10. Memory map

The memory map of the LEC controller is shown below.

Only use the valid addresses and flags. Do not use any others (including undefined and unused).

10.1 State data

The state of the electrical actuator (current location, current speed, and current thrust) is located in address D9000-D9006.

Address	Parameter name	Byte	Setting range	Data type	Contents
D9000	Current position	4	± 2147483647	Integer	Displays the current position (Units: 0.01mm)
D9002	Current speed	2	0～65535		Displays the current speed (Units: mm/sec)
D9003	Current thrust	2	0～300		Displays the current thrust (Units: %)
D9004	Target position	4	± 2147483647		Displays the target position (Units: 0.01mm)
D9006	Driving data No.	2	0～63		Displays the step data no. that is completed or driving

② "Equipment name"(basic parameter "Equipment name") is stored in Address D000e.

Address	Parameter name	Byte	Setting range	Data type	Contents
D000e	Equipment name	16	14 letters	Letter	Registered by ASCII code

10.2 Running with specified data

Electric actuator is run with specified data using addresses D9100 to D9110. This operation changes the internal flag (Area D9084) depending on the operating conditions.

【Procedure for running with specified data】

① Set internal flag Y30(input invalid flag) to "1:Serial input operation mode".

② Write "1" to internal flag Y19(SVON) and confirm that internal flag X49(SVRE) has become "1".

③ Write "1" to internal flag Y1C(SETUP) and confirm that internal flag X4A(SETON) has become "1".

④ Write data in addresses D9102 to D9110 to controller.

⑤ Write Operation Start instruction from address D9100.

Address	Operation start instruction	byte	Setting
D9100	Data specified mode	1	1: Starts operation according to operation data (D9102 to D9110). (Returns to 0 after operation start was processed.)
	Not defined	1	-

Address	Virtual operation data	byte	Setting range	Unit	Data type
D9102	Movement Mode	2	1:absolute coordinate movement 2:relative coordinate movement	- -	Integer
D9103	Speed	2	1 to 65535	mm/s	
D9104	Position	4	±2147483647	0.01mm	
D9106	Acceleration	2	1 to 65535	mm/s^2	
D9107	Deceleration	2	1 to 65535	mm/s^2	
D9108	Pushing force	2	0 to 100 (Positioning operation for "0")	%	
D9109	Trigger Level	2	0 to 100	%	
D910a	Pushing speed	2	1 to 65535	mm/s	
D910b	Moving force	2	0 to 300	%	
D910c	Area output end 1 (Area 1)	4	±2147483647	0.01mm	
D910e	Area output end 2 (Area 2)	4	±2147483647	0.01mm	
D9110	In position	4	1～2147483647	0.01mm	

⚠ Warning

The setting range differs depending on the actuator. Avoid using the actuator outside the setting range. Please refer to the instruction manual of each actuator for the setting range.

10.3 Internal flags

The status information of the motor controller can be confirmed by using address D9084 (X40 to X4F). The internal flags of the electrical actuator are operated using address D90c1 (Y10～Y1F) and D90c2 (Y30～Y3F).

● **Internal flags (status flags)**

Flag name		Read	Write	Contents
X40	OUT0	○	×	As internal processing of controller (regardless of parallel/ serial), ON when the functions on the left are output
X41	OUT1	○	×	
X42	OUT2	○	×	
X43	OUT3	○	×	
X44	OUT4	○	×	
X45	OUT5	○	×	
X46	—	○	×	Cannot be used
X47				
X48	BUSY	○	×	As internal processing of controller (regardless of parallel/ serial), ON when the functions on the left are output But unlike parallel I/O driving, ESTOP and ALARM signals have positive logic. E-STOP: ON when EMG stops. ALARM: ON when alarm is generated.
X49	SVRE	○	×	
X4A	SETON	○	×	
X4B	INP	○	×	
X4C	AREA	○	×	
X4D	WAREA	○	×	
X4E	ESTOP	○	×	
X4F	ALARM	○	×	

● **Internal flags (state change flags)**

Flag name		Read	Write	Contents
Y10	IN0	○	○	●When Read Displays the instruction state when in serial driving mode. (ON: 1, OFF: 0) ●When Write Gives instructions to controller. Only valid when in serial driving mode. (ON: 1, OFF: 0)
Y11	IN1	○	○	
Y12	IN2	○	○	
Y13	IN3	○	○	
Y14	IN4	○	○	
Y15	IN5	○	○	
Y16	—	○	○	Cannot be used
Y17		○	○	
Y18	HOLD	○	○	●When Read Displays the instruction state when in serial driving mode. (ON: 1, OFF: 0) ●When Write Gives instructions to controller. Only valid when in serial driving mode. (ON: 1, OFF: 0)
Y19	SVON	○	○	
Y1A	DRIVE	○	○	
Y1B	RESET	○	○	
Y1C	SETUP	○	○	
Y1D	JOG-	○	○	Move to – direction by JOG operation. (1: move, 2: stop)
Y1E	JOG+	○	○	Move to + direction by JOG operation. (1: move, 2: stop)
Y1F	—	○	○	Cannot be used
Y30	Input invalid flag (*1) (*2)	○	○	0: Parallel input driving mode (parallel output end normal operation) 1: Serial input driving mode (parallel output end output prohibited)
Y31 ～Y3F	—	○	×	Cannot be used (cannot be changed)

(*1) The driving input mode (parallel/ serial) is switched in Y30.

(*2) When Y30 is specified from 0 to 1, the parallel input state before the instruction is continued. Conversely, when Y30 is specified from 1 to 0, the state of the parallel input terminal is reflected immediately.