

LS600 Series Inverters

IGBT Space vector inverters

Voltage Range :
200V~240V 1P/3P
380V~460V 3P

Capacity Range :
0.4KW~75KW



LS800 Series — Flux vector inverters

VF, VF + PG feedback, Sensorless control,
Flux vector control

Voltage Range : 200V~240V 1P/3P
380V~460V 3P

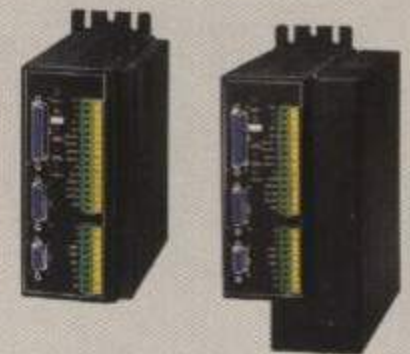
Capacity Range : 0.4KW~225KW



ESD Series — DC Brush-less Servo Drive

Voltage Range : 200V~240V 1P/3P

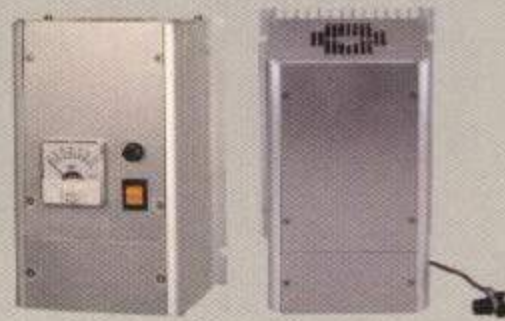
Capacity Range : 0.4KW~5.5KW



LS200A — Space vector inverter Analogic control

Voltage Range : 200V~240V 1P

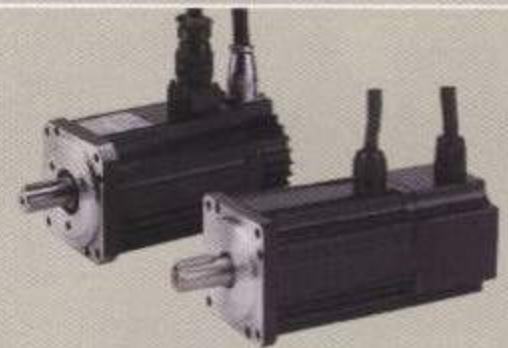
Capacity Range : 0.4KW~1.5KW



ESM Series — DC Brush-less Motor

Voltage Range : 200V~240V 3P

Capacity Range : 0.4KW~5.5KW



LS100A — Space vector inverter Analogic control

Voltage Range : 200V~240V 1P

Capacity Range : 60W~200W



LSBR Series — Brake unit

Voltage Range : 200V~230V
380V~460V

Capacity Range : 0.4KW~300KW



EMC Filter

Voltage Range : 200V~260V 1P/3P
380V~460V 3P

Capacity Range : 0.4KW~225KW



LSBR Series — Brake resistors

Voltage Range : 100V~10KW

Resistance : 5Ω~500Ω



LS AC input reactor

Voltage Range : 200V~260V 1P/3P
380V~460V 3P

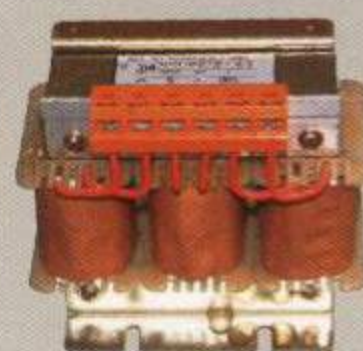
Capacity Range : 0.4KW~300KW



LS AC output reactor

Voltage Range : 200V~260V 3P
380V~460V 3P

Capacity Range : 0.4KW~300KW



LS DC Bus choke

Voltage Range : DC 200V~800V

Capacity Range : 0.4KW~300KW



LS — operate keypad with exterior cable



LS600 Model extension cable with operate keypad



Exterior cable with operation box



LS800 Model extension cable with operate keypad

LS600

Space vector: space vector control of voltage. voltage is equally distributed automatically with low loss of output and high efficiency for energy saving.

Silent design: modulated IGBT, high carrier, high-speed change, and long life.

High precision: high speed operation of DSP, high precision and low error.

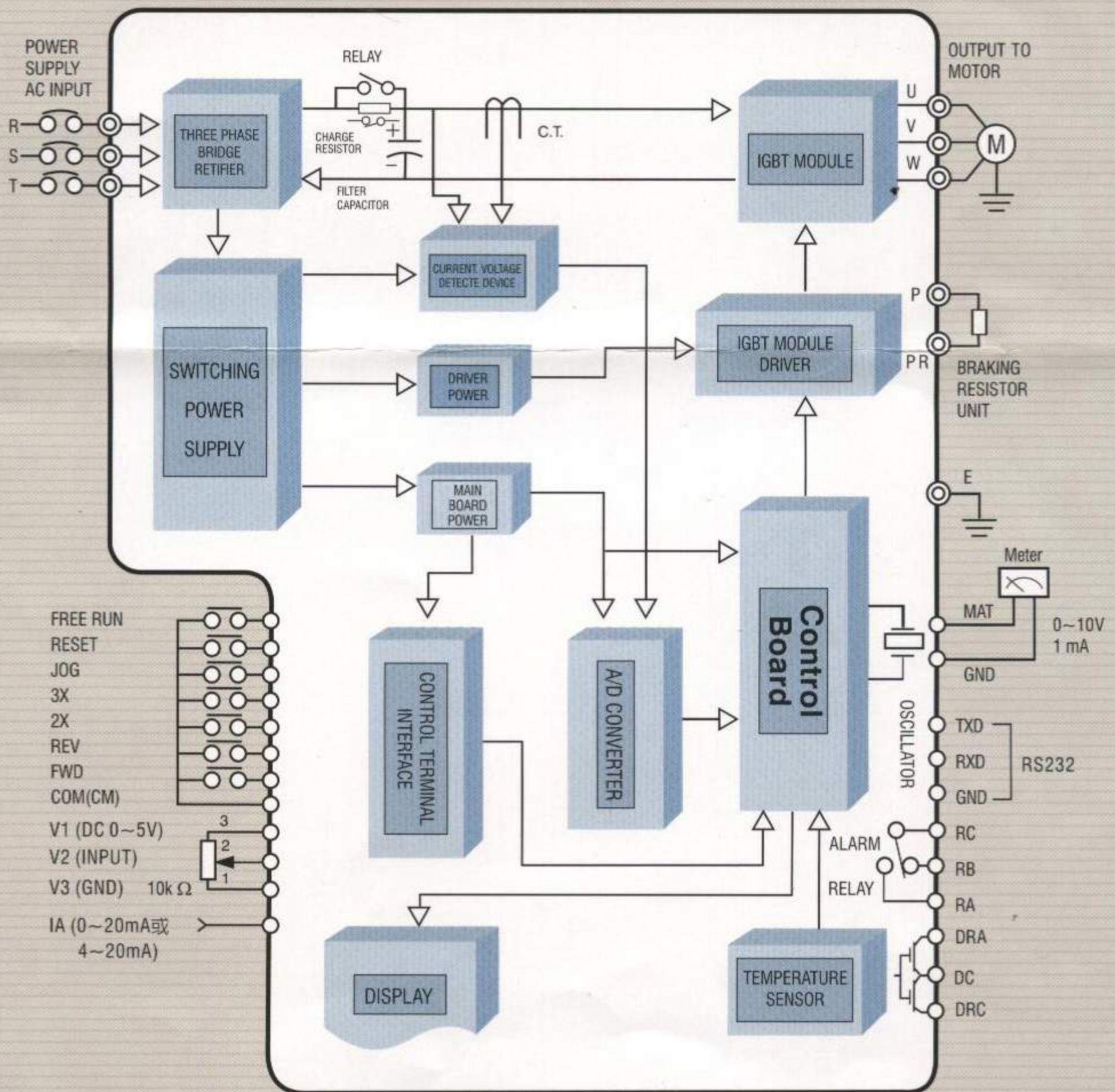
Smooth current: close to sine wave, smooth running of motor, no vibration and safety in operation.

Small size: space saving design for compact design, portable silent type.

Interface: equipped with RS-232 interface for automatic on-line operation with computer.

Two-way mode: digital/analogy mode can apply two-way or single-way operations simultaneously.

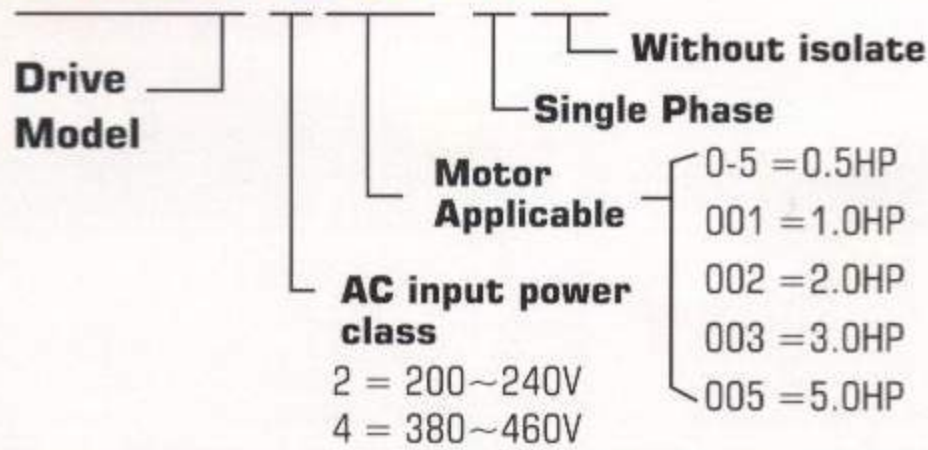
BLOCK DIAGRAM OF INVERTERS



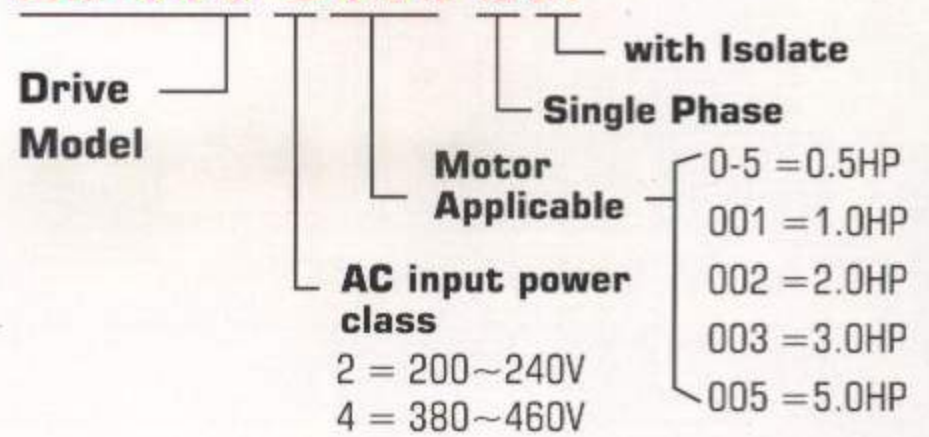
How to discriminate specifications ?

M : Without isolate, **N** : With isolate, Not show **M** · **N** all With isolate

LS 600-2001 SM



LS 600-2001 SN



LS600-20-5 SM
LS600-2001 SM
LS600-2002 SM
LS600-2003 SM

LS600-20-5 N
LS600-2001 N
LS600-2002 N
LS600-2003 N

LS600-2003
LS600-2005
LS600-4003
LS600-4005

LS600-2007
LS600-2010
LS600-2015
LS600-4007
LS600-4010
LS600-4015

LS600-2020
LS600-2025
LS600-2030
LS600-4020
LS600-4025
LS600-4030

LS600-2040
LS600-2050
LS600-4040
LS600-4050

LS600-2060
LS600-2075
LS600-4060
LS600-4075
LS600-4100

LS600-20-5 SN
LS600-2001 SN
LS600-2002 SN
LS600-2003 SN

LS600-40-5 N
LS600-4001 N
LS600-4002 N
LS600-4003 N

STANDARD SPECIFICATIONS

200V-240V Series

Model	LS600-20-5 SM	LS600-2001 SM	LS600-2002 SM	LS600-2003 SM	LS600-20-5 SN	LS600-2001 SN	LS600-2002 SN	LS600-2003 SN	LS600-20-5 N	LS600-2001 N	LS600-2002 N	LS600-2003 N	LS600-2005	LS600-2007	LS600-2010	LS600-2015	LS600-2020	LS600-2025	LS600-2030	LS600-2040	
Max. Motor(kw)	0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	
Capacity (KVA)	1.2	1.7	2.8	4.2	1.2	1.7	2.8	4.2	1.2	1.7	2.8	4.2	6.1	9.1	12.2	17.5	23	29	34.7	44	
Rated Current(A) of Inverters	3.0	4.5	7.5	11	3.0	4.5	7.5	11	3.0	4.5	7.5	11	16	24	33	46	61	76	90	115	
Dimension Chart	A	A	A	A	A	A	A	A	A	A	A	A	B	C	C	C	D	D	D	E	
Power Source	Rated voltage & Frequency		Single phase 200V / 208V / 220V 50Hz 200V / 208V / 220V / 240V 60Hz										Three phase 200V / 208V / 220V 50Hz 200V / 208V / 220V / 240V 60Hz								
	All voltage variance		± 10%																		

