

## Recommended Parameter Values by Actuator Model(LECSA)

These are the "Recommended parameter values" for the LECSA driver for each actuator.  
(Setup Software(MR Configurator2™) : For part No. LEC-MRC2E)

These recommended parameter values have been created for use in control mode "Position control mode (pulse input)" and for actuator with stroke less than 1000 mm.

Please change the parameter values according to the customer application.  
See section 4 of the "LECSA Operation Manual" for details.

### Recommended Parameter Values [LEF]


Series				LEFS25			LEFS32			LEFS40		
	Lead symbol			H	A	B	H	A	B	H	A	B
	Lead			20	12	6	24	16	8	30	20	10
Parameter *1,*2	Para No	Initial value	Recommended Value									
Number of command input pulses per revolution *3.	PA05	100	100									
Electronic gear numerator *3.	PA06	1	100 (Positioning mode: 10)									
Electronic gear denominator *3.	PA07	1	20	12	6	24	16	8	30	20	10	
Feed length multiplication (STM) (Multiplier)	PE02	0000	0000 (<1000 stroke)/0001 (>1000 stroke)									
Home position return type	PE03	0010	□□□3 (Stopper type)									
Home position return direction	PE03	0010	□□1□ (Motor side)									
Home position return Speed (rpm)	PE04	500	90	150	300	75	113	225	60	90	180	
Home position return/JOG operation Acceleration/Deceleration time constants (msec)	PE07	100	1000	600	300	1200	800	400	1500	1000	500	
Home position return position data (μm)	PE08	0	-2000 (<1000 stroke)/-200 (>1000 stroke)									
Stopper type home position return stopper time (msec)	PE10	100	200									
Stopper type home position return torque limit value (%)	PE11	15	30									
Regenerative option	PA02	000	000 (Non)/002 (LEC-MR-RB-032)									
Rotation direction selection *4	PA14	0	1 (+: Counter motors side)									
Adaptive tuning mode	PB01	000	000									
Load to motor inertia moment ratio	PB06	7	7									
Machine resonance suppression filter 1	PB13	4500	4500									
Notch shape selection 1	PB14	000	000									

□ Differs to initial value

- \*1. Parameter is set to the recommended value. Please set parameter according to customer application.
- \*2. Mechanical resonance may occur depending on the shape or mounting orientation of the work piece. Please change this parameter during initial configuration.  
(Parameter initial configuration ⇒ Set the recommended parameter value ⇒ Operation start)
- \*3. Other than positioning mode: Actuator travel distance at 10 [μm/pulse] per pulse.  
Positioning Mode: Minimum actuator travel distance of 1[μm].
- \*4. When the motor mounting position is right side parallel (LEFS\*R) or left side parallel (LEFS\*L), the rotation direction selection is 0(+: Counter motors side).

Series			LEFB25	LEFB25U	LEFB32	LEFB32U	LEFB40	LEFB40U
	Lead symbol		S					
	Lead		54					
Parameter *1,*2	Para No	Initial value	Recommended value					
Number of command input pulses per revolution *3.	PA05	100	100					
Electronic gear numerator *3.	PA06	1	100 (Positioning mode: 10)					
Electronic gear denominator *3.	PA07	1	54					
Feed length multiplication (STM) (Multiplier)	PE02	0000	0000 (<1000 stroke)/0001 (>1000 stroke)					
Home position return type	PE03	0010	□□□3 (Stopper type)					
Home position return direction	PE03	0010	□□1□ (Motor side)					
Home position return Speed (rpm)	PE04	500	66					
Home position return/JOG operation Acceleration/Deceleration time constants (msec)	PE07	100	2700					
Home position return position data (μm)	PE08	0	-3000 (<1000 stroke)/-300 (>1000 stroke)					
Stopper type home position return stopper time (msec)	PE10	100	200					
Stopper type home position return torque limit value (%)	PE11	15	30					
Regenerative option	PA02	000	000 (Non)/002 (LEC-MR-RB-032)					
Rotation direction selection	PA14	0	1 (+: Counter motors side)	0 (+: Counter motors side)	1 (+: Counter motors side)	0 (+: Counter motors side)	1 (+: Counter motors side)	0 (+: Counter motors side)
★ Adaptive tuning mode	PB01	000	002		000			
★ Load to motor inertia moment ratio	PB06	7	50					
★ Machine resonance suppression filter 1	PB13	4500	400		4500			
★ Notch shape selection 1	PB14	000	030		000			

★ Parameter setting required.

