


Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL	
OU-33	0h1621	Multi-function relay 2 item	28	Timer out	14: Run	O	O	O
			29	Trip				
			31	DB Warn%ED				
			34	On / Off control				
			35	BR Control				
			36	Reserved				
			37	FAN Exchange				
			38	Fire mode				
			40	KEB Operating				
			41	Pre overheat				
			42	Minor fault				
			43	Torque detect 1				
			44	Torque detect 2				
OU-41	0h1629	Multi-function output monitor	-	00	-	-	-	
OU-50	0h1632	Multi-function output on delay	0.00~100.00(s)	0.00	O	O	O	
OU-51	0h1633	Multi-function output off delay	0.00~100.00(s)	0.00	O	O	O	
OU-52	0h1634	Multi-function output contact selection	Relay2, Relay1		00 ³⁴⁾	X	O	O
			0	A contact (NO)				
			1	B contact (NC)				
OU-53	0h1635	Fault output on delay	0.00~100.00(s)	0.00	O	O	O	
OU-54	0h1636	Fault output off delay	0.00~100.00(s)	0.00	O	O	O	
OU-55	0h1637	Timer on delay	0.00~100.00(s)	0.00	O	O	O	
OU-56	0h1638	Timer off delay	0.00~100.00(s)	0.00	O	O	O	
OU-57	0h1639	Detection frequency	0.00-Maximum frequency(Hz)	30.00	O	O	O	
OU-58	0h163A	Detection frequency band	0.00-Maximum frequency(Hz)	10.00	O	O	O	
OU-67 ³⁵⁾	0h1643	Torque detection 1 setting	0	None	0	X	O	O
			1	OT cmdspd warn				
			2	OT warning				
			3	OT cmdspdtrip				
			4	OT trip				
			5	UT cmdspd warn				
			6	UT warning				
			7	UT cmdspd trip				
			8	UT trip				
OU-68	0h1644	Torque detection 1 level	0~200.0 (%)	100	X	O	O	
OU-69	0h1645	Torque detection 1 delay time	0.0~10.0 (s)	0.1	X	O	O	
OU-70 ³⁶⁾	0h1646	Torque detection 1 setting	0	None	0	X	O	O
			1	OT cmdspd warn				
			2	OT warning				
			3	OT cmdspdtrip				
			4	OT trip				
			5	UT cmdspd warn				
			6	UT warning				
			7	UT cmdspd trip				
			8	UT trip				
OU-71	0h1647	Torque detection 2 level	0~200.0 (%)	100	X	O	O	
OU-72	0h1648	Torque detection 2 delay time	0.0~10.0 (s)	0.1	X	O	O	

* SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

³⁴⁾ The initial value 0000 will be displayed on the keypad as .

³⁵⁾ Displayed when OU.31,33 is set to 43 (Prt Trq Det1).

³⁶⁾ Displayed when OU.31,33 is set to 44 (Prt Trq Det2).

Communication Function Group (PAR → CM)

General Drive

Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL
CM-00	-	Jump code	1~99	20	0	0	0
CM-01	0h1701	Built-in communication inverter ID	1~250	1	0	0	0
CM-02	0h1702	Built-in communication protocol	0	Modbus RTU	0: Modbus RTU	0	0
			2	LS Inv 485			
CM-03	0h1703	Built-in communication speed	0	1200 bps	3: 9600 bps	0	0
			1	2400 bps			
			2	4800 bps			
			3	9600 bps			
			4	19200 bps			
			5	38400 bps			
			6	56 Kbps			
CM-04	0h1704	Built-in communication frame setting	0	D8 / PN / S1	0: D8 / PN / S1	0	0
			1	D8 / PN / S2			
			2	D8 / PE / S1			
			3	D8 / PO / S1			
CM-05	0h1705	Transmission delay after reception	0~1000(ms)	5ms	0	0	0
CM-06 ³⁸⁾	0h1706	Communication option S/W version	-	0.00	0	0	0
CM-07 ³⁸⁾	0h1707	Communication option inverter ID	0~255	1	0	0	0
CM-08 ³⁸⁾	0h1708	Field bus communication speed	-	12Mbps	-	0	0
CM-09 ³⁸⁾	0h1709	Communication option LED status	-	-	0	0	0
CM-30	0h171E	Number of output parameters	0~8	3	0	0	0
CM-31	0h171F	Output communication address 1	0000~FFFF Hex	000A	0	0	0
CM-32	0h1720	Output communication address 2	0000~FFFF Hex	000E	0	0	0
CM-33	0h1721	Output communication address 3	0000~FFFF Hex	000F	0	0	0
CM-34	0h1722	Output communication address 4	0000~FFFF Hex	0000	0	0	0
CM-35	0h1723	Output communication address 5	0000~FFFF Hex	0000	0	0	0
CM-36	0h1724	Output communication address 6	0000~FFFF Hex	0000	0	0	0
CM-37	0h1725	Output communication address 7	0000~FFFF Hex	0000	0	0	0
CM-38	0h1726	Output communication address 8	0000~FFFF Hex	0000	0	0	0
CM-50	0h1732	Number of input parameters	0~8	2	0	0	0
CM-51	0h1733	Input communication address 1	0000~FFFF Hex	0005	X	0	0
CM-52	0h1734	Input communication address 2	0000~FFFF Hex	0006	X	0	0
CM-53	0h1735	Input communication address 3	0000~FFFF Hex	0000	X	0	0
CM-54	0h1736	Input communication address 4	0000~FFFF Hex	0000	X	0	0
CM-55	0h1737	Input communication address 5	0000~FFFF Hex	0000	X	0	0
CM-56	0h1738	Input communication address 6	0000~FFFF Hex	0000	X	0	0
CM-57	0h1739	Input communication address 7	0000~FFFF Hex	0000	X	0	0
CM-58	0h173A	Input communication address 8	0000~FFFF Hex	0000	X	0	0
CM-68	0h1744	Field bus data swap	0	No	0	X	0
			1	Yes			
CM-70	0h1746	Communication multi-function input 1	0	None	0: None	0	0

