

Top 100
Global
Innovator
for 10 years

LV Drive Series

M100 / G100 / S100 / H100+ / iS7 / SP100

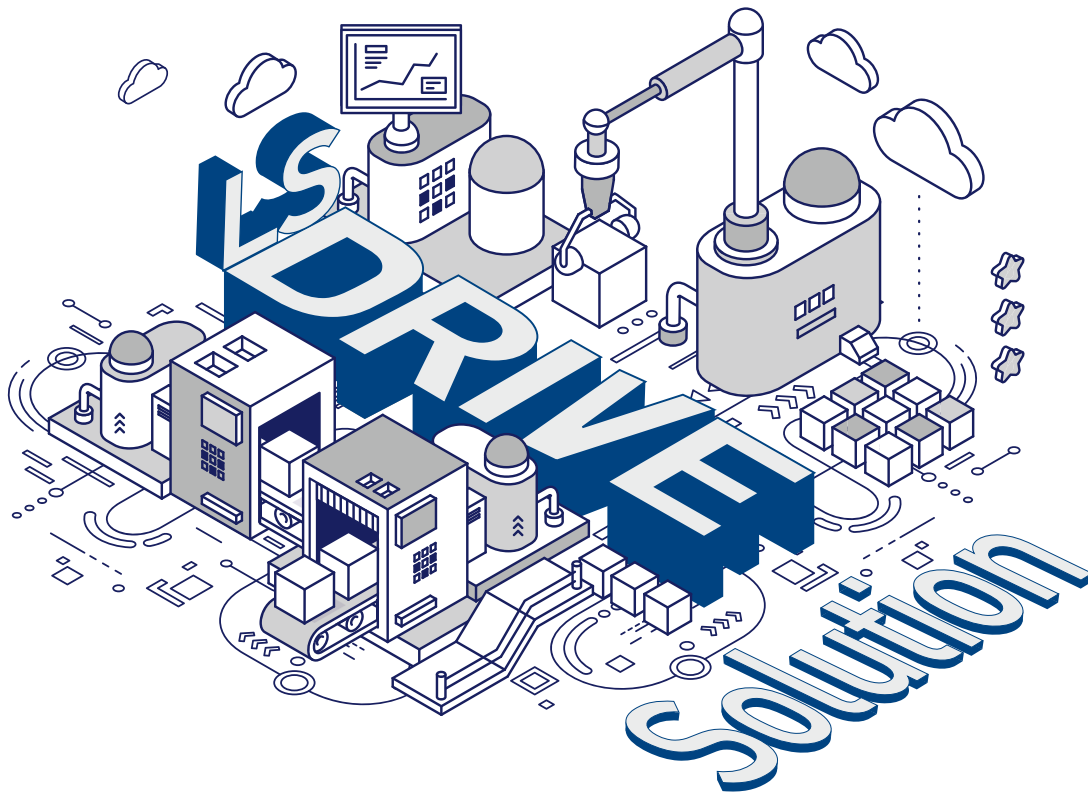


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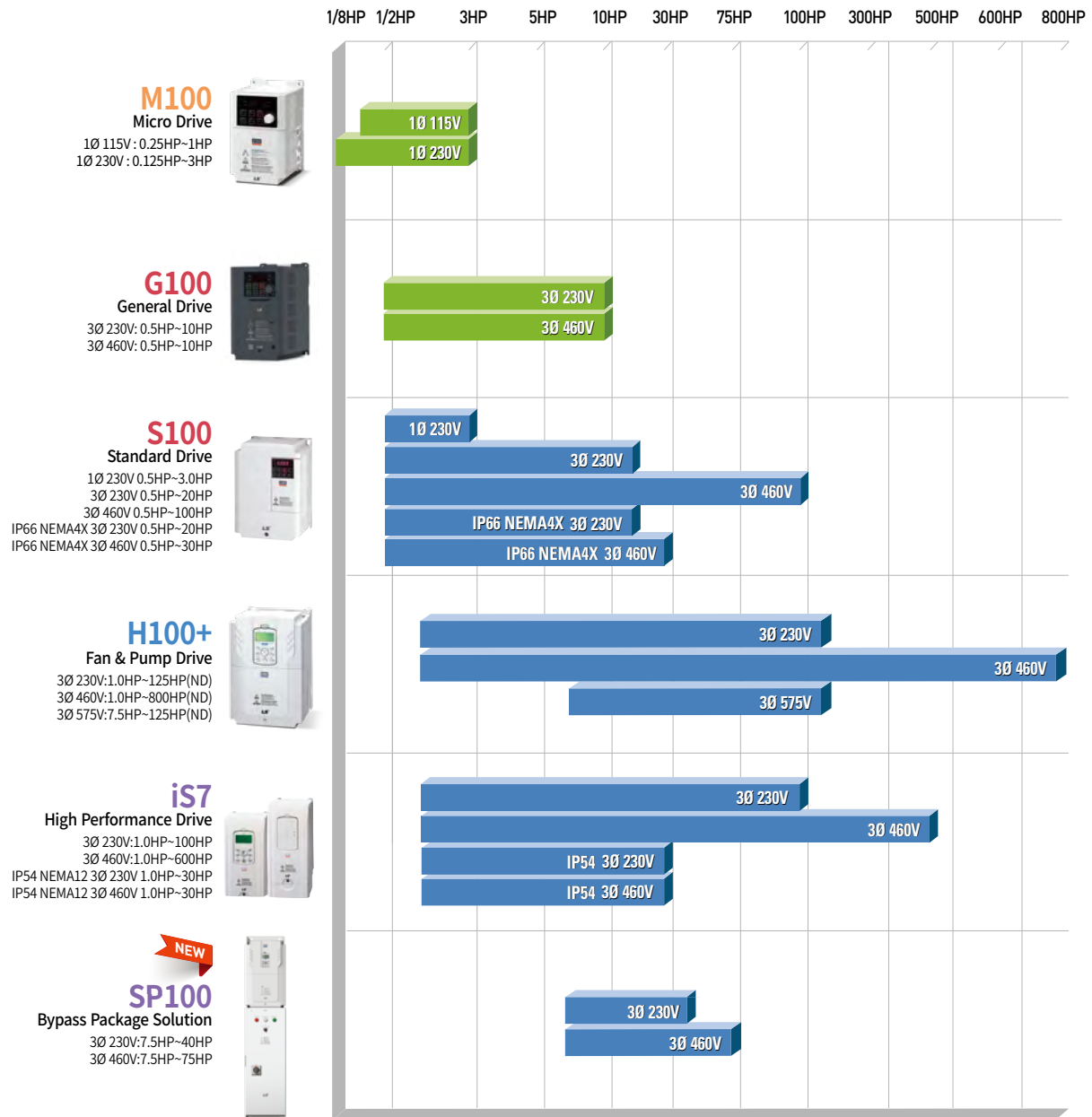
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LS Drive at a Glance

LS Drive is characterized by its user-convenience interface, accurate and flexible control, and various functions. LS Drive Series with varied capacities and excellent functionality will be the optimal option for your company's competitiveness.