 Differs to initial value

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- \*2. Mechanical resonance may occur depending on the shape or mounting orientation of the work piece. Please change this parameter during initial configuration.  
(Parameter initial configuration ⇒ Set the recommended parameter value ⇒ Operation start)
- \*3. Other than positioning mode: Actuator travel distance at 10 [μm/pulse] per pulse.  
Positioning Mode: Minimum actuator travel distance of 1[μm].

## Recommended Parameter Values [LEJ]

Series			LEJS40			LEJS63			LEJB40	LEJB63
	Lead symbol		H	A	B	H	A	B	T	
	Lead		24	16	8	30	20	10	27	42
Parameter *1,*2	Para. No	Initial value	Recommended value							
Number of command input pulses per revolution *3.	PA05	100	<b>100</b>							
Electronic gear numerator *3.	PA06	1	<b>100 (Positioning mode: 10)</b>							
Electronic gear denominator *3.	PA07	1	<b>24</b>	<b>16</b>	<b>8</b>	<b>30</b>	<b>20</b>	<b>10</b>	<b>27</b>	<b>42</b>
Feel length multiplication (STM) (Multiplier)	PE02	0000	<b>0000 (&lt;1000 stroke)/0001 (&gt;1000 stroke)</b>							
Home position return type	PE03	0010	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <b>3 (Stopper type)</b>							
Home position return direction	PE03	0010	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <b>(Motor side)</b>							
Home position return Speed (rpm)	PE04	500	<b>75</b>	<b>113</b>	<b>225</b>	<b>60</b>	<b>90</b>	<b>180</b>	<b>133</b>	<b>86</b>
Home position return/JOG operation Accelerationeration/Deceleration time constants (msec)	PE07	100	<b>1200</b>	<b>800</b>	<b>400</b>	<b>1500</b>	<b>1000</b>	<b>500</b>	<b>1350</b>	<b>2100</b>
Home position return position data (μm)	PE08	0	<b>-2000 (&lt;1000 stroke)/-200 (&gt;1000 stroke)</b>							
Stopper type home position return stopper time (msec)	PE10	100	<b>200</b>							
Stopper type home position return torque limit value (%)	PE11	15	<b>30</b>							
Regenerative option	PA02	000	<b>000 (Non)/002 (LEC-MR-RB-032)/003 (LEC-MR-RB-12)</b>							
Rotation direction selection	PA14	0	<b>1 (+: Counter motors side)</b>						<b>0 (+: Counter motors side)</b>	
★Adaptive tuning mode	PB01	000	<b>000</b>						<b>002</b>	000
★Load to motor inertia moment ratio	PB06	7	<b>7</b>						<b>50</b>	
★Machine resonance suppression filter 1	PB13	4500	<b>4500</b>						<b>400</b>	4500
★Notch shape selection 1	PB14	000	<b>000</b>						<b>030</b>	000

★ Parameter setting required.

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\*2. Mechanical resonance may occur depending on the shape or mounting orientation of the work piece. Please change this parameter during initial configuration.

(Parameter initial configuration  $\Rightarrow$  Set the recommended parameter value  $\Rightarrow$  Operation start)

\*3. Other than positioning mode: Actuator travel distance at 10 [ $\mu\text{m}/\text{pulse}$ ] per pulse.

Positioning Mode: Minimum actuator travel distance of 1[ $\mu\text{m}$ ].

