

LDS COMPACT IGBT INVERTER (1PHASE)

Features

- ① Simple and safe operability, energy saving, compact design as well as superior performance features
- ② The compact IGBT inverter is especially advantageous for standard application by virtue of its user friendliness.
- ③ Design for application such as conveyor drives, feeders, machining tool and door drives

Model No	IGBT - K100	IGBT - K200
Motor Rating (maximum)	120W (1/6HP) (25W ~ 120W)	250W (1/4HP) (25W ~ 200W)
Rated Output Capacity	0.4kVA	0.6kVA
Rated Output Current	1 Amp	1.5 Amp
Rated Output Voltage	AC 3 Phase 220V (3Ø220V)	
Range of Output Frequency	0.1Hz ~ 400Hz	
Power Source Voltage	AC 1 Phase 200V~250V (1Ø), 50Hz/60Hz	
Input Current	2 Amp	3 Amp
Permissible AC Power Source Fluctuation	176V ~ 264V, 50Hz/6-Hz, ± 5%	
Overload Protection	150% of rated output current for 1 minuet	
Cooling Method	Self-cooling	
Protection Level	IP20	
Dimension	Body 52 x 127 x 60mm • Mounting Frame: 60 x 100 x 3mm	
Weight	0.4KG	
Options	With Braking Transistor / Without Braking Transistor	
Remark	Mounting dimension compatible with US Type Speed Controller	



Compact IGBT Inverter



Portable Keypad KP601A offer Remote Control of the inverter via Modbus (RS485) Communication

OPERATION PANEL

Function Key

RUN	Start
STOP RESET	Stop • Reset
▲ ▼	Up • Down
PROG	Enter or Exit the Function Mode
FUNC DATA	Set • Switch Monitor Mode
◀	Switch Function • Group • Number
SPEC	Special Function Key



Status Display I

Indicator : Frequency • Voltage • Current • Operation

Status Display II

Power Indicator
SPEC • START Key Indicator

Main LED Display (high brightness)

Display of Setting & Error Code

Potentiometer / Knob

Fast Setting and Input



Protective Cover For Inverter



Control Circuit Terminal

GENERAL SPECIFICATIONS / CONTROL CHARACTERISTICS

Control Method:	Voltage vector sinusoidal PWM control (V/F control) Switching frequency : 800-16kHz	Other Functions:	Automatic operation for energy-saving • Automatic torque compensation • Automatic adjustment for output voltage stability • Automatic adjustment of switching frequency • Slip compensation / Counter function • Restart after instantaneous power failure • Modbus (RS-485) communication • Over-torque detection • Jump frequency • Setting for upper and lower limits of output frequency • 8-preset speeds • S-curve acceleration & deceleration • Temperature management • Parameters duplication
Frequency Range:	0.1Hz ~ 400.00Hz	Frequency Setting Signal:	Operation panel (including KP-601A keypad): ▲▼ Analogue Signal: (DC 0 ~ 10V) / 0-100% Digital Signal: Jog speed, 8-preset speeds Modbus (RS485) Communication
Resolution:	Digital Command : 0.01Hz Analogue Command: 0.06Hz / 60Hz	Operation Signal:	Operation panel (including KP-601A keypad): RUN / STOP Digital Signal: FWD (forward) / REV (reverse) rotation control Modbus (RS-485) communication
Overload Protection:	150% of rated output current for 1 minute	Multi-Function Inputs:	3 programmable input terminal: X1-X3 Response time (1-255, unit 1ms) Refer to the F5.19-F5.21 functions setting description.
DC Braking:	Start/Stop Braking Time: 0 ~ 60.0 second Stop Braking Frequency : 0.1Hz ~ 60Hz Braking Ability: 0-150% of rated current	Analogue Inputs:	1 set of analogue input: VI (DC 0 ~ 10V) Analogue filter (0-255, unit 5ms), the dead band of analogue frequency, gain and bias are adjustable
Braking Torque:	Approximately 20%		
V/F Pattern:	Linear, Energy-Saving mode (automatic adjusting V/F pattern according to the load condition) Square of 1.5, 1/7 and 2 curves. V/F pattern (2 V/F points) Output voltage adjustment of V/F pattern. (Variable voltage adjustment of V/F pattern for acceleration and deceleration).		

