Quick Start Guide - ATV 61

S1B8697400

⚠ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
- Read and understand this quick start guide before performing any procedure with this drive.
- The user is responsible for compliance with all international and national electrical code requirements with respect to grounding of all equipment.
- Many parts of this drive, including the printed circuit boards, operate at the line voltage. DO NOT TOUCH. Use only electrically insulated tools.
- DO NOT touch unshielded components or terminal strip screw connections with voltage present.
- DO NOT short across terminals PA/+ and PC/- or across the DC bus capacitors.
- Before servicing the drive:
    - Disconnect all power, including external control power that may be present.
    - Place a "DO NOT TURN ON" label on all power disconnects.
    - Lock all power disconnects in the open position.
    - WAIT 15 MINUTES to allow the DC bus capacitors to discharge.
    - Measure the voltage of the DC bus between the PA/+ and PC/- terminals to ensure that the voltage is less than 42 Vdc.
    - If the DC bus capacitors do not discharge completely, contact your local Schneider Electric representative. Do not repair or operate the drive
- Install and close all covers before applying power or starting and stopping the drive.
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.

Information below is designed to use **single drive** connected to **single asynchronous motor with a motor cable length less than 50 meters (164ft).** In any other case, consult the drive installation manuals (1760643 or 1760655) and programming manual (1760649) on www.schneider-electric.com.

❶ Check the delivery of the drive

- Remove the drive from the packaging and check that it has not been damaged.

⚠ WARNING

DAMAGED DRIVE EQUIPMENT
Do not operate or install any drive or drive accessory that appears damaged.
Failure to follow these instructions can result in death, serious injury, or equipment damage.

- Check that the drive reference printed on the label matches the delivery note and corresponding purchase order.

ATV61HU15N4

1.5KW - 2HP - 380/480V ∿

Write the drive Model Reference: _____ _____and Serial Number: _____

8B0917121134
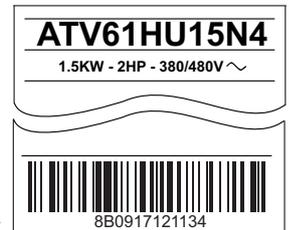
❷ Check the line voltage compatibility

- Check that the **line voltage** is compatible with the supply range of the drive.
  Line voltage _____ Volts   Drive voltage range _____ Volts
  Drive range: ATV●●●●●● M3 = 200/ 240 V three-phase - ATV●●●●●● N4 = 380 /480 V three-phase
  　　　　　　ATV●●●●●● Y = 500 /690 V three-phase - ATV●●●●●● S6 = 500 /600 V three-phase

❸ Mount the drive vertically
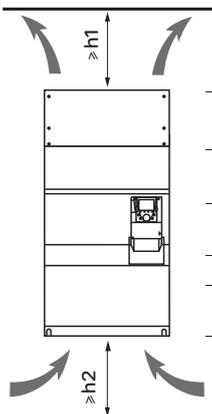
ATV61H	h1	h2
	mm (in.)	mm (in.)
D55M3X, D75M3X, D90M3X, D90N4, C11N4	100 (3.9)	100 (3.9)
C13N4, C16N4, C22N4, C11Y, C13Y, C16Y, C20Y	150 (5.9)	150 (5.9)
C25N4, C31N4, C25Y, C31Y, C40Y	200 (7.8)	150 (5.9)
C40N4, C50N4	300 (11.8)	250 (9.8)
C63N4, C50Y, C63Y, C80Y	400 (15.7)	250 (9.8)
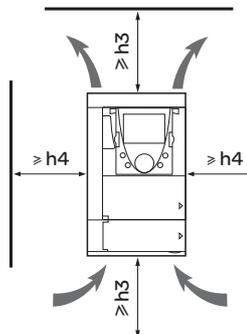
ATV61H	h3	h4
	mm (in.)	mm (in.)
D18M3X to D45M3X, D22N4 to D75N4 U30Y to D90Y	100 (3.9)	50 (1.9)
075M3 to D15M3X, 075N4 to D18N4, U22S6X to U75S6X		

Free space in front of the drive: 10 mm (0.4 in.) minimum
Install the drive vertically at ± 10°.