• In the following table, data shaded in blue will be displayed when the related code has been selected.

• SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

³⁷⁾ 115200bps

³⁸⁾ Displayed only when a communication option card is installed.

Code	Comm.Address	Name	Setting Range		Initial Value	Property*	V/F	SL
CM-71	0h1747	Communication multi-function input 2	1	Fx	0: None	0	0	0
CM-72	0h1748	Communication multi-function input 3	2	Rx	0: None	0	0	0
CM-73	0h1749	Communication multi-function input 4	3	RST	0: None	0	0	0
CM-74	0h174A	Communication multi-function input 5	4	External trip	0: None	0	0	0
CM-75	0h174B	Communication multi-function input 6	5	BX	0: None	0	0	0
CM-76	0h174C	Communication multi-function input 7	6	JOG	0: None	0	0	0
CM-77	0h174D	Communication multi-function input 8	7	Speed-L	0: None	0	0	0
			8	Speed-M				
			9	Speed-H				
			11	XCEL-L				
			12	XCEL-M				
			13	Run enable				
			14	3-wire				
			15	2nd source				
			16	Exchange				
			17	Up				
			18	Down				
			20	U / D clear				
			21	Analog hold				
			22	I-term clear				
			23	PID openloop				
			24	P gain2				
			25	XCEL stop				
			26	2nd motor				
			27	U / D enable				
			33	Baseblock				
34	Pre excite							
38	Timer in							
40	Dis Aux ref							
46	FWD JOG							
47	REV JOG							
49	XCEL-H							
51	Fire mode							
52	KEB-1 select							
CM-86	0h1756	Communication multi-function input monitoring	-		0	X	0	0
CM-90	0h175A	Selection of data frame communication monitor	0	Int485	0	0	0	0
			1	Keypad				
CM-91	0h175B	Rev data frame count	0~65535		-	X	0	0
CM-92	0h175C	Err data frame count	0~65535		-	X	0	0
CM-93	0h175D	NAK data frame count	0~65535		-	X	0	0
CM-94 ³⁹⁾	-	Communication data upload	0	No	0: No	X	0	0
			1	Yes				

• In the following table, data shaded in blue will be displayed when the related code has been selected.

• SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

³⁹⁾ Displayed only when a communication option card is installed.

Application Function Group (PAR → AP)

General Drive

Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL	
AP-00	-	Jump code	1~99	20	O	O	O	
AP-01	0h1801	Application function selection	0	None	0: None	X	O	O
			1	-				
			2	Proc PID				
AP-16 ⁴⁰⁾	0h1810	PID output monitor	(%)	0.00	-	O	O	
AP-17 ⁴⁰⁾	0h1811	PID reference monitor	(%)	50.00	-	O	O	
AP-18 ⁴⁰⁾	0h1812	PID feedback monitor	(%)	0.00	-	O	O	
AP-19 ⁴⁰⁾	0h1813	PID reference setting	-100.00~100.00(%)	50.00	O	O	O	
AP-20 ⁴⁰⁾	0h1814	PID reference source	0	Keypad	0: Keypad	X	O	O
			1	V1				
			3	V0				
			4	I2				
			5	Int 485				
			6	Fieldbus				
AP-21 ⁴⁰⁾	0h1815	PID feedback source	0	V1	0: V1	X	O	O
			2	V0				
			3	I2				
			4	Int 485				
			6	Fieldbus				
AP-22 ⁴⁰⁾	0h1816	PID controller proportional gain	0.0~1000.0(%)	50.0	O	O	O	
AP-23 ⁴⁰⁾	0h1817	PID controller integral time	0.0~200.0(s)	10.0	O	O	O	
AP-24 ⁴⁰⁾	0h1818	PID controller differentiation time	0~1000(ms)	0	O	O	O	
AP-25 ⁴⁰⁾	0h1819	PID controller feed-forward compensation gain	0.0~1000.0(%)	0.0	O	O	O	
AP-26 ⁴⁰⁾	0h181A	Proportional gain scale	0.0~100.0(%)	100.0	X	O	O	
AP-27 ⁴⁰⁾	0h181B	PID output filter	0~10000(ms)	0	O	O	O	
AP-28 ⁴⁰⁾	0h181C	PID Mode	0	Process PID	0	X	O	O
			1	Normal PID				
AP-29 ⁴⁰⁾	0h181D	PID upper limit frequency	PID lower limit frequency-300.00(Hz)	60.00	O	O	O	
AP-30 ⁴⁰⁾	0h181E	PID lower limit frequency	-300.00-PID upper limit frequency(Hz)	-60.00	O	O	O	
AP-32 ⁴⁰⁾	0h1820	PID output scale	0.1~1000.0(%)	100.0	X	O	O	
AP-33 ⁴⁰⁾	0h181F	PID output inverse	0	No	0: No	X	O	O
			1	Yes				
AP-34 ⁴⁰⁾	0h1822	PID controller motion frequency	0.00-Maximum frequency(Hz)	0.00	X	O	O	
AP-35 ⁴⁰⁾	0h1823	PID controller motion level	0.0~100.0(%)	0.0	X	O	O	
AP-36 ⁴⁰⁾	0h1824	PID controller motion delay time	0~9999(s)	600	O	O	O	
AP-37 ⁴⁰⁾	0h1825	PID sleep mode delay time	0.0~999.9(s)	60.0	O	O	O	
AP-38 ⁴⁰⁾	0h1826	PID sleep mode frequency	0.00-Maximum frequency(Hz)	0.00	O	O	O	
AP-39 ⁴⁰⁾	0h1827	PID wake-up level	0~100(%)	35	O	O	O	
AP-40 ⁴⁰⁾	0h1828	PID wake-up mode setting	0	Below level	0: Below level	O	O	O
			1	Above level				
			2	Beyond level				