Func-tion	Description	Initial Factory Setting (TW)	LDS Setting (MY-SG-TH)
F0.01	Parameter Lock (Changeable/Lock)	0	0 (Un-Lock) 1 (Lock)
F0.18	Parameter List (Simple/Complete)	0 (Simple)	1 (Complete)
F0.20	Default Setting (Taiwan / Malaysia)	dF60	dF50
F1.21	Switching Frequency	2	4
F2.16	Jog Speed	6.0Hz	0.0Hz
F2.18	Acceleration Time (seconds)	5.0s	2.0s
F2.19	Deceleration Time (seconds)	5.0s	2.0s
F2.32	Maximum Output Frequency	50.0Hz	60.0Hz
F2.48	Minimum Output Frequency	0.0Hz	0.0Hz
F4.07	Overload Protection (Independent)	1	2
F4.08	Overload Protection Setting - Motor's Rated Ampere	0.3A ~ 1.5A Based on Motor Spec	
F4.10	OVL Trip Time	0.5 (30s)	0.5 (30s)
F5.08	Analogue Frequency Dead Band	0.00	0.05
F5.19	X1 Terminal	22	22 (Forward)
F5.20	X2 Terminal	23	23 (Reverse)
F5.21	X3 Terminal	10	1 (Jog Speed)
F5.25	Digital Response Time	10	3

LDS Compact Motor Ampere

Motor Power	Rated Ampere	F4.08 Setting
25W	0.23	0.3
40W	0.36	0.4
60W	0.50	0.6
90W	0.65	0.7
120W	0.75	0.8
150W	0.95	1.00
180W	1.04	1.10
200W	1.10	1.10
(6IK) 200W	1.00	1.10

LDS Small Gear Motor Ampere


Motor Power	Rated Ampere	F4.08 Setting
0.1kW	0.7	0.8
0.2kW	1.2	1.3
0.25kW	1.3	1.4

**** F0.20 - Saving of Parameter Setting (SAV)**
User is advised to save and store all the parameter after any changes make to the inverter program setting.

Preface

Thank you for using LDS Compact K-series Inverter drive. For proper operations and safety purposes, please do read and follow the safety specific instructions in the manual before using the product. To ensure proper operation of drive, the manual shall be placed on the top of the machine. Furthermore, please download the completely safety information on LDS website <http://www.leaderdrives.com>.

Safety Precaution

1. Don't conduct any wiring during the system power ON to avoid the electric shock.
2. Please wait at least 5 minutes until the indicator light turn off.
3. The electronic components are sensitive to static electricity in the drive.
Please don't put the any objects in the drives or touch the main circuit board.
4. PE  terminal must be exactly grounded.
5. Don't touch the heat sink because the temperature of heat sink may over 70°C.
6. The LDS inverter series outputs are designed to drive a three-phase motor.
Do not connect output terminals to the single-phase or use for other purpose.
7. U, V, W are the outputs of drive to the motor. Please do not connect these terminals to the power source.

Ambient Conditions

Atmosphere	Non-corrosive or non-conductive, or non-explosive gas or liquid, and non-dusty
Surrounding temperature:	-10°C~+45°C (14°F~122°F) (Non-condensing and non-freezing)
Storage temperature:	-20°C~+60°C (-4°F~140°F)
Relative humidity:	90% RH or less (No-condensing atmosphere)
Vibration:	Less than 5.9m/sec ² (0.6G)
Altitude:	Less than 1000m (3280 ft.)

Features

1. The drive has temperature management and setting pre-alarm level to forecast over temperature
2. RS-485 Modbus RTU communication function
3. Special function key (SPEC): Cable set (in parameter) to realize FWD/REV running, jog speed, and other multifunction operation.
4. Built-in knob (Pot) for directly speed adjustment.
5. The switching frequency can be adjust between 800Hz ~ 16kHz.
6. Provide 8 sets of monitor displays. (frequency, speed, voltage, current and 13 kind of options available)
7. Counter function.
8. To support external PTC for motor overheat protection.
9. User can connect KP-601A keypad (option) for remote control, parameters duplication and saving.
10. Detachable Buckles design for installation.
11. Six sets of fault record (fault record, current, voltage, frequency)
12. Simple parameter group and complete parameter group.
13. Parameter lock and parameter password functions.


Chapter 1 Caution before Installation

The product has passed the strictest quality test before shipped out from the factory. However, the product might possibly sustain minor damages due to the impact, shaking, vibration, and other factors during the transportation. Please make sure to verify the following items after receiving this product. If the product verification finds anything abnormal, please contact the agent immediately for the further assistance.

- (1) Check up appearance of the drive for any paint chipped off, smearing, deformation of shape, etc.
- (2) Check up the operation manual whether it shortage or damage or not.
- (3) Check up the drive model number is identical with the shipping label on the carton or not.

