



EAV9613610

Easy Altivar ATV310 complete parameters list

ENGLISH

Reference mode 402 External reference value 403 Integrated display jog dial reference 801 Speed reference 59.11 Internal PID reference 806 PID reference value	F008 Internal CPU F009 Overbraking F010 Overcurrent F011 Drive overheat F012 Process overload F013 Motor overload F014 1 Output phase loss F015 3 Output phases loss F016 Main overvoltage F017 Input phase loss F018 Motor short-circuit F019 Ground short-circuit F020 IGBT short circuit F021 Load short circuit F022 Modbus interruption F024 HMI communication F025 Overspeed F026 PI feedback fault F027 IGBT overheat F028 Autotuning fault F029 Process underload fault F030 Undervoltage F031 Incorrect configuration F032 Invalid configuration F033 AI1 current loss F034 Download invalid configuration F036 Angle setting fault	202 2-wire type control [00] Level [01]* Transition [02] Forward priority 203 Logic inputs type [00]* Positive [01] Negative internal supply [02] Negative external supply	215 Motor thermal state threshold 0 to 118 % of motor thermal state (100 %) 216.0 AO1 assignment [00]* Not assigned [129] Motor current [130] Output frequency [131] Ramp output [135] PID reference [136] PID feedback [137] PID error [139] Output power [140] Motor thermal state [141] Drive thermal state 216.1 AO1 type [10U] Voltage: 0-10 Vdc [0A]* Current: 0-20 mA [4A] Current: 4-20 mA 217 Speed Template [BSD]* Standards [BLS] Pedestal [BNS] Deadband [BNSD] Deadband at 0 %	321 Max voltage of constant power Rated motor voltage to 460 V (380 V*) 322 Max frequency of constant power Rated motor frequency to 400 Hz (50 Hz*) 323 Dual Rating [00]* Normal duty [01]* Heavy duty	400- CONTROL MENU 401 Reference channel 1 [01]* Analog terminal [163] Remote display [164] Modbus [183] Integrated display with Jog dial 402 External reference value -400 to 400 Hz 403 Integrated display jog dial reference 0 to 100 % 404 Reverse inhibition [00]* No [01] Yes 405 Stop key priority [00]* No: Stop inactive [01]* Yes: Stop active 406 Channel configuration [01]* Combined mode [02] Separate mode 407 Command channel 1 [01]* Terminals [02] Integrated display [03] Remote display [10] Modbus 408 Forced local assignment [00]* No: Function inactive [01] Yes: Function active [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 409 Forced local reference [00]* Not assigned [01] Analog terminal [163] Remote display [183] Integrated jog dial 410 Forced local command [01] Terminals [02]* Integrated display [03] Remote display	502.3 Ramp divider 1 to 10 (4*) 502.4 DC injection assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 502.5 DC injection level 0.1 to 1.41 In (0.64 In*) 502.6 IDC injection time for DCLI 0.1 to 30 s (0.5 s*) 502.7 DC injection level 2 0.1In to DC injection level (0.5 In*) 502.8 Injection standstill braking time 0.1 to 30 s (0.5 s*) 503 Reverse direction [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 504- AUTO DC INJECTION MENU 504.0 Automatic DC injection [00] Function inactive, no DC injected current. [01]* Time limited DC injection [02] Continuous DC injection 504.1 Automatic DC injection current 0 to 1.2 In (0.7 In*) 504.2 Automatic DC injection time 0.1 to 30 s (0.5 s*) 505.0 Jog assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 505.1 Jog frequency 0 to 10 Hz (5 Hz*)