LS Drive Comparison Table



Model name		M100	G100	
Voltage & Capacity		1Ø 115V : 0.25~1HP 1Ø 230V : 0.125~3HP	3Ø 230V: 0.5~10HP 3Ø 460V: 0.5~10HP	
Control Method	V/F Control	Standard	Standard	
	Sensor-less Vector	-	Standard	
	Sensored Vector	-	-	
Input Terminal	Multifunction Terminal	5 Inputs (P1~P5)	5 Inputs (P1~P5)	
	Analog Input (Current)	-	1 Inputs (0~20mA)	
	Analog Input (Voltage)	1 Inputs (0~10V)	1 Inputs (0~10V)	
Output Terminal	Relay Output	2 Outputs (5 port)	2 Outputs (5 port)	
	Open Collector Output	-	-	
	Analog Output	1 Outputs (0~10V)	1 Outputs (0~10V)	
Enclosure Class		IP20	0.5~10.0HP:IP20 (Standard), UL Type 1 (Option)	
Keypad		LED 7-segment	LED 7-segment	
Remote Cable		1m/2m /3m /5m	1m/2m /3m /5m	
Brake Unit		Standard built-in (2.0~3.0HP)	Standard built-in (0.5~10.0HP)	
EMC Filter		Standard built-in (0.5~3.0HP)	Standard built-in (0.5~10.0HP)	
DC Reactor		-	-	
Communications		RS485 (Advanced I/O Standard built-in)	Modbus RTU (Standard built-in), CANopen, Profibus-DP, EtherNet/IP (Option)	
Cooling System		-	Forced air cooling by fan	
Ambient Temperature		-10°C~50°C (2.5% /°C current derating at 40°C or above 75% of the rated current operable at 50°C); without any ice or frost		
Ambient Humidity		Relative humidity 95% RH or below (without any dew formation)		
Storage Temperature		-20°C ~ 65°C		
Surrounding Environment		Non- corrosive gas, flammable gas, oil residue and dust at the indoor environment		
Altitude		1,000m above sea level (From 1,000m or more, voltage/output current derating by 1% for every 100m elevation; up to 4,000m)		
Vibration		9.8m/sec ² (1.0G) or below		
Ambient Air Pressure		70 ~ 106kPa		
Protective Function	Alarm	Stall prevention, overload, light load, fan failure, keypad command loss, speed command loss		
	Trip	Overvoltage, overcurrent, undervoltage, external trip, grounding current detection, drive overheat, electric motor overheat, I/O phase open, overload protection, communication error, frequency command loss, hardware failure, cooling fan failure, no motor trip, etc.		



	S100		H100+	iS7	
	IP20(NEMA1)	IP66(NEMA4X)		IP20(NEMA1)	IP66(NEMA12)
	1Ø 230V 0.5~3.0HP 3Ø 230V 0.5~20HP 3Ø 460V 0.5~100HP	3Ø 230V 0.5HP~20HP 3Ø 460V 0.5HP~30HP	3Ø 230V:1.0HP~125HP 3Ø 460V:1.0HP~800HP 3Ø 575V:1.0HP~125HP	3Ø 230V:1.0~100HP 3Ø 460V:1.0~600HP	3Ø 230V:1.0~30HP 3Ø 460V:1.0~30HP
	Standard		Standard	Standard	
	Standard		-	Standard	
	-		-	Option	
	5 Inputs (P1~P5)		7 Inputs (P1~P7)	8 Inputs (P1~P8)	
	1 Input (0~10V or 0~20mA)		1 Input (0~20mA)	1 Input (0~20mA)	
			1 Input (0~10V)	1 Input (0~10V, -10V~+10V)	
	1 Output (3 port)		5 Outputs	2 Outputs (5 port)	
	1 Output (2 port)		1 Output	1 Output (2 port)	
	1 Output (0~10V or 0~20mA) Note 1)		1 Output (0~10V or 0~20mA)	2 Outputs (0~10V, 0~20mA)	
	0.5HP~100HP: IP20 (Standard), UL Type1 (Option)	0.5HP~30HP : IP66	1-800HP: IP20 (Standard) UL Type 1 (Option) 150-800HP : Heatsink out the back(NEMA12)	200V class (1~30HP), 400V class (1~100HP) : IP20 200V class (40~100HP), 400V class 120~600HP: IP00	1.0~30HP: IP54
	LED 7-segment : 0.5~30HP LCD graphic : 40~100HP	LED 7-segment : 0.5~30HP	LCD Graphic	LCD Graphic	
	1m/2m/3m/5m		1m/2m/3m/5m	1m/2m/3m/5m	
	Standard built-in (0.5~30HP) Option (40~100HP)	Standard built-in (0.5~30HP)	Standard built-in (1~40HP)	Standard built-in (0.5~30HP) Option (40~100HP)	
	Standard built-in (400V class 7.5~30HP)	-	Standard built-in (400V class 1~75HP) (400V class 150~800HP)	Standard built-in (1~30HP)	-
	Standard built-in (400V class 40~100HP)	-	Standard built-in (400V class 50~800HP)	Standard built-in (200V class1~30HP) (400V class1~350HP)	-
	RS485 (Standard built-in), Modbus TCP, EtherCAT, EtherNet/IP, PROFINet, Profibus-DP, CANopen (Option)		Modbus RTU, Metasys N2, BACnet MS/TP, Lonworks (Option)	RS485 (Standard built-in), DeviceNet, Profibus-DP, Modbus TCP, R-Net, F-net, LonWorks, CC Link-IE, CANopen (option), EtherNet/IP, Profinet, RAPIEnet	
	Forced air cooling by fan				

Note 1) In case of 40~100HP, Analog 1 output(0~10V) is additionally provided.

M100

Micro Drive



- 1Ø 115V : 0.25HP~1HP
- 1Ø 230V : 0.125HP~3HP

The Optimal compact drive That is Applicable to Small Machinery, Fans/Pumps and Conveyors.

Space efficiency is increased with a compact product design, side-by-side installation and standard installation of Din Rail. Product reliability is improved with a built-in C2 EMC filter and application of a new UL standard. We offer two I/O types (standard type and advanced type), frequently-used parameter group, built-in potentiometer and parameter copier/remote keypad options.



Compact

The M100 Drive is small and cost-effective. Space efficiency can be maximized with side-by-side installation.



Convenient Use

Din Rail installation is standard for the M100 Drive, A RJ45 Port is provided for a convenient connection with peripheral devices.

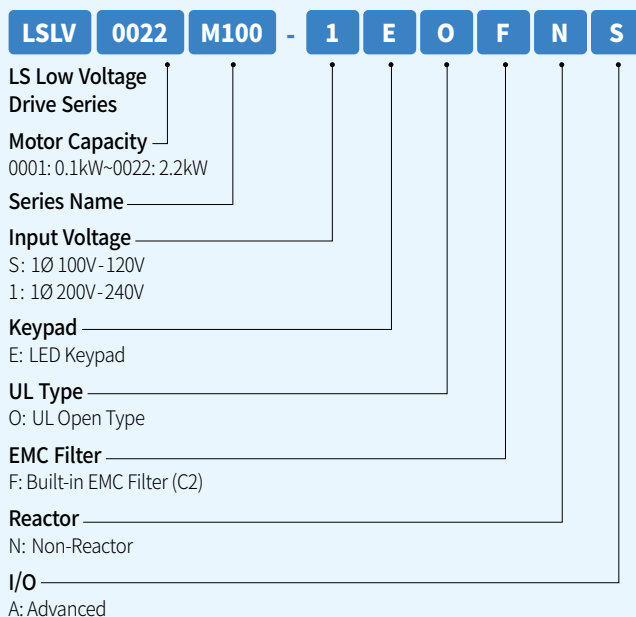


Applications

- Refrigerant compressor, air conditioner, refrigerator
- HVAC industry
- Cargo terminal transfer line (Conveyor)
- Packaging machine transfer line (Conveyor)
- CNC, Machine tool such as a lens grinder, spinning wheel, etc.