1-1 Confirmation of Appearance

Product Code	Power (Watt)	Horse Power
K100	125W	0.17HP
K200	200W	0.25HP

INVERTER K100-RM6S1		} Model Number
 Leader Mechanical & Electrical Co., Ltd		
Input Voltage:	1PH200V-240V	} Input Power Specification
Amp:	2A	
Hertz:	50Hz / 60Hz	
Output Voltage:	3PH220V	} Output Current & Capability
Amp:	1A	
Hertz Range:	0.1Hz ~ 400Hz	
ISO 9001 IP20	Made In Taiwan	
14630V020		} Serial Number

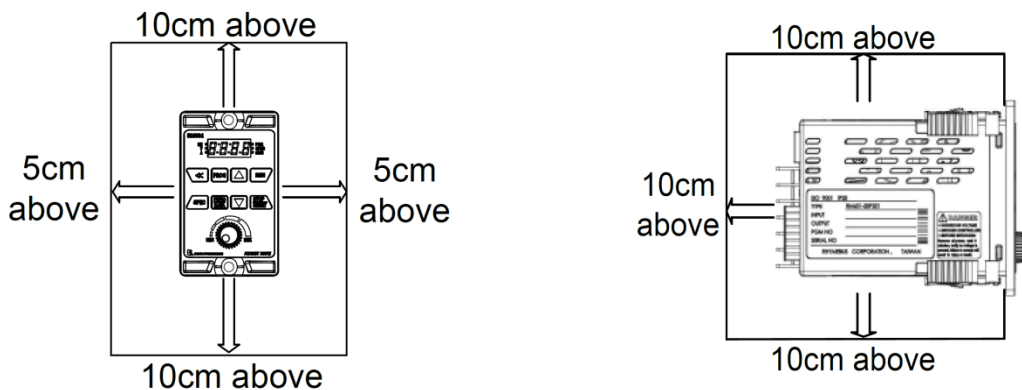
1-2 Standard Specifications

Model No:	K100	K200
Motor Rating (maximum):	1/16HP • 125W (25W / 40W / 60W / 90W / 120W)	1/4HP • 200W (150W / 180W / 200W)
Rated Output Capacity:	0.4kVA	0.6kVA
Rated Output Current:	1Amp	1.5Amp
Rated Output Voltage:	Thee Phase (3Ø)	
Range of Output Frequency:	0.1Hz ~ 400Hz	
Power Source Voltage:	AC Single Phase 200V~250V (1Ø), 50Hz/60Hz	
Input Current:	2Amp	3Amp
Permissible AC Power Source Fluctuation:	176V ~ 264V, 50Hz/6-Hz, ± 5%	
Overload Protection:	150% of rated output current for 1 minuet	
Cooling Method:	Self-cooling	
Protection Level:	IP20	
Weight:	0.4KG	
Options:	With Braking Transistor / Without Braking Transistor	

Chapter 2 Installation and Confirmation

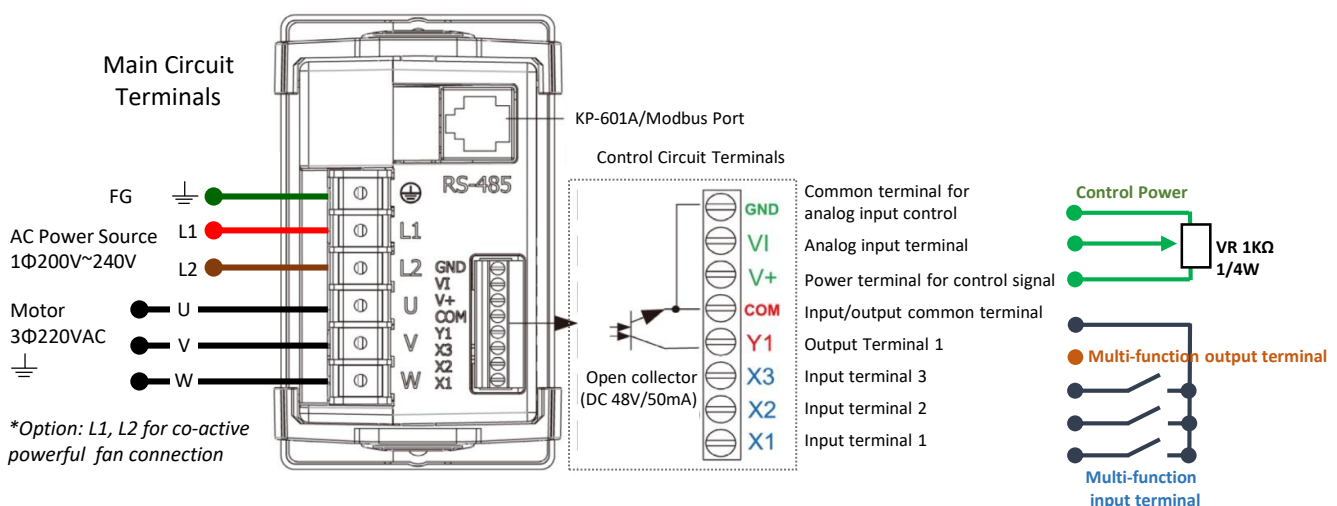
2-1 Basic Equipment

- Correct installation can extend the lifespan of the inverter, please follow the installation precaution.
- Do not place the drive next to the heating substance or exposure to sunlight. Due to the heat dissipating requirement during the drive operation, the drive must keep enough space for heat dissipation.
- Environment temperature $-10^{\circ}\text{C}\sim+45^{\circ}\text{C}$ ($14^{\circ}\text{F}\sim122^{\circ}\text{F}$)
- Please install the drive with clearance space around the drive and the location of installation shall be arrange as follow :