Monitoring mode 402 External reference value 403 Integrated display jog dial reference 801 Speed reference 802 Output frequency 803 Motor current 804 PID error 805 PID Feedback 806 PID reference 807 Main voltage 808 Motor thermal state 809 Drive thermal state 810 Output power 811 Product status [-00] Drive ready [-01] Drive running [-02] Acceleration [-03] Deceleration [-04] DC injection braking in progress [-05] Current limitation state [-06] Freewheel stop control or freewheel state [-07] Auto-adapted deceleration [-08] Controlled stop on mains phase loss [-09] Auto-tuning in progress [-10] Fast stop state [-11] No line power state [-12] Drive in back state [-13] Remote control mode [-14] Local control mode	Configuration mode 301 Standard motor frequency [00]* 50Hz IEC [01] 60Hz NEMA 401 Reference channel 1 [01]* Analog terminal [163] Remote display [164] Modbus [183] Integrated display with Jog dial 501.0 Acceleration 0.0 s to 999.9s (3.0s*) 501.1 Deceleration 0.0 s to 999.9s (3.0s*) 512.0 Low speed 0.0Hz to High speed (0Hz*) 512.2 High speed Low speed to Max frequency (50 or 60 Hz determined by 301 parameter value) 302 Rated Motor Power Drive power -5 to +2** 305 Rated motor current 0.25-1.5In** 204.0 AI1 type [5U]* 0-5 V [10U] 0-10 V [0A] x-y mA [L1U] Logic inputs 101 Store customer parameter set [00]* Disabled [01] Stores current configuration 102 Factory / recall customer parameter set [00]* Disabled [02] Customer configuration [64] Factory set configuration COMPLETE MENU 100 Macro-configuration [00]* Start/stop [04] PID regulation [09] Speed 200- I/O MENU 201 Type of control [00]* 2-wire control [01] 3-wire control	204- AI1 CONFIGURATION MENU 204.0 AI1 type [5U]* Voltage: 0-5 Vdc [10U] Voltage: 0-10 Vdc [0A] Current: x-y mA [L1U] Logic inputs 204.1 AI1 current scaling parameter of 0% 0-20mA (4 mA*) 204.2 AI1 current scaling parameter of 100% 0-20mA (20 mA*) 204.3 AI1 filter time 0 s to 10 s (0 s*) 205- R1 CONFIGURATION MENU 205.0 R1 assignment [00] Not assigned [01]* No fault [02] Drive run [04] Frequency threshold reached [05] HSP reached [06] I threshold reached [07] Frequency reference reached [08] Motor thermal reached [21] Process underload fault [22] Process overload fault [123] Loss of 4-20 mA signal 205.1 R1 status (output active level) [00]* Positive logic : active high [01] Negative logic: active low 206- LO1 CONFIGURATION MENU 206.0 LO1 Assignment [00]* Not assigned [01] No fault [02] Drive run [04] Frequency threshold reached [05] HSP reached [06] I threshold reached [07] Frequency reference reached [08] Motor thermal reached [21] Process underload fault [22] Process overload fault [123] AI1 alarm 4-20 mA [126] Auxiliary pump active 206.1 LO1 status (output active level) [00]* Positive logic : active high [01] Negative logic: active low 207 Process overload time delay 0 to 100 s (0 s*) 208 Process overload threshold 70 to 150 % of nominal motor current (90 %) 209 Process overload fault duration 0 to 6 min (0 min*) 210 Process underload time delay 0 to 100 s (0 s*) 211 Process underload threshold 20 to 100 % of nominal motor current (60 %) 212 Process underload fault duration 0 to 6 min (0 min*) 213 Motor frequency threshold 0 to 400 Hz (50 Hz* or 60 Hz) 214 Motor current threshold 0 to 1.5In (In*)	300- MOTOR CONTROL MENU 301 Standard motor frequency [00]* 50 Hz [01] 60 Hz 302 Rated motor power Drive power -5 to +2** 303 Rated motor cos phi 0.5 to 1** 304 Rated motor voltage 360 to 460 V (380 V*) 305 Rated motor current 0.25 to 1.5In** 306 Rated motor frequency 10 to 400Hz (50Hz*) 307 Rated motor speed 0 to 24000 rpm** 308 Maximum frequency 0 to 400Hz (60Hz*) 309 Motor control type [00]* Performance: Vector control [03] Standard: U/F 2 points [05] Sync. motor control (1) [06] Pump: U/F 310 IR compensation 25 to 200 % (100 %) 311 Slip compensation 0 to 150 % (100 %) 312 Frequency loop stability 0 to 100 % (20 %*) 313 Frequency loop gain 0 to 100 % (20 %*) 314 Flux Profile 0 to 100 % (20 %*) 315 Switching frequency 2 to 12 kHz (4 kHz*) 317 Motor noise