• In the following table, data shaded in blue will be displayed when the related code has been selected.

• SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

⁴⁰⁾ Displayed when AP.01 is set to 2 (Proc PID).

Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL	
AP-42 ⁴⁰⁾	0h182A	PID controller unit selection	0	%	0: %	O	O	O
			1	Bar				
			2	mBar				
			3	Pa				
			4	kPa				
			5	Hz				
			6	Rpm				
			7	V				
			8	I				
			9	kW				
			10	HP				
			11	°C				
			12	°F				
AP-43 ⁴⁰⁾	0h182B	PID unit gain	0.00~300.00(%)	100.00	O	O	O	
AP-44 ⁴⁰⁾	0h182C	PID unit scale	0	x100	2: x 1	O	O	O
			1	x10				
			2	x 1				
			3	x 0.1				
			4	x 0.01				
AP-45 ⁴⁰⁾	0h182D	PID 2nd proportional gain	0.0~1000.0(%)	100.0	X	O	O	

• In the following table, data shaded in blue will be displayed when the related code has been selected.

• SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

⁴⁰⁾ Displayed when AP.01 is set to 2 (Proc PID).


Protection Function Group (PAR → Pr)

General Drive

Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL
Pr-00	-	Jump code	1~99	40	O	O	O
Pr-04	0h1B04	Load level setting	0	Normal duty	1: Heavy duty	X	O
			1	Heavy duty			
Pr-05	0h1B05	Input / Output open-phase protection	bit	00~11	00 ⁴¹⁾	X	O
			01	Output open phase			
			10	Input open phase			
Pr-06	0h1B06	Input voltage range during open-phase	1~100(V)	15	X	O	O
Pr-07	0h1B07	Deceleration time at fault trip	0.0~600.0(s)	3.0	O	O	O
Pr-08	0h1B08	Selection of startup on trip reset	0	No	0: No	O	O
			1	Yes			
Pr-09	0h1B09	Number of automatic restarts	0~10	0	O	O	O
Pr-10 ⁴²⁾	0h1B0A	Automatic restart delay time	0.0~60.0(s)	1.0	O	O	O
Pr-12	0h1B0C	Motion at speed command loss	0	None	0: None	O	O
			1	Free-run			
			2	Dec			
			3	Hold input			
			4	Hold output			
			5	Lost preset			
Pr-13 ⁴³⁾	0h1B0D	Time to determine speed command loss	0.1~120(s)	1.0	O	O	O
Pr-14 ⁴³⁾	0h1B0E	Operation frequency at speed command loss	0, Start frequency-maximum frequency(Hz)	0.00	O	O	O
Pr-15 ⁴³⁾	0h1B0F	Analog input loss decision level	0	Half of x1	0: Half of x1	O	O
			1	Below x1			
Pr-17	0h1B11	Overload warning selection	0	No	0: No	O	O
			1	Yes			
Pr-18	0h1B12	Overload warning level	30~180(%)	150	O	O	O
Pr-19	0h1B13	Overload warning time	0.0~30.0(s)	10.0	O	O	O
Pr-20	0h1B14	Motion at overload fault	0	None	1: Free-run	O	O
			1	Free-run			
			2	Dec			
Pr-21	0h1B15	Overload fault level	30~200(%)	180	O	O	O
Pr-22	0h1B16	Overload fault time	0.0~60.0(s)	60.0	O	O	O
Pr-25	0h1B19	Under load warning selection	0	No	0: No	O	O
			1	Yes			
Pr-26	0h1B1A	Under load warning time	0.0~600.0(s)	10.0	O	O	O
Pr-27	0h1B1B	Under load fault selection	0	None	0: None	O	O
			1	Free-run			
			2	Dec			
Pr-28	0h1B1C	Under load fault time	0.0~600.0(s)	30.0	O	O	O
Pr-29	0h1B1D	Under load lower limit level	10~100(%)	30	O	O	O

• In the following table, data shaded in blue will be displayed when the related code has been selected.

• SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

⁴¹⁾ The initial value 0000 will be displayed on the keypad as .

⁴²⁾ Displayed when Pr.09 is set higher than 0.

⁴³⁾ Displayed when Pr.12 is not set to 0 (NONE).

Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL
Pr-30	0h1B1E	Under load upper limit level	10~100(%)	30	O	O	O
Pr-31	0h1B1F	No motor motion at detection	0	None	0: None	O	O
			1	Free-run			
Pr-32	0h1B20	No motor detection current level	1~100(%)	5	O	O	O
Pr-33	0h1B21	No motor detection time	0.1~10.0(s)	3.0	O	O	O
Pr-40	0h1B28	Electronic thermal fault selection	0	None	0: None	O	O
			1	Free-run			
			2	Dec			
Pr-41	0h1B29	Motor cooling fan type	0	Self-cool	0: Self-cool	O	O
			1	Forced-cool			
Pr-42	0h1B2A	Electronic thermal 1 minute rating	120~200(%)	150	O	O	O
Pr-43	0h1B2B	Electronic thermal continuous rating	50~150(%)	120	O	O	O
Pr-45	0h1B2D	BX trip mode	0	Free-run	0	X	O
			1	Dec			
Pr-50	0h1B32	Stall prevention motion and flux braking	bit	0000~1111	0000	X	O
			0001	Accelerating			
			0010	At constant speed			
			0100	Decelerating			
			1000	Fluxbraking			
Pr-51	0h1B33	Stall frequency 1	Start frequency-stall frequency2(Hz)	60.00	O	O	X
Pr-52	0h1B34	Stall level 1	30~250(%)	180	X	O	X
Pr-53	0h1B35	Stall frequency 2	Start frequency1-stall frequency2(Hz)	60.00	O	O	X
Pr-54	0h1B36	Stall level 2	30~250(%)	180	X	O	X
Pr-55	0h1B37	Stall frequency 3	Start frequency2-stall frequency4(Hz)	60.00	O	O	X
Pr-56	0h1B38	Stall level 3	30~250(%)	180	X	O	X
Pr-57	0h1B39	Stall frequency 4	Stall frequency3-maximum frequency(Hz)	60.00	O	O	X
Pr-58	0h1B3A	Stall level 4	30~250(%)	180	X	O	X
Pr-59	0h1B3B	Flux braking gain value	0~150[%]	0	O	O	O
Pr-66	0h1B42	DB resistor warning level	0~30(%)	10	O	O	O
Pr-77	0h1B4D	Pre-overheat warning temperature	90~110	90	O	O	O
Pr-78	0h1B4E	Pre-overheat warning operation selection	0	None	0	O	O
			1	Warning			
			2	Freerun			
			3	Dec			
Pr-79	0h1B4F	Cooling fan fault selection	0	Trip	1: Warning	O	O
			1	Warning			
Pr-80	0h1B50	Motion selection at option trip	0	None	1: Free-run	O	O
			1	Free-run			
			2	Dec			
Pr-81	0h1B51	Low voltage fault decision delay time	0.0~60.0(s)	0.0	X	O	O
Pr-82	0h1B52	LV2 Selection	0	No	0	X	O
			1	Yes			
Pr-86	0h1B56	Accumulated percent of fan usage	0.0~100.0[%]	0.0	-	O	O
Pr-87	0h1B57	Fan exchange warning level	0.0~100.0[%]	90.0	O	O	O

* SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

Code	Comm.Address	Name	Setting Range		Initial Value	Property*	V/F	SL
Pr-88	0h1B58	Fan reset time	0	No	0	X	0	0
			1	Yes				
Pr-89	0h1B59	Fan status	Bit	00~01	0	-	0	0
			00	-				
			01	Fan exchange				
Pr-90	0h1B5A	Relay open trip selection	-		-	X	0	0
Pr-91	0h1B5B	Fault history 1	-		-	-	0	0
Pr-92	0h1B5C	Fault history 2	-		-	-	0	0
Pr-93	0h1B5D	Fault history 3	-		-	-	0	0
Pr-94	0h1B5E	Fault history 4	-		-	-	0	0
Pr-95	0h1B5F	Fault history 5	-		-	-	0	0
Pr-96	0h1B60	Fault history deletion	0	No	0: No	0	0	0
			1	Yes				

*SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL	
M2-00	-	Jump code	1~99	14	O	O	O	
M2-04	0h1C04	Acceleration time	0.0~600.0(s)	20.0	O	O	O	
M2-05	0h1C05	Deceleration time	0.0~600.0(s)	30.0	O	O	O	
M2-06	0h1C06	Motor capacity	0	0.2 kW	-	X	O	O
			1	0.4 kW				
			2	0.75 kW				
			3	1.1 kW				
			4	1.5 kW				
			5	2.2 kW				
			6	3.0 kW				
			7	3.7 kW				
			8	4.0 kW				
			9	5.5 kW				
			10	7.5 kW				
11	11.0kW							
M2-07	0h1C07	Base frequency	30.00~400.00(Hz)	60.00	X	O	O	
M2-08	0h1C08	Control mode	0	V / F	0: V / F	X	O	O
			2	Slip compen				
			4	IM sensorless				
M2-10	0h1C0A	Number of motor poles	2~48	Dependent on motor setting	X	O	O	
M2-11	0h1C0B	Rated slip speed	0~3000(Rpm)		X	O	O	
M2-12	0h1C0C	Motor rated current	1.0~1000.0(A)		X	O	O	
M2-13	0h1C0D	Motor no-load current	0.5~1000.0(A)		X	O	O	
M2-14	0h1C0E	Motor rated voltage	170~480(V)		X	O	O	
M2-15	0h1C0F	Motor efficiency	64~100(%)		X	O	O	
M2-16	0h1C10	Load inertia rate	0~8		X	O	O	
M2-17	-	Stator resistance	Dependent on motor setting		X	O	O	
M2-18	-	Leakage inductance			X	O	O	
M2-19	-	Stator inductance			X	O	O	
M2-20 ⁴⁴⁾	-	Rotor time constant			25~5000(ms)	X	O	O
M2-25	0h1C19	V / F pattern	0	Linear	0: Linear	X	O	O
			1	Square				
			2	User V / F				
M2-26	0h1C1A	Forward torque boost	0.0~15.0(%)	2.0	X	O	O	
M2-27	0h1C1B	Reverse torque boost	0.0~15.0(%)		X	O	O	
M2-28	0h1C1C	Stall prevention level	30~150(%)	150	X	O	O	
M2-29	0h1C1D	Electronic thermal 1 minute rating	100~200(%)	150	X	O	O	
M2-30	0h1C1E	Electronic thermal continuous rating	50-Electronic thermal 1 minute rating	100	X	O	O	
M2-31	0h1C1F	Low-speed torque compensation gain	50~300(%)	Varies by motor capacity	X	X	O	

• In the following table, data shaded in blue will be displayed when the related code has been selected.

• The 2nd Motor function group will be displayed if any of In.65-71 is set to 26 (2nd motor).

• SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

⁴⁴⁾ Displayed when M2.08 is set to 4(IM Sensorless).

Code	Comm.Address	Name	Setting Range	Initial Value	Property*	V/F	SL
M2-32	0h1C20	Output torque compensation gain	50~300(%)	Varies by motor capacity	X	X	O
M2-33	0h1C21	Speed deviation sub compensation gain	50~300(%)	Varies by motor capacity	X	X	O
M2-34	0h1C12	Speed deviation main compensation gain	50~300(%)	Varies by motor capacity	X	X	O
M2-40	0h1C28	Rotation count speed gain	0.1~6000.0[%]	100.0	O	O	O
M2-41	0h1C29	Rotation count speed scale	0	x 1	0: x 1	O	O
			1	x 0.1			
			2	x 0.01			
			3	x 0.001			
			4	x 0.0001			
M2-42	0h1C2A	Rotation count speed unit	0	Rpm	0: rpm	O	O
			1	mpm			

- The 2nd Motor function group will be displayed if any of In.65-71 is set to 26 (2nd motor).
- SL: Sensorless vector control (dr.09), Property: Write-enabled during operation

Braking Resistor Specification

Capacity(kW)		Resistance(Ω)	Rated Capacity(W)
3-Phase 200V Class	0.4	300	100
	0.75	150	150
	1.5	60	300
	2.2	50	400
	3.7	33	600
	4	33	600
	5.5	20	800
	7.5	15	1200
3-Phase 400V Class	0.4	1200	100
	0.75	600	150
	1.5	300	300
	2.2	200	400
	3.7	130	600
	4	130	600
	5.5	85	1000
	7.5	60	1200

* The standard for braking torque is 150% and the working rate (%ED) is 5%. If the working rate is 10%, the rated capacity for braking resistance must be calculated at twice the standard.

Compatible Circuit Breaker, Leakage Breaker and Magnetic Contactor Models (Manufactured by LSIS)

Capacity(kW)	Circuit Breaker			Leakage Breaker		Magnetic Contactor	
	Model	Current(A)	Specific Model Name	Model	Current(A)	Model	Current(A)
3-Phase 200V Class	0.4	UTE100H	UTE100-H·FTU·15·3P·UL	EBS33c	5	MC-6a	9
	0.75				10	MC-9a, MC-9b	11
	1.5				15	MC-18a, MC-18b	18
	2.2	20	UTE100-H·FTU·20·3P·UL	20	MC-22b	22	
	4.0	30	UTE100-H·FTU·30·3P·UL	30	MC-32a	32	
	5.5	UTS150H	50	EBS53c	50	MC-50a	55
7.5	60		EBS63c	60	MC-65a	65	
3-Phase 400V Class	0.4	UTE100E	UTE100-E·FTU·15·3P·UL	EBS33c	5	MC-6a	7
	0.75				MC-6a		
	1.5				10	MC-9a, MC-9b	9
	2.2	20	UTE100-E·FTU·20·3P·UL	20	MC-12a, MC-12b	12	
	4.0	30	UTE100-E·FTU·30·3P·UL	30	MC-18a, MC-18b	18	
	5.5	30	UTE100-E·FTU·30·3P·UL	30	MC-22b	22	
7.5				30	MC-32a	32	