380V-460V Series

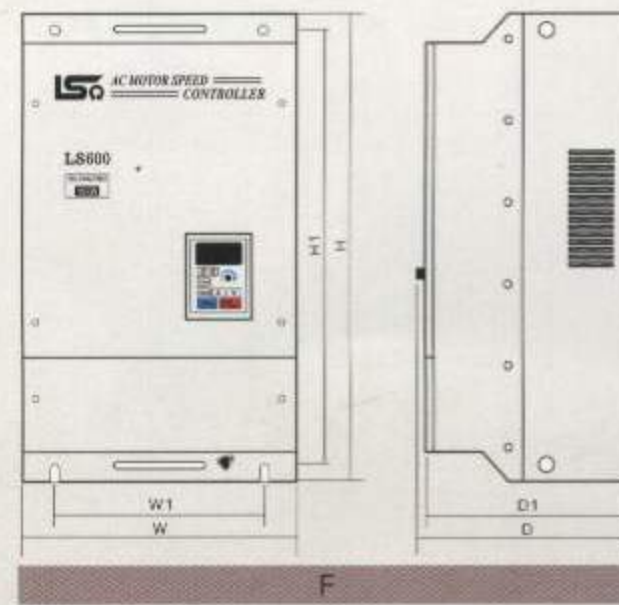
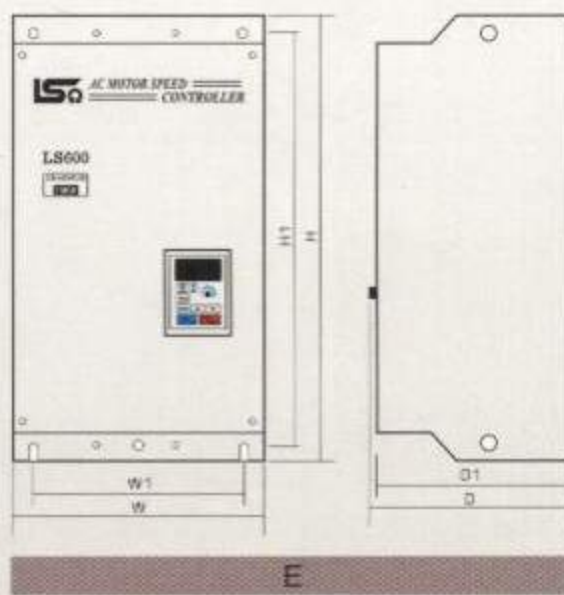
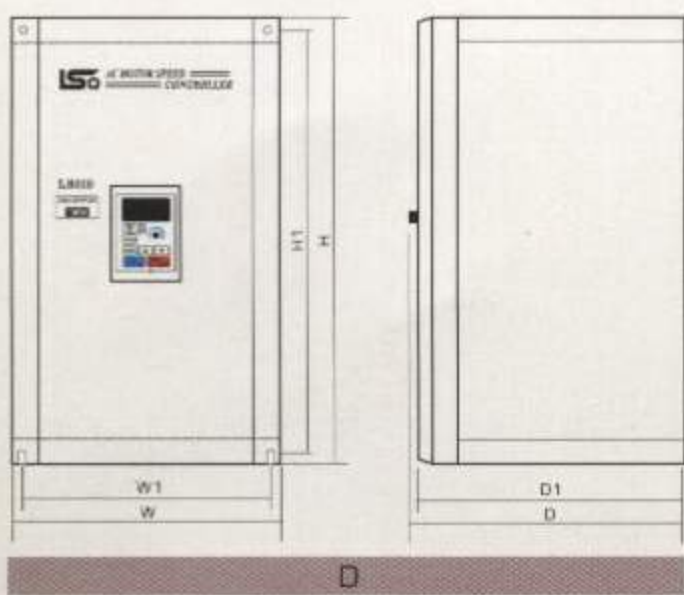
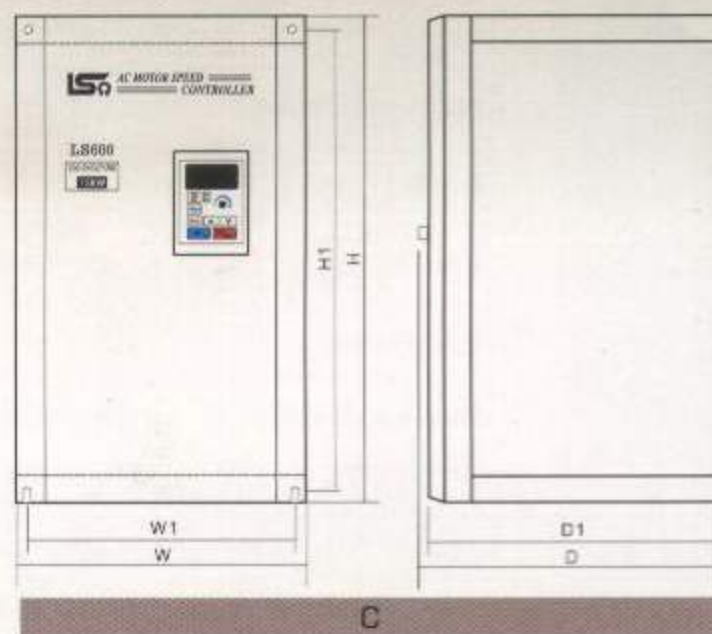
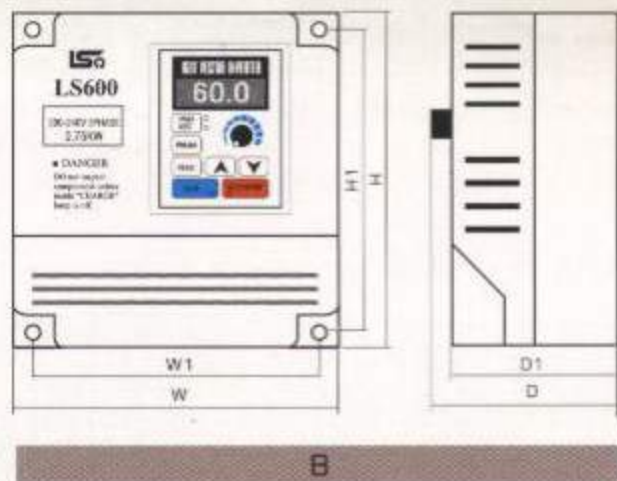
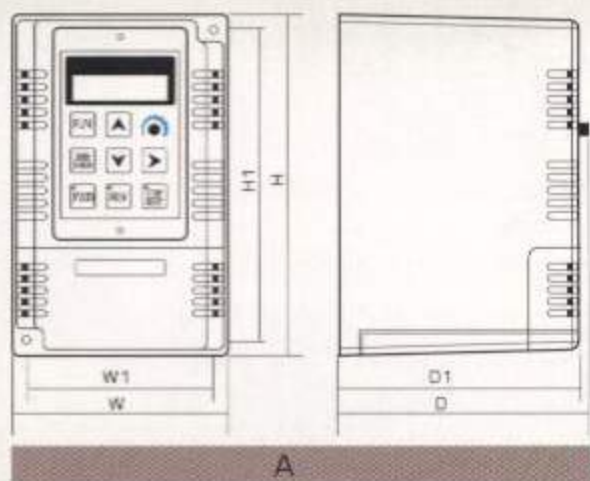
LS600-2050	LS600-2060	LS600-2075
37	45	55
55	67	82
145	175	215
E	F	F

Model	LS800-40-5N	LS600-4001N	LS600-4002N	LS600-4003N	LS600-4005	LS600-4007	LS600-4010	LS600-4015	LS600-4020	LS600-4025	LS600-4030	LS600-4040	LS600-4050	LS600-4060	LS600-4075	LS600-4100
Max. Motor(kw)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
Capacity (KVA)	1.4	2.0	3.2	4.2	7.0	9.5	13	18	23.5	29	33	46	53	68	84	110
Rated Current(A) of Inverters	1.8	3.2	4.5	7.0	9.0	12	17	23	30	38	43	58	70	85	110	150
Dimension Chart	A	A	A	A	B	C	C	C	D	D	D	E	E	F	F	F
Power Source	Rated voltage & Frequency		Three phase 380V / 400V / 415V / 440V / 460V / 50Hz, 60Hz													
	All voltage variance		± 10%													

COMMON CHARACTERISTICS

Control System	Control Model	Space Vector PWM adjusting control	
	Overload Limited	Nominal Output AMP. 150%, 0.1~20 Sec.	
	Signal of Frequency Setting	DC0~5V, DC0~10V(10k Ω), 4~20mA(250 Ω), 0~20mA(250 Ω)	
	Time for Speed Acc./Dec.	Individual Setting: 0.1~210 sec.	
	Torque for Braking	About 20%(Plus braking resistance up to 150% built-in braking chip)	
	V/F Curve	Automatic torque compensation or compensation by any V/F curve setting.	
	N ² reduction Progressively Curve Line	17 lines for usage of great inertia and high torque starting.	
	Automatic Compensation Curve	Code selection "0", the parameter have 17 lines for 20% compensation selection.	
	Instantaneous Over Current	Speed Acc. Setting by motion current, Dec. protection setting by voltage	
	Range of Frequency Control	0.5~240Hz	
	Frequency Precision	Digital Command : 0.1 %(-10 ~40 $^{\circ}$ C) Analog Command: 0.5%(25 $^{\circ}$ C \pm 10 $^{\circ}$ C)	
Protection Function	Instantaneous Over Current	When over 200%, machine will stop immediately for protection. OC1 : Acc. Over current, OC2 : Rated Speed over current, OC3 : Dec. Over current.	
	Overload	Over 150% current, output stopped in 0.1 to 20 Sec any set.	
	Over-Voltage or Low-Voltage	DC Bus over voltage 400V or under 200V (1phase 170V) output stopped DC Bus over voltage 800V or under 400V, output stopped, OU1 : Acc. Over voltage, OU2 : Rated Speed over voltage, OU3 : Dec. Over voltage	
	Low Power Protect	Voltage less than DC 170V, in 15 ms stopping.	
	Over-heat	protected by thermo-switch, include heating sink and charge Resistor.	
	Charging Indicating	DC Bus over voltage over 50V, charging lamp is on light	
Rotation System	Input	Rotation	Clock & anti-clock rotation or individual command on VR and keypad
		External Effect	Warning signal for abnormal external effect to stop operation
		Recovery	Upon removal of protection action signal
		Signal Control	Eight point control(2x,3x Jog speed signal. speed search, free run, DC0~5V, DC0~10V, 4~20mA, 0~20mA input.)
	Output	Abnormal Contact	Abnormal output contacts, Alarm Relay output, 1a/1b Max. Ac250V/3A
		Collector output	Crystal open collector output terminals. DC MAX. 24V/150mA, AC MAX. 250V/150mA
		Analog output	0~10VDC/1mA analog output terminal.
	Display	LED Display	LED for RUN/STOP, FWD/REV
Digital Operator		Setting for frequency, output frequency, direction of rotation, abnormal matter	
Environment	Location	Indoor, no corrosive gas or liquid and free from dust	
	Ambient Temp.	-10 $^{\circ}$ C~50 $^{\circ}$ C (No Freezing)	
	Storage Temp.	-15 $^{\circ}$ C~50 $^{\circ}$ C (Avoiding high temperature to damage capacitor in main line)	
	Humidity	Below dew point, up to 90% RH	
	Vibration	Below 0.5G	

REMARK : Largest motor is standard three-phase, 4-pole induction motor



Model	Size	Area	W	W1	H	H1	D	D1	Net Weight (Kg)	Gross Weight (Kg)	Measurement	Fix Screw
									Approx. Weight			
A	LS600-20-5SM	LS600-2001SM	114.2	101	172.1	159	146	136	Approx. Weight		0.2	M4
	LS600-2002SM	LS600-2003SM							1.4	1.9		
	LS600-20-5SN	LS600-2001SN										
	LS600-2002SN	LS600-2003SN										
	LS600-20-5N	LS600-2001N										
	LS600-2002N	LS600-2003N										
	LS600-40-5N	LS600-4001N										
	LS600-4002N	LS600-4003N										
B	LS600-20-5	LS600-2001	148	128	152	138	142	132	Approx. Weight		0.3	M4
	LS600-2002	LS600-4001							1.8	2.0		
	LS600-4002	LS600-20-5S										
	LS600-2001S	LS600-2002S										
C	LS600-2003	LS600-2005	148	128	202	189	166	155	2.6	3.0	0.4	M4
	LS600-4003	LS600-4005										
C	LS600-7.5HP~15HP		188	173	304	284	178	170	2.3	2.7	0.3	M4
D	LS600-2007	LS600-2010	202	185	333	313	196	186	10.0	12	1.0	M6
	LS600-2015	LS600-4007										
	LS600-4010	LS600-4015										
E	LS600-2020	LS600-2025	250	226	425	402	226	216	18.0	20.6	1.7	M6
	LS600-2030	LS600-4020										
	LS600-4025	LS600-4030										
F	LS600-2040	LS600-2050	290	236	562	535	215	205	21.0	26.4	3.0	M6
	LS600-4040	LS600-4050										
F	LS600-2060	LS600-2075	356	236	670	645	285	275	41.0	47.4	4.9	M8
	LS600-4060	LS600-4075										
	LS600-4100											

We were established in 1985. Our factory is located at Taipei Hsien, Taiwan, For many years, we have been specialized in manufacturing AC vector inverter, DC brushless servo actuator, braking unit and periphery equipment, etc. with excellent quality and price, and also our products have been sold all round the world. In 2002, we passed and were recognized by the international quality standard certification ISO9001:2000, which showed our products with much more improved quality and fulfilled our promises and trusts to our customers.

