Nominal Motor Power] nPr :<br>Nominal motor power on motor nameplate (KW) | drive rating | |
| | [Nom Motor Voltage] unS:<br>Nominal motor voltage on motor nameplate (Vac) | drive rating | |
| | [Nom Motor Current] nCr :<br>Nominal motor current on motor nameplate (A) | drive rating | |
| | [Nominal Motor Freq] FrS:<br>Nominal motor frequency on motor nameplate (Hz) | 50 | |
| | [Nominal Motor Speed] nSP:<br>Nominal motor speed on motor nameplate (rpm) | drive rating | |
| | [2/3-Wire Control] tCC:<br>Command control by 2 wire or 3 wire control | 2C | |
| | [Max Frequency] tFr :<br>Maximum motor frequency (Hz) | 60 | |
| | [Mot. therm. current] ItH:<br>Motor thermal current on motor nameplate (A) | drive rating | |

For synchronous or reluctance motor, refer to the ATV340 Programming Manual (NVE61643) on www.schneider-electric.com.

# ❾ Perform a Motor [Autotuning]

**⚠ WARNING**

**UNEXPECTED MOVEMENT**

Autotuning moves the motor in order to tune the control loops.

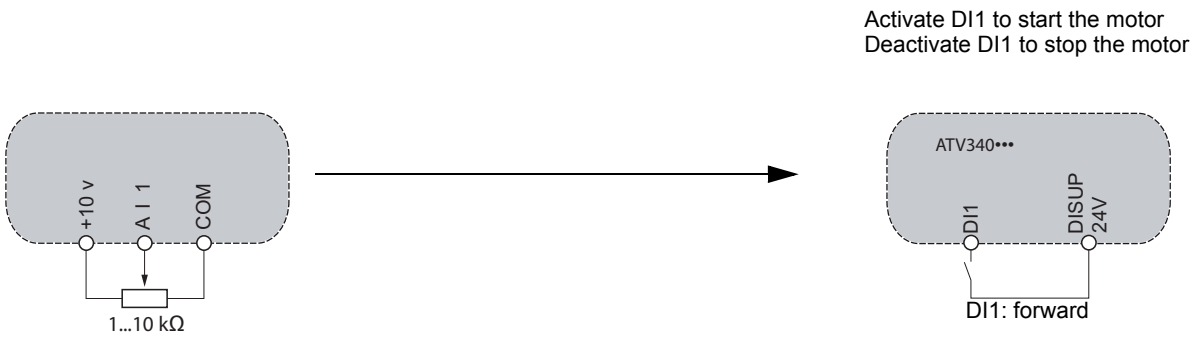
- Only start the system if there are no persons or obstructions in the zone of operation

**Failure to follow these instructions can result in death, serious injury or equipment damage.**

During [Autotuning], the motor makes small movement. Noise development and oscillations of the system are normal.

# ❿ Set Basic Parameters

| Menu | Description | Factory setting | Customer setting |
|---|---|---|---|
| [Simply Start] | [Acceleration] ACC: Acceleration time (s) | 3.0 | |
| | [Deceleration] dEC: Deceleration time (s) | 3.0 | |
| | [Low speed] LSP: Motor frequency at minimum reference (Hz) | 0 | |
| | [High speed] HSP: Motor frequency at maximum reference (Hz) | 50 | |

# ⓫ Start/Stop The Motor

Set the [Reference frequency] with the potentiometer.