



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 ATV610 Installation manual ([EAV64381](#))
- The ATV610 Programming manual ([EAV64387](#))

The Getting Started manual does not replace the Installation and the Programming manuals.

⚠️ ⚠️ 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. Do not repair or operate the product.
 - 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 product.

2 Verify The Delivery Of The Drive

- Unpack the drive and verify that it has not been damaged.
- Damaged products or accessories may cause electric shock or unanticipated equipment operation

⚠️ ⚠️ DANGER

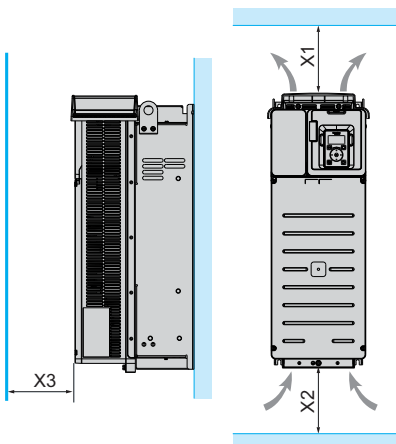
HAZARD OF ELECTRIC SHOCK OR UNANTICIPATED EQUIPMENT OPERATION

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.

3 Mount The Drive Vertically

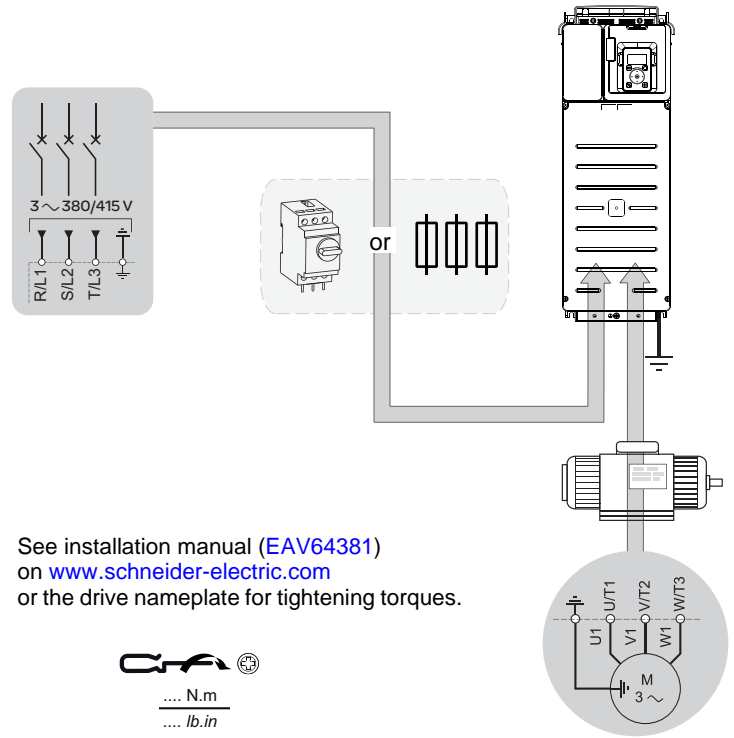


Drive	X1	X2	X3
ATV610U07N4...ATV610D90N4	≥ 100 mm (3.9 in.)	≥ 100 mm (3.9 in.)	≥ 10 mm (0.39 in.)
ATV610C11N4...ATV610C16N4	≥ 250 mm (10 in.)	≥ 250 mm (10 in.)	≥ 10 mm (0.39 in.)

For a surrounding air temperature up to 45 °C (113 °F), and for other thermal conditions, see installation manual ([EAV64381](#)) on www.schneider-electric.com