LS800 series is a series of more than perfect actuators. LS800 series adopts the magnetic flux current control principle with the advanced high technology "direct field conduction" to exactly estimate the magnetic flux and also adopts DSP software and hardware to process the engineering calculation for the output conversion of best rotational torque effect. LS800 series is applied to the control in precision and complex industries and is used in such as AC induced servo motors, crane equipments, high speed elevators, proportional synchronous operational control, fixed current and fixed rotational torque control, fixed tension control and the control of general induced electrical machines.

LS800 Series Flux vector inverters

VF, VF+PG feedback, Sensorless control,

Flux vector control
Voltage Range :
200V~240V 1P/3P
380V~460V 3P

Capacity Range :
0.4KW~225KW



LS600 Series Inverters IGBT Space vector inverters

Voltage Range : 200V~240V 1P/3P
380V~460V 3P

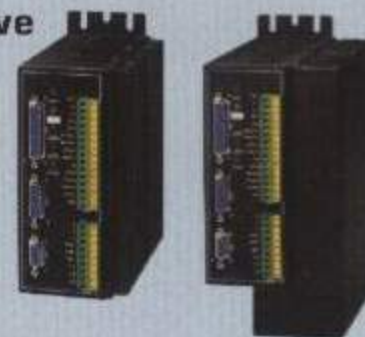
Capacity Range : 0.4KW~75KW



ESD Series DC Brush-less Servo Drive

Voltage Range : 200V~240V 1P/3P

Capacity Range : 0.4KW~5.5KW



LSBR Series Brake unit

Voltage Range : 200V~230V
380V~460V

Capacity Range : 0.4KW~300KW



ESM Series DC Brush-less Motor

Voltage Range : 200V~240V 3P

Capacity Range : 0.4KW~5.5KW



LSBR Series Brake resistors

Voltage Range : 100W~10KW

Resistance : 5Ω~500Ω



LS DC Bus choke

Voltage Range : DC 200V~800V

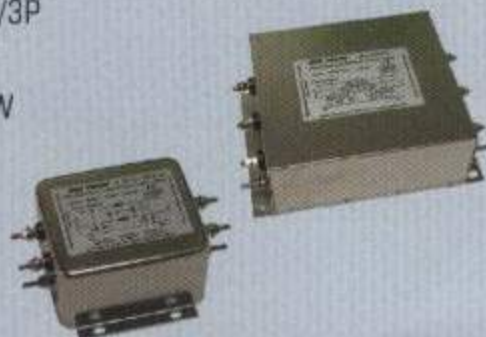
Capacity Range : 0.4KW~300KW



EMC Filter

Voltage Range : 200V~260V 1P/3P
380V~460V 3P

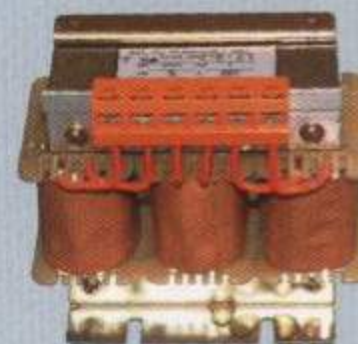
Capacity Range : 0.4KW~225KW



LS AC output reactor

Voltage Range : 200V~260V 3P
380V~460V 3P

Capacity Range : 0.4KW~300KW



LS operate keypad with exterior cable



LS600 Model extension cable with operate keypad

Exterior cable with operation box

LS800 Model extension cable with operate keypad

LS AC input reactor

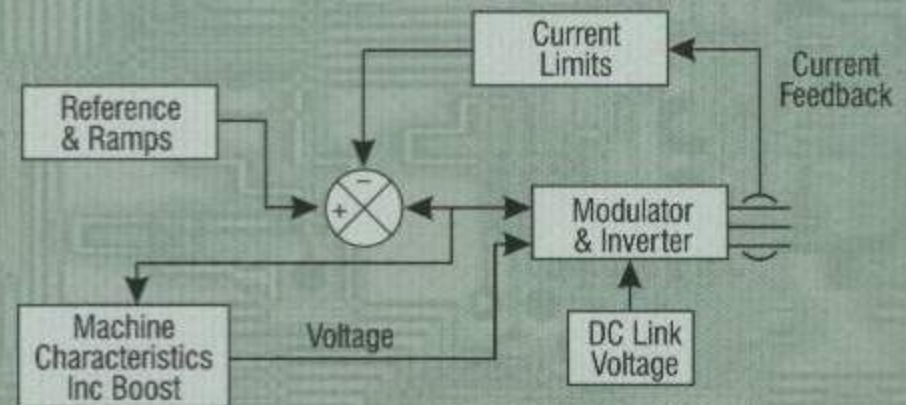
Voltage Range : 200V~260V 1P/3P
380V~460V 3P

Capacity Range : 0.4KW~300KW

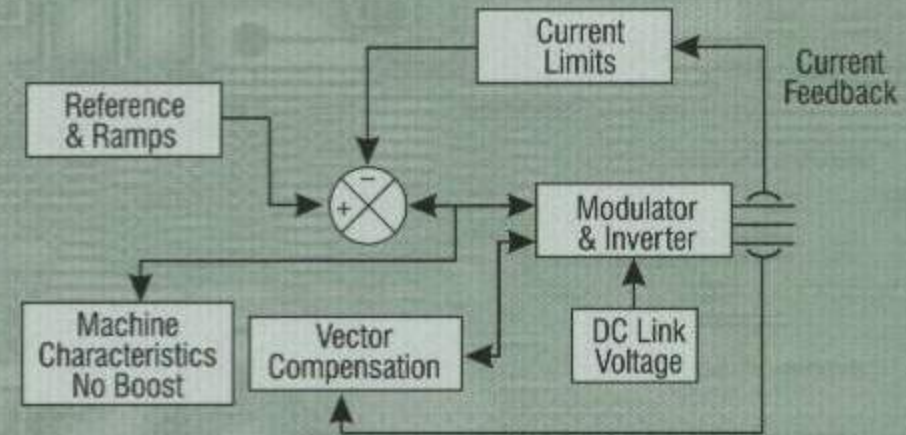


5 operational control modes

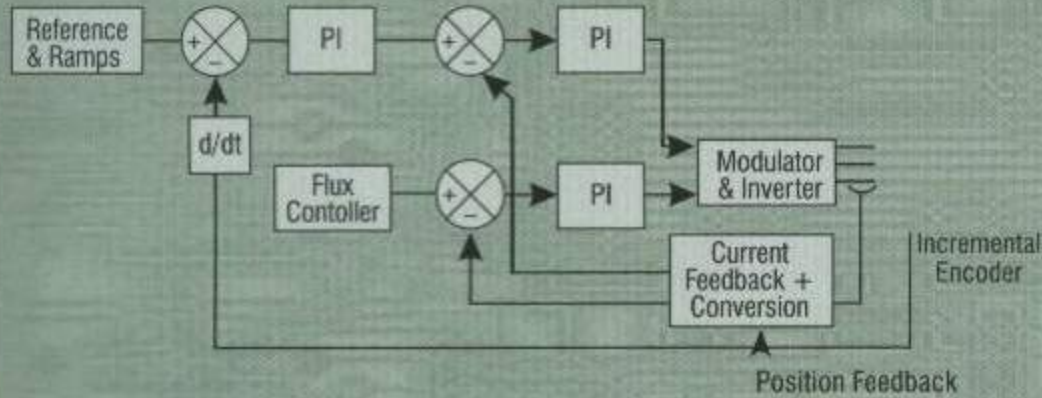
- ◆ Sine wave V/F vector control
- ◆ Sine wave V/F vector closed-loop control and closed-loop speed PI adjustment
- ◆ Sine wave V/F sensorless vector control
- ◆ Flux vector closed-loop control and closed-loop speed PI adjustment
- ◆ Flux vector sensorless control and sensorless speed PI adjustment



Open loop V/F vector control mode



Flux vector sensorless control mode



Magnetic flux current vector closed-loop control mode

International standard communication protocol

- ◆ Built-in RS485 digital operator format
- ◆ International standard Modbus Protocol RS485 communication format
- ◆ Applies to man-machine interface and graphics control software
- ◆ Offers customized software which:
 - Can use PC to simulate digital operator format control for human-interface operation and instant showing function introduction
 - With RS485 Modbus format, can use PC, PLC, etc. to quickly search, monitor, set, and modify the parameter groups, etc.
 - Before the monitor, can perform saving N sets of parameter groups and multi-machine control, monitoring with automatic synchronous status, etc.



RS485/Modbus Communication

Built-in Multi-Function I/O interfaces

- ◆ 8 sets of Digital-In can perform multi-function compilation
- ◆ 3 sets of Digital-Out can perform multi-function compilation
- ◆ 2 sets of Analog-In, 1 set of current signal input
- ◆ 2 sets of Analog-Out can perform multi-function compilation
- ◆ 2 sets of Relay can perform multi-function compilation
- ◆ 8 sets of Di and 3 sets of Do can perform Sink and Source in convertible mode control
- ◆ Offering DC24V/200ma for the use of digital terminals



Monitoring Tool

Parameter Tables

Command Tools

Built-in special practical functions

- ◆ With digital operator, can perform duplication function and parameter saving function
- ◆ Auto-Tune parameter of motors with precision
- ◆ Can input parameters automatically or manually
- ◆ Speed errors within ± 1 r.p.m
- ◆ In Standstill Position, rotational torque output 100% in speed zero
- ◆ 2 sets of multi-function PID setting
- ◆ 16 sets of speed, 8 for PLC compilation and the other 8 for terminal compilation
- ◆ 1 set of multi-function Counter function
- ◆ Built-in intelligent multi-functional parameter group specialized for water pump
- ◆ Can perform 4 quadrant rotational torque control
- ◆ Can perform fixed current and fixed rotational torque, and fixed tension control
- ◆ Speed and rotational torque commands are set and controlled by VR individually
- ◆ S curve, linear curve and V/F curve
- ◆ Slip and rotational torque are compensated automatically
- ◆ AVR automatic voltage regulator control
- ◆ Power saving control system with high efficiency

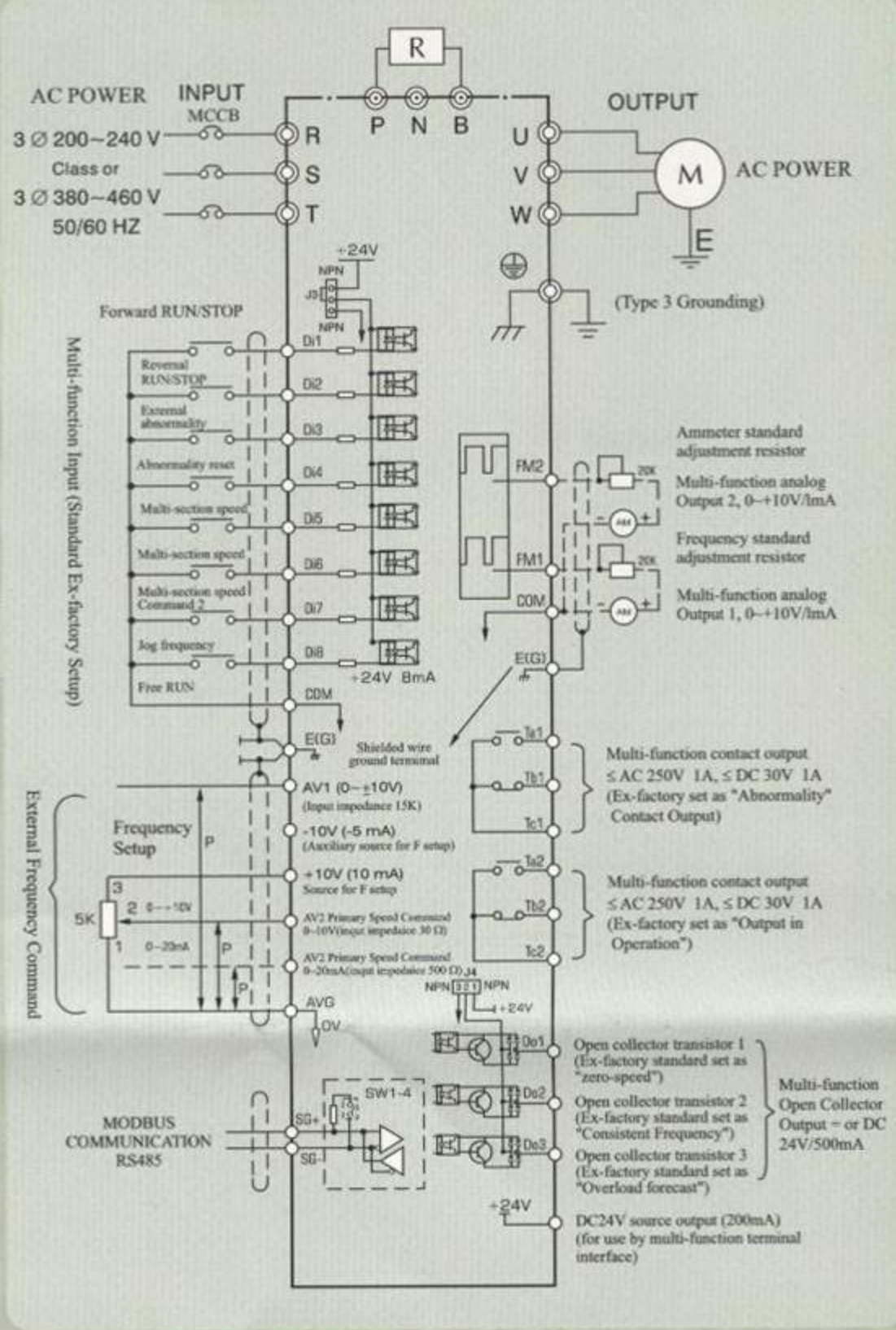
Multi-function compiler feedback card

- ◆ Response frequency can accept 300KHz to its maximum 400KHz
- ◆ Can perform impulse to monitor input and output
- ◆ Can perform Master and Slave for multi-machine control

