

Reference mode		402	External reference value
		403	Analog input virtual
		801	Speed reference
		59.11	Internal PID reference
		806	PID reference value
Monitoring mode			
		402	External reference value
		403	Analog input virtual
		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]	Free-wheel stop control or free-wheel state
		[07]	Auto-adapted deceleration
		[08]	Controller 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
900- MAINTENANCE MENU			
		901	State of logic inputs L1 to L14
		902	State of logic output L01 and relay R1
		903	Display of high speed value
904 Drive Power rating			
		037	
		075	
		U15	
		U22	
		U30	
		U40	
		U55	
		D15	
905 Drive voltage rating			
		037	
		075	
		U15	
		U22	
		U30	
		U40	
		U55	
		D15	
906 Specific Product Number			
		907	Card 1 Software Version
		908	Card 2 Software Version
		909	Run elapsed time display
		910	Power On time display
		911	Fan time display
		912	Process Exposed time
		913	Modbus communication status
		914	Last fault 1
		915	State of drive at fault 1
		916	Last fault 2
		917	State of drive at fault 2
		918	Last fault 3
		919	State of drive at fault 3
		920	Last fault 4
		921	State of drive at fault 4
		999	HMI Password
F000 HMI menu			
		F001	Precharge
		F002	Unknown drive ralling
		F003	Unknown or incompatible power board
		F004	Internal serial link
		F005	Invalid industrialization zone

F006	Current measurement circuit
F007	Internal thermal sensor fault
F008	Internal CPU
F009	Overbraking
F010	Overcurrent
F011	Drive overheat
F012	Process overheat
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	Over-speed
F026	PI feedback fault
F027	IGBT overheat
F028	Autotuning fail
F029	Processing underload
F030	Undervoltage
F031	Incorrect configuration
F032	Invalid configuration
F033	A11 current loss
F034	Download invalid configuration
F035	Pre-charge resistor protection fault
Configuration mode	
301	Standard motor frequency [00] 50Hz IEC [01] 60Hz NEMA
401	Reference channel 1 [00] Terminal [01] Remote display [02] Keypad
501.0	Acceleration [00] Integrated display with Jog dial [01] Acceleration
501.1	Deceleration [00] 0.3 s to 999.3s (3.0s*) [01] 0.3 s to 999.3s (3.0s*)
512.0	Low speed [00] 0.0Hz to high speed (0Hz*) [01] 0.0Hz to high speed (0Hz*)
512.2	High speed to max. frequency (mot. frequency*) [00] Low speed to max. frequency (mot. frequency*) [01] Low speed to max. frequency (mot. frequency*)
302	Rated motor power [00] 510 to NOV *2 (according to drive rating*) [01] 510 to NOV *2 (according to drive rating*)
305	Rated motor current [00] 0.25~1.5m (n) [01] 0.25~1.5m (n)
204.0	A11 type [00] 100 [01] 100 [02] 100 [03] 100 [04] 100 [05] 100 [06] 100 [07] 100 [08] 100 [09] 100 [10] 100 [11] 100 [12] 100 [13] 100 [14] 100 [15] 100 [16] 100 [17] 100 [18] 100 [19] 100 [20] 100 [21] 100 [22] 100 [23] 100 [24] 100 [25] 100 [26] 100 [27] 100 [28] 100 [29] 100 [30] 100 [31] 100 [32] 100 [33] 100 [34] 100 [35] 100 [36] 100 [37] 100 [38] 100 [39] 100 [40] 100 [41] 100 [42] 100 [43] 100 [44] 100 [45] 100 [46] 100 [47] 100 [48] 100 [49] 100 [50] 100 [51] 100 [52] 100 [53] 100 [54] 100 [55] 100 [56] 100 [57] 100 [58] 100 [59] 100 [60] 100 [61] 100 [62] 100 [63] 100 [64] 100 [65] 100 [66] 100 [67] 100 [68] 100 [69] 100 [70] 100 [71] 100 [72] 100 [73] 100 [74] 100 [75] 100 [76] 100 [77] 100 [78] 100 [79] 100 [80] 100 [81] 100 [82] 100 [83] 100 [84] 100 [85] 100 [86] 100 [87] 100 [88] 100 [89] 100 [90] 100 [91] 100 [92] 100 [93] 100 [94] 100 [95] 100 [96] 100 [97] 100 [98] 100 [99] 100
101	Store customer parameter set [00] Disabled [01] Store current configuration [02] Recall customer parameter set