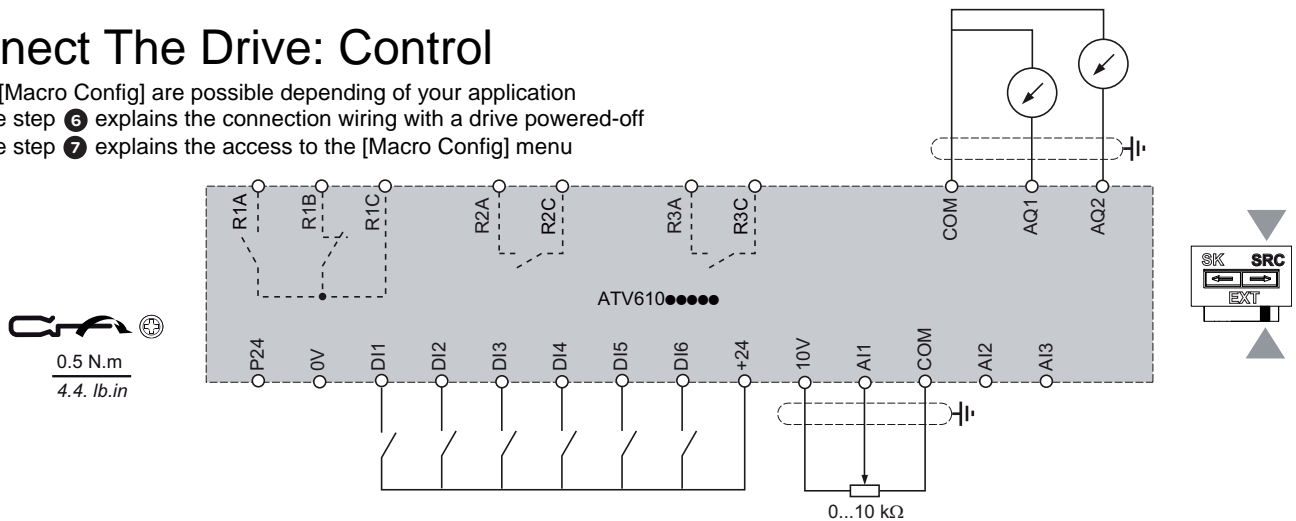
4 Connect The Drive: Power

- Connect the drive to ground.
- Verify circuit breaker rating or fuse rating (see the ATV610 Catalog).
- Verify that the nominal motor voltage is compatible with the drive voltage.
Nominal motor voltage _____ volts.
- Connect the drive to the motor.
- Connect the drive to the mains.



5 Connect The Drive: Control

- Several [Macro Config] are possible depending of your application
- the step 6 explains the connection wiring with a drive powered-off
 - the step 7 explains the access to the [Macro Config] menu



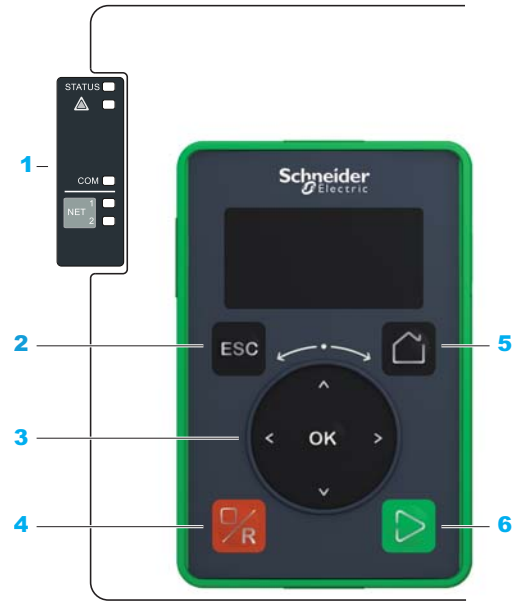
Assignment of the inputs/outputs according to [Macro Config]