For a surrounding air temperature up to 50 °C (122°F), see installation manual (1760643 or 1760655) on www.schneider-electric.com for other thermal conditions.

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❹ Connect the drive: Power

- Wire the drive to the ground.
- Check circuit breaker rating or fuse rating (See SCCR annex S1B86981).
- Check that the motor voltage is compatible with the drive voltage. Motor voltage _____Volts.
- Wire the drive to the motor.
- Wire the drive to the line supply.

3∼200...690 Vac

R/L1 S/L2 T/L3

or

... N.m
... lb.in

See installation manual (1760643 or 1760655) on www.schneider-electric.com or on the drive nameplate for tightening torque.

PA/ + PC / -

U/T1 V/T2 W/T3
U1 V1 W1
M 3∼
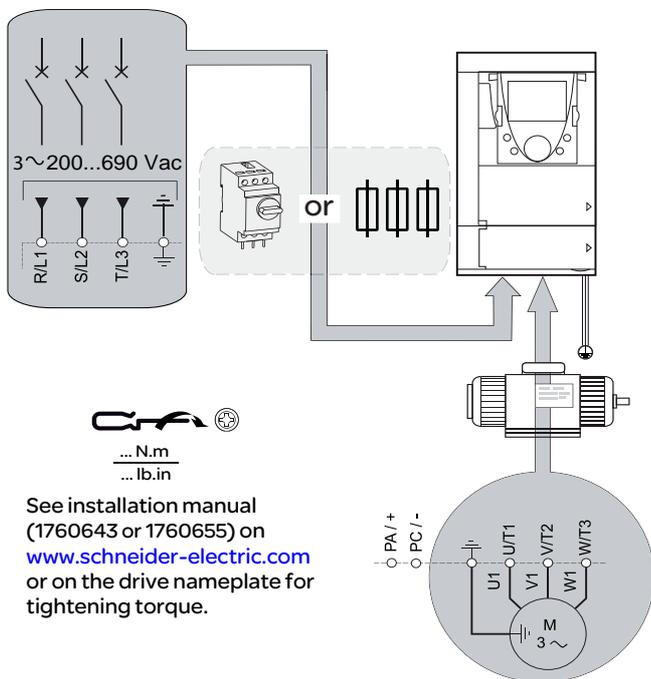
❺ Connect the drive: Control by external reference
(Fr1 = AI1)

0,6 N.m
5.3 lb.in
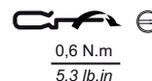
- **Wire the speed reference:**

+10 v   AI1+   AI1-   COM
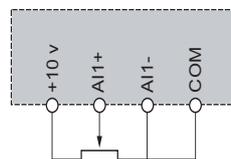
- **Wire the command:**

  Control command 2-wire:
  Parameter *t C C* = *2 C*

  LI1: forward
  LI2: reverse

SW1 — Source / Ext / Sink / Int

ATV●●●●●●

+24   LI1   LI2
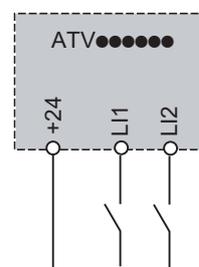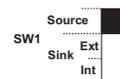
⚠⚠ DANGER

HAZARD OF FIRE OR ELECTRIC SHOCK
- To avoid overheating or loss of contact, connections must be carried out according to the cable sizes and tightening torques visible on the label stuck on the ATV●●.
- The use of multi-wire cable without a lug is forbidden for the mains connection.
- Carry-out a pull out test to check that terminal screws are correctly tighten.

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

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❻ Apply power to the drive

- Check that Logic Inputs are not active (LI1, LI2, see drawing ❺).
- Apply power to the drive.
- At first power up, it's displaying the drive state.