Schedule of Control Terminal Function

Terminal Mark	Terminal Designation	Description
Multi-function Input Terminals	Di1	Forward revolution command
	Di2	Reversal revolution command
	Di3	Input in case of external abnormality (NC)
	Di4	Abnormality reset
	Di5	Multi-section command 1
	Di6	Multi-section command 2
	Di7	Jog inching frequency
	Di8	Free-run
COM	I/O Common terminal	Terminal common by multi-function I/O terminals and pulse FM terminals
Analog F Setting	+10V	Source for F setup
	-10V	Negative source for F setup
	AVG	Common terminals for F setup
	AV1	Analog voltage F command
	AV2	Analog voltage F command
AI	Analogy current F command	
Multi-function Output Terminals	DO1	Zero-Speed detected
	DO2	Consistent F
	DO3	Overload forecast
	COM	I/O Common terminal
	24V	Auxiliary source for terminal
	Ta1	Output in normality (NC)
	Tb1	
	Tc1	
	Ta2	In Operation
	Tb2	
Tc2		
FM1	Analog output, FM	
FM2	Analog output, amperage monitor	
COM	SG+	RS-485 series com interface
	SG-	RS-485 series com interface
	E	Earth cable terminal

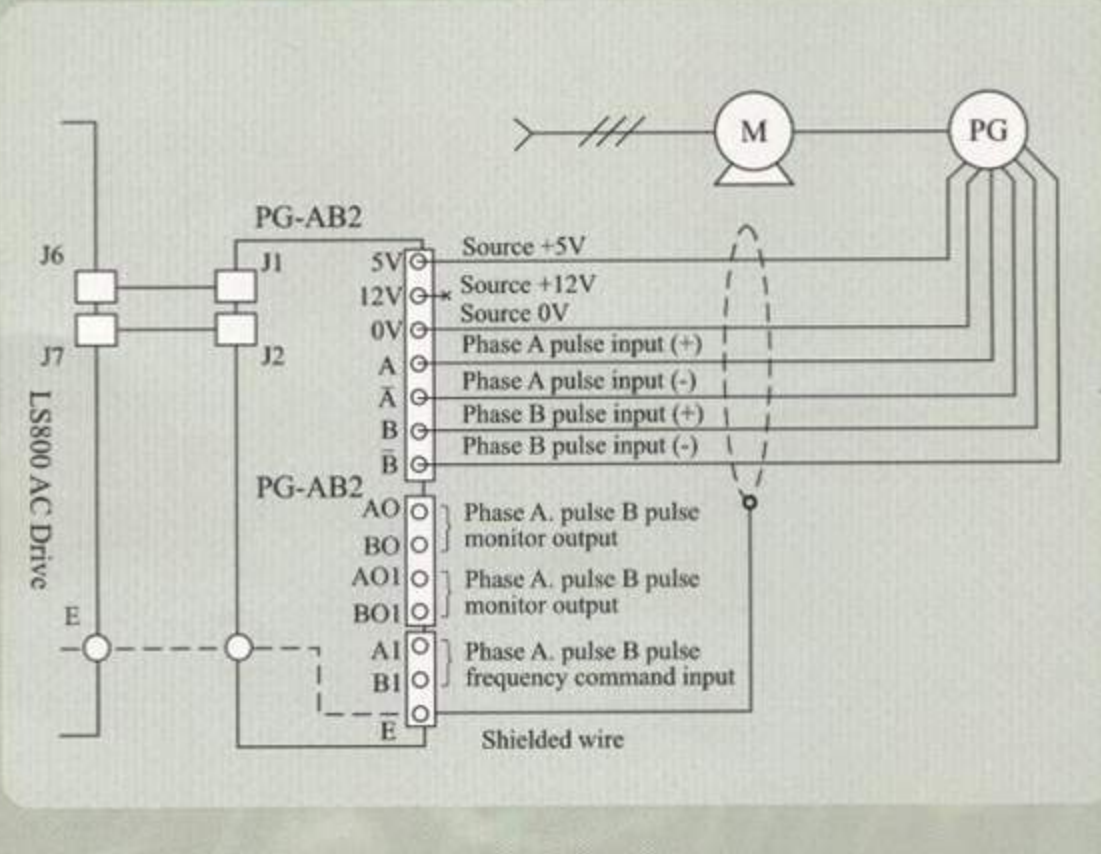
Control Circuit Wiring Diagram



PG-AB2 Terminals & Specification

Terminal Mark	Description	Specification
E	Shielded cable connection ground terminal	-----
A	Phase A pulse input (+)	* Adaptable to Line Driver, Encoder with 5V or 12V source of complementary and open collector transistor, A, B. Phase signal output.
\bar{A}	Phase A pulse input (-)	
B	Phase B pulse input (+)	* Maximal response frequency 300 KHz.
\bar{B}	Phase B pulse input (-)	* If open collector transistor type of input is used, connect Phase A and Phase B terminals to source terminals of 12V encoder.
AO	Phase A pulse monitor output	* The maximal for Phase A and Phase B open collector transistor output is DC 5V/30mA.
BO	Phase B pulse monitor output	* Maximal response frequency 300 KHz.
5V	Pulse generator dedicated source	DC+5V ($\pm 5\%$), 200mA (max.)
12V		DC+12V ($\pm 5\%$), 200mA (max.)
0V		DC 0V (+5V and +12V share the common grounding terminal)
A1	Phase A pulse frequency command input	For Phase A and Phase B, the input is done by open collector transistor type (0-300 KHz). (Select J3 according to the specification. Refer to page 2-12 to selection a correct signal voltage.)
B1	Phase B pulse frequency command input	
AO1	Phase A pulse frequency command monitor output	* Phase A and Phase B open collector transistor output, DC5V/30mA (max.)
BO1	Phase B pulse frequency command monitor output	* Maximal response frequency 300 KHz

PG-AB2 Wiring Diagram



Flux Vector Model LS800 Series

Model Instructions

LS800 – 22K2

AC DRIVE Model Number

Power : 2.2KW
2 : input 200V~240V
4 : input 380V~460V



STANDARD SPECIFICATIONS

200V Series

LS800 Model	20K7	21K5	22K2	24K0	25K5	27K5	2011	2015	2018	2022	2030	2037	2045	2055	2075	2090	2110
Max.Motor(kw) Rated	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
Output Capacity(KVA) of Drive	1.7	2.8	4.2	6.0	9.1	12.2	17.5	23	29	34.7	44	55	67	82	110	140	160
Rated Current(A) of Drive	4.5	7.5	11	16	24	33	46	61	76	90	115	145	175	215	300	350	450

400V Series

LS800 Model	40K7	41K5	42K2	44K0	45K5	47K5	4011	4015	4018	4022	4030	4037	4045	4055	4075	4090	4110	4132	4160	4185	4220
Max.Motor(kw) Rated	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	220
Output Capacity(KVA) of Drive	2.0	3.2	4.2	7.0	9.5	13	18	23.5	29	33	46	53	68	84	110	150	170	210	230	260	340
Rated Current(A) of Drive	3.2	4.5	7.0	9.0	12	17	23	30	38	43	58	70	85	110	150	190	216	275	300	350	450

Item		220V Rating	400V Rating
Power source	Input Voltage, frequency	Three phase 220/208/220V 50/60Hz, 230V 60Hz	Three phase 380/400/415/440/460V 50/60Hz
	Allow Voltage Variance	+10%, -15%	
	Allow Frequency Variance	±5%	
	Max. Output Voltage	Three phase 220/208/220/230V corresponds to input voltage	Three phase 380/400/415/440/460V corresponds to input voltage
	Rated Output Frequency	Setting Max. Range 0.1Hz ~ 400Hz	
Control Characteristics	Control Model	Sine wave SVPWM two or three phase modulated switch frequency 2K ~ 16KHz adjustable, choose one of 5 control modes: V/f, V/f + closed loop, V/f sensorless, flux vector control + closed loop, and flux vector sensorless	
	Starting Torque	150% / speed zero (150% / 1Hz without PG card)	
	Range of Speed Control	1:1000 with PG card, 1:100 without PG card	
	Precision of Speed Control	±0.02% (±0.2% without PG card)	
	Torque Control	Four quadrant control, zero speed vector positioning control, variable and constant current torque control	
	Control Function	36 indications, 8 command sources of rotation speed, speed searching, torque limits, zero speed vector control, variable and constant current torque control, sink and source option, multi-work input and output terminal control, 16 preset speeds control, option card, jump frequency, AVR, Auto-Tuning dynamic motor parameters, S curve, slip compensation, torque compensation, upper and lower frequency setting, DC brake in start/stop, double PID function, power saving operation, intelligent water pump function setting, RS485/ Modbus communication.	
	Frequency Precision (Temperature Variation)	Digital signal: ±0.1% (-10°C ~ +40°C)	Analog signal: ±0.1% (25°C ~ ±10°C)
	Frequency Setting Resolution	Digital signal: 0.1Hz (0.1 ~ 400Hz) Analog signal : 0.1Hz/60Hz * (11bit + symbol)	
	Frequency Output Resolution	0.1Hz	
	Overload Limited	Rated current 150%, 1 Min.	
	Analog Rated Setting Signal	DC 0 ~ ±10V, 0 ~ 10V, 0 ~ 20 mA (499Ω, with PG card for impulse input control)	
	Time for Speed Acc/Dec	0.1 sec ~ 1200 sec, 4 adjustments are individually distributed to 16 speeds	
	Torque for Braking	About 20%, up to 125% with braking controller	
Protection Function	Motor Protection	Integral electrical thermo protection	
	Instantaneous Over Current	When over 200% rated current and skip current protection, motor stops	
	Overload	About 150% rated output current, motor stops after 1 Min.	
	Over Voltage	DC voltage in main circuit about 400V, motor stops	DC voltage in main circuit about 800V, motor stops
	Low Voltage	DC voltage in main circuit below 180V, motor stops	DC voltage in main circuit below 380V, motor stops
	Power Protection	Input (equipped above 5.5KW), output phase lag protection (equipped above 0.4KW)	
	Instantaneous Power Break Compensation	Factory setting: instantaneous power break, motor stops in 15 ms	
	Ventilation Over-heat	Protected, by thermo-switch, can be read and monitored	
	Stall Prevention	In speed Acc/Dec, stall prevention during operation	
	Ground Protection	Electrical circuit protection	
Environment	Charging Indicating	DC voltage in main circuit over 50V, charging light is "on"	
	Location	Indoor, no corrosive and free from dust	
	Ambient Temp.	-10 ~ +40°C (closed and wall mounted type), -10 ~ +45°C (open type), no freezing	
	Storage Temp. (*2)	-20 ~ +60°C	
	Humidity	Below 90% RH (no condensing)	
Vibration	1G below 20Hz, 0.2G during 20 ~ 50Hz		