Product Type & Model



Main Features

Features	Description	Benefits
Micro Size	85×135×100mm (W x H x D); Mini drive (based on 0.2kW)	Reduced area for product installation and increased convenience
EMC Filter	Filter that satisfies the following standard: EN61800-3 Category C2 (1st Environment)	No space and expenses needed for additional filter to reduce electromagnetic noise.
DIN rail Installation	DIN rail and wall mount to the rear and sides of the product with removal clips	Fast and easy product installation that lasts less than 5 minutes and maximized space efficiency through side-by-side installation
Quick Parameter Menu	Frequently-used and useful parameters can be listed in the Quick Parameter group	Quick setting and improved operational convenience for the customer's application type
Potentiometer	Standard potentiometer for analog setting	Easy and flexible operation setting
Global Standard Requirement	Obtained CE certification and new UL 61800-5-1 standard	Ensures product reliability (improved quality of insulation distance)

Single Phase 100 ~ 120VAC (-15% ~ +10%)

Heavy Duty(CT)150% for 60 seconds		Model Number	Order Code	Dimensions (in) WXHxD	Appox. Weight (lbs.)	Additional Data			
HP	Output Current					Keypad	Reactor	Filter	Potentiometer
0.25	1.4	LSLV0002M100-SEONNA	66440001	3.3 X 6.4 X 4.8	2.2	Built-in 7 Segment LED Keypad	NO	NO	Built-in Potentiometer
0.5	2.4	LSLV0004M100-SEONNA	66440002		2.2				
1	4.2	LSLV0008M100-SEONNA	66440003	3.9 X 7.5 X 5.5	3.0				

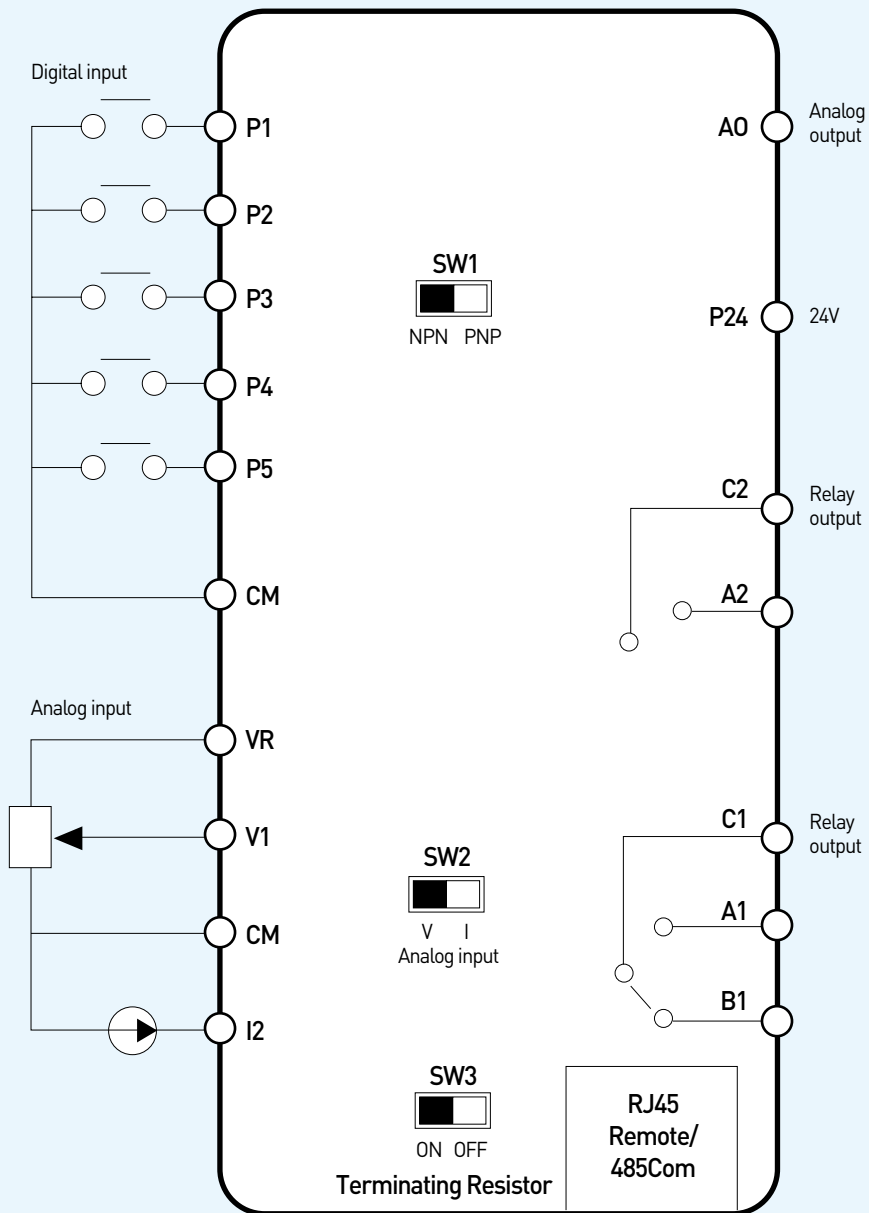
Single Phase 200 ~ 240VAC (-15% ~ +10%)

Heavy Duty(CT)150% for 60 seconds		Model Number	Order Code	Dimensions (in) WXHxD	Appox. Weight (lbs.)	Additional Data			
HP	Output Current					Keypad	Reactor	Filter	Potentiometer
0.125	0.8	LSLV0001M100-1EOFNA	66430007	3.3 X 5.7 X 3.9	1.5	Built-in 7 segment LED keypad	NO	Built-in EMC Filter	Built-in Potentiometer
0.25	1.4	LSLV0002M100-1EOFNA	66430008						
0.5	2.4	LSLV0004M100-1EOFNA	66430009	3.3 X 6.4 X 4.8	2.2				
1	4.2	LSLV0008M100-1EOFNA	66430010						
2	7.5	LSLV0015M100-1EOFNA	66430011	3.9 X 7.5 X 5.5	3.2				
3	10	LSLV0022M100-1EOFNA	66430012						

Remote Cable with Keypad

Length	Model Number	Order Code
3.3 ft	REMOTE 1M (LSLV-M100)	64170007
6.6 ft	REMOTE 2M (LSLV-M100)	64170008
9.8 ft	REMOTE 3M (LSLV-M100)	64170009
16.4 ft	REMOTE 5M (LSLV-M100)	64170010

Wiring



Memo



- 3Ø 230V: 0.5HP~10HP
- 3Ø 460V: 0.5HP~10HP



G100 Drive, General Purpose drive for use on Commercial and Industrial Applications.

The G100 is a general drive optimized for use in all industrial sectors with powerful sensor-less functions, improved hardware performance and proven high product reliability.



Improved Torque Performance Through Powerful Sensor-less Vector Control Functions

it has newly improved sensorless.
it maintains high torque performance at low speed and efficiently controls the motor.



A Variety of User-convenient Functions

Compact installation is realized through Din Rail mounting and side-by-side installation. RJ port is at the front of the drive which makes it easily connectable with peripheral devices.



High Product Reliability

Heat resistance and overall durability of the enclosure has been significantly improved. Additionally, the insulation distance and voltage ratings have improved with our design which meets UL61800-5-1 standard.