2-2 Basic Wiring

2-2-1 Description of Terminal and Wiring Diagram



2-2-2 Main Circuit Terminals

Type		Symbol	Function	Description
Terminal of Main Circuit	Power Source	L1,L2	AC power source input terminals	For the single-phase power source AC 200~240V.
	Motor	U,V,W	Drive outputs to motor terminals	The terminals output three phase variable frequency and voltage to motor.
	Grounding		Grounding terminal	Grounding resistance must be below 100Ω

2-2-3 Control Circuit Terminals

Type		Symbol	Function	Description
Control Circuit Terminal	Multi-function input terminal	X1	Input terminal 1	The function is set by F5.19~F5.21.
		X2	Input terminal 2	
		X3	Input terminal 3	
	Multi-function output terminal	Y1	Output terminal 1	Capacity: DC 48V, 50mA The function is set by F5.26.
		COM	Input/output common terminal	The common terminal of input/output control signal
	Control Power	V+	Power terminal for control signal	DC +12V output. Maximum supplied current is 20mA.
		VI	Analog input terminal	DC 0~10V
		GND	Common terminal for analog input control	Common terminal for control power (V+) and analog input terminal (AI)

2-2-4 Modbus Port (RS-485)/ Keypad-601A

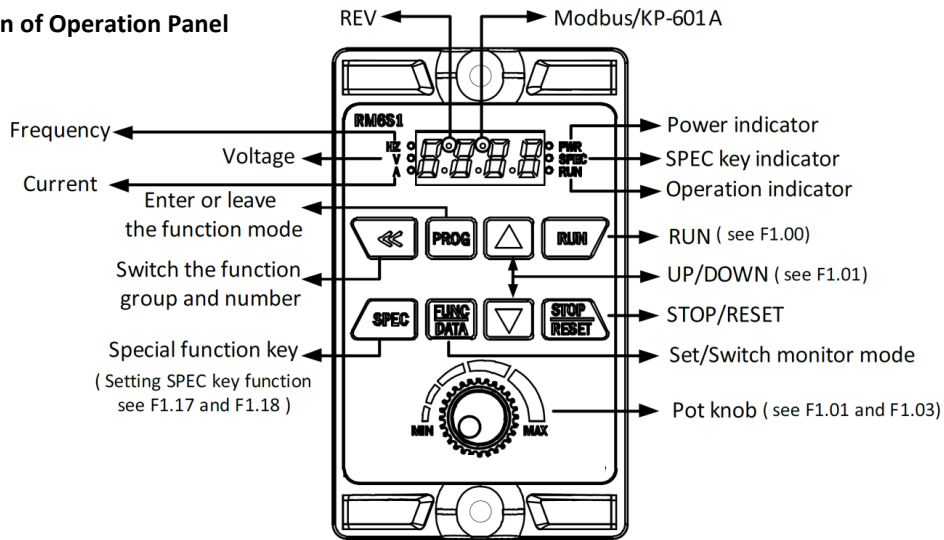
Type	Pin	Function	Description
Modbus (RS-485)/ KP-601A Communication	1	Communication transmission terminal (DX+)	Modbus (RS-485) communication uses pin 1, 2.
	2	Communication transmission terminal (DX-)	
	3	Power terminal of KP (+13V)	Only for KP-601A linking
	4	Auto-detect terminal of KP	Only for KP-601A linking
	5 ~ 6	Reversed	Reversed
	7	Common ports terminal of KP power (0V)	Only for KP-601A linking
	8		