Fuse and Reactor Specifications

Capacity (kW)	AC Input Fuse			AC Reactor			
	Model	Current (A)	Voltage (V)	Inductance (mH)	Current (A)		
3-Phase 200V Class	0.4	DFJ-10 ¹⁾	600		1.20	10	
	0.75						
	1.5	DFJ-15			15	0.88	14
	2.2	DFJ-20			20	0.56	20
	4.0	DFJ-30			30	0.39	30
	5.5	DFJ-50			50	0.30	34
	7.5	DFJ-60			60	0.22	45
3-Phase 400V Class	0.4	DFJ-10	600		4.81	4.8	
	0.75						
	1.5	DFJ-15			15	3.23	7.5
	2.2	DFJ-20			20	2.34	10
	4.0	DFJ-30			30	1.22	15
	5.5	DFJ-35			35	1.12	19
7.5			0.78	27			

Note1) DFJ is class J / 600V level model name of the bussmann company.

Caution Use class CC, G, J, L, R or T UL listed Input fuse and UL listed breaker only. See the table above for the voltage and current rating of the fuse and the breaker.

Voltage	Model Number	Rated Power (kW)	HD				ND			
			Rated Output Current(A)	Total Losses(W)	Internal Losses(W)	Heat Losses (Kcal)	Rated Output Current(A)	Total Losses(W)	Internal Losses(W)	Heat Losses (Kcal)
220	LSLV0004G100-2	0.4	2.5	19	16.8	2	3.1	24	16.8	7
220	LSLV0008G100-2	0.75	5.0	34	16.8	14	6.0	37	16.8	17
220	LSLV0015G100-2	1.5	8.0	50	17.4	28	9.6	59	17.4	35
220	LSLV0022G100-2	2.2	11.0	80	17.4	54	12.0	89	17.4	62
220	LSLV0037G100-2	4.0	17.0	127	17.7	94	18.0	160	17.7	122
220	LSLV0055G100-2	5.5	24.0	173	18.7	132	30.0	267	18.7	214
220	LSLV0075G100-2	7.5	32.0	247	18.7	197	40.0	398	18.7	326
440	LSLV0004G100-4	0.4	1.3	21	17.4	3	2.0	22	17.4	4
440	LSLV0008G100-4	0.75	2.5	25	17.4	7	3.1	31	17.4	12
440	LSLV0015G100-4	1.5	4.0	40	17.7	19	5.1	47	17.7	25
440	LSLV0022G100-4	2.2	5.5	54	17.7	31	6.9	57	17.7	33
440	LSLV0037G100-4	4.0	9.0	93	18.7	64	10.0	125	18.7	91
440	LSLV0055G100-4	5.5	12.0	170	19.7	129	16.0	153	19.7	115
440	LSLV0075G100-4	7.5	16.0	194	19.7	149	23.0	225	19.7	177

Total losses

Capacity(kW) x (1-Efficiency/100) x 1000 = W
 ex) 0.4kW x (1- 95.3/100) x 1000 = 18.8W
 Total losses = Internal loss + External loss

Internal losses

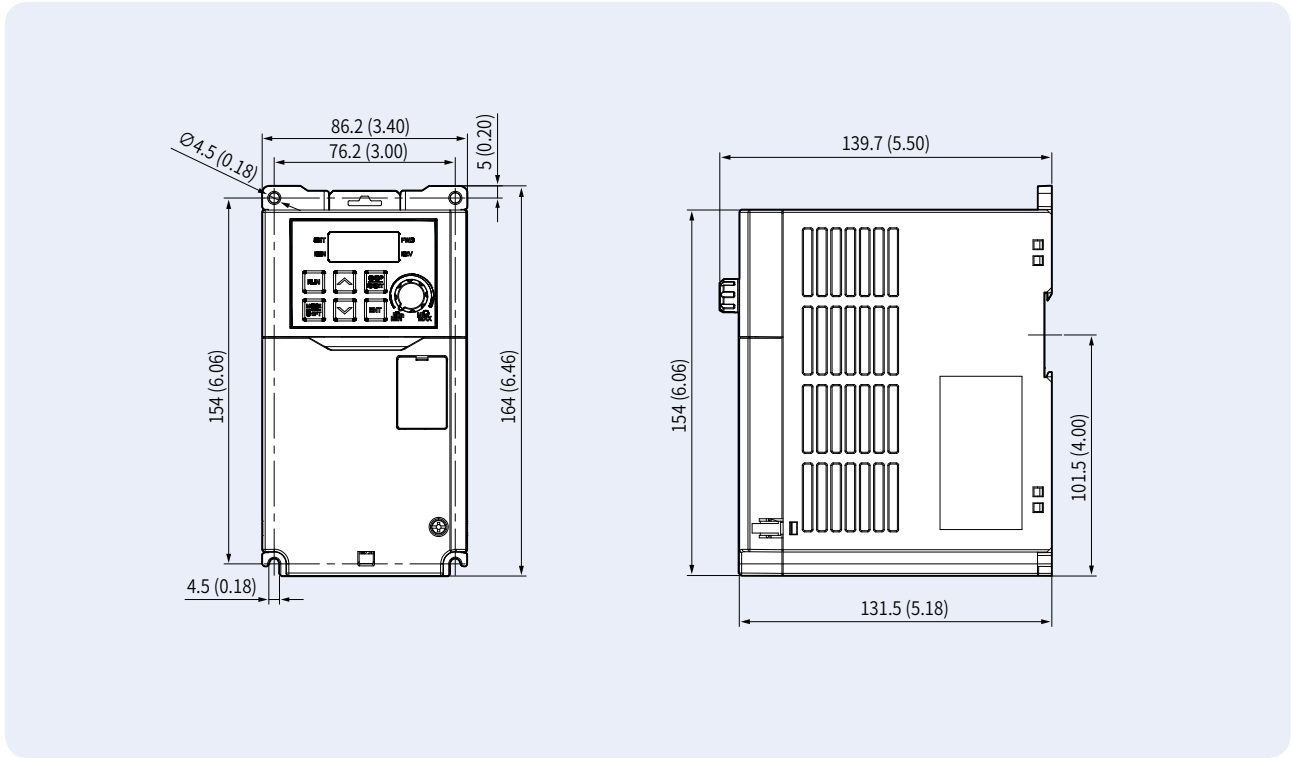
Based on design standard such as SMPS Rated Capacity, Fan and so forth