Applications

Metal, elevator/escalator, textile machinery, shipping, food and beverage, pulp/paper, coal mine, oil/gas, water treatment CNC, Machine Tool, Small fan and Pump

- Hoist (Hoist, Gantry, Trolley)
- General crane
- Winder (Loom, Knitting machine)
- Conveyor
- Mixer (Agitator)

Product Type & Model

LSLV 0022 G100 - 2 E O F N

LS Low Voltage Drive Series

Motor Capacity
0004: 0.4kW~0075: 7.5kW

Series Name

Input Voltage
2: 3Ø 200V-240V / 4: 3Ø 380V-480V

Keypad
E: LED Keypad

UL Type
O: UL Open Type

EMC Filter
N: Non Built-in EMC filter / F: Built-in EMC filter (C3)

Reactor
N: Non-Reactor

Main Features

Features	Description	Benefits
Improved Control Performance	Improved sensor-less function and simplified setup	Powerful torque performance at low speed and high load conditions
Din rail Mounting and Side-by-side Installation	2mm installation space between products	Fast and simple product installation that takes less than 5 minutes; increased space efficiency for panels
RJ45 Port at the Front Side of the Product	Easily connected to peripheral devices; and parameters can be copied (read/write) without taking the product out from its box or connecting power	Enhanced convenience in setup and connection with peripheral devices
Various Field Communication Network Support	Modbus, Profibus-DP, CANopen and Ethernet IP communication network support	Connectible with widely-used field networks
Quick Parameter Menu	Frequently-used and useful parameters are set in Quick Parameter Menu (Favorites)	Quick setting with operational convenience according to the customer's application
EMC Filter	Filter that meets the Category C3 standard	Reduced electromagnetic noise and no additional space and expenses for filter installation is necessary
Improved Heat-resisting Property and Intensity of Enclosures	Heat resistance and overall durability of the enclosure has significantly increased	Significantly improved product reliability and MTTF 27 years guaranteed
Network Option, Installation Convenience	Communication network option can be easily connected without removing covers. Dual port ethernet support	Easy and fast removable communication network option
Global Standard Requirement	Obtained a certification of CE and new UL 61800-5-1 standard	Product reliability guaranteed (improved quality of insulation distance)

Control

Control Mode	V/F control, Slip compensation, Sensorless vector
Frequency Setting Resolution	Digital command: 0.01Hz; analog command: 0.06Hz (based on 60Hz)
Frequency Level	1% of the peak output frequency
V/F Pattern	Linear, square torque reduction, user V/F
Overload Tolerance	Heavy duty: 150% 1min, Normal duty: 120% min
Torque Boost	Manual torque boost: auto torque boost

Operation

Operation Mode		Keypad / Terminal block / Communication network operation options
Frequency Setting		Analog method: -10~10 (V), 0~10 (V), 4~20 (mA); digital method: keypad input
Operation Function		PID control; 3-wire operation; frequency limit; second motor; forward/backward rotation prohibited; power switching; speed search; power braking; up-down operation; DC braking; frequency jump; slip compensation; auto restart; auto tuning; energy buffering operation; flux braking; and Fire Mode
Input	Multifunction Terminal P1~P5	NPN (Sink) / PNP (Source) options
		Function: Forward operation; backward operation; reset; external trip; emergency trip; jog operation; switching frequency – high, middle, low; acceleration/deceleration by stage – high, middle, low; DC braking at pause; second motor option; frequency increase; frequency decline; 3-wire operation; switching to general operation during PID operation; switching to the body operation during option operation; analog command fixed frequency; acceleration or deceleration stop option
Output	Multifunctional Relay Terminal	Fault output and inverter operation mode output (N.O., N.C.) AC 250V, 1A or below, DC 30V, 1A or below
	Analog Output	12Vdc: Frequency, output current, output voltage, DC voltage options

Three Phase 200 ~ 240 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings				Model Number	
Heavy Duty(CT)150% for 60 seconds		Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT) Single Phase		Normal Duty(VT) Single Phase			
HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Output Current (Amps)		
0.5	2.5	1	3.1	-	1.5	-	2.0	LSLV0004G100-2EONN	
1	5.0	2	6.0	0.5	2.8	0.75	3.6	LSLV0008G100-2EONN	
2	8.0	3	9.6	1	4.6	1	5.9	LSLV0015G100-2EONN	
3	11.0	5	12.0	1.5	6.1	1.5	6.7	LSLV0022G100-2EONN	
5	17.0	7.5	18.0	2	9.3	3	9.8	LSLV0040G100-2EONN	
7.5	24.0	10	30.0	3	12.8	5	16.3	LSLV0055G100-2EONN	
10	32.0	15	40.0	5	17.4	7.5	22.0	LSLV0075G100-2EONN	

Three Phase 380 ~ 480 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings				Model Number	
Heavy Duty(CT)150% for 60 seconds		Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT) Single Phase		Normal Duty(VT) Single Phase			
HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Output Current (Amps)		
0.5	1.3	1	2.0	-	0.7	0.5	1.3	LSLV0004G100-4EOFN	
1	2.5	2	3.1	0.5	1.4	0.75	1.9	LSLV0008G100-4EOFN	
2	4.0	3	5.1	1	2.1	1	2.8	LSLV0015G100-4EOFN	
3	5.5	5	6.9	1	2.8	2	3.6	LSLV0022G100-4EOFN	
5	9.0	7.5	10.0	3	4.9	3	5.4	LSLV0040G100-4EOFN	
7.5	12.0	10	16.0	3	6.4	5	8.7	LSLV0055G100-4EOFN	
10	16.0	15	23.0	5	8.7	7.5	12.6	LSLV0075G100-4EOFN	

Remote Cable with Keypad

Length	Model Number	Order Code
3.3 ft	REMOTE 1M (LSLV-G100)	64180001
6.6 ft	REMOTE 2M (LSLV-G100)	64180002
9.8 ft	REMOTE 3M (LSLV-G100)	64180003
16.4 ft	REMOTE 5M (LSLV-G100)	64180004