reduction [00]* No [01] Yes 318 Auto-tuning [00]* No: Use factory parameters of standard motors [01] Yes: Request auto-tuning [02] Done: Auto-tuning has already been performed 319 Motor parameter choice [00]* Nominal motor power [01] Nominal motor cos phi 320 Vector control 2 points [00]* No [01] Yes	324- SYNC. MOTOR MENU (1) 324.0 Nominal motor current 0.25 to 1.5In** 324.1 Nominal motor torque 0.1...6.553.5 Nm** 324.2 Nominal motor speed 0 to 48000 rpm** 324.3 Poles pair number 1 to 50** 318 Auto-tuning [00]* No: Use factory parameters of standard motors [01] Yes: Request auto-tuning [02] Done: Auto-tuning has already been performed 324.4 Nominal motor frequency (Read only) 10 to 800 Hz (Calculated by speed and poles*) 324.5 Sync. EMF constant 0 to 6553.5 mV/rpm (0.0 mV/rpm*) 324.6 % error EMF Sync (Read only) -3276.7 to 3275.8 % 324.7 "d" axis stator inductance 0 to 655.35 mH (0.00 mH*) 324.8 "q" axis stator inductance 0 to 655.35 mH (0.00 mH*) 324.9 Cust. stator R syn 0 to 65535 mOhm (0 mOhm*) 325- SYNC. MOTOR PERFORMANCE MENU (1) 325.0 Saliency mot. state (Read only) [00] Tune not done [01]* Low saliency level [02] Medium saliency level [03] High saliency level 325.1 Auto angle setting type [03] Alignment for IPM motor [04] Alignment for SPM motor [05] Pulse signal injection [06]* Pulse signal injection - optimized [254] No alignment 325.2 Speed filter coefficient 0 to 100 (65*) 325.3 Current reference filter time 0 to 100 ms (3.2 ms*) 325.4 Boost activation [00] No boost [01]* Dynamic boost [02] Static boost 325.5 Boost value -100 to 100% (0%*) 325.6 Boost frequency threshold 0 to 400 Hz (0Hz*) 325.7 Maximum current of PSI alignment 0 to 300% (0%*) 325.8 Autotune status (Read only) [00]* Default autotune not done [01] Autotune pending [02] Autotune is in progress [03] Autotune failed [04] Autotune done	500- FUNCTION MENU 501- RAMP MENU 501.0 Acceleration 0.0 to 999.9 s (3.0 s*) 501.1 Deceleration 0.0 to 999.9 s (3.0 s*) 501.2 Ramp shape assignment [00]* Linear [01] S shape [02] U shape 501.3 Ramp switching commutation [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 501.4 Acceleration 2 0.0 to 999.9 s (5.0 s*) 501.5 Deceleration 2 0.0 to 999.9 s (5.0 s*) 501.6 Decel Ramp Adaptation assignment [00] Function deactivated [01]* Function activated [02] Motor brake 502- STOP CONFIGURATION MENU 502.0 Type of stop [00]* Ramp stop [03] DC injection stop [08] Fast stop [13] Free wheel stop 502.1 Freewheel stop assignment [00]* Not assigned [L1L] to [L4L] LI1 to LI4 active Low to stop 502.2 Fast stop assignment [00]* Not assigned [L1L] to [L4L] LI1 to LI4 active Low to stop [LUL] LIU active Low to stop	506- Speed up and down 506.0 Up speed command [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 506.1 Down speed command [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 506.2 Store [00]* No [01] RAM [02] ROM 506.3 Clear the function [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 506.4 Reactivity of +/- speed around ref. 0 to 100 % (0 %*) 507- PRESET SPEED MENU 507.0 2 Preset speeds [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [L1L] to [L4L] LI1 to LI4 active Low 507.1 4 Preset speeds same as 2 Preset speeds 507.2 8 Preset speeds same as 2 Preset speeds 507.3 Preset speed 2 0 to 400 Hz (10 Hz*) 507.4 Preset speed 3 0 to 400 Hz (15 Hz*) 507.5 Preset speed 4 0 to 400 Hz (20 Hz*) 507.6 Preset speed 5 0 to 400 Hz (25 Hz*)

The (*) indicates a parameter factory setting.
 The (**) indicates a parameter factory setting determined by drive rating and dual rating.

(1) Menus and parameters are only visible for ATV310H●●●N4S references and when 309 Motor control type is set to 05 Synchronous motor control.