Chapter 3 Characteristics and Instructions

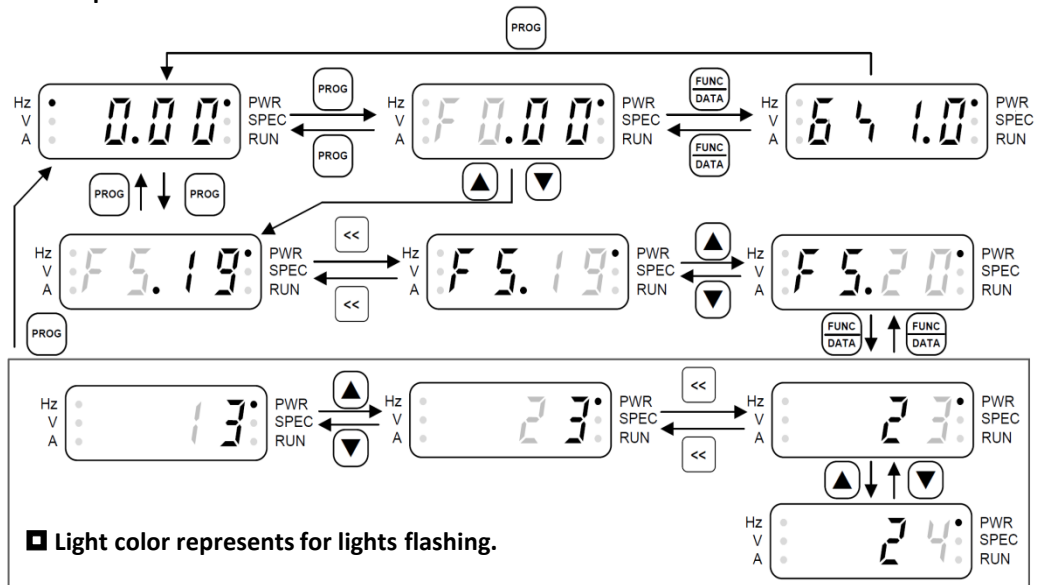
3-1 The Features of Control and Operation

General Specifications : Control Characteristics	
Control Method:	Voltage vector sinusoidal PWM control (V/F control); Switching frequency : 800~16kHz
Frequency Range:	0.1Hz ~ 400.00Hz
Resolution:	Digital Command : 0.01Hz Analogue Command: 0.06Hz / 60Hz
Overload Protection:	150% of rated output current for 1 minute
DC Braking:	Start/Stop Braking Time: 0 ~ 60.0 second Stop Braking Frequency : 0.1Hz ~ 60Hz Braking Ability: 0~150% of rated current
Braking Torque:	Approximately 20%
V/F Pattern:	Linear, Energy-Saving mode (automatic adjusting V/F pattern according to the load condition) Square of 1.5, 1/7 and 2 curves. V/F pattern (2 V/F points) Output voltage adjustment of V/F pattern. (Variable voltage adjustment of V/F pattern for acceleration and deceleration).
Other Functions:	Slip compensation / Counter function / Automatic torque compensation / Automatic adjustment for output voltage stability / Automatic operation for energy-saving / Automatic adjustment of switching frequency / Restart after instantaneous power failure / Modbus (RS-485) communication / Over-torque detection / Jump frequency / Setting for upper and lower limits of output frequency / 8-preset speeds / S-curve acceleration and deceleration / Temperature management / Parameters duplication
Frequency Setting Signal:	Operation panel (including KP-601A keypad): ▲▼ Analogue Signal: (DC 0 ~ 10V) / 0~100% Digital Signal: Jog speed, 8-preset speeds Modbus (RS485) Communication
Operation Signal:	Operation panel (including KP-601A keypad): RUN / STOP Digital Signal: FWD (forward) / REV (reverse) rotation control Modbus (RS-485) communication
Multi-Function Inputs:	3 programmable input terminal: X1~X3 Response time (1~255, unit 1ms) Refer to the F5.19~F5.21 functions setting description.
Analogue Inputs:	1 set of analogue input: VI (DC 0 ~ 10V) Analogue filter (0~255, unit 5ms), the dead band of analogue frequency, gain and bias are adjustable








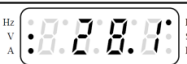
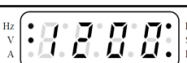
3-2-1 Function of Operation Panel



3-2-1 Function of Operation Panel



3-2-3 The description of monitor mode

Press  key	Hz, V, A Indicator light	Display
Display1 (Main Display)	Hz On (Output Frequency)	
Display2	Hz On (Frequency Command)	
Display3	V On (Output Voltage)	
Display4	V On (DC bus Voltage)	
Display5	A On (output current)	
Display6	Hz、A On (Default value: terminal status)	
Display7	V、A On (Default value: heat sink temperature)	
Display8	Hz、V On (Default value MPM)	

Chapter4 Parameter List (The default setting is simple parameter)

SIMPLE PARAMETER GROUP (F0.18 = 0)		
Group	Function	
F0	System Parameters*(Simple)	
F1	Control Setting(Simple) Main Display Setting(Simple) SPEC Key Setting Stop Mode Switching Frequency Setting(Simple)	
F2	Frequency Parameters	Preset speed and jog seed. Acceleration/deceleration. V/F pattern setting. Upper/lower limits of output frequency.
F4	Protection Parameters	Motor overload protection
F5	Multi-function Parameters	Multi-function input Multi-function output

COMPLETE PARAMETER GROUP LIST (F0.18 = 1)		
Group	Function	
F0	System Parameters	
F1	Control Setting Main Display Setting SPEC Key Setting Stop Mode Switching Frequency Setting	
F2	Frequency Parameters	Preset speed. Multi-accel/decel time. V/F pattern setting. Jump frequency. Upper/lower limits of output frequency.
F3	Control Parameters	Holding frequency and time. Stall prevention setting. Motor Slip compensation. AVR compensation. DC Breaking. Drive operation after instantaneous power failure. Speed tracing.
F4	Protection Parameters	Drive overload protection Motor overload protection Drive overheat protection Fan control Overload protection setting
F5	Multi-function Parameters	Analog input Multi-function input Multi-function output UP/DOWN setting Counting mode Frequency detection
F6	Special parameters	Modbus communication

* To check the complete parameter list and communication instruction, please consult authorized distributor whom you have bought the product from.