102	Factory / recall customer parameter set [00] Disabled [01] Customer configuration [02] Factory set configuration
COMPLETE MENU	
100	Macro configuration [00] Start stop [01] Wire control [02] PID regulation [03] Speed [04] Forward priority
200-	IO MENU
201	Type of control [00] Type of control [01] 2-wire control [02] 4-wire control [03] Level [04] Transition [05] Forward priority
202	2-wire wire control level

203	Logic inputs type	[00] positive [01] negative
204	A11 CONFIGURATION MENU	
204.0	A11 type	[00] 50V Voltage, 0-5Vdc [01] 100V Voltage, 0-10Vdc [0A] Current, x-y mA [0U] Logic inputs
204.1	A11 current scaling parameter of 0%	[00] 0-20mA (4mA*)
204.2	A11 current scaling parameter of 100%	[00] 0-20mA (20mA*)
204.3	A11 filter	[00] 0 s to 10 s (0 s*)
205	R1 assignment	[00] Not assigned [01] No error detected [02] Drive run [04] Frequency threshold reached [05] HSP reached [06] Threshold reached [07] Frequency reference reached [08] Motor thermal reached [21] Underload alarm [22] Overload alarm [23] Loss of 4-20mA signal
206	LO1 CONFIGURATION MENU	
206.0	LO1 Assignment	[00] Not assigned [01] No error detected [02] Drive run [04] Frequency threshold reached [05] HSP reached [06] Threshold reached [07] Frequency reference reached [08] Motor thermal reached [21] Underload alarm [22] Overload alarm [23] Loss of 4-20mA signal
206.1	LO1 alarm 4-20mA	[00] Auxiliary pump active [01] Error (output active level) [02] Error (input active level) [03] Position activation level [04] Negative [05] Positive
207	Application Overload time delay	[00] 0 to 100 s (0 s*)
208	Application Overload threshold	[00] 70 to 150% of nominal motor current (90%*)
209	Overload fault duration	[00] 0 to 6 min (0 min*)
210	Application underload time delay	[00] 0 to 100 s (0 s*)
211	Application Underload threshold	[00] 20 to 100% of nominal motor current (60%*)
212	Underload fault duration	[00] 0 to 6 min (0 min*)
213	Motor frequency threshold	[00] 0 to 400Hz (50Hz* for 60Hz)
214	Motor current threshold	[00] 0 to 1.5In (In*)
215	Motor thermal state threshold	[00] 0 to 118% (100%*)
216.0	A01 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	AOI type	[100] Voltage: 0-10 Vdc [101] Current: 0-20 mA [4A] Current: 4-20 mA
217	Speed Template	[00] Standard [02] Deadband
300-	MOTOR CONTROL MENU	
301	Standard motor frequency	[100] 50Hz [01] 60Hz
302	Rated motor power	Drive power (-5 to +2) depending on drive rating
303	Rated motor cos phi	0.5 to 1 (depending on drive rating)
304	Rated motor voltage	380 to 460V (380V)
305	Rated motor current	0.25 to 1.5n (depending on drive rating)
306	Rated motor frequency	10 to 400Hz (50Hz)
307	Rated motor speed	0 to 2400rpm (depending on drive rating)
308	Maximum frequency	10 to 400Hz (60Hz)
309	Motor control type	[00] Performance: Vector control [03] Standard: U/F 2 points
310	IR compensation	[00] Pump: U/F [01] Compensation
311	Slip compensation	25 to 200% (100%)
312	Frequency loop stability	0 to 150% (100%)
313	Frequency loop gain	0 to 100% (20%)
314	Filter cut-off frequency	0 to 100% (20%)
315	Switching frequency	2 to 12kHz (4kHz)
317	Motor noise reduction	[00] No [01] Yes
318	Auto-tuning	[00] No When factory parameters of stand- dard motors [01] Yes Launches auto-tuning [02] Done: If auto-tuning has already been performed
319	Motor parameter choice	[00] Nominal motor power [01] Nominal motor cos phi [02] Vector control 2 points
320		[00] No [01] Yes
321	Max voltage of constant power	380 to 460V (380V)
322	Max frequency of constant power	50 to 400Hz (50Hz)
400-	CONTROL MENU	
401	Reference channel 1	[01] Terminal [163] Remote display [164] Modbus
402	External reference value	[183] Integrated display with Jog dial -400 to 400Hz