OUTSIDE DIMENSION CHART UNIT: m/m

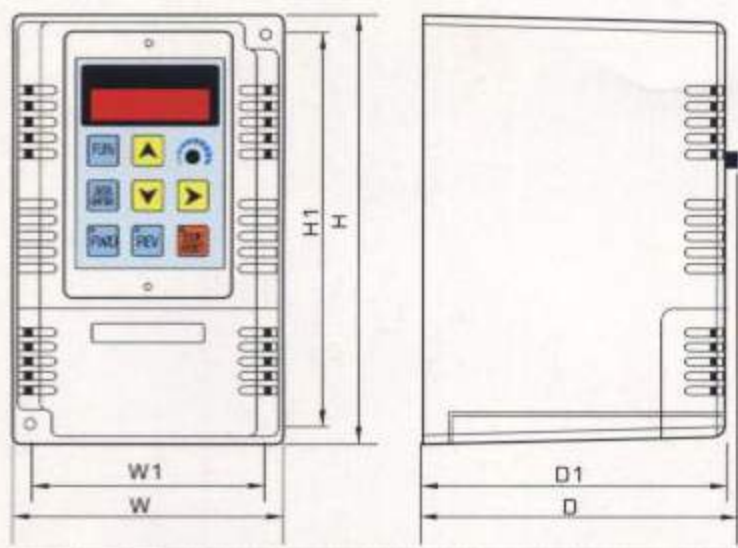


Diagram A

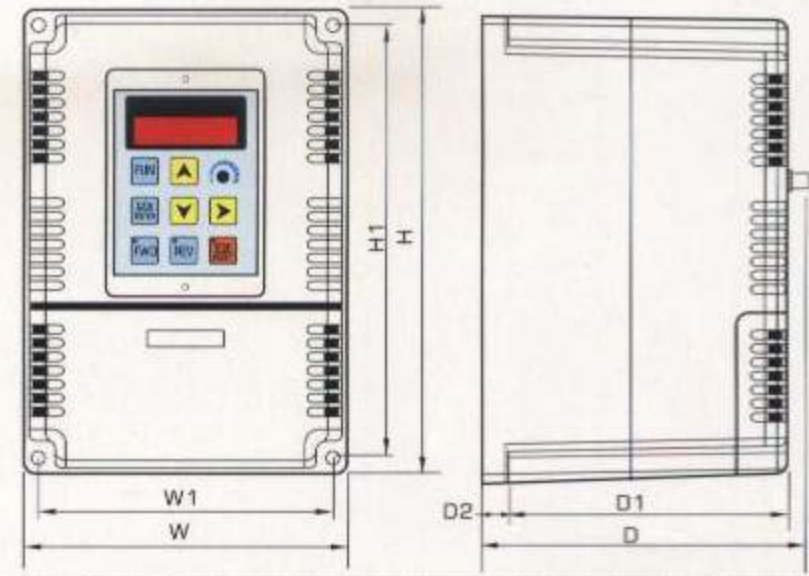


Diagram B

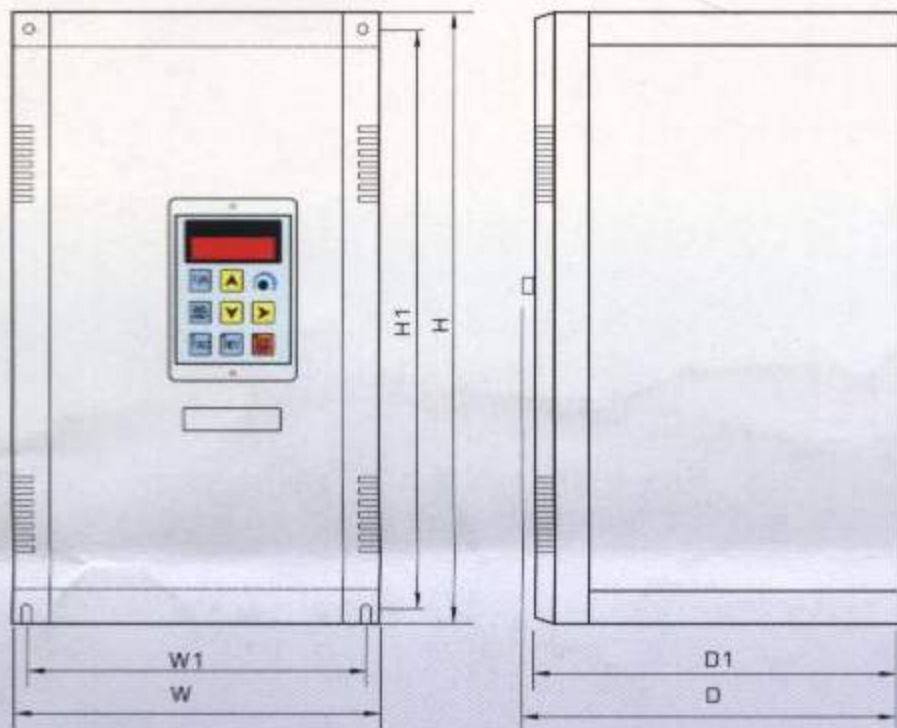


Diagram C

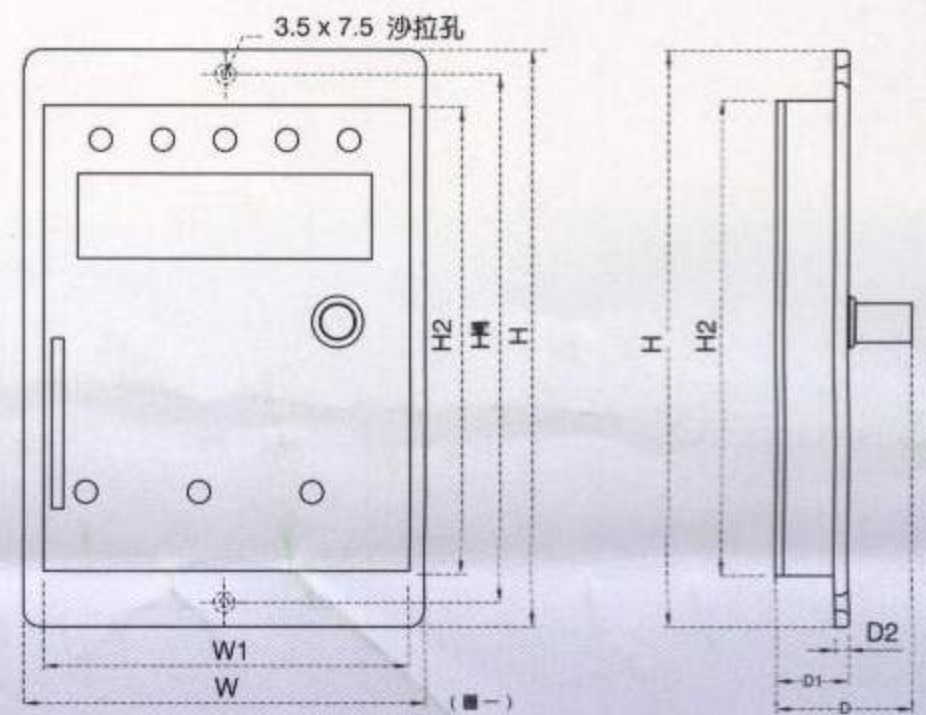
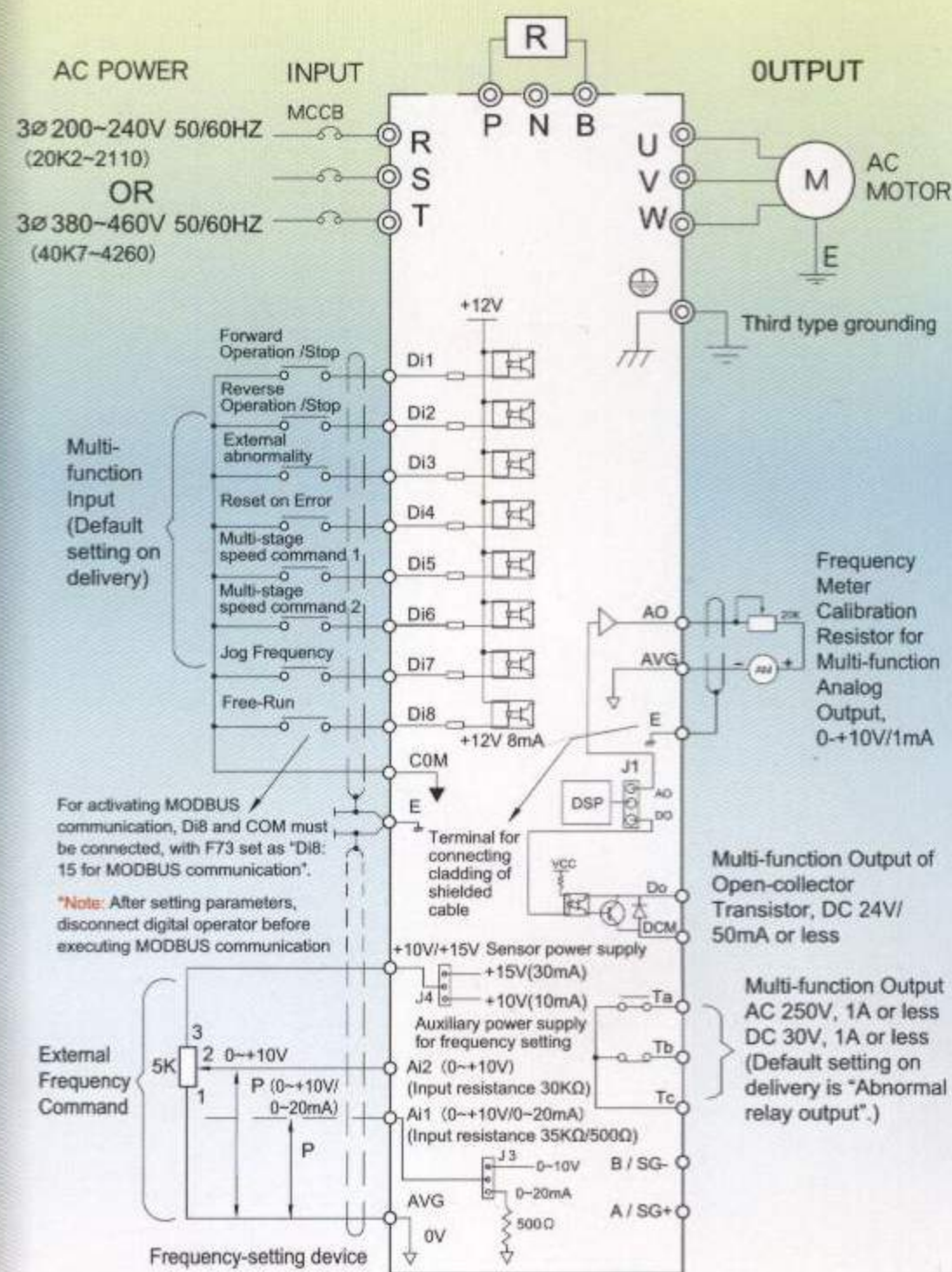


Diagram D

Model	Size	Area	W	W1	H	H1	D	D1	Net Weight (Kg)	Gross Weight (Kg)	Measurement	Fix Screw	
A	LS800-20K7, LS800-40K7 LS800-21K5, LS800-41K5		114.2	101	172.1	159	146	136	Approx. Weight		0.2	M4	
									1.4	1.9			
B	LS800-22K2, LS800-42K2 LS800-24K0, LS800-44K0		148	128	152	138	142	132	Approx. Weight		0.3	M4	
									1.8	2.0			
C	LS600-2007 LS600-2015 LS600-4010	LS600-2010 LS600-4007 LS600-4015	188	170	300	282	180	170	8.0	10	0.9	M6	
D	LS800 操作盒 (KP-AD20)		W	W1	H	H1	H2	D	D1	D2	Net(g)	G. Weight(g)	
			70.9	65.3	101.6	93	84.5	25.8	15.8	2.5	66	72	

* The correct dimension, please checking us.

Terminal Mark	Terminal Name	Descriptions	
Multi-function Input terminals	Di1	Forward command Di1-COM (ON) for Forward, (OFF) for Stop	
	Di2	Reverse command Di2-COM (ON) for Reverse, (OFF) for Stop	
	Di3	Input of external error When External Error is ON, the Inverter will trip and stop	
	Di4	Reset ON will reset from the holding status activated by the protection circuit.	
	Di5	Multi-stage speed command 1 Multi-step speed command 1 and 2, configured with binary 2Bit for achieving 4-step speed control	
	Di6	Multi-stage speed command 2	
	Di7	Jog Frequency ON to activate inching frequency	LS650M is not provided with Di7 and Di8 interfaces. (The MODBUS communication mode is replaced by JP1, replacing Di8)
	Di8	Free-Run When a Stop command is ON, the inverter immediately cuts the output voltage, letting the motor in a free run and subsequent stop.	
COM	Common for digital input Common terminal for multi-function inputs.		
Analog frequency setup	+10V	+15V Sensor power supply DC+15V power output for Sensor (Max. current 30mA)	
		+10V Power supply for frequency setting DC+10V power output for frequency setting device (Max. current 10mA)	
	Note 1: J4 is used for selecting +10V or +15V as the output voltage. Default setting is +10V.		
	AVG	Common terminal for Frequency The common (ground) of Inputs of Frequency Setting signals (terminals Ai1, Ai2 and AO)	
Multi-function output terminals	Ai1	Analog voltage frequency command Input Voltage DC 0~10V, input resistance 30KΩ; or input current DC 0~20mA, input resistance 500Ω. J3 is used for selecting a voltage signal or a current signal.	
	Ai2	Analog voltage frequency command Input voltage DC 0~10V, input resistance 30KΩ	
	AO	Analog output Multi-function analog output monitor (DC 0 ~ +10V), using AVG as the reference level.	
	DO	Frequency achieved This terminal goes ON when Inverter output frequency (F76) reaches preset value.	
	Note 2: Only one selection can be made between AO and DO using the software and the hardware J1 simultaneously. Software AO is set by parameters F63-F65; software DO is set by the parameter F75.		
	DCM	Common for DO outputs The common for multi-function output terminals.	
Multi-function output terminals	Ta	When the protection function of the inverter is activated, 1a and 1b terminals will engage to output a signal	
	Tb	Output in the event of a fault * During a fault, Ta-Tc becomes closed (ON).	
	Tc	* During a fault, Tb-Tc becomes open (OFF).	
	E	Grounding terminal Shielded cable, exclusively used for connecting with a selected ground.	