Simple Parameter List:

The color as means functions can be set during the operation.

(F0) System Parameters

Func.	Name	Descriptions	Range of Setting	Unit	dF60
F0.01	Parameter Lock	0 : Parameters are changeable 1 : Parameters are locked	0 , 1	–	0
F0.18	Parameter Display Selection	0 : Simple parameters 1 : Complete parameters	0 , 1	–	0
F0.20	Default Setting	0 : Disable	–	–	0
		CLF : Clear fault records			
		dF60 : Restore to the factory setting of 60Hz			
		dF50 : Restore to the factory setting of 50Hz			
		SAv : Store setting			
		rES : Resume setting			
		rdEE : Read the parameters from drive to KP-601A			
UrEE : Write the parameters from KP-601A to drive					

(F1)Operation Parameters

Func.	Name	Descriptions	Range of Setting	Unit	dF60		
F1.00	Start Command Selection		0~11	–	3		
						Start command	Rotation direction command
		0				FWD or REV command	FWD or REV command
		1				FWD command	REV command
		2				Operation panel	FWD, REV command
		3					Forward
		4					Reverse
		5					Reverse command
		6~7				Reversed	Reversed
		8				Communication control	Communication control
		9				Communication control	Reverse command
		10				Forward command	Communication control
11	Operation panel	Communication control					

(F1)Operation Parameters

Func.	Name	Descriptions	Range of Setting	Unit	dF60
F1.01	Primary Frequency Command Selection	0: Frequency command by analog input selection. 1: Frequency command by operation panel. 2 : Reversed 3 : Machine speed setting by operation panel. 4 : UP/DOWN terminal control. 5 : Frequency command by communication terminal.	0~5	—	1
F1.03	Analog Input Selection	0 : Pot + VI 1 : Pot – VI 2 : VI – Pot 3 : Pot or VI(switch by multi-function input terminal) 4 : Pot 5 : VI	0~5	—	0
F1.08	Main Display Selection	Control panel have 8 display options 1 : Output frequency 2 : Frequency command 3 : Output voltage 4 : DC bus voltage 5 : Output current 6 : Terminal status 7 : Heat sink temperature 8 : Machine speed ratio	1~8	—	1
F1.13	Machine Speed Ratio	Set the ratio of machine speed. This function determines MPM display value.	0.00 ~ 500.00	0.01	20.00
F1.14	Digits of Decimal Value (Machine Speed)	Select the digits of decimal values displaying the machine speed.	0 ~ 3	—	0
F1.17	SPEC Key Setting	Same function as multi-function input	-28 ~ +28	—	0
F1.18	SPEC Key Setting	0 : Disable 1 : Enable	0 , 1	—	0
F1.19	Stop Mode	0: Ramp to stop + DC braking 1: Coast to stop 2: Coast to stop+ DC braking	0 ~ 2	—	0
F1.21	Switching Frequency	The setting value is higher and the motor noise is lower.	0 ~ 6	— 4	2 (Note3)

(F2) Frequency Parameters

Func.	Name	Descriptions				Range of Setting	Unit	dF60
F2.00	Primary Speed (Preset Speed 1)	Jog speed command	Multi-speed level 3 command	Multi-speed level 2 command	Multi-speed level 1 command	0.00~400.00	0.01 Hz	50.00 (Note1)
		OFF	OFF	OFF	OFF			60.00 (Note2)
F2.16	Jog Speed	Jog speed				0.00~400.00	0.01 Hz	6.00
F2.18	Primary Acceleration Time	The acceleration time of primary speed, preset speed 5~8, and jog speed.				0.0~3200.0	0.1sec	5.0
F2.19	Primary Deceleration Time	The deceleration time of primary speed, preset speed 5~8, and jog speed.				0.0~3200.0	0.1sec	5.0
F2.32	Maximum Output Frequency	Maximum output frequency of drive.				0.1~400.0	0.1Hz	50.0 (Note1)
								60.0 (Note2)
F2.34	Starting Voltage	The voltage corresponds to the output starting frequency.				0.1~50.0	0.1V	8.0
F2.35	Base Frequency	The frequency corresponds to the base voltage in V/F pattern.				0.1~400.0	0.1Hz	50.0 (Note1)
								60.0 (Note2)
F2.36	Base Voltage	The voltage corresponds to the base frequency in V/F pattern.				0.1~255.0	0.1V	220.0
F2.47	Frequency Upper Limit	The upper limit of output frequency. (1.00=maximum output frequency)				0.00~1.00	0.01	1.00
F2.48	Frequency Lower Limit	The lower limit of output frequency. (1.00=maximum output frequency)				0.00~1.00	0.01	0.00

(F4) Protection Parameters

Func.	Name	Descriptions	Range of Setting	Unit	dF60
F4.08	Motor Rated Current	Current setting depends on the motor rated current.	10%~150% of drive rated current	0.1A	According to the rated current of motor.