	[Macro Config] C F G						
Input/output	[Start/stop] b 5 E 5 Factory setting	[Auto/manual] b A P P	[PID controller] b P . d	[Preset speed] b P 5 P	[Modbus communication] b P b C	[Multi-pump 1] b P P 1	[Multi-pump 2] b P P 2
DI1	[Start/Stop]	[Forward]	[Forward]	[Start/Stop]	[Start/Stop]	[Start/Stop]	[Start/Stop]
DI2	[Fault Reset]	[Reverse] (Manual)	Not assigned	[Fault Reset]	[Fault Reset]	Not assigned	Not assigned
DI3	Not assigned	Not assigned	Not assigned	[2 Preset speeds]	[Ref Freq 2 switching]	Not assigned	Not assigned
DI4	Not assigned	[Ref Freq 2 Switching]	Not assigned	[4 Preset speeds]	Not assigned	Not assigned	Not assigned
DI5	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned
DI6	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned
AI1	[Ref Freq Channel 1] 0...10 Vdc	[Ref Freq Channel 1] 0...10 Vdc (Manual)	[PID ref.]	[Ref Freq Channel 1] 0...10 Vdc	[Ref Freq Channel 2] 0...10 Vdc	[PID ref.]	[PID ref.]
AI2	Not assigned	[Ref Freq Channel 2] 4...20 mA (Auto)	[PID feedback]	Not assigned	Not assigned	[PID feedback]	[PID feedback]
AQ1	[Motor frequency] 4...20 mA	[Motor frequency] 4...20 mA	[Motor frequency] 4...20 mA	[Motor frequency] 4...20 mA	[Motor frequency] 4...20 mA	[Motor frequency] 4...20 mA	[Motor frequency] 4...20 mA
AQ2	[Motor current] 4...20 mA	[Motor current] 4...20 mA	[Motor current] 4...20 mA	[Motor current] 4...20 mA	[Motor current] 4...20 mA	[Motor current] 4...20 mA	[Motor current] 4...20 mA
R1	[Operating state Fault]	[Operating state Fault]	[Operating state Fault]	[Operating state Fault]	[Operating state Fault]	[Operating state Fault]	[Operating state Fault]
R2	[Drive Running]	[Drive Running]	[Drive Running]	[Drive Running]	[Drive Running]	[Pump 2 Cmd]	[Pump 1 Cmd]
R3	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned	[Pump 3 Cmd]	[Pump 2 Cmd]

6 Plain Text Display Terminal and LED: Description

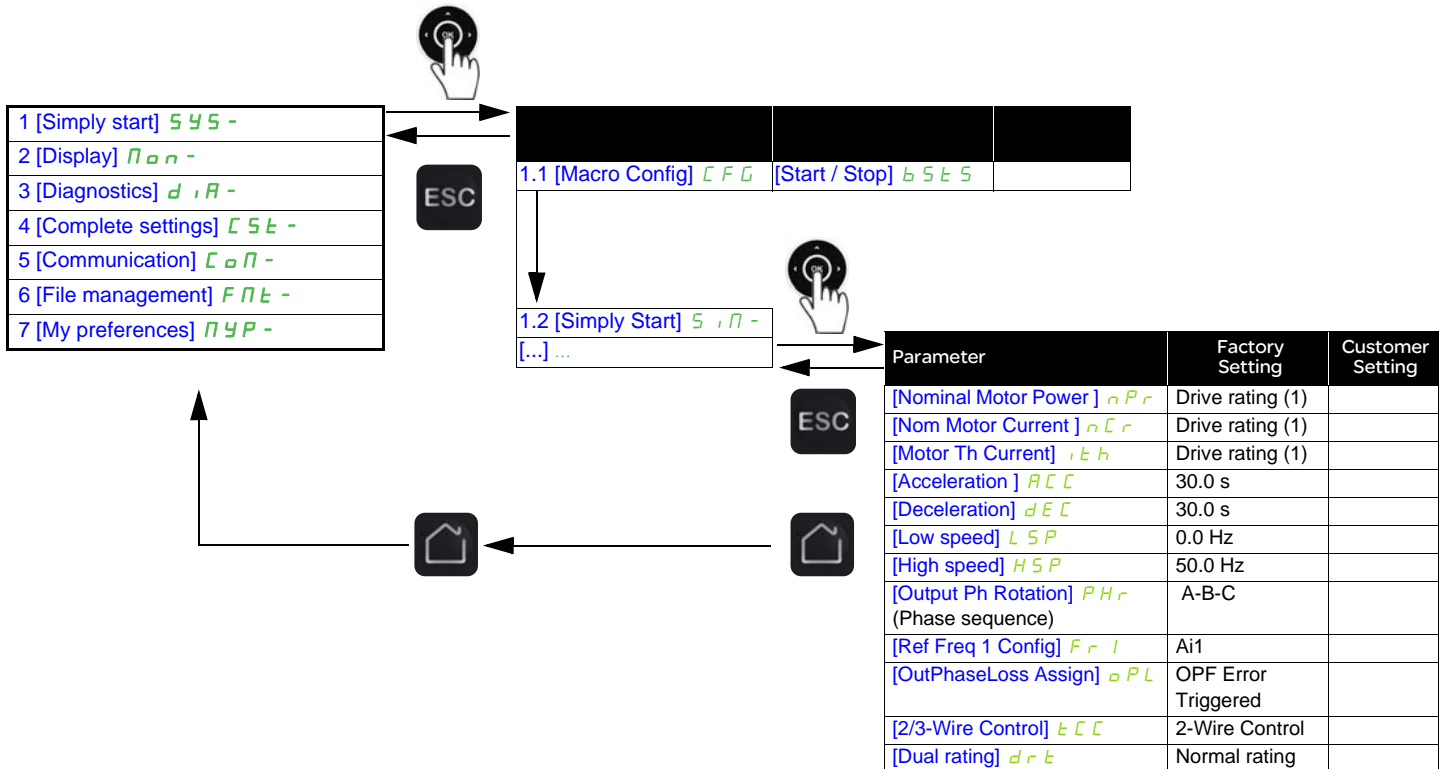
1 LEDs	Signaling LEDs, see table below.
2 ESC	Used to quit a menu/parameter or remove the currently displayed value in order to revert to the previous value retained in the memory.
3 Touch wheel (OK - arrows)	Used to save the current value or access the selected menu/parameter. The touch wheel is used 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.
4 STOP/RESET	Stop command / apply a Fault Reset.
5 Home	Access directly the home page.
6 RUN	Run command