LS650M-20K2-SX	LS650-20K4-TD	LS650-22K2-TD	LS650-25K5-TD	LS650-2015-T	LS650-2037-T	LS650-2075-T
LS650M-20K4-SX	LS650-20K7-TD	LS650-24K0-TD	LS650-27K5-TD	LS650-2018-T	LS650-2045-T	LS650-2090-T
LS650M-20K7-SX	LS650-21K5-TD	LS650-2011-TD	LS650-2011-TD	LS650-2022-T	LS650-2055-T	LS650-2110-T
	LS650-22K2-TD	LS650-42K2-TD		LS650-2030-T		
LS650M-20K2-S	LS650-44K0-TD	LS650-45K5-TD		LS650-4045-T		LS650-4090-T
LS650M-20K4-S	LS650-40K4-TD	LS650-47K5-TD		LS650-4015-T		LS650-4110-T
LS650M-20K7-S	LS650-40K7-TD	LS650-4011-TD		LS650-4018-T		LS650-4132-T
LS650M-21K5-S	LS650-41K5-TD			LS650-4022-T		LS650-4160-T
	LS650-42K2-TD			LS650-4030-T		LS650-4185-T
LS650M-20K2-TN				LS650-4037-T		LS650-4220-T
LS650M-20K4-TN					The above models can be provided with a brake circuit	LS650-4260-T
LS650M-20K7-TN						
LS650M-21K5-TN						

Model Descriptions

LS650 Series

AC Motor Speed Controller



LSCT650-24K0-XX

Code of Long Shenq Inverter Family	
LSCT650	Standard
LSVT650	Standard
LSCT650M	Miniature
LSVT650M	Miniature

Voltage class	
1	100~120V
2	200~240V
4	380~460V

N : Without dynamic brake
D : With built-in dynamic brake circuitry

S : 1-phase input
T : 3-phase input
X : 110V input, 220V output
Z : 110V input, 110V output

Max. applicable motor
0K7=0.75KW 1K5=1.5KW
2K2=2.2KW 4K0=4.0KW

Standard Specifications

200V Class	Model LS650	20K2	20K4	20K7	21K5	22K2	24K0	25K5	27K5	2011	2015	2018	2022	2030	2037	2045	2055	2075	2090	2110
Applicable Motor Capacity (KW)		0.2	0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
Output Capacity (KVA)		0.6	1.2	1.7	2.7	3.8	6.4	9.5	12.5	17.5	23	29	34	45	57	68	82	114	133	162
Continuous Rated Current (A)		1.6	3.2	4.5	7.0	10	17	25	33	46	62	76	90	120	150	180	215	300	350	425

400V Class	Model LS650	40K7	41K5	42K2	44K0	45K5	47K5	4011	4015	4018	4022	4030	4037	4045	4055	4075	4090	4110	4132	4160	4185	4220	4260
Applicable Motor Capacity (KW)		0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	220	260
Output Capacity (KVA)		2.4	3.4	5.3	6.8	9.5	13	19	24	30	34	47	57	70	87	110	144	164	210	228	265	340	395
Continuous Rated Current (A)		3.2	4.5	7.0	9.0	12.5	17	25	32	40	46	62	75	92	115	150	180	216	275	300	350	450	530

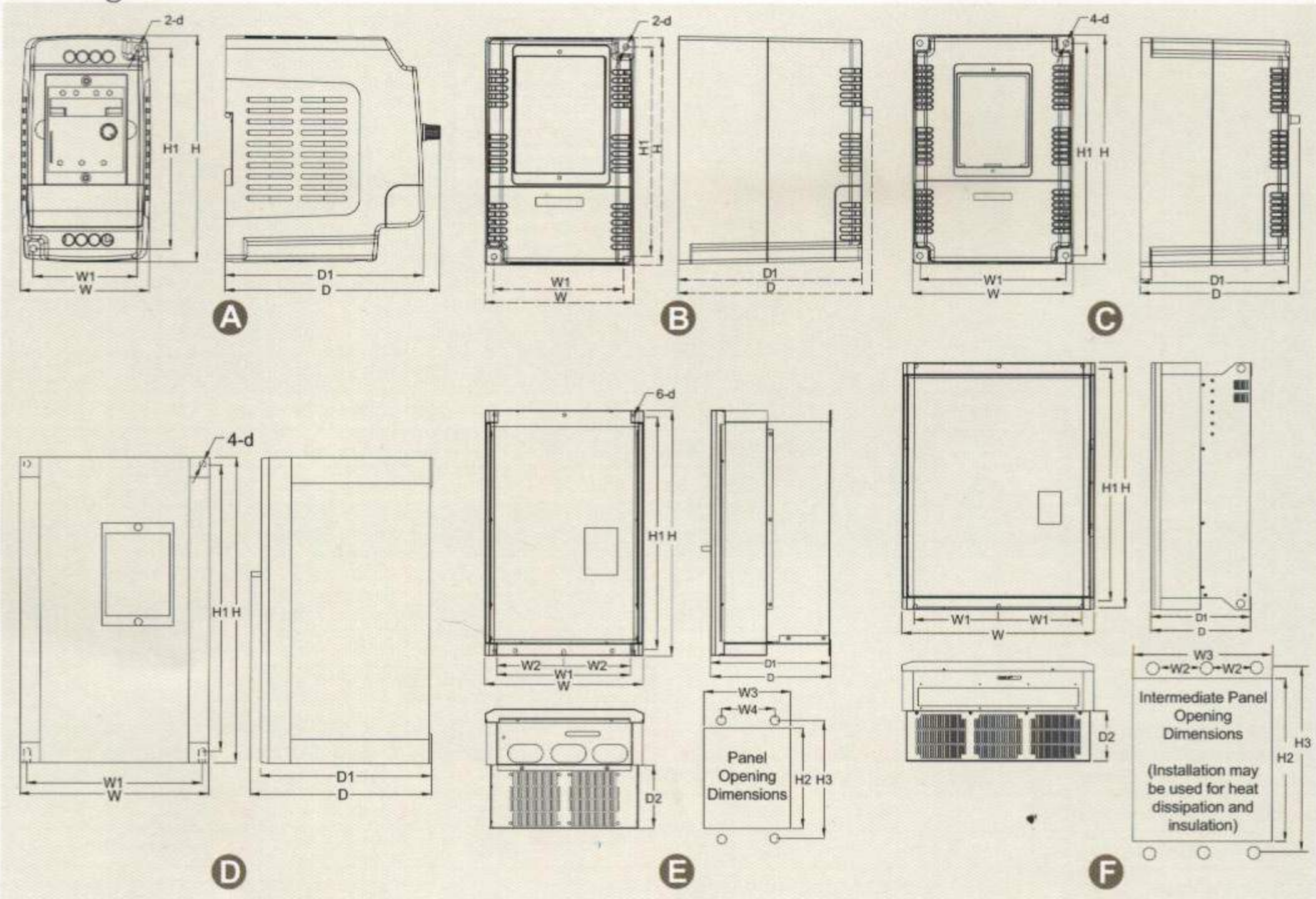
VT

Item	200V Rating	400V Rating	
Power Supply	Input voltage and frequency	Single phase/Three phase 200V~240V 50/60Hz	Three phase 380V~460V 50/60Hz
	Permitted voltage fluctuation	+10%	
	Permitted frequency fluctuation	±5%	
	Max. output voltage	Corresponding 3-phase input voltage	Corresponding 3-phase input voltage
	Rated output frequency	Max. setting range: 0.01~300.00Hz	
Control Properties	Control method	Sine Wave SVPWM 3-phase modulation, switching frequency 2K~16KHZ, V/F Voltage-vector control	
	Max. output frequency	0.00~300.00Hz	
	Frequency precision (temperature variation)	Digital Signal: ±0.1% (-10°C~+40°C) · Analog Signal: ±0.1% (25°C±10°C)	
	Resolution of frequency setting	Digital Signal: 0.01Hz (0.01~300.00Hz) · Analog Signal: 0.06/60.00Hz	
	Precision of speed control	Voltage type sensorless vector: ± 1.0 % when >10Hz; V/F: ± 3.0% ~ 5.0%	
	Acceleration/ deceleration time	0.00~3000.00(s) · 8 steps, each with individual setting of the acceleration/deceleration time	
	V/F Curve	CT: 3-point line setting; CT/VT: 2-point curve setting	
	Control function	15 display functions; 9 command sources of rotating speed; upper/lower frequency settings; AVR function; S-Curve; Multiplex input/output terminal control; 16-step preset speed control; frequency hopping; slip compensation; PID function; PID for Water Pump only; Intelligent Setting of Pump Function; DC-current braking at START/STOP; Simple PLC (programmable logic control) operation; MODBUS communication; Multi-step automation	
	Signal for frequency setting	DC 0~10V · 0~20mA	
	Braking torque	Approx. 20%; up to 125% with additional brake	
	Additional control functionalities	Digital operator, RS-485, speed control, PID control, multi-step speed control, pump function, etc.	
Protection Function	Motor protection	Integral electronic thermal relay protection	
	Overcurrent protection	CT: Overcurrent protection trips when exceeding 200% of the rated current for 3s, the motor stops automatically VT: Overcurrent protection trips when exceeding 170% of the rated current for 3s, the motor stops automatically	
	Overload capacity of Inverter	CT: 150%, 60s / VT: 120%, 60s	
	Overvoltage protection	Over voltage level: Vdc > 414V (200V~240V Class) / Vdc>827V (380V~460V Class)	
	Under-voltage protection	Under voltage level: Vdc < 200V (200V~240V Class) / Vdc<400V (380V~460V Class)	
	Power supply protection	Phase failure protection on power source (provided for above 5.5KW), Phase failure protection on output (provided for >0.4KW)	
	Fin Over-heat	Thermocouple protection: 85°C±5°C	
	Stall prevention	Stall prevention during acceleration/ deceleration or operation	
	Ground protection	Electronic circuit protection	
	Charge indication	Charge Indicator "lights up" when main circuit DC voltage exceeds 50V	
	Site surrounding	Indoor locations without corrosives or dust	
Environment	Temperature, surrounding	-10°C~ +40°C (Closed wall-mount type), -10°C~45°C (open type) without freeze	
	Storage temperature (Note 1)	-20°C~ +60°C	
	Humidity	Below 90%RH (without condensation)	
	Vibration	1G for below 20HZ, 0.2G for 20~50HZ	

* Note 1: Excessive storage temperature may cause damage to main capacitors of the circuit.

Diagram of Dimensions

UNIT : mm



LS650 Table of dimensional specifications (CT/MT Series)

Applicable Motor Capacity Model	Dimensions (mm)			Fixing dimensions (mm)				∅ d	Semi-recessed Opening • Fixing dimensions (mm)					Unit Net Wt. (kgs)	Unit Gross Wt. (kgs)	Square-foot per unit	Drawing No.
	W	H	D	W1	W2	H1	D1		W3	W4	H2	H3	D2				
LS650M-20K2 · LS650M-20K4 LS650M-20K7 · LS650M-21K5	82.5	145	138	66.5	—	128.5	127.5	4.6	—	—	—	—	—	1	1.1	0.18'	A
Traditional carriage bolt or Din Rail installment																	
LS650-20K4 LS650-40K4 LS650-20K7 LS650-40K7 LS650-21K5 LS650-41K5	114	172	146	101	—	159	136	5.3	—	—	—	—	—	1.33	2.0	0.33'	B
LS650-22K2 LS650-42K2 LS650-24K0 LS650-44K0	152	214	146	137.5	—	200	136	5.3	—	—	—	—	—	2.2	3.0	0.45'	C
LS650-25K5 LS650-45K5 LS650-27K5 LS650-47K5 LS650-2011 LS650-4011	188	300	180	170	—	283	170	7	—	—	—	—	—	8.0	9.4	1'	D
LS650-2015 LS650-4015 LS650-2018 LS650-4018 LS650-2022 LS650-4022 LS650-2030 LS650-4030 LS650-2037 LS650-4037	250	458	227	218	—	401	217	7	242	170	445	460	112	14.6	21.8	1.8'	E
LS650-2045 LS650-4045 LS650-2055 LS650-4055 LS650-2055 LS650-4075	345	563	272	305	152.5	515	262	7	330	212	546	568	140	33.0	39.0	4.9'	E
LS650-2075 LS650-4090 LS650-2090 LS650-4110 LS650-2110 LS650-4132 LS650-2090 LS650-4160 LS650-2110 LS650-4185 LS650-4220 LS650-4260	604	770	322	262.4	220	749.5	312	7	582	—	745	770	158	75.0	81.0	11.6'	F
Digital Controller (KP-AD20)	70.9	102	25.8	—	—	—	15.8	3.5	65.3	—	84.5	93	—	—	—	—	

* We are reserves the right to make changes of the models as well as the specifications. All rights reserved. Do not copy.

We were established in 1985. Our factory is located at Taipei Hsien, Taiwan. For many years, we have been specialized in manufacturing AC vector inverter, DC brushless servo drives, braking unit and periphery equipment, etc. with excellent quality and price, and also our products have been sold all round the world. In 2002, we passed and were recognized by the international quality standard certification ISO9001:2000, which showed our products with much more improved quality and fulfilled out promises and trusts to our customers.

LS700 series is a series of more than perfect AC drives. LS700 series adopts the flux vector control principle with the advanced high technology "direct field excited" to exactly estimate the magnetic flux and also adopts DSP software and hardware to process the engineering calculation for the output conversion of best output torque excited. LS700 series is applied to the control in precision and complex industries and is used in such as AC induction motors, crane equipment, elevators, torque control, Vacuum pump and constant pressure water pump control...etc.