External(Heat) losses

1wh = 3,600J, 1kcal = 4,186 J
 Efficiency= Output/(Output+Loss)*100=Output/Input*100
 Loss*0.9=Heat Loss
 -> Other Loss 0.1
 Σ(The number of installed drive at each capacity*Heat) = Total amount of Heat

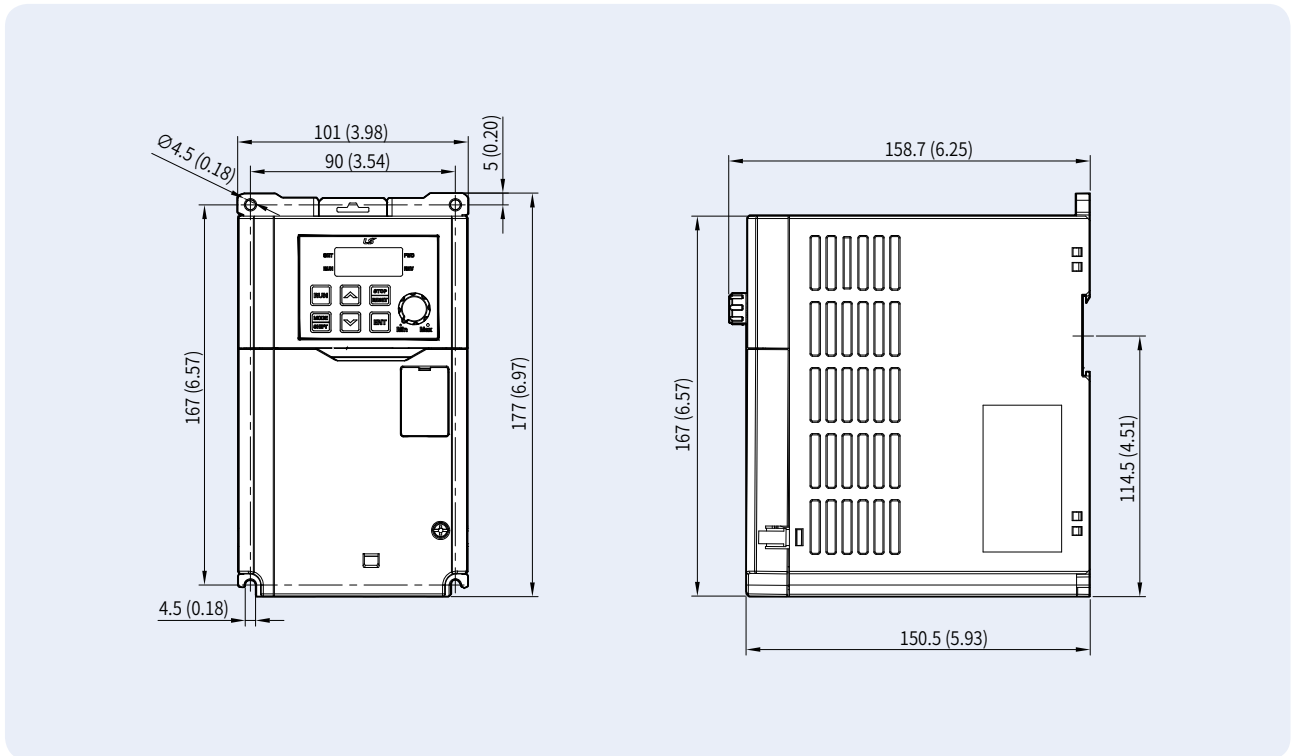
0.4~0.75kW (0004G100-2, 0008G100-2, 0004G100-4, 0008G100-4)

Units: mm(Inches)