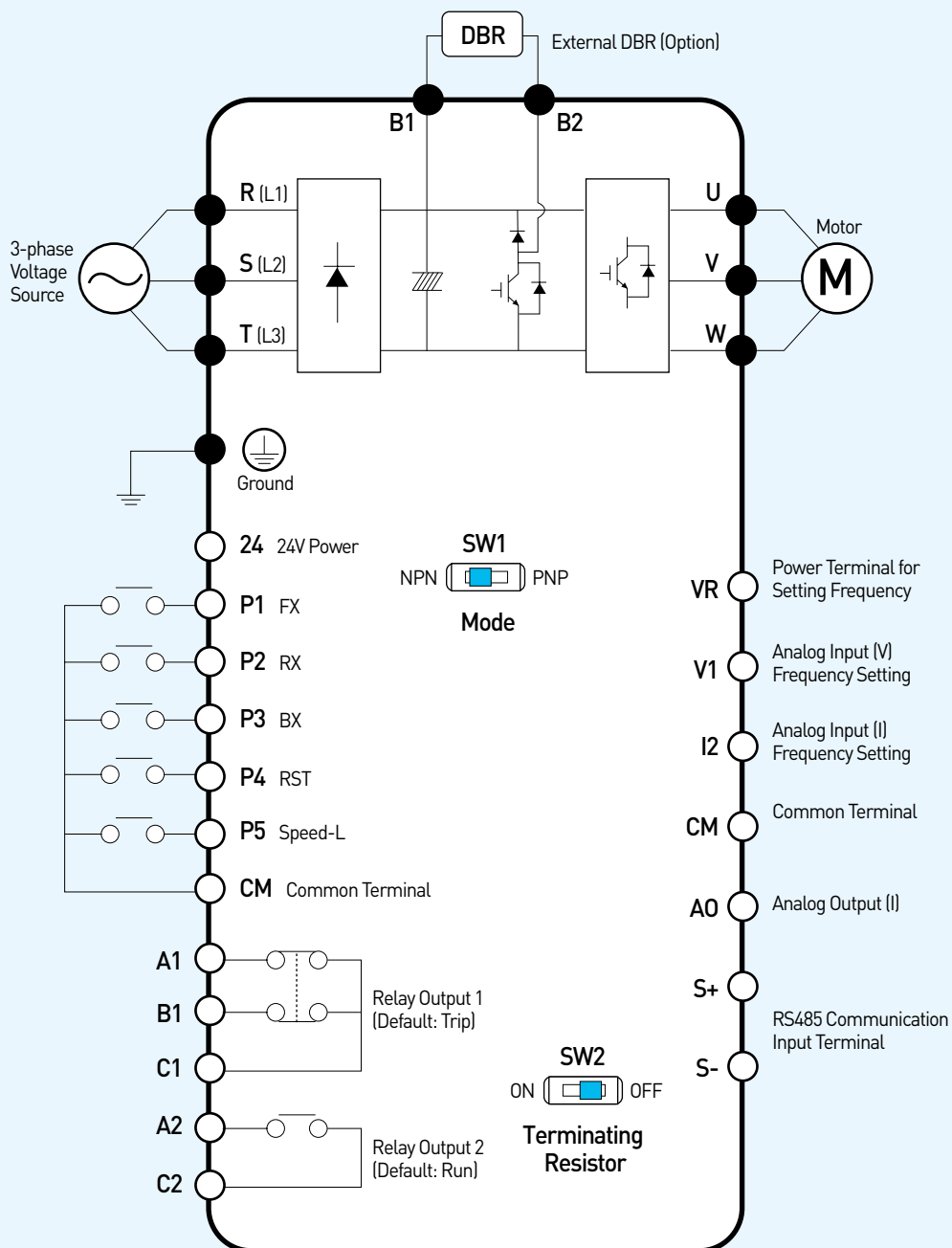
	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Additional Data			
				Order Code	Keypad	Reactor	Filter	Potentiometer
	6040000100	3.4 X 6.5 X 5.5	2.3	64180005	Built-in 7 segment LED keypad	NO	NO	Built-in Potentiometer
	6040000200							
	6040000300	4.0 X 7.0 X 6.3	3.1	64180006				
	6040000400							
	6040000600	5.3 X 7.6 X 6.3	4.2	64180007				
	6040000700	7.1 X 9.5 X 6.0	7.0	64180008				
	6040000800							

	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Additional Data			
				Order Code	Keypad	Reactor	Filter	Potentiometer
	6041002100	3.4 X 6.5 X 5.5	2.3	64180005	Built-in 7 segment LED keypad	NO	Built-in EMC Filter	Built-in Potentiometer
	6041002200							
	6041002300	4.0 X 7.0 X 6.3	3.1	64180006				
	6041002400							
	6041002600	5.3 X 7.6 X 6.3	4.2	64180007				
	6041002700	7.1 X 9.5 X 6.0	7.0	64180008				
	6041002800							

Option

	Model Number	Order Code
Ethernet I/P	Ethernet(LSLV-G100),CENT-G100	64180009

Wiring



Memo



IP20

1Ø 230V 0.5HP~3.0HP
3Ø 230V 0.5HP~20HP
3Ø 460V 0.5HP~100HP

IP66

NEMA4X 3Ø 230V 0.5HP~20HP
NEMA4X 3Ø 460V 0.5HP~30HP



Standard Drive, S100

The S100 is LS's high-performance standard drive offering. It offers powerful sensorless vector control, and a diverse range of user friendly functions and features. The S100 features the ability to run permanent magnet motors, has a redundant safe-torque off(STO) circuit, and offers a wide array of field bus communication options. An IP66/NEMA4X option up to 30HP is available for dusty, wet, or harsh environments.



Efficient Space Utilization

Space efficiency is maximized with its compact size, which is 40% smaller than the original product, and the ability of side-by-side installation.



Various Field Network Support

The drive supports the following networks: EtherCAT, EtherNet/IP, Profibus-DP, Modbus TCP, CANopen and etc



IP66/ NEMA4X

The S100 has been tested for IP66 and NEMA4X (Washdown) standards. This makes the S100 ideal for food and beverage processing or any application with a wet, dusty, or contaminant filled environment.

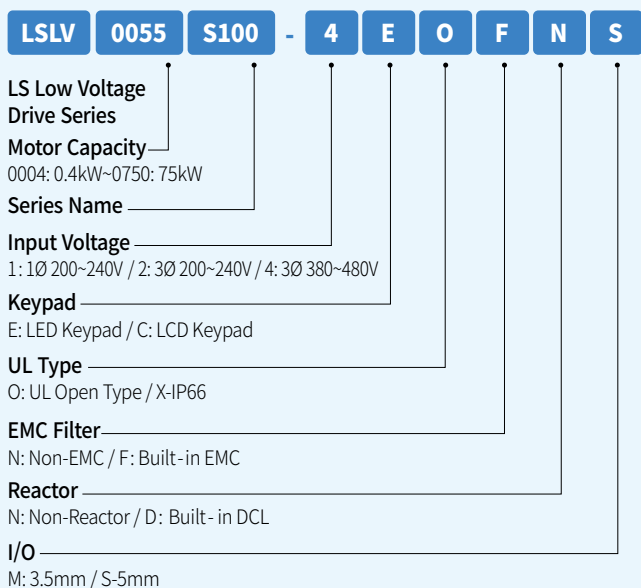


Applications

Applied to the following industries: metal, elevator/escalator, textile machinery, shipping, food and beverage, pulp/paper, coal mine, oil/gas and water treatment

- Hoist (hoist, gantry, trolley)
- Winder (loom, knitting machine)
- Mixer (agitator)
- Compressor
- Centrifugal separator
- General crane
- Conveyor

Product Type & Model



Main Features

Features	Description	Benefits
Sensor-less Control and Static-type/Rotation-type Auto Tuning	Motor tuning is possible without rotating the motor when the motor is installed at a place where rotation is impossible or when the system is already installed.	Accurate velocity and torque control
Product Size Reduction and Side-by-side Installation	The product size has been reduced up to 60% of its original size; simple replacement of cooling fans; installation span between products is about 2mm	Reduced installation area; when multiple drives are installed, the control panel size is significantly reduced
Various Field Networks	EtherCAT, PROFINET, Profibus-DP, Ethernet IP, Modbus TCP and CANopen communication network support	Possible to connect to all widely-used field networks; comfortable maintenance of option cards and easy mounting
Compact PLC Function Option	With a combination of various function blocks, a simple PLC sequence programming is possible	High-level control programming with only the drive and without the external PLC
DC Reactor	Built-in DC reactor ※ 400V, 30~75kW	Improved power factor and THD reduction
Safe Torque Off (STO)	Redundant safe input circuit standard; safe input function meets the following standards: EN 61508 SIL2 (EN60204-1, Stop category 0)	Satisfies the safety standards of systems with a built-in safety design
EMC Filter	Filter satisfying Category C3 (Class A) 2nd Environment CE standard ※ 1-phase 200V 0.4~2.2kW (C2) ※ 3-phase 400V 0.4~75kW (C3)	Reduced electromagnetic noise; additional space and expense for parts are not required
IP66 (NEMA 4X) Enclosure Option	Completely protected from foreign substances such fine dust and water sprayed with a high-pressure sprayer	Inverters can be used even when exposed to the poor environment