LS700 Series

Flux vector inverters

Sensorless control

Voltage Range :
200V~240V 1P/3P
380V~460V 3P

Capacity Range :
0.2KW~75KW



LS600 Series Inverters

IGBT Space vector inverters

Voltage Range :
200V~240V 1P/3P
380V~460V 3P

Capacity Range :
0.4KW~75KW



LS DC Bus choke

Voltage Range :
DC200V~800V

Capacity Range :
0.4KW~300KW



LS700 Series

Flux vector inverters
Sensorless

Voltage Range :
200V~240V 1P/3P
380V~460V 3P

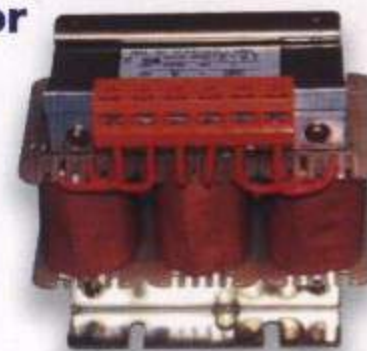
Capacity Range :
0.2KW~75KW



LS AC output reactor

Voltage Range :
200V~240V 3P
380V~460V 3P

Capacity Range :
0.4KW~300KW



LS800 Series

Flux vector inverters
Sensorless & Closed Loop

Voltage Range :
200V~240V 1P/3P
380V~460V 3P

Capacity Range :
0.75KW~220KW



LS AC input reactor

Voltage Range :
200V~240V 1P/3P
380V~460V 3P

Capacity Range :
0.4KW~300KW



LSBR Series - Brake unit

(Simultaneous Gate)

Voltage Range :
200V~230V
380V~460V

Capacity Range :
0.4KW~300KW



LSBR Series - Brake resistors

Capacity Range :
100W~10KW

Resistance :
5Ω~500Ω



EMC Filter

Voltage Range :
200V~240V 1P/3P
380V~460V 3P

Capacity Range :
0.4KW~220KW



LS - operation keypad with extension cable



LS600 Model extension cable with operation keypad External cable with operation box LS800 Model extension cable with operation keypad

3 operational control modes

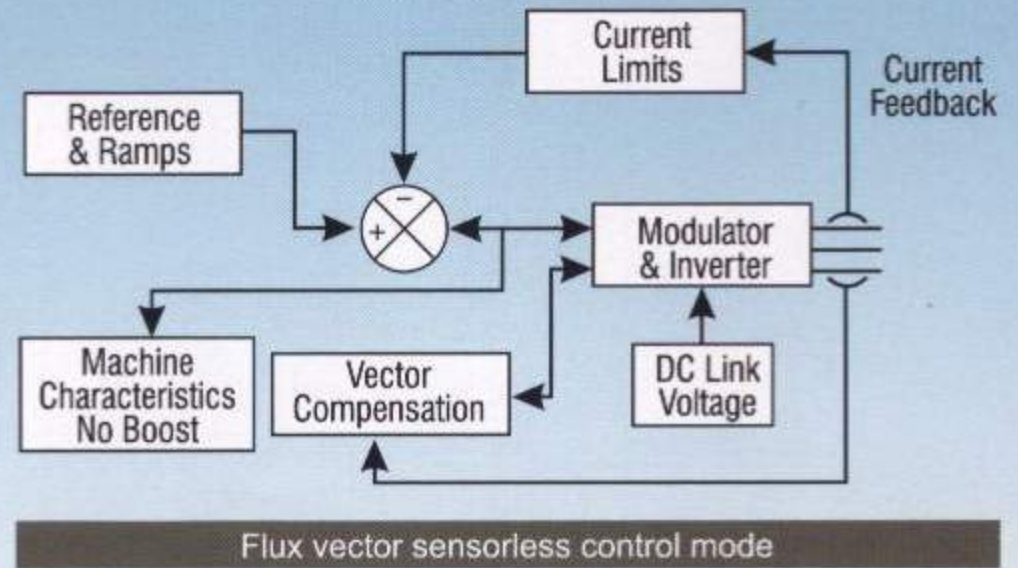
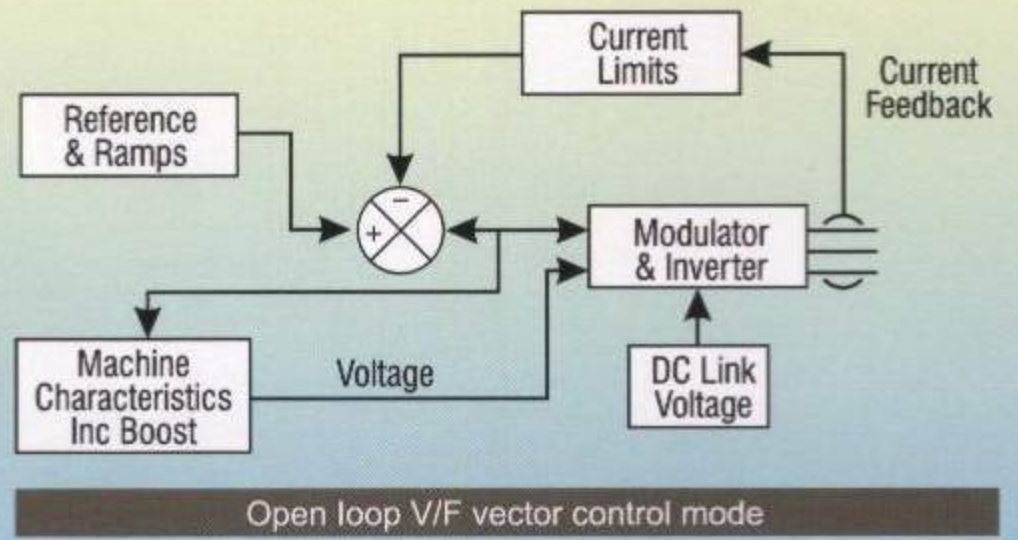
- Sine wave V/F vector control
- Sine wave V/F sensorless vector control
- Flux vector sensorless control and sensorless speed PI adjustment

Built-in special practical functions

- Auto-Tuning parameter of motors with precision
 - (1) can automatically detect the motor electricity parameters dynamic and static or Manual key-in motor electricity parameter value
 - (2) The drives can perform auto-tuning with load
- Speed accuracy(±1%)
- Multi-function PID block
- Special PID function for pumping application
- 8 preset speeds control ~ 8 groups of accel/decel time
- Built-in intelligent multi-functional parameter group specialized for water pump
- S ramp, linear ramp and V/F curve are programmable
- Slip and rotational torque are compensated automatically
- AVR automatic voltage regulation control

Built-in Multi-Function I/O

- 8 sets of Digital-Input can perform multi-function application
- 1 set of Digital-Output can perform multi-function application
- 1set of Relay can perform multi-function application output
- 2 sets of Analog-input (5 selection of inputs condition)
- 1 set of Analog-Output can perform multi-function application



LS700 special-purpose form

- May simulate the keypad by PC, to operate the drive or to show all the parameters on the PC
- Indicate the parameter, read parameter.....etc
- May select and set the parameter by shipping way (not any by sequence)



Communication

Parameters list

Display all parameter value

Display the unit

Display the parameter name and the scope

Display the parameter value

Simulation Frequency setting

Reads the parameter

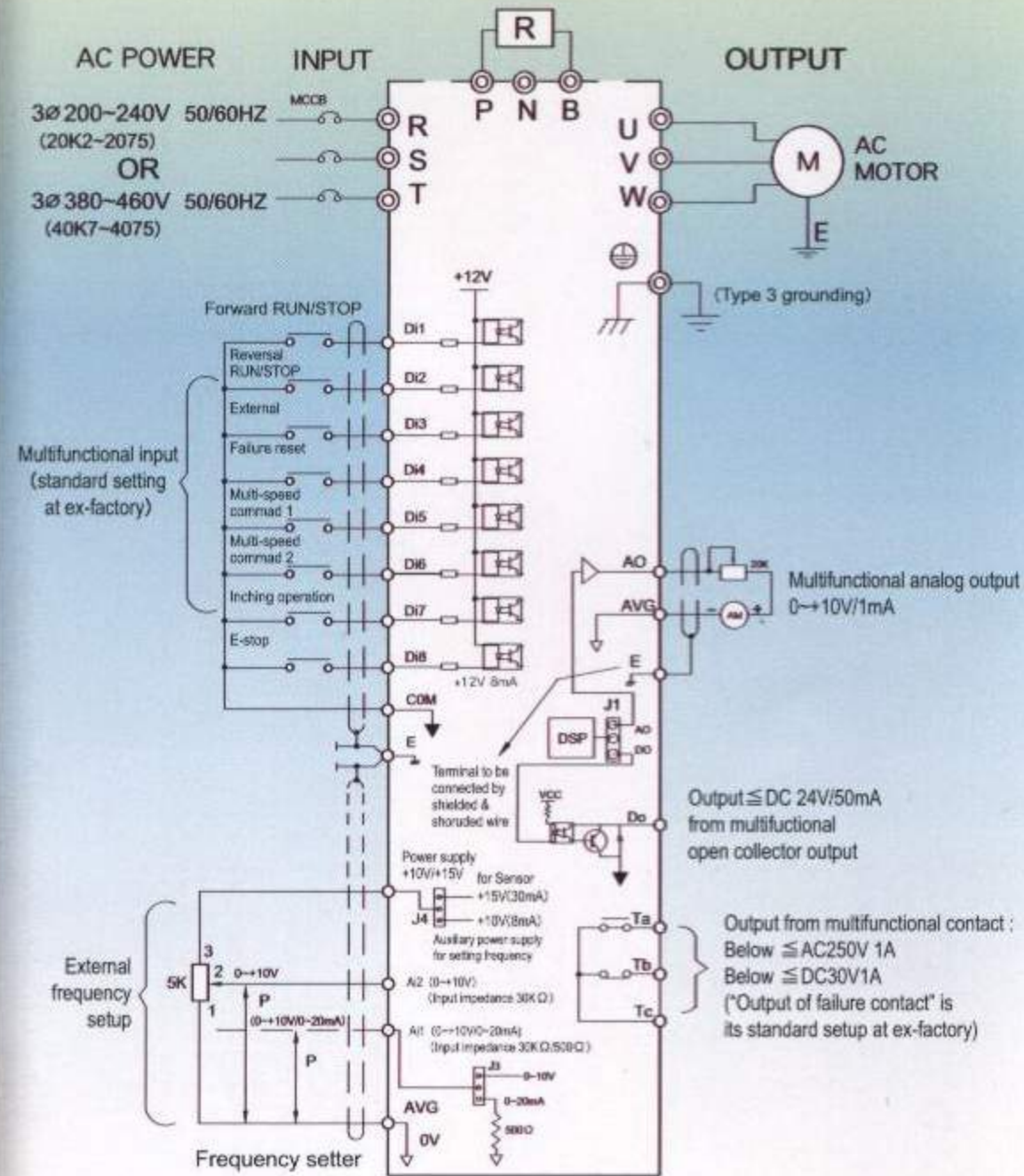
F-0	Save the current parameters	(0-1)	20
F-1	Water pressure set value	(0.0-10.0)	0
F-2	Password entry to protect the water pump parameters	(-32767-32767)	2,000
F-3	Reserved	(-32767-32767)	2
F-4	Select the variables to be displayed in operation panel	(0-16)	0
F-5	Unit of speed display	(0-1)	0
F-6	Display of filtration time	(0-15)	0
F-7	Operation control source	(0-1)	1
F-8	Rpm command source	(0-8)	5.0
F-9	Start method	(0-1)	.0
F-10	Braking duration before start	(0-3000.0)	5.0
F-11	Brake voltage before start	(0-20.00)	.0
F-12	Stop mode	(0-2)	.0
F-13	Stopping & braking voltage	(0-20.00)	0
F-14	Stopping & braking time	(0-3000.0)	.0

Schedule of Control Terminal Function

Terminal Mark	Designated function	Descriptions	
Multifunctional D/I terminals	Di1	Forward rotation command	Di1-COM ON for forward, and OFF for stop
	Di2	Reverse rotation command	Di2-COM ON for reverse, and OFF for stop
	Di3	Input at external failure (NC)	External fault.
	Di4	Failure reset	Di4 failure releases, reset the drive
	Di5	Multi-speed command 1	4 preset speeds by BCD code
	Di6	Multi-speed command 2	4 preset speeds by BCD code
	Di7	Inching operation	To execute inching frequency operation
	Di8	E-stop	When activated ON, ac drive stops outputting voltage immediately.
	COM	Common terminal for digital input/output	Common terminal for multifunctional D/I and D/O
Analog Frequency setup	+15V	+15V power supply for encoder	Power supply outputs DC+15V (maximum current 30mA) for encoder
	+10V	+10V power supply for setting up frequency	Power supply outputs DC+10V for speed reference (maximum current 10mA)
	Note 1 To output +10V or +15V is determined by the J4 setting; +10V is default output set at ex-factory.		
Multifunction D/O terminals	AVG	0V	0V for AI and AO
	Ai1	Analog voltage frequency reference	Input impedance 30kΩ at input voltage DC 0~10V/or input impedance 500Ω at input current DC 0~20mA is determined by the J3 command selected from the voltage or current signal.
	Ai2	Analog voltage frequency reference	Input impedance 30kΩ at input voltage DC 0~10V
	AO	Analog output	Multifunctional analog output (DC 0~10V)
Multifunction D/O terminals	DO	AI Speed	This contact will be enabled "ON" status when output frequency of ac drive reaches the frequency setting (F62).
	Note 2 It can only have one choice, either AO or DO, as a synchronous setting output made by software and hardware J1. Software AO is to be established by parameters F50 ~ F52 while software DO is to be set up by parameter F62.		
	COM	Common terminal for signal input/output	Common terminal for signals from multifunctional input/output terminals.
	Ta		The relay will be enabled when the drive trip
	Tb	Output at failure (NC)	* Ta-Tc is closed when drive trip
	Tc		* Tb-Tc circuit is opened when drive trip
E	Terminal for grounding	Ground terminal	