403	Analog input virtual	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	001* Not separate mode 002* Separate mode 003* Command channel 1
407	Control menu (cont.)	001* Terminals 002* Local 003* Remote display 10* Modbus
408	Forced local assignment	000* No: Function inactive L1H1 L1 active High L2H1 L2 active High L3H1 L3 active High L4H1 L4 active High L1H1 L1 active High L2H1 L2 active High L3H1 L3 active High L4H1 L4 active High
409	Forced local reference	000* Not assigned 001* Terminal 163* Remote display 183* Integrated log dial
500-	RAMP MENU	
501-	Acceleration	0.0 to 399.98 (3.08*)
501.0	Deceleration	0.0 to 399.98 (3.08*)
501.2	Ramp shape assignment	000* Linear 001* S Shape 002* U Shape
501.3	Ramp switching commutation	000* L1 assigned High L1H1 L1 active High L2H1 L2 active High L3H1 L3 active High L4H1 L4 active High L1H1 L1 active High L2H1 L2 active High L3H1 L3 active High L4H1 L4 active High L1H1 L1 active Low L2H1 L2 active Low L3H1 L3 active Low L4H1 L4 active Low L1L1 L1 active Low L2L1 L2 active Low L3L1 L3 active Low L4L1 L4 active Low L1L1 L1 active Low L2L1 L2 active Low L3L1 L3 active Low L4L1 L4 active Low
501.4	Acceleration 2	0.0 to 399.98 (3.08*)
501.5	Deceleration 2	0.0 to 399.98 (3.08*)
501.6	Decel Ramp Adaptation assignment	000* Not assigned 001* Function activated 002* Motor brake
502-	STOP CONFIGURATION MENU	
502.0	Type of stop	000* Ramp stop 001* Fast stop 002* Free wheel stop
502.1	Freewheel stop assignment	000* Not assigned L1L1 L1 active Low to stop L2L1 L2 active Low to stop L3L1 L3 active Low to stop L4L1 L4 active Low to stop L1L1 L1 active Low to stop L2L1 L2 active Low to stop L3L1 L3 active Low to stop L4L1 L4 active Low to stop
502.2	Fast stop assignment	000* Not assigned L1L1 L1 active Low to stop L2L1 L2 active Low to stop L3L1 L3 active Low to stop L4L1 L4 active Low to stop L1L1 L1 active Low to stop L2L1 L2 active Low to stop L3L1 L3 active Low to stop L4L1 L4 active Low to stop
502.3	Ramp divider	1 to 10 (4*)
503	Reverse direction	000* Not assigned L1H1 L1 active High L2H1 L2 active High L3H1 L3 active High L4H1 L4 active High L1H1 L1 active High L2H1 L2 active High L3H1 L3 active High L4H1 L4 active High

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504- 504.0	AUTO DC INJECTION MENU 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 120% of nominal motor current (70%*)
504.2	Automatic DC injection time	0.1 to 30s (0.5s*)
505	Log assignment	[00]* Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
506- 506.0	Speed up and down Up speed command	[00]* Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
506.1	Down speed command	[00]* Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
506.2	Store	[00] No [01] RAM [02] ROM
506.3	Motor potentiometer function	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
506.4	Reactivity of +V speed around ref.	[159] Accepted and deceleration with constant active high 0 to 100% (0%*)
507- 507.0	PRESET SPEED MENU 2 Preset speeds	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.1	4 Preset speeds	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.2	8 Preset speeds	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.3	Preset speed 2	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.4	Preset speed 3	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.5	Preset speed 4	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.6	Preset speed 5	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.7	Preset speed 6	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.8	Preset speed 7	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