Control

Control Mode	V/F control, Slip compensation, Sensorless vector, PM sensorless
Frequency Setting Resolution	Digital command: 0.01Hz; analog command: 0.06Hz (peak frequency: 60Hz)
Frequency Level	1% of the peak output frequency
V/F Pattern	Linear, square torque reduction, user V/F
Overload Tolerance	Heavy duty: 150% 1min, Normal duty: 120% min
Torque Boost	Manual torque boost: auto torque boost

Operation

Operation Mode		Keypad/ Terminal block / Communication network options
Frequency Setting		Analog method: -10~10 (V), 0~10 (V), 4~20 (mA); digital method: keypad, pulse train input
Operation Function		PID control; up-down operation; 3-wire operation; DC braking; frequency limit; frequency jump; secondary function; slip compensation; forward/backward rotation prohibited; auto restart; power switch; auto tuning; speed search; energy buffering; power braking; flux braking; leakage-reduced operation; Fire Mode
Input	NPN (Sink) / PNP (Source) option	
	Multifunctional Terminal Standard I/O (5 input) Multiple I/O (7 input)	Function: Forward operation; backward operation; reset; external trip; emergency trip; jog operation; switching frequency – high, middle, low; acceleration/deceleration by stage – high, middle, low; DC braking on stop; second motor option; frequency increase; frequency decline; 3-wire operation; switching to general operation during PID operation; switching to body operation during option operation; analog command fixed frequency; acceleration/deceleration stop option
	Analog Input	V1: -10~10V, V2: 0~10V / I2 4~20mA options
	Pulse Train	0~32kHz, Low Level: 0~2.5V, High Level: 3.5~12V
Output	Multifunctional Open Collector Terminal	DC 24V, 50mA or below
	Multifunctional Relay Terminal	Fault output and drive operation mode output (N.O., N.C.) AC 250V 1A or below, DC 30V 1A or below
	Analog Output	0~12Vdc/0~24mA: selectable among frequency, output current, output voltage and DC terminal voltage
	Pulse Train	Up to 32kHz, 10~12 (V)

S100

Standard Drive (NEMA 1*)

* Requires NEMA 1 option kit

Single Phase 200 ~ 240VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings						Model Number
Heavy Duty(CT)150% for 60 seconds		Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	Normal Duty(VT) Single Phase Input		Normal Duty(VT) 3 Phase Output	
HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Amps	Amps	HP	Amps	Amps	
0.5	2.5	1	3.1	-	-	-	-	-	-	LSLV0004S100-1EONNS
1	5.0	2	6.0	-	-	-	-	-	-	LSLV0008S100-1EONNS
2	8.0	3	10.0	-	-	-	-	-	-	LSLV0015S100-1EONNS
3	11.0	5	12.0	-	-	-	-	-	-	LSLV0022S100-1EONNS

Three Phase 200 ~ 240 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings						Model Number
Heavy Duty(CT)150% for 60 seconds		Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	Normal Duty(VT) Single Phase Input		Normal Duty(VT) 3 Phase Output	
HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Amps	Amps	HP	Amps	Amps	
0.5	2.5	1	3.1	-	2.2	1.5	-	3.0	1.8	LSLV0004S100-2EONNS
1	5.0	2	6.0	0.5	4.9	2.8	0.75	6.3	3.3	LSLV0008S100-2EONNS
2	8.0	3	10.0	1	8.4	4.6	1	10.8	5.7	LSLV0015S100-2EONNS
3	11.0	5	12.0	1.5	11.8	6.1	1.5	13.1	6.6	LSLV0022S100-2EONNS
5.4	17.0	7.5	18.0	2	18.5	9.3	3	19.4	9.9	LSLV0040S100-2EONNS
7.5	24.0	10	30.0	3	25.8	13.0	5	32.7	16.0	LSLV0055S100-2EONNS
10	32.0	15	40.0	5	34.9	18.0	7.5	44.2	22.0	LSLV0075S100-2EONNS
15	46.0	20	56.0	7.5	50.8	26.0	10	62.3	31.0	LSLV0110S100-2EONNS
20	60.0	25	69.0	10	66.7	33.0	10	77.2	38.0	LSLV0150S100-2EONNS

Three Phase 380 ~ 480 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings						Model Number
Heavy Duty(CT)150% for 60 seconds		Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	Normal Duty(VT) Single Phase Input		Normal Duty(VT) 3 Phase Output	
HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Amps	Amps	HP	Amps	Amps	
0.5	1.3	1	2.0	-	1.1	0.8	0.5	2.0	1.3	LSLV0004S100-4EONNS
1	2.5	2	3.1	0.5	2.4	1.5	0.75	3.3	1.9	LSLV0008S100-4EONNS
2	4.0	3	5.1	0.75	4.2	2.3	1	5.5	3.0	LSLV0015S100-4EONNS
3	5.5	5	6.9	1	5.9	3.1	2	7.5	3.9	LSLV0022S100-4EONNS
5.4	9.0	7.5	10.0	3	9.8	5.4	3	10.8	5.9	LSLV0040S100-4EONNS
7.5	12.0	10	16.0	3	12.9	7.1	5	17.5	9.5	LSLV0055S100-4EONNS
10	16.0	15	23.0	5	17.5	9.5	7.5	25.4	14.0	LSLV0075S100-4EONNS
15	24.0	20	30.0	7.5	26.5	15.0	10	33.4	18.0	LSLV0110S100-4EONNS
20	30.0	25	38.0	10	33.4	18.0	15	42.5	23.0	LSLV0150S100-4EONNS
25	39.0	30	44.0	10	43.6	23.0	15	49.5	27.0	LSLV0185S100-4EONNS
30	45.0	40	58.0	15	50.7	27.0	20	65.7	35.0	LSLV0220S100-4EONNS
40	61.0	50	75.0	20	56	32.0	25	69.0	39.0	LSLV0300S100-4CONDS
50	75.0	60	91.0	25	69	39.0	30	85.0	47.0	LSLV0370S100-4CONDS
60	91.0	75	107.0	30	85	47.0	40	100.0	55.0	LSLV0450S100-4CONDS
75	110.0	100	142.0	40	103	57.0	50	134.0	73.0	LSLV0550S100-4CONDS
100	152.0	120	169.0	50	143	78.0	60	160.0	87.0	LSLV0750S100-4CONDS

	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data		
				Order Code	Order Code	Keypad	Reactor	Filter
	6033000100	2.7 X 5.0 X 5.0	1.9	64150004	64150013	Built-in 7 segment LED keypad	NO	NO
	6033000200	3.9 X 5.0 X 5.1	2.9	64150005	64150014			
	6033000300	3.9 X 5.0 X 5.7	3.3	64150005	64150014			
	6033000400	5.5 X 5.0 X 5.7	4.9	64150006	64150015			

	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data		
				Order Code	Order Code	Keypad	Reactor	Filter
	6030000100	2.7 X 5.0 X 4.8	1.9	64150004	64150013	Built-in 7 segment LED keypad	NO	NO
	6030000200	2.7 X 5.0 X 5.0	1.9	64150004	64150013			
	6030000300	3.9 X 5.0 X 5.1	3.3	64150005	64150014			
	6030000400	3.9 X 5.0 X 5.7	3.3	64150005	64150014			
	6030000600	5.5 X 5.0 X 5.7	5.1	64150006	64150015			
	6030000700	6.3 X 9.1 X 5.5	7.3	64150007	64150016			
	6030000800							
	6030000900	7.1 X 11.4 X 6.4	10.1	64150008	64150017			
	6030001000	8.7 X 13.8 X 7.4	10.1	64150009	64150018			