LED	LED Color	LED status	Drive status
STATUS	Green	Blinking	Ready
		Flickering	Acceleration or deceleration
		On	Running
△	Red	Blinking	Warning
		On	Operating State Fault
COM	Yellow	Blinking	Modbus communication active
NET 1 NET 2	Green	On	Fieldbus module: communication active
		On	Fieldbus module: communication detected error
		Blinking	Fieldbus module: incorrect settings



7 [Macro Config] and [Simply start] Parameters

- Verify that digital inputs are not active (DI1 see step 5 drawing).
- Apply power to the drive.
- Select [Simply start] menu
- Select [Macro Config.] and select the configuration compatible with the wiring used (step 5)
- Set [Simply Start] Parameters.



(1) See on the motor nameplate to set the following parameters

8 Start The Motor

1 [Simply Start] <i>545-</i>	[Other State] <i>55t-</i> [Identification] <i>oid-</i>	4.5 [Generic monitoring] <i>GPr-</i> [Stall monitoring] <i>5tPr-</i> [Therm sensor monit] <i>nt5P-</i>
1.1 [Macro Config] <i>CFG</i> [Start/Stop] <i>b5t5</i> [Auto/Manual] <i>bANN</i> [PID controller] <i>bP id</i> [Preset speeds] <i>bPSP</i> [Modbus] <i>bnbC</i> [Multi-pump 1] <i>bNP1</i> [Multi-pump 2] <i>bNP2</i>	3.2 [Error history] <i>PFH-</i>	4.6 [Error/Warning handling] <i>CSWn-</i> [Fault Reset] <i>r5t-</i> [Auto Fault Reset] <i>AEr-</i> [Catch on the fly] <i>FLr-</i> [Motor thermal monit] <i>EHt-</i> [Output phase Loss] <i>oPL-</i> [Input phase loss] <i>iPL-</i> [External error] <i>EEF-</i> [Undervoltage handling] <i>u5b-</i> [4-20 mA loss] <i>LFL-</i> [Error detection disable] <i>inh-</i> [Fieldbus monitoring] <i>LLL-</i> [Communication Module] <i>CoPo-</i> [Tuning Error Resp] <i>enL</i> [Process underload] <i>uLd-</i> [Process overload] <i>oLd-</i> [Warning groups config] <i>AGCF-</i>
1.2 [Simply Start] <i>S, n-</i> [Nominal Motor Power] <i>nPr</i> [Nom Motor Current] <i>unCr</i> [Motor Th Current] <i>ieH</i> [Acceleration] <i>ACC</i> [Deceleration] <i>dEC</i> [Low speed] <i>LSP</i> [High speed] <i>HSP</i> [Output Ph Rotation] <i>PHr</i> [Ref Freq 1 Config] <i>Fr1</i> [OutPhaseLoss Assign] <i>oPL</i> [2/3-Wire Control] <i>tCC</i> [Dual rating] <i>drE</i>	4 [Complete settings] <i>CS t-</i>	4.7 [Maintenance] <i>CSNA-</i> [Diagnostics] <i>dRA-</i> [Fan management] <i>FANA-</i> [Time Counter Reset] <i>rPr</i>