507.9	Preset speed 8	[00] Not assigned [1.1] L1 active High [2.2] L2 active High [3.3] L3 active High [4.4] L4 active High [5.5] L5 active High [6.6] L6 active High [7.7] L7 active High [8.8] L8 active High [9.9] L9 active High
508	Skip frequency	0 to 400Hz (0Hz*)

59- 59.00	PID MENU PID feedback assignment	000* Not assigned 001 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	000* No 001* Yes
59.06	2 preset PID assignment	000* Not assigned 001 L1 active High L2 active High L3 active High L4 active High LU active High
59.07	4 preset PID assignment	000* Not assigned 001 L1 active High L2 active High L3 active High L4 active High LU active High
59.08	2 preset PID reference	0.0 to 100% (25%)
59.09	3 preset PID reference	0.0 to 100% (50%)
59.10	4 preset PID reference	0.0 to 100% (50%)
59.11	Internal PID reference	0.0 to 100% (0*)
59.12	PID min value reference	0.0 to 100% (0*)
59.13	PID max value reference	0.0 to 100% (0*)
59.14	PID predictive speed	0.1 to 400Hz (0, 0*)
59.15	Acceleration 2	0.0 to 999.9s (5s*)
59.16	PID correction reverse	000* No 001* No, no negative speed 002 No, no negative speed 003 Yes, allow negative speed
59.17	PID auto/manual assignment	000* Not assigned 001 L1 active High L2 active High L3 active High L4 active High LU active High
59.18	PID manual reference	000* No 001* Yes
512.1	Low speed operating time	163s Integrated jog dial 0.1 to 999.9s (0s*)
59.19	PID: wake up level	0.0 to 100% (0%)
59.20	PID: Wake up threshold	0.0 to 100% (0%)
59.21	Sleep offset threshold	0.0 to 100% (0%)
59.22	PID feedback speed threshold	0.0 to High speed (0Hz*)
59.23	PID supervision function time delay	0.0 to 300s (0s*)

59.24	Maximum frequency detection hysteresis 0 to 50Hz (0Hz*)
59.25	PID feedback supervision [00]* Not assigned [00]* Free wheel [04] Falback speed Falback speed
59.26	Falback speed 0 to High speed (0Hz*)
510-	PUMP SUB-MENU
207	Overload time delay 0 to 100 s (0 s*)
208	Overload threshold 70 to 150% of nominal motor current (90%)
209	Overload fault duration 0 to 6 min (0 min*)
210	Underload time delay 0 to 100 s (0 s*)
211	Underload threshold 20 to 120% of nominal motor current (60%)
212	Underload fault duration 0 to 6min (0min*)
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 60Hz (50Hz*)
510.2	Time delay before starting auxiliary pump 0 to 999.9s (2s*)
510.3	Auxiliary pump ramp reaching 0 to 999.9s (2s*)
510.4	Auxiliary pump stop frequency 0 to 60Hz (0Hz*)
510.5	Auxiliary pump stop time delay 0 to 999.9s (2s*)
510.6	Auxiliary pump stop ramp 0 to 999.9s (2s*)
510.7	Zero flow detection period 2 to 20min (0min)
510.8	Zero flow detection activation threshold 0 to 400Hz (0Hz*)
510.9	Zero flow detection offset 0 to 400Hz (0Hz*)
511-	CURRENT LIMITATION MENU
511.0	2nd current limitation commutation [00] Not activated L1) active High L1) L1 active High L2H) L2 active High L3H) L3 active High L4H) L4 active High LUH) LU active High L1L) L1 active Low L2L) L2 active Low L3L) L3 active Low L4L) L4 active Low LUL) LU active Low
511.1	Current limitation 0.25 to 1.5n (1.5n*)
511.2	Current limitation 2 0.25 to 1.5n (1.5n*)
512-	SPEED LIMIT MENU
512.0	Low speed 0Hz to high speed (0Hz*)
512.1	Low speed operating time 0 to 999.9s (0s*)
512.2	High speed to maximum frequency (50 or 60Hz) Low speed to standard motor frequency*)
512.3	Speed assignment [00]* Not assigned L1H) L1 active High L2H) L2 active High L3H) L3 active High L4H) L4 active High LUL) LU active High

512.4	4 High speed assignment	[00]* Not assigned [01]* L1 not assigned [11]* L1 active High [21]* L2 active High [31]* L3 active High [41]* L4 active High [4H]* L4 active High
512.5	High speed 2	Low speed to Max frequency (50 or 60Hz*)
512.6	High speed 3	Low speed to Max frequency (50 or 60Hz*)