# Recommended Parameter Values [LEY]

Series	Lead symbol		LEY25/LEYG25			LEY25D/LEYG25D			LEY32/LEYG32			LEY32D/LEYG32D		
			A	B	C	A	B	C	A	B	C	A	B	C
	Lead		12	6	3	12	6	3	20	10	5	16	8	4
Parameter *1,*2	Para. No	Initial value	Recommended value											
Number of command input pulses per revolution *3.	PA05	100	100											
Electronic gear numerator *3.	PA06	1	100 (Positioning mode: 10)											
Electronic gear denominator *3.	PA07	1	12	6	3	12	6	3	20	10	5	16	8	4
Feed length multiplication (STM) (Multiplier)	PE02	0000	0000 (<1000 stroke)/0001 (>1000 stroke)											
Home position return type	PE03	0010	□□□3 (Stopper type)											
Home position return direction	PE03	0010	□□1□ (Motor side)											
Home position return Speed (rpm)	PE04	500	50	100	200	50	100	200	30	60	120	38	75	150
Home position return/JOG operation Acceleration/Deceleration time constants (msec)	PE07	100	600	300	150	600	300	150	1000	500	250	800	400	200
Home position return position data (μm)	PE08	0	-2000 (<1000 stroke)/-200 (>1000 stroke)											
Stopper type home position return stopper time (msec)	PE10	100	200											
Stopper type home position return torque limit value (%)	PE11	15	30											
Regenerative option	PA02	000	000 (Non)/002 (LEC-MR-RB-032)											
Rotation direction selection	PA14	0	0 (+: Counter motors side)			1 (+: Counter motors side )			0 (+: Counter motors side)			1 (+: Counter motors side )		
Adaptive tuning mode	PB01	000	000											
Load to motor inertia moment ratio	PB06	7	7											
Machine resonance suppression filter 1	PB13	4500	4500											
Notch shape selection 1	PB14	000	000											

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- \*3. Other than positioning mode: Actuator travel distance at 10 [μm/pulse] per pulse.  
Positioning Mode: Minimum actuator travel distance of 1[μm].

Series			LEY63				LEY63D		
	Lead symbol		A	B	C	L	A	B	C
	Lead (Including pulley ratio)		20	10	5	5(2.86) (Pulley ratio 4/7)	20	10	5
Parameter *1,*2	Para. No	Initial value	Recommended value						
Number of command input pulses per revolution *3.	PA05	100	100						
Electronic gear numerator *3.	PA06	1	100 (10)			35 (7)	100 (10)		
Electronic gear denominator *3.	PA07	1	20	10	5	1 (2)	20	10	5
Feed length multiplication (STM) (Multiplier)	PE02	0000	0000 (<1000 stroke)/0001 (>1000 stroke)						
Home position return type	PE03	0010	□□□3 (Stopper type)						
Home position return direction	PE03	0010	□□1□ (Motor side)						
Home position return Speed (rpm)	PE04	500	30	60	120	210	30	60	120
Home position return/JOG operation Acceleration/Deceleration time constants (msec)	PE07	100	1000	500	250	143	1000	500	250
Home position return position data (μm)	PE08	0	-4000 (<1000 stroke)/-400 (>1000 stroke)						
Stopper type home position return stopper time (msec)	PE10	100	200						
Stopper type home position return torque limit value (%)	PE11	15	30						
Regenerative option	PA02	000	000 (Non)/002 (LEC-MR-RB-032)/003 (LEC-MR-RB-12)						
Rotation direction selection	PA14	0	0 (+: Counter motors side)				1 (+: Counter motors side )		
Adaptive tuning mode	PB01	000	000						
Load to motor inertia moment ratio	PB06	7	7						
Machine resonance suppression filter 1	PB13	4500	4500						
Notch shape selection 1	PB14	000	000						

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- \*3. Other than positioning mode: Actuator travel distance at 10 [μm/pulse] per pulse.  
Positioning Mode: Minimum actuator travel distance of 1[μm].