1.3 [Modified parameters] <i>LNd-</i>	4.1 [Motor parameters] <i>MPA-</i> [Motor Standard] <i>bFr</i> [Nominal Motor Power] <i>nPr</i> [Nom Motor Voltage] <i>un5</i> [Nom Motor Current] <i>nCr</i> [Nominal Motor Freq] <i>Fr5</i> [Nominal Motor Speed] <i>n5P</i> [Max frequency] <i>tFr</i> [Motor Th Current] <i>ieH</i> [Output Ph Rotation] <i>PHr</i> [Motor control type] <i>CEt</i> [U/F Profile] <i>PFL</i> [IR compensation] <i>uFr</i> [Slip compensation] <i>SLP</i> [Switching frequency] <i>5Fr</i> [Noise Reduction] <i>nrD</i> [Motor surge limit.] <i>SVL</i> [Current Limitation] <i>CL,</i> [Autotuning] <i>tun</i> [Autotuning Status] <i>tus</i> [Dual rating] <i>drE</i>	5 [Communication] <i>Co n-</i> [Modbus Address] <i>Add</i> [Modbus baud rate] <i>tbr</i> [Modbus Format] <i>tFo</i> [ModbusTimeout] <i>tto</i> [Com. scanner input] <i>iCS-</i> [Com. scanner output] <i>oCS-</i>
2 [Display] <i>no n-</i>	4.2 [Input/Output] <i>io-</i> [2/3-Wire Control] <i>tCC</i> [2-wire type] <i>tCE</i> [Reverse Assign] <i>r5</i> [DI1 Assignment] <i>L, iC</i> [DI2 Assignment] <i>L, i2C</i> [DI3 Assignment] <i>L, i3C</i> [DI4 Assignment] <i>L, i4C</i> [DI5 Assignment] <i>L, i5C</i> [DI6 Assignment] <i>L, i6C</i> [Ref Freq template] <i>b5P</i> [AI1 configuration] <i>A, i-1</i> [AI2 configuration] <i>A, i-2</i> [AI3 configuration] <i>A, i-3</i> [AIV1 assignment] <i>AV, iA-</i> [R1 configuration] <i>r, i-1</i> [R2 configuration] <i>r, i-2</i> [R3 configuration] <i>r, i-3</i> [R4 configuration] <i>r, i-4</i> [R5 configuration] <i>r, i-5</i> [R6 configuration] <i>r, i-6</i> [AQ1 configuration] <i>AQ, i-1</i> [AQ2 configuration] <i>AQ, i-2</i>	6 [File management] <i>Fnt-</i> 6.1 [Transfer config file] <i>tCF-</i> [Copy to the drive] <i>oPF</i> [Copy from the drive] <i>oPF</i>
2.1 [Motor parameters] <i>MPA-</i> [Motor Speed] <i>SPD</i> [Motor Voltage] <i>uop</i> [Motor Power] <i>oPr</i> [Motor Torque] <i>oEr</i> [Motor Current] <i>LEr</i> [Motor Therm State] <i>tHr</i>	4.3 [Command and Reference] <i>CrP-</i> [Low Speed] <i>LSP</i> [High Speed] <i>HSP</i> [Ref Freq 1 Config] <i>Fr1</i> [Reverse Disable] <i>rin</i> [Stop Key Enable] <i>P5t</i> [Control Mode] <i>CHCF</i> [Command Switching] <i>CC5</i> [Cmd channel 1] <i>cd1</i> [Cmd channel 2] <i>cd2</i> [Freq Switch Assign] <i>rFC</i> [Ref Freq 2 Config] <i>Fr2</i> [Copy Ch1-Ch2] <i>CoP</i> [Forced Local Freq] <i>FLoC</i> [Forced Local Assign] <i>FLo</i>	6.2 [Factory settings] <i>FCS-</i> [Config. Source] <i>FCS,</i> [Parameter group list] <i>FrY-</i> [Go to Factory Settings] <i>GF5</i> [Save Configuration] <i>5CS,</i>