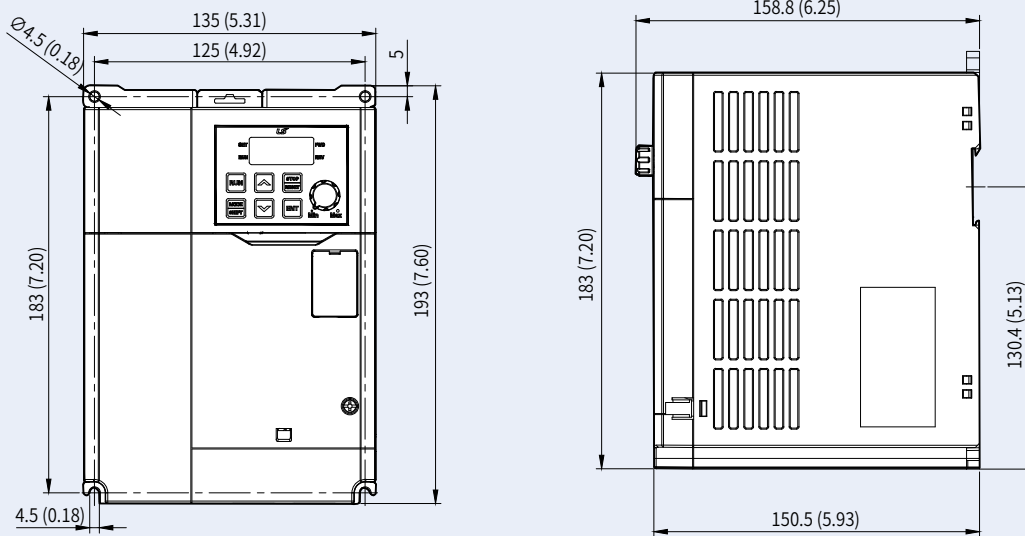
1.5~2.2kW (0015G100-2, 0022G100-2, 0015G100-4, 0022G100-4)

Units: mm(Inches)



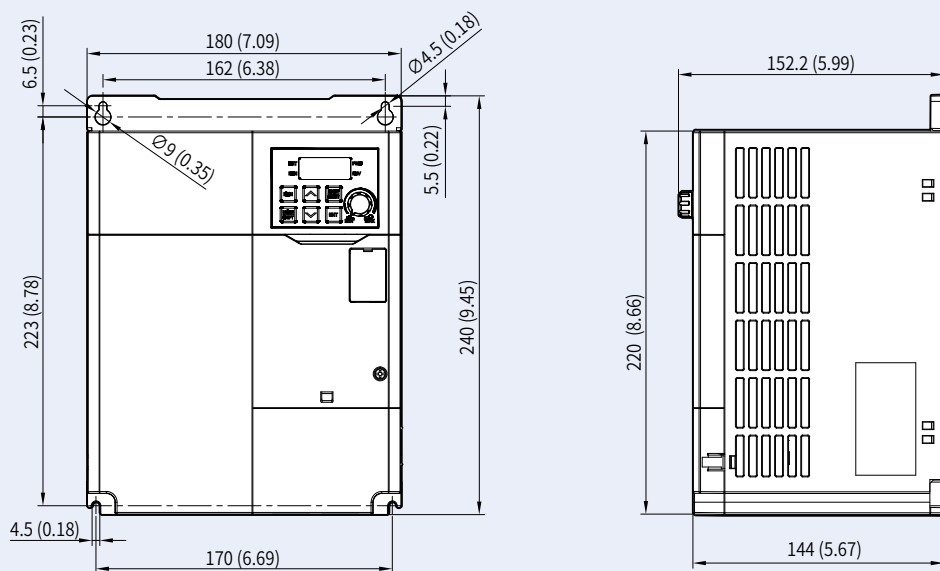
4.0kW (0040G100-2, 0040G100-4)

Units: mm(Inches)



5.5~7.5kW (0055G100-2, 0075G100-2, 0055G100-4, 0075G100-4)

Units: mm(Inches)



Global Network

LSIS is engaged in business all over the world.
 LSIS global network includes 7 overseas corporations, 12 overseas branches, and 224 clients in 77 countries.



► R&D

► Factory



R&D Campus

Focuses on gaining competitive advantages through development of next generation platforms



Power Device R&D Center

Leading technology in electric industry and continuously developing future-growth dynamic engines



Automation R&D Center

Serves as the main research institute for LSIS



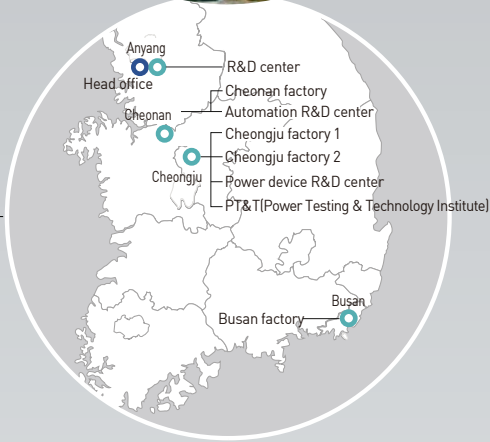
PT&T (Testing laboratory)

Internationally-renowned testing center that has formed partnerships with the UL, CE, KEMA and CESI



Cheongju Factory (Korea)

Electric products, mold TR, MV/LV switchgear, HV GIS



Cheonan Factory (Korea)

PLC, AC drive, HMI, DCS, PV module



Busan Factory (Korea)

HV TR, HVDC, FACTS



Wuxi Factory (China)

Electric products



Dalian Factory (China)

MV/LV switchgear, MV contactor



Hanoi Factory (Vietnam)

MV/LV switchgear, Mold TR



Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance. Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.



- According to The WEEE Directive, please do not discard the device with your household waste.



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