512.7	High speed 4	Low speed to Max frequency (50 or 60Hz*)
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 [11]* L1 active High [21]* L2 active High [31]* L3 active High [41]* L4 active High [4H]* L4 active High
602-	AUTOMATIC RESTART MENU	
602.0	Automatic restart	[00]* No [01]* Yes
602.1	Max. automatic restart	[00]* 0 min [01]* 1 min [10]* 30 min [11]* 1 hour [20]* 2 hours [21]* 3 hours [30]* 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 (According to drive rating*)
604.1	Motor protection type	[01]* Motor protection [02]* Self-ventilated
604.2	Overload fault management	[00]* Detected fault ignored [01]* Free wheel 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
607-	UNDERVOLTAGE MENU	
607.0	Undervoltage detected fault management	[00]* Undervoltage fault and RT relay open [01]* Undervoltage fault and RT relay closed
607.1	Undervoltage prevention	[00]* No action (freewheel) [01]* No action (freewheel)
607.2	Stop following an adjustable ramp	0.0 to 10.0s (1.0s*)
607.3	Precharge resistor protection level	430 to 580 VDC (0 V* with protection removed)
608	IGBT test	[00]* No test [01]* Starting test
609	4-20mA loss Behaviour	[00]* Detected fault ignored [01]* Freewheel stop

610	Detected fault inhibit assignment	001* Function inactive 002* L1 active high 003* L2 active high 004* L3 active high 005* L4 active high 006* L5 active high 007* L6 active high 008* L7 active high 009* L8 active high 010* L9 active high 011* L10 active high 012* L11 active high 013* L12 active high 014* L13 active high 015* L14 active high 016* L15 active high 017* L16 active high 018* L17 active high 019* L18 active high 020* L19 active high 021* L20 active high 022* L21 active high 023* L22 active high 024* L23 active high 025* L24 active high 026* L25 active high 027* L26 active high 028* L27 active high 029* L28 active high 030* L29 active high 031* L30 active high 032* L31 active high 033* L32 active high 034* L33 active high 035* L34 active high 036* L35 active high 037* L36 active high 038* L37 active high 039* L38 active high 040* L39 active high 041* L40 active high 042* L41 active high 043* L42 active high 044* L43 active high 045* L44 active high 046* L45 active high 047* L46 active high 048* L47 active high 049* L48 active high 050* L49 active high 051* L50 active high 052* L51 active high 053* L52 active high 054* L53 active high 055* L54 active high 056* L55 active high 057* L56 active high 058* L57 active high 059* L58 active high 060* L59 active high 061* L60 active high 062* L61 active high 063* L62 active high 064* L63 active high 065* L64 active high 066* L65 active high 067* L66 active high 068* L67 active high 069* L68 active high 070* L69 active high 071* L70 active high 072* L71 active high 073* L72 active high 074* L73 active high 075* L74 active high 076* L75 active high 077* L76 active high 078* L77 active high 079* L78 active high 080* L79 active high 081* L80 active high 082* L81 active high 083* L82 active high 084* L83 active high 085* L84 active high 086* L85 active high 087* L86 active high 088* L87 active high 089* L88 active high 090* L89 active high 091* L90 active high 092* L91 active high 093* L92 active high 094* L93 active high 095* L94 active high 096* L95 active high 097* L96 active high 098* L97 active high 099* L98 active high 100* L99 active high 101* L100 active high 102* L101 active high 103* L102 active high 104* L103 active high 105* L104 active high 106* L105 active high 107* L106 active high 108* L107 active high 109* L108 active high 110* L109 active high 111* L110 active high 112* L111 active high 113* L112 active high 114* L113 active high 115* L114 