2.2 [Drive parameters] <i>MP, i-</i> [Pre-Ramp Ref Freq] <i>FrH</i> [Ref Frequency] <i>LFr</i> [Motor Frequency] <i>rFr</i> [Mains Voltage] <i>uLn</i> [DC bus voltage] <i>Vbu5</i> [Drive Therm State] <i>tHd</i> [Motor Run Time] <i>rEH</i> [Power-on time] <i>PtH</i>	4.4 [Generic functions] <i>CSGF-</i> [Ramp] <i>rANN-</i> [+/- speed] <i>uPd-</i> [Stop configuration] <i>5tE-</i> [Auto DC injection] <i>AdC-</i> [Jog] <i>JoG-</i> [Preset Speeds] <i>P55-</i> [Skip Frequency] <i>JPF</i> [Skip Frequency 2] <i>JF2</i> [Skip Frequency 3] <i>JF3</i> [Skip Freq.Hysteresis] <i>JFH</i> [Define system units] <i>5uC-</i> [PID controller] <i>P, id-</i> [Sleep/Wakeup] <i>5PW</i> [Threshold reached] <i>tHRE-</i> [Mains contactor command] <i>LLC-</i> [Parameters switching] <i>nLP-</i> [Stop after speed timeout] <i>P5SP-</i> [Advanced sleep check] <i>Ad5</i> [Booster Control] <i>b5t-</i>	6.3 [Firmware Update] <i>FwUP-</i> [Firmware update diag] <i>Fwud-</i> [Identification] <i>oid-</i> [Package version] <i>PfV-</i> [Update Firmware] <i>FwAP-</i> [Abort Firmware Update] <i>FWCL</i>
2.3 [I/O Map] <i>io n-</i> [Digital Input Map] <i>L, iA-</i> [Analog inputs image] <i>A, iA-</i> [Analog outputs image] <i>AoA-</i> [Digital Output Map] <i>LoA</i>	7 [My preferences] <i>MyP-</i>	7.1 [Language] <i>LnG-</i>
2.4 [Communication map] <i>Co n n-</i> [Command Channel] <i>Co n d C</i> [Cmd Register] <i>Co n d</i> [Ref Freq Channel] <i>rFC</i> [Pre-Ramp Ref Freq] <i>FrH</i> [CIA402 Sate Reg] <i>EEA</i> [Modbus network diag] <i>Co n d-</i> [Modbus HMI diag] <i>Co n dH-</i> [Command word image] <i>Co w, i-</i> [Freq. ref. word map] <i>rW, i-</i>	7.2 [Password] <i>Co d-</i> [Password status] <i>P55t</i> [Password] <i>Pw d-</i> [Upload rights] <i>uLr</i> [Download rights] <i>dLr</i>	7.3 [Customization] <i>Co u5-</i> [Display screen type] <i>n5C-</i>
2.5 [Application Parameters] <i>APr-</i> [Variable Speed Pump] <i>nPP-</i> [Booster Control Pump] <i>bCP-</i>	7.4 [Access Level] <i>LRAc-</i> [Basic] <i>bA5</i> [Expert] <i>EPr</i>	7.5 [LCD settings] <i>cnL-</i> [Screen Contrast] <i>c5t</i> [standby] <i>5bY</i> [Display Terminal locked] <i>KLLCK</i>
3 [Diagnostics] <i>d, iA-</i>		
3.1 [Diag. data] <i>ddt-</i> [Last Warning] <i>LALr</i> [last error] <i>LFE</i> [Nb Of Starts] <i>n5N</i> [Motor Run Time] <i>rEH</i>		

[-] after *code* means there are more parameters levels

Some parameters have visibility constraints, see Programming manual (EAV64387) on www.schneider-electric.com