Easy Altivar ATV310 complete parameters list

507.7 Preset speed 6 0 to 400 Hz (30 Hz*) 507.8 Preset speed 7 0 to 400 Hz (35 Hz*) 507.9 Preset speed 8 0 to 400 Hz (40 Hz*) 508 Skip frequency 0 to 400 Hz (0 Hz*) 59- PID MENU 59.00 PID feedback assignment [00]* Not assigned [01] Analog terminal 59.01 PID proportional gain 0.01 to 100 (1*) 59.02 PID integral gain 0.01 to 100 (1*) 59.03 PID derivative gain 0.00 to 100.0 (0*) 59.04 PID feedback scale factor 0.1 to 100.0 (1.0*) 59.05 Activation internal PID reference [00]* No [01] Yes 59.06 2 preset PID assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [LUH] LIU active High 59.07 4 preset PID assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [LUH] LIU active High 59.08 2 preset PID reference 0 to 100 % (25 %*) 59.09 3 preset PID reference 0 to 100 % (50 %*) 59.10 4 preset PID reference 0 to 100 % (75 %*) 59.11 Internal PID reference 0 to 100 % (0 %*) 59.12 PID reference ramp 0 to 99.9 s (0 s*) 59.13 PID min value reference 0 to 100 % (0 %*) 59.14 PID max value reference 0 to 100 % (100 %*) 59.15 PID predictive speed 0.1 to 400 Hz (0.0 Hz*) 501.4 Acceleration 2 0.0 to 999.9 s (5 s*) 59.16 PID correction reverse [00]* No, no negative speed [01] Yes, no negative speed [02] No, allow negative speed [03] Yes, allow negative speed 59.17 PID auto/manual assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [LUH] LIU active High 59.18 PID manual reference [00]* No [01] Analog terminal [183] Integrated display with Jog dial 512.1 Low speed operating time 0.1 to 999.9 s (0 s*) 59.19 PID: wake up level 0 to 100 % (0 %*) 59.20 PID: Wake up threshold 0 to 100 % (0 %*) 59.21 Sleep offset threshold 0 to High speed (0 Hz*) 59.22 PID feedback supervision threshold 0 to 100 % (0 %*) 59.23 PID supervision function time delay 0 to 600 s (0 s*) 59.24 Maximum frequency detection Hysteresis	0 to High speed (0 Hz*) 59.25 PID feedback supervision [01]* Free wheel [04] Fallback speed 59.26 Fallback speed 0 to High speed (0 Hz*) 510- PUMP SUB-MENU 207 Process overload time delay 0 to 100 s (0 s*) 208 Process overload threshold 70 to 150% of nominal motor current (90 %*) 209 Process overload fault duration 0 to 6 min (0 min*) 210 Process underload time delay 0 to 100 s (0 s*) 211 Process underload threshold 20 to 120 % of nominal motor current (60 %*) 212 Process underload fault duration 0 to 6 min (0 min*) 510.0 Selecting operating mode [00]* Single frequency conversion mode [01] Single frequency conversion combined with auxiliary pump mode 510.1 Starting frequency of the auxiliary pump 0 to Maximum frequency (50 Hz*) 510.2 Time delay before starting auxiliary pump 0 to 999.9 s (2 s*) 510.3 Auxiliary pump ramp reaching 0 to 999.9 s (2 s*) 510.4 Auxiliary pump stop frequency 0 to Maximum frequency (0 Hz*) 510.5 Auxiliary pump stop time delay 0 to 999.9 s (2 s*) 510.6 Auxiliary pump stop ramp 0 to 999.9 s (2 s*) 510.7 Zero flow detection period 0 to 20 min (0 min*) 510.8 Zero flow detection activation threshold 0 to 400 Hz (0 Hz*) 510.9 Zero flow detection offset 0 to 400 Hz (0 Hz*) 511- CURRENT LIMITATION MENU 511.0 2nd current limitation commutation [00]* Not activated [L1H] to [L4H] LI1 to LI4 active High [LUH] LIU active High [L1L] to [L4L] LI1 to LI4 active Low [LUL] LIU active Low 511.1 Current limitation 0.25 to 1.5In** 511.2 Current limitation 2 0.25 to 1.5In** 512- SPEED LIMIT MENU 512.0 Low speed 0 Hz to high speed (0 Hz*) 512.1 Low speed operating time 0.1 to 999.9 s (0 s*) 512.2 High speed Low speed to Max frequency (50 or 60 Hz determined by 301 