Control Circuit Wiring Diagram

Terminal wiring for control circuit of ac drive



LS700M-20K2-TN
LS700M-20K4-TN
LS700M-20K7-TN
LS700M-21K5-TN

LS700-20K4-TD
LS700-20K7-TD
LS700-21K5-TD
LS700-22K2-TD

LS700-40K4-TD
LS700-40K7-TD
LS700-41K5-TD
LS700-42K2-TD

LS700-22K2-TD
LS700-24K0-TD

LS700-42K2-TD
LS700-44K0-TD

LS700-25K5-TD
LS700-27K5-TD
LS700-2011-TD

LS700-45K5-TD
LS700-47K5-TD
LS700-4011-TD

LS700-2015-TN LS700-2018-TN
LS700-2022-TN LS700-2030-TN

LS700-2037-TN LS700-2045-TN
LS700-2055-TN LS700-2075-TN

LS700-4015-TN LS700-4018-TN
LS700-4022-TN LS700-4030-TN

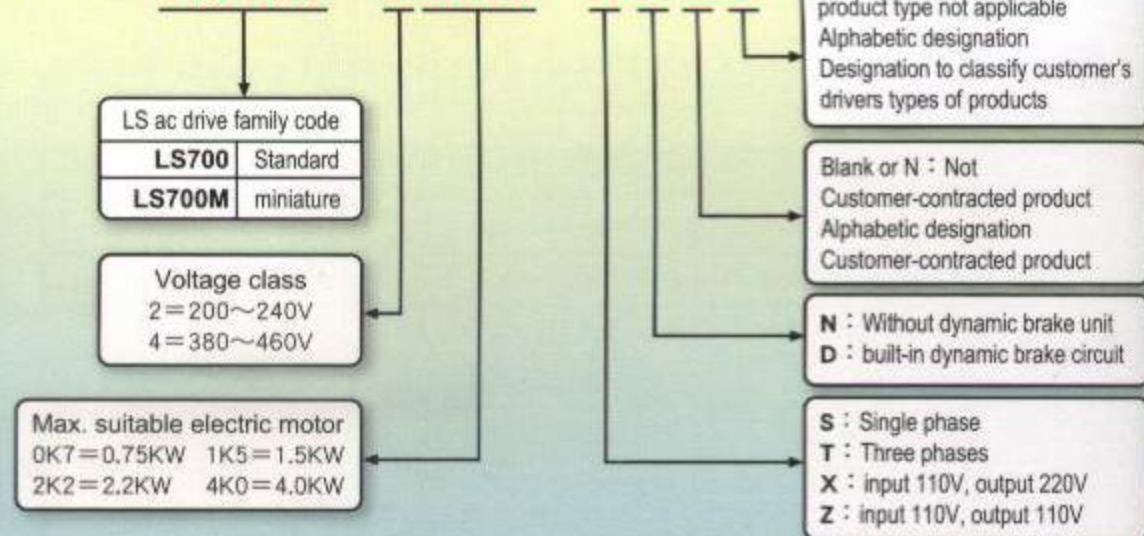
LS700-4037-TN LS700-4045-TN
LS700-4055-TN LS700-4075-TN

Model Instructions

LS700 Series Flux Vector Drive Sensorless



LS700-24K0-XXXX



Standard Specifications

200V Series	LS700 Model	20K2	20K4	20K7	21K5	22K2	24K0	25K5	27K5	2011	2015	2018	2022	2030	2037	2045	2055	2075
	Max Motor (KW) for Drive	0.2	0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75
	Output Capacity (KVA) of Drive	0.6	1.0	1.7	2.8	4.2	6.0	9.1	12.2	17.5	23	29	34.7	44	55	67	82	110
	Rated Current (A) of Drive	1.6	2.5	4.5	7.5	11	17.5	24	33	46	61	76	90	115	145	175	215	300

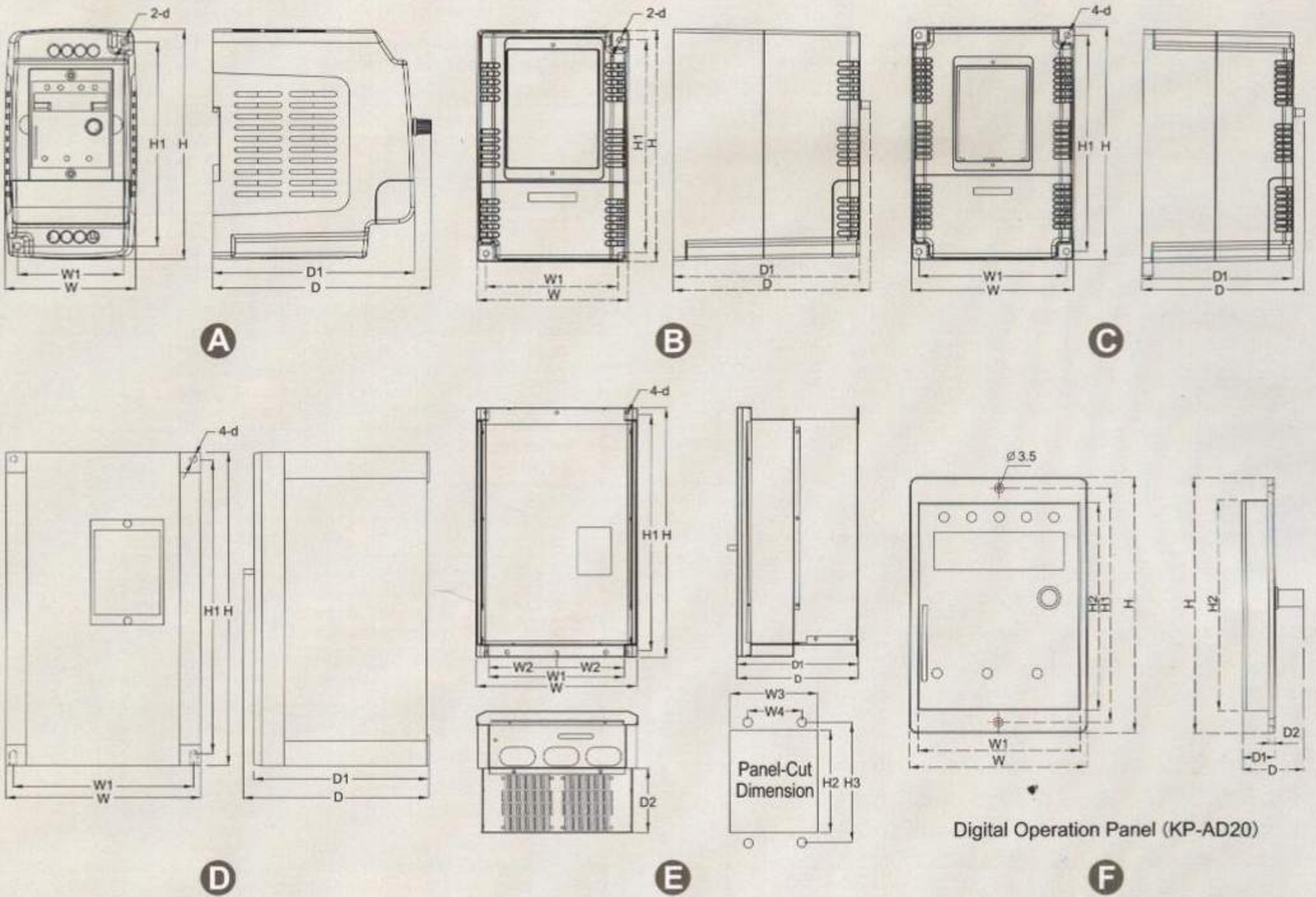
400V Series	LS700 Model	40K7	41K5	42K2	44K0	45K5	47K5	4011	4015	4018	4022	4030	4037	4045	4055	4075
	Max Motor (KW) for Drive	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75
	Output Capacity (KVA) of Drive	2.0	3.2	4.2	7.0	9.5	13	18	23.5	29	33	46	53	68	84	110
	Rated Current (A) of Drive	3.2	4.5	7.0	9.0	12	17	23	30	38	43	58	70	85	110	150

Ltem		200V Rating	400V Rating
Power Source	Power Voltage, Frequency	Single-phase / Three phase 200V-240V 50 / 60Hz	Three phase 380V-460V 50 / 60Hz
	Allow Voltage Variance	±10%	
	Allow Frequency Variance	±5%	
	Max. Output Voltage	Three phase corresponds to Input voltage	Three phase corresponds to Input voltage
	Rated Output Frequency	0.01Hz~240Hz	
Control Characteristics	Control Model	Sine wave SVPWM, carrier frequency 2K~16KHz adjustable, choose one of 3 control modes : V/F, V/F sensorless, flux vector sensorless	
	Starting Torque	150% / 1Hz	
	Range of Speed Control	1 : 100	
	Precision of Speed Control	±1%	
	Control Function	15 indications, 9 command sources of rotation speed, speed searching, torque limits, multi-function input and output terminal, 8 preset speeds control, skip frequency, AVR, Auto-Tuning motor parameters, s curve, slip compensation, torque compensation, MAX and Min frequency setting, DC brake in start/stop, PID function, Water pump special-purpose PID, intelligent water pump Application function	
	Frequency Precision (Temperature Variation)	Digital signal : ±0.1% (-10°C~+40°C)	Analog signal : ±0.1% (25°C±10°C)
	Frequency Setting Resolution	Digital signal : 0.01%Hz (0.01~240Hz)	Analog signal : 0.06 / 60Hz
	Frequency Output Resolution	0.01Hz	
	Overload Capacity	Rated current 150%, 1 Min.	
	Analog Setting Signal	DC 0~10V, 0~20mA	
	Speed Acc/Dec	0.1 sec~600sec, adjustments are individually distributed to 8 speeds	
Protection Function	Torque for Braking	About 20%, up to 125% with braking unit	
	Motor Protection	I ² · t electrical thermo protection	
	Instantaneous Over Current	When over 200%rated current drive trip, motor stops	
	Overload	About 150% rated output current, 1 Min, Drive trip	
	Over Voltage	DC voltage in main circuit about 400V, motor stops	DC voltage in main circuit about 800V, motor stops
	Low Voltage	DC voltage in main circuit below 180V, motor stops	DC voltage in main circuit below 3800V, motor stops
	Power Protection	Input phase loss (equipped above 5.5 KW), output phase loss protection (equipped above 0.4KW)	
	Ventilation Over-heat	Protected, by thermo-switch, can be read and monitored	
	Stall Prevention	In speed Acc/Dec, stall prevention during operation	
	Ground Protection	Electrical circuit protection	
Environment	Charging Indicating	DC voltage in main circuit over 50V, charging light is "on"	
	Location	Indoor, no corrosive and free from dust	
	Ambient Temp	-10°C~+40°C(closed and wall mounted type), -10°C~45°C(open type), no freezing	
	Storage Temp (Note 2)	-20°C~+60°C	
Humidity	Below 90% RH (no condensing)		
Vibration	1G below 20Hz, 0.2G during 20~50Hz		

(Note 1) Max. applicable capacity of motor is based on 4-pole motor.

(Note 2) If storage temperature is too high, it might destroy the capacitor in main circuit.

Dimension UNIT : mm



LS700 Specification Dimensional Drawing

Model	Dimensions (mm)			Fixed size (mm)				∅	Semi-embedded Opens the hole • Fixed size (mm)					Figure No	
	W	H	D	W1	W2	H1	D1		W3	W4	H2	H3	D2		
LS700M-20K2 · LS700M-20K4 LS700M-20K7 · LS700M-21K5	82.5	145	138	66.5	—	128.5	127.5	4.6	—	—	—	—	—	A	
Traditional carriage bolt or Din Rail installment															
LS700-20K4 · LS700-40K4 LS700-20K7 · LS700-40K7 LS700-21K5 · LS700-41K5	114	172	146	101	—	159	136	5.3	—	—	—	—	—	B	
LS700-22K2 · LS700-42K2 LS700-24K0 · LS700-44K0	152	214	146	137.5	—	200	136	5.3	—	—	—	—	C		
LS700-25K5 · LS700-45K5 LS700-27K5 · LS700-47K5 LS700-2011 · LS700-4011	188	300	180	170	—	283	170	7	—	—	—	—			D
LS700-2015 · LS700-4015 LS700-2018 · LS700-4018 LS700-2022 · LS700-4022 LS700-2030 · LS700-4030	250	420	227	218	—	401	217	7	242	170	407	422	112	E	
LS700-2037 · LS700-4037 LS700-2045 · LS700-4045 LS700-2055 · LS700-4055 LS700-2075 · LS700-4075	345	533	272	305	152.5	515	262		330	212	515	538	140		
KP-AD 20	70.9	102	25.8	—	—	93	15.8		3.5	65.3	—	84.5	—		—