(F5)Multi-function Parameters

Func.	Name	Descriptions		Range of Setting	dF60
F5.19	Multi-function Input Terminal X1	0: Disable ±1: Jog command ±2: Secondary accel/decel command switching ±3: Multi-speed level 1 command	±13: Holding command. ±14: UP command. ±15: DOWN command. ±16: Clean UP/DOWN frequency command. ±17: UP/DOWN command enter key.	0 ~ ±28	22
F5.20	Multi-function Input Terminal X2	±4: Multi-speed level 2 command ±5: Multi-speed level 3 command ±7: Reset command ±8: External fault command (EF)	±18: Analog input source selection(Pot knob/AI) ±19: Primary and secondary frequency command option. ±22: Forward command.	0 ~ ±28	23
F5.21	Multi-function Input Terminal X3	±9: Interruption of output command (bb) ±10: Coast to stop command(Fr) ±11: Speed search from the maximum frequency ±12: Speed search from the frequency setting	±23: Reverse command. ±24: Stop command with 3-wire start/stop circuit. ±25: DC braking enable (Stop). ±26: Counter input. ±27: Counter clear. ±28: Current limit enable.	0 ~ ±28	1
F5.26	Multi-function Output Terminal Y1	0: No functions. ±1: Running detection. ±2: Constant speed detection. ±3: Zero speed detection. ±4: Frequency detection. ±5: System overload detection(OLO). ±6 :Stall prevention detection. ±7: Low voltage detection (LE). ±8: Over voltage during deceleration (db).	±9: Restart after instantaneous power failure detection. ±10: Restart after fault condition detection. ±11: Fault detection. ±16: Detection of counter value1 ±17: Detection of counter value2 ±18: Reverse detection. ±19: NTC temperature warning detection(OHt). ±21 : PTC temperature warning detection (OH1)	0 ~ ±21	11


※ The skipping numbers represented for reservation of parameters.

Note :

1. The default setting of 50Hz. 2. The default setting of 60Hz.
3. When the setting value of switching frequency exceeds “4”, the drive must be de-rating for usage.






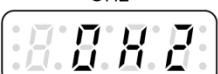



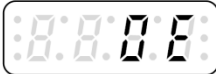


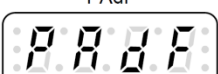

Chapter5 Fault Protection Display

A: Description:







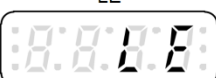
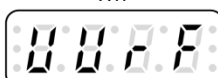




The drive has well protection functions to protect drive and motor when faults occur. When the fault occurs, the drive protective functions will trip to stop the output. After the abnormality remove, reset the drive by pressing  of the drive operation panel or through the multi-functions terminal command to reset the drive.

B: Protection List :

✧ Error Trip Display

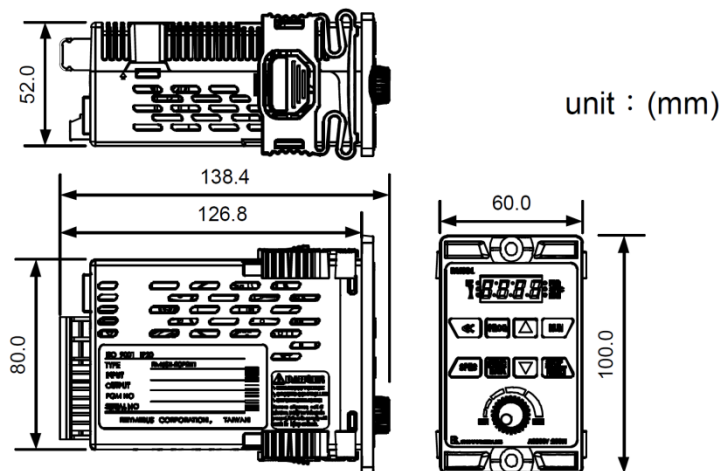
Display	Description	Display	Description
OC 	Drive over current •The drive current during the operation exceeds 220% of drive rated current.	ntcF 	Thermal sensor fault •Please call customer service for drive repair.
OL 	Motor overload • Operation current exceeds 150% of motor rated current and reaches the motor overload protection time. • Active time: F4.10.	OH 	Drive overheat •The temperature of drive's heat sink reaches the trip level. •Trip level: F4.12
OL1 	Drive overload •Operation current exceeds 150% of drive's rated current and continues for 1minute.	OH2 	Motor overheat •The internal temperature of motor is over the trip level. •Trip level: F4.23
OLO 	System overload •Load is too heavy and the operation current reaches the active level. •Detection level: F4.28 •Detection time: F4.29	EEr1  EEr2 	KP-601A Internal memory error •Please call customer service for drive repair.
OE 	Over voltage •The internal DC bus voltage is over the protection level.	EEr 	EEPROM error
LE1 	Under voltage during operation •The internal DC bus voltage is below 70% of power source.	PAdF 	KP-601A interruption during copy
EF 	External fault (Terminal receives the external fault signal)		