parameter value) 512.3 2 High speed assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [LUH] LIU active High 512.4 4 High speed assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High	[LUH] LIU active High 512.5 High speed 2 Low speed to Max frequency (50 or 60 Hz*) 512.6 High speed 3 Low speed to Max frequency (50 or 60 Hz*) 512.7 High speed 4 Low speed to Max frequency (50 or 60 Hz*) 513 Cooling fan control [00] Fan runs when drive runs [01]* Thermal control 600- FAULT DETECTION MANAGEMENT MENU 601 Detected fault reset assignment [00]* Not assigned [L1H] to [L4H] LI1 to LI4 active High [LUH] LIU active High 602- AUTOMATIC RESTART MENU 602.0 Automatic restart [00]* No [01] Yes 602.1 Max. automatic restart [00]* 5 min [01] 10 min [02] 30 min [03] 1 hour [04] 2 hours [05] 3 hours [06] Infinite 603 Catch on the fly [00]* Function inactive [01] Function active 604- MOTOR THERMAL PROTECTION MENU 604.0 Motor thermal current 0.2-1.5In** 604.1 Motor protection type [01]* Self-ventilated [02] Motor-ventilated 604.2 Overload fault management [00] Detected fault ignored [01]* Free wheel stop [08] DC injection stop 604.3 Motor thermal state memo [00]* thermal state not stored at power off [01] thermal state is stored at power off 605 Output Phase loss [00] Deactivated [01]* Tripping then freewheel stop 606 Input Phase loss [00] Detected fault ignored [01]* Detected fault with freewheel stop [08] DC injection stop 607- UNDERVOLTAGE MENU 607.0 Undervoltage detected fault management [00]* Detected fault and R1 relay set 0 [01] Detected fault and R1 relay set 1 607.1 Undervoltage prevention [00]* No action (freewheel) [02] Stop following an adjustable ramp 607.2 Undervoltage ramp deceleration time 0.0 to 10.0 s (1.0 s*) 608 IGBT test [00]* No test [01] Starting test 609 4-20mA loss Behaviour [00]* Detected fault ignored	[01] Freewheel stop [08] DC injection stop 610 Detected fault inhibition assignment [00]* Function inactive [L1H] to [L4H] LI1 to LI4 active High [LUH] LIU active High 611 Modbus detected fault management [00] Detected fault ignored [01]* Freewheel stop [08] DC injection stop 612 Degraded line supply operation [00]* No [01] Yes 613 Reset power run [00]* No [03] Reset drive running time [04] Reset power-on time [07] Reset fan operation time 614 Reset all previous detected faults via Run key of HMI [00]* Deactivated [01] Active 700- COMMUNICATION MENU 701 Modbus address Off to 247 (off*) 702 Modbus baud rate [24] 4.8 kbps [28] 9.6 kbps [32]* 19.2 kbps [36] 38.4 kbps 703 Modbus format [02] 8o1 [03]* 8E1 [04] 8n1 [05] 8n2 704 Modbus time out 0.1 to 30 s (10 s*) 705- INPUT SCANNER MENU 705.0 Com scanner read address parameter 1 0C81* 705.1 Com scanner read address parameter 2 219C* 705.2 Com scanner read address parameter 3 0000 705.3 Com scanner read address parameter 4 0000 706- OUTPUT SCANNER MENU 706.0 Com scanner write address parameter 1 2135* 706.1 Com scanner write address parameter 2 219A* 706.2 Com scanner write address parameter 3 0000 706.3 Com scanner write address parameter 4 0000 707- INPUT SCANNER ACCESS MENU 707.0 Com scanner read address value 1 ETA value* 707.1 Com scanner read address value 2 RFRD value* 707.2 Com scanner read address value 3 8000 707.3 Com scanner read address value 4 8000	708- OUTPUT SCANNER ACCESS MENU 708.0 Com scanner write address value 1 CMD value* 708.1 Com scanner write address value 2 LFRD value* 708.2 Com scanner write address value 3 8000 708.3 Com scanner write address value 4 8000	7	8
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