	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data		
				Order Code	Order Code	Keypad	Reactor	Filter
	6031000100	2.7 X 5.0 X 4.8	1.9	64150004	64150013	Built-in 7 segment LED keypad	NO	NO
	6031000200	2.7 X 5.0 X 5.0	1.9	64150004	64150013			
	6031000300	3.9 X 5.0 X 5.1	3.3	64150005	64150014			
	6031000400	3.9 X 5.0 X 5.7	3.3	64150005	64150014			
	6031000600	5.5 X 5.0 X 5.7	6.0	64150006	64150015			
	6031000700	6.3 X 9.1 X 5.5	7.5	64150007	64150016			
	6031000800							
	6031000900	7.1 X 11.4 X 6.4	10.6	64150008	64150017			
	6031001000							
	6031001100	8.7 X 13.8 X 7.4	16.5	64150009	64150018			
	6031001200							
	6031006000	10.8 X 17.7 X 11.2	57.3	64150010	64150019	Built-in LCD keypad	Built-in DC Reactor	NO
	6031006100	12.8 X 20.1 X 11.2	77.2	64150011	64150020			
	6031006200							
	6031001600	12.8 X 21.7 X 12.2	94.8	64150012	64150021			
	6031001700							

S100

Standard Drive (NEMA 4X)

Three Phase 200 ~ 240 VAC (-15% ~ +10%)

UL Three Phase Ratings		UL Single Phase Ratings			Model Number
Heavy Duty(CT)150% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	
HP	Output Current (Amps)	HP	Amps	Amps	
0.5	2.5	-	2.2	1.5	LSLV0004S100-2EXNNS,IP66
1	5.0	0.5	4.9	2.8	LSLV0008S100-2EXNNS,IP66
2	8.0	1	8.4	4.6	LSLV0015S100-2EXNNS,IP66
3	11.0	1.5	11.8	6.1	LSLV0022S100-2EXNNS,IP66
5	16.0	2	17.5	8.8	LSLV0037S100-2EXNNS,IP66
7.5	24.0	3	25.8	13.0	LSLV0055S100-2EXNNS,IP66
10	32.0	5	34.9	18.0	LSLV0075S100-2EXNNS,IP66
15	46.0	7.5	50.8	26.0	LSLV0110S100-2EXNNS,IP66
20	60.0	10	66.7	33.0	LSLV0150S100-2EXNNS,IP66

Three Phase 380 ~ 480 VAC (-15% ~ +10%)

UL Three Phase Ratings		UL Single Phase Ratings			Model Number
Heavy Duty(CT)150% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	
HP	Output Current (Amps)	HP	Amps	Amps	
0.5	1.3	-	1.1	0.8	LSLV0004S100-4XNNS,IP66
1	2.5	0.5	2.4	1.5	LSLV0008S100-4XNNS,IP66
2	4.0	0.75	4.2	2.3	LSLV0015S100-4XNNS,IP66
3	5.5	1	5.9	3.1	LSLV0022S100-4XNNS,IP66
5	8.0	2	8.7	4.8	LSLV0037S100-4XNNS,IP66
7.5	12.0	3	12.9	7.1	LSLV0055S100-4XNNS,IP66
10	16.0	5	17.5	9.5	LSLV0075S100-4XNNS,IP66
15	24.0	7.5	26.5	15.0	LSLV0110S100-4XNNS,IP66
20	30.0	10	33.4	18.0	LSLV0150S100-4XNNS,IP66
25	39.0	10	43.6	23.0	LSLV0110S100-4XNNS,IP66
30	45.0	15	50.7	27.0	LSLV0150S100-4XNNS,IP66

Remote Cable with Keypad

Length	Model Number	Order Code
6.6 ft	REMOTE 2M (LSLV-S100)	64110009
9.8 ft	REMOTE 3M (LSLV-S100)	64110010

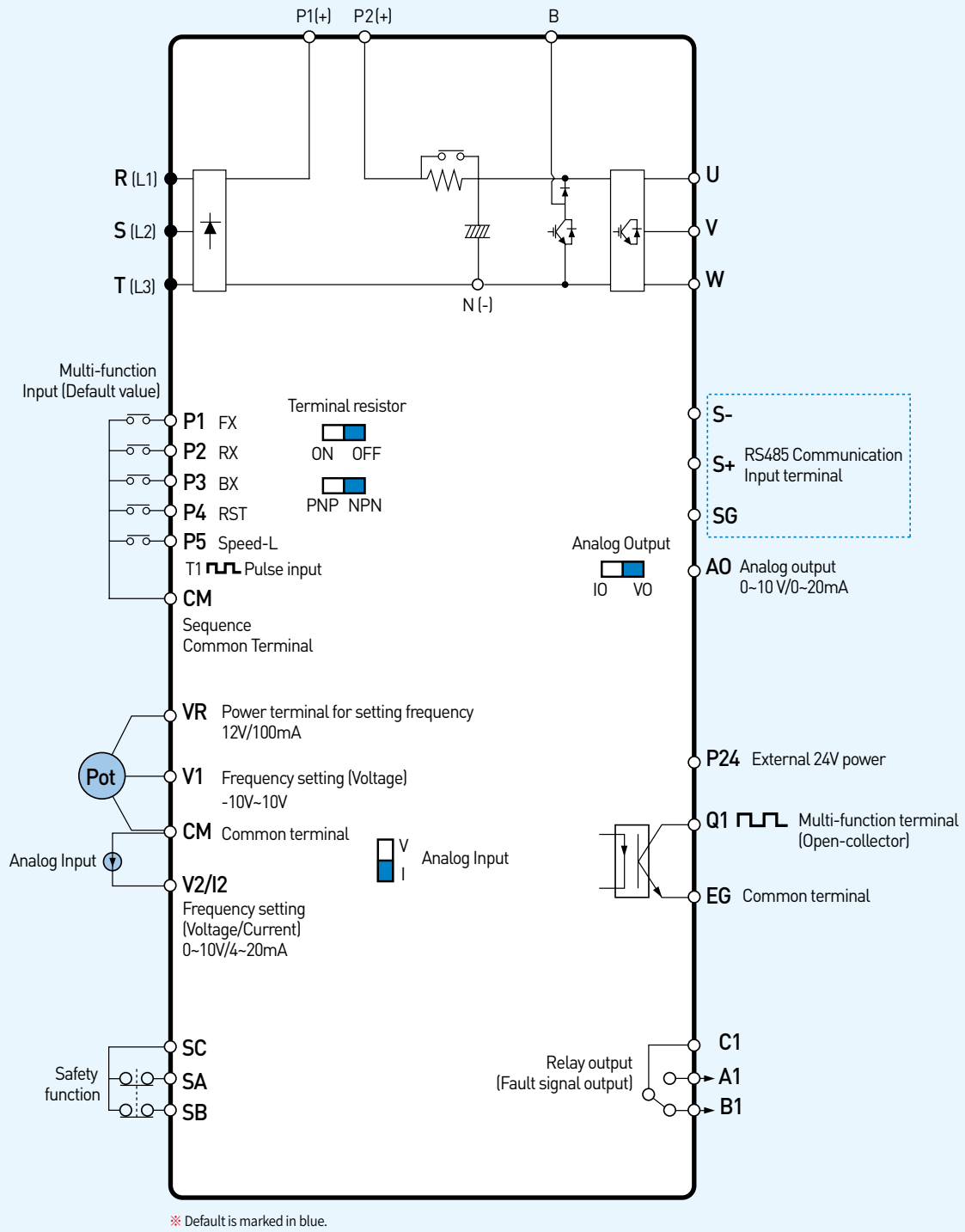
	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Frame Size	Additional Data		
					Keypad	Reactor	Filter
	6030001800	7.1 X 10.1 X 6.9	7.9	1 (NEMA4X)	Built-in 7 segment LED keypad	NO	NO
	6030001900						
	6030002000	8.7 X 10.2 X 7.9	11.5	2 (NEMA4X)			
	6030002100		11.7				
	6030002200		12.3				
	6030002400	9.8 X 12.9 X 8.9	19.8	3 (NEMA4X)			
	6030002500						
	6030002600	10.2 X 15.7 X 9.7	21.2	4 (NEMA4X)			
	6030002700	11.8 X 18.1 X 9.8	26.7	5 (NEMA4X)			