※ Warning Display

Display	Description	Display	Description
OLO 	System overload •F4.27=0 Drive is still running when the overload is detected.	Fr 	Coast to stop
Hv 	Power source over voltage •DC bus voltage of drive is over the protection level during standby time.	dtF 	Forward/reverse command input simultaneously
db 	Over voltage during deceleration •DC bus voltage over setting protection level F3.27		No input of forward/reverse command
LE 	Power source over voltage	WrF 	Different software version inter-copy
OHt 	Drive overheat •The temperature of heat sink reaches the protection level. •Warning level: F4.14	Cot 	Modbus communication overtime • Setting F6.58
OH1 	Motor overheat •The internal temperature of motor is over the warning level. •Warning level: F4.21	bb 	Drive output interruption

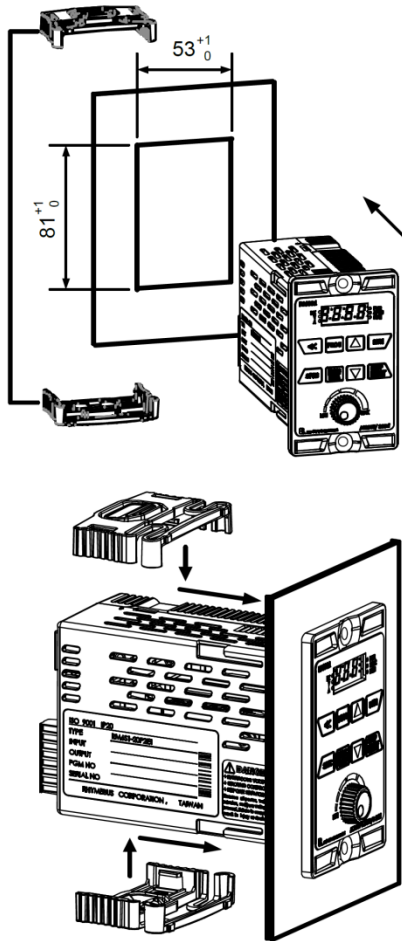
Chapter 6 Installation Dimensions of Drive

6-1 Outline Dimension of Drive:

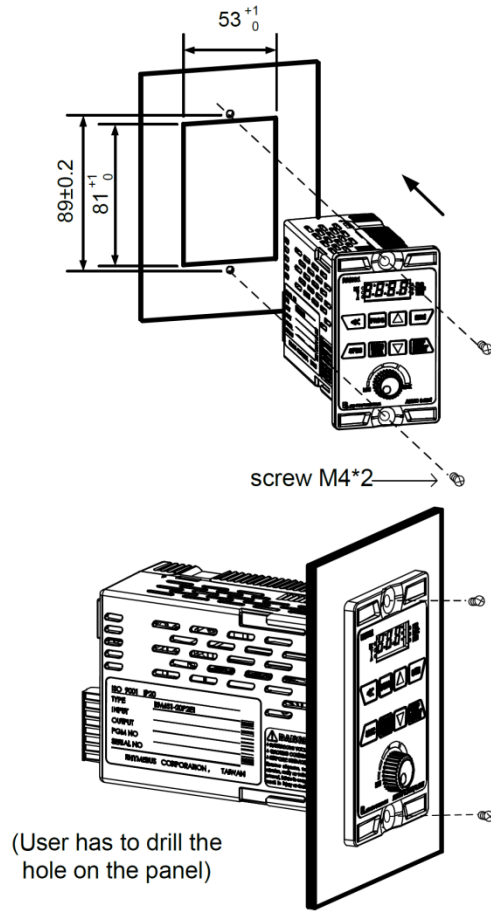


6-2 Installation Dimensions

Fixation 1: Detachable Buckle (Standard Fixation)



Fixation 2: Screw Fixing (Using for Vibrant Environment)



Unit : (mm)

Purchase Accessories

1. KP-601A Keypad
2. Protection Cover for Drive

Please consult any LDS authorized distributor for the accessories and specification.

Figure1: Drive Supporting Frame