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ATV61HU15N4
1.5kW/2HP 380/480Vac
Config. n°1

Display for 3 seconds following power-up
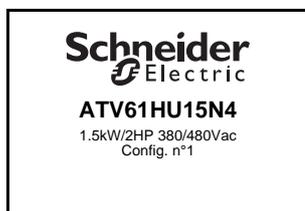
3 seconds

RDY	Term	+0.00Hz	0.0A
5 LANGUAGE			
English			
Français			✓
Deutsch			
Español			
Italiano			
	<<	>>	Quick

Switches to [5 LANGUAGE] menu automatically after 3 seconds. Select the language and press ENT

ENT

RDY	Term	+0.00Hz	0.0A
2 ACCESS LEVEL			
Basic			
Standard			✓
Advanced			
Expert			
	<<	>>	Quick

Switches to [2 ACCESS LEVEL] menu

ENT

RDY	Term	+0.00Hz	0.0A
1 DRIVE MENU			
1.1 SIMPLY START			
1.2. MONITORING			
1.3. SETTINGS			
1.4. MOTOR CONTROL			
1.5. INPUTS / OUTPUTS CFG			
Code	<<	>>	Quick

Switches to [1 DRIVE MENU]

ESC
2 times

RDY	Term	+0.00Hz	0.0A
MAIN MENU			
1 DRIVE MENU			
2 ACCESS LEVEL			
3 OPEN / SAVE AS			
4 PASSWORD			
5 LANGUAGE			
Code			Quick

Press ESC to return to [MAIN MENU].

With integrated display terminal.

At first power ON

r d Y

ESC   ENT

S I n -
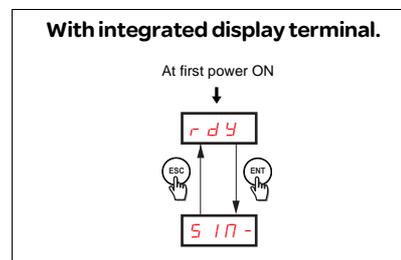
7 Set motor parameters for asynchronous motor.

- See on the motor Nameplate to set the following parameters .

Menu	Code	Description	Factory setting	Customer setting
S I M - [1.1 SIMPLY START]	b F r	[Standard mot. freq]: Standard motor frequency (Hz)	[50Hz IEC] 5 0	
	n P r	[Rated motor power]: Nominal motor power on motor nameplate (KW)	drive rating	
	U n S	[Rated motor volt.]: Nominal motor voltage on motor nameplate (Vac)	drive rating	
	n C r	[Rated mot. current]: Nominal motor current on motor nameplate (A)	drive rating	
	F r S	[Rated motor freq.]: Nominal motor frequency on motor nameplate (Hz)	5 0	
	n S P	[Rated motor speed]: Nominal motor speed on motor nameplate (rpm)	drive rating	
	I t H	[Mot. therm. current]: Motor thermal protection current on the motor's rating plate (A)	drive rating	

Menu	Code	Description	Factory setting	Customer setting
S I M - [1.1 SIMPLY START]	t U n	Set [Auto tuning] (tUn) parameter to Y E S. Auto-tuning is performed as soon as possible, then the parameter automatically changes to [Done] (dOnE).	n O	

⚠ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK OR ARC FLASH
- During auto-tuning, the motor operates at rated current.
- Do not service the motor during auto-tuning.

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

⚠ WARNING

DAMAGED DRIVE EQUIPMENT
- **Asynchronous motor:** It is essential that the following parameters U n S, F r S, n C r, n S P and n P r are correctly configured before starting autotuning.

- **Synchronous motor**: It is essential that the following parameters n C r S, n S P S, P P n S, P H S, L d S and L q S are correctly configured before starting autotuning.

- When one or more of these parameters have been changed after auto-tuning has been performed, Y E S will return to d O n E and the procedure will have to be repeated.

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

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8 Set basic parameters

Menu	Code	Description	Factory setting	Customer setting
S I M - [SIMPLY START]	A C C	[Acceleration]: Acceleration time (s)	3. 0	
	d E C	[Deceleration]: Deceleration time (s)	3. 0	
	L S P	[Low speed]: Motor frequency at minimum reference (Hz)	0	
	H S P	[High speed]: Motor frequency at maximum reference (Hz)	5 0	

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9 Start the motor

LI1: forward

ATV●●●●●●
+24   LI1   LI2

Graphic display terminal

| RDY | Term | +38.0Hz | 0.0A |

Frequency ref.