active high 116* L115 active high 117* L116 active high 118* L117 active high 119* L118 active high 120* L119 active high 121* L120 active high 122* L121 active high 123* L122 active high 124* L123 active high 125* L124 active high 126* L125 active high 127* L126 active high 128* L127 active high 129* L128 active high 130* L129 active high 131* L130 active high 132* L131 active high 133* L132 active high 134* L133 active high 135* L134 active high 136* L135 active high 137* L136 active high 138* L137 active high 139* L138 active high 140* L139 active high 141* L140 active high 142* L141 active high 143* L142 active high 144* L143 active high 145* L144 active high 146* L145 active high 147* L146 active high 148* L147 active high 149* L148 active high 150* L149 active high 151* L150 active high 152* L151 active high 153* L152 active high 154* L153 active high 155* L154 active high 156* L155 active high 157* L156 active high 158* L157 active high 159* L158 active high 160* L159 active high 161* L160 active high 162* L161 active high 163* L162 active high 164* L163 active high 165* L164 active high 166* L165 active high 167* L166 active high 168* L167 active high 169* L168 active high 170* L169 active high 171* L170 active high 172* L171 active high 173* L172 active high 174* L173 active high 175* L174 active high 176* L175 active high 177* L176 active high 178* L177 active high 179* L178 active high 180* L179 active high 181* L180 active high 182* L181 active high 183* L182 active high 184* L183 active high 185* L184 active high 186* L185 active high 187* L186 active high 188* L187 active high 189* L188 active high 190* L189 active high 191* L190 active high 192* L191 active high 193* L192 active high 194* L193 active high 195* L194 active high 196* L195 active high 197* L196 active high 198* L197 active high 199* L198 active high 200* L199 active high 201* L200 active high 202* L201 active high 203* L202 active high 204* L203 active high 205* L204 active high 206* L205 active high 207* L206 active high 208* L207 active high 209* L208 active high 210* L209 active high 211* L210 active high 212* L211 active high 213* L212 active high 214* L213 active high 215* L214 active high 216* L215 active high 217* L216 active high 218* L217 active high 219* L218 active high 220* L219 active high 221* L220 active high 222* L221 active high 223* L222 active high 224* L223 active high 225* L224 active high 226* L225 active high 227* L226 active high 228* L227 active high 229* L228 active high 230* L229 active high 231* L230 active high 232* L231 active high 233* L232 active high 234* L233 active high 235* L234 active high 236* L235 active high 237* L236 active high 238* L237 active high 239* L238 active high 240* L239 active high 241* L240 active high 242* L241 active high 243* L242 active high 244* L243 active high 245* L244 active high 246* L245 active high 247* L246 active high 248* L247 active high 249* L248 active high 250* L249 active high 251* L250 active high 252* L251 active high 253* L252 active high 254* L253 active high 255* L254 active high 256* L255 active high 257* L256 active high 258* L257 active high 259* L258 active high 260* L259 active high 261* L260 active high 262* L261 active high 263* L262 active high 264* L263 active high 265* L264 active high 266* L265 active high 267* L266 active high 268* L267 active high 269* L268 active high 270* L269 active high 271* L270 active high 272* L271 active high 273* L272 active high 274* L273 active high 275* L274 active high 276* L275 active high 277* L276 active high 278* L277 active high 279* L2
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