+ 38.0 Hz

Code   Quick

Integrated display terminal

↓
3 8. 0
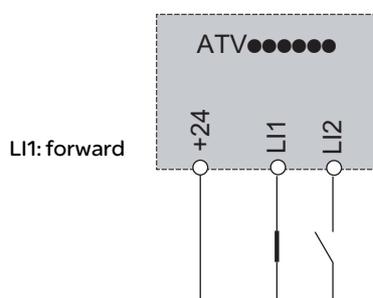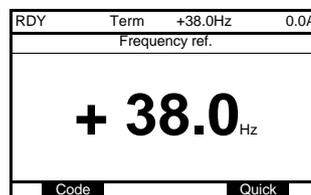
Menus structure

Access level

Comparison of the menus that can be accessed on the graphic display terminal/integrated display terminal

Graphic display terminal		Integrated display terminal	[2. ACCESS LEVEL] (LAC-)			
			[Basic] bAS	[Standard] Std (factory setting)	[Advanced] AdU	[Expert] EPr
[2 ACCESS LEVEL]		LAC-				
[3 OPEN/SAVE AS]		COd-				
[4 PASSWORD]						
[5 LANGUAGE]						
[1 DRIVE MENU]	[1.1 SIMPLY START]	SIM-				
	[1.2 MONITORING]	SUP-				
	[1.3 SETTINGS]	SEt-				
	[1.11 IDENTIFICATION]					
	[1.12 FACTORY SETTINGS]	FCS-				
	[1.13 USER MENU]	USr-				
A single function can be assigned to each input.						
	[1.4 MOTOR CONTROL]	drC-				
	[1.5 INPUTS / OUTPUTS CFG]	I-O-				
	[1.6 COMMAND]	CtL-				
	[1.7 APPLICATION FUNCT.]	FUn-				
	[1.8 FAULT MANAGEMENT]	FLt-				
	[1.9 COMMUNICATION]	COM-				
	[1.10 DIAGNOSTICS]					
	[1.14 PROGRAMMABLE CARD] (1)	PLC-				
[6 MONITORING CONFIG.]						
A single function can be assigned to each input.						
[7 DISPLAY CONFIG.]						
Several functions can be assigned to each input						
Expert parameters		EPr-				
Several functions can be assigned to each input.						

(1) can be accessed if the PLC card is present.

Accessing SIMPLY START and parameters.

A dash appears after menu and submenu codes to differentiate them from parameter codes.
Example: [1.1 SIMPLY START] (SIM-), [2/3 wire control] (tcc) parameter.

Power-up

XXX — Displays the state of the drive

SIM- — SIMPLY START — Simplified menu for a fast startup

Refer to the programming manual (1760649) for comprehensive menu description.

Menus
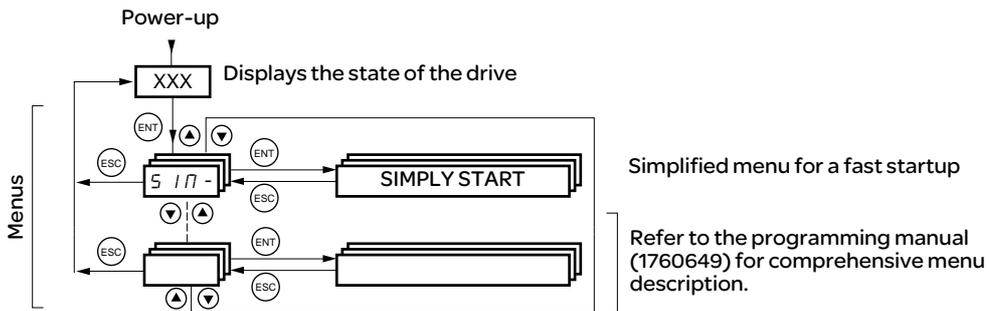
Certificate CE/ATEX

See on www.schneider-electric.com

CE
ATV61H CE Certificate
ATV61W CE Certificate
ATV61E5 CE Certificate

(Ex) 07ATEX0004X