	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Frame Size	Additional Data		
					Keypad	Reactor	Filter
	6031004200	7.1 X 10.1 X 6.9	8.2	1 (NEMA4X)	Built-in 7 segment LED keypad	NO	NO
	6031004300						
	6031004400	8.7 X 10.2 X 7.9	11.7	2 (NEMA4X)			
	6031004500		12.1				
	6031004600		12.3				
	6031004800	9.8 X 12.9 X 8.9	19.4	3 (NEMA4X)			
	6031004900						
	6031005000	10.2 X 15.7 X 9.7	21.2	4 (NEMA4X)			
	6031005100		21.6				
	6031005200	11.8 X 18.1 X 9.8	27.3	5 (NEMA4X)			
	6031005300						

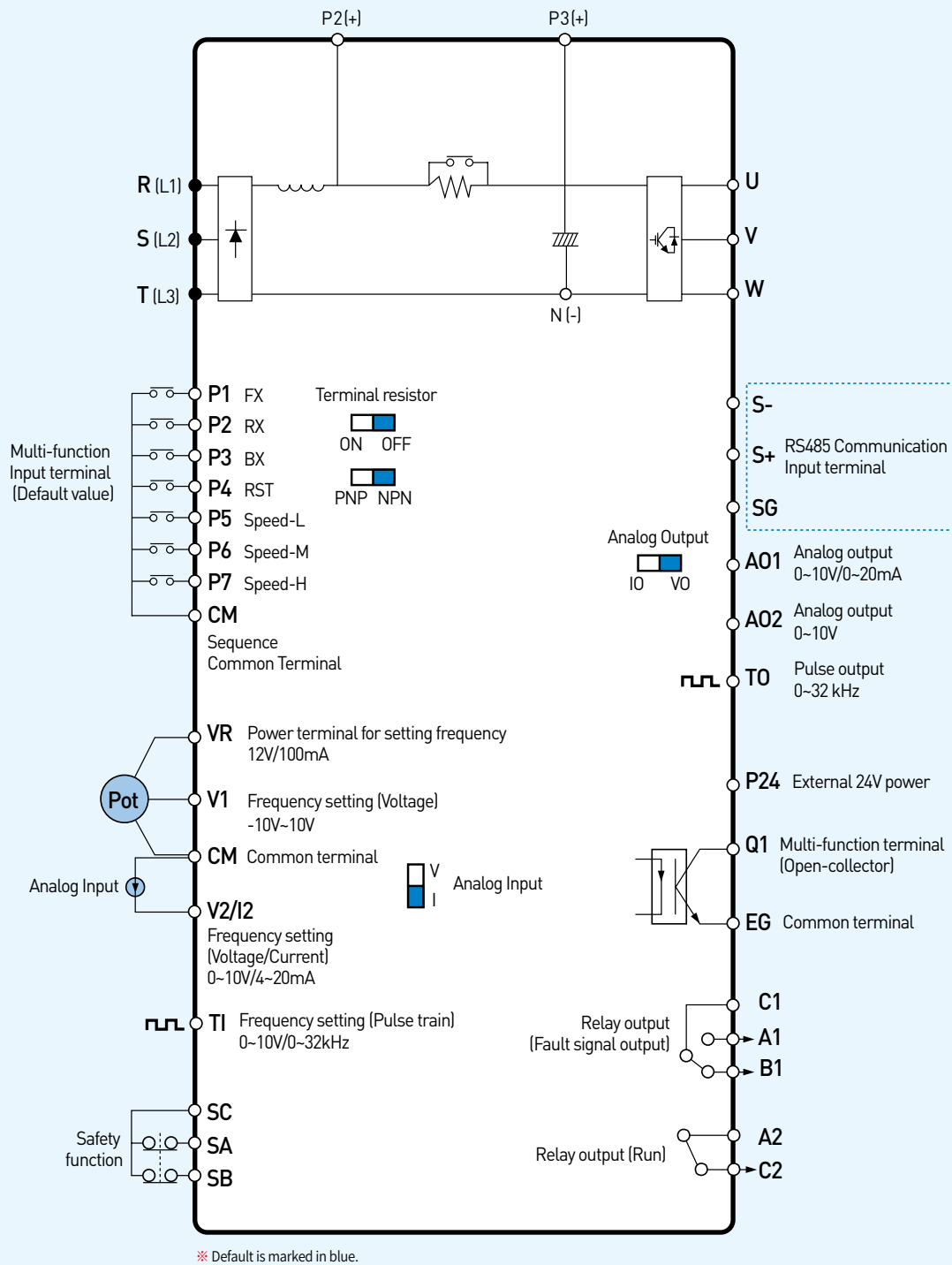
Option

	Model Number	Order Code
CAN Open	CANOpen for LSLV-S100	64150001
Profibus-DP	Profibus-DP for LSLV-S100	64150002
Ethernet IP & Modbus TCP (Single port)	Ethernet IP & Modbus TCP for LSLV-S100	64150003
Ethernet IP & Modbus TCP (Dual port)	Ethernet IP & Modbus TCP for S100 Series	64150042
64150003	EtherCAT for LSLV-S100	64150034
Profinet	Profinet for LSLV-S100	64150035
Extension I/O	Extension I/O for LSLV-S100	64150025
LCD Keypad (Graphic)	LCD Keypad for LSLV-S100	64110038
USB-RJ45 Cable	RS232 to USB Converter for LSLV-S100	64090353

Wiring (0.5HP ~30HP)



Wiring (40HP ~100HP)





- 3Ø 230V:1.0HP~125HP
- 3Ø 460V:1.0HP~800HP
- 3Ø 575V:1.0HP~125HP

Significant Energy Savings With LS Drive Solutions

The H100+ Drive was developed to build an environment-friendly system that realizes significant energy savings in the commercial and industrial field of fans/pumps and water treatment applications based on leading drive solutions.



System Protection

To protect your pump and application, the following functions are provided for users: Soft Fill; start and stop slope adjustment; valve deceleration time setting; multi-motor control; and underload detection, pipe broken, pump clean



Optimized for HVAC and Water Treatment

User-friendly functions for convenient use of fans/pumps such as Fire mode, Lead lag, auxiliary motor PID compensation and load tuning.



Applications

- Building • Metal • Pulp/paper • Coal mine
- Oil/gas and water treatment; (fan/pump, dryer)



Product Type & Model

LSLV 0008 H100 - 4 C O F N(PLUS)

LS Low Voltage Drive Series

Motor Capacity
0008: 0.75kW~5000: 500kW

Series Name

Input Voltage
2: 3Ø 200~240 (V)
4: 3Ø 380~480 (V)
5: 3Ø 525~600 (V)

Keypad Type
C: LCD Keypad

UL Type
O: UL Open
E: UL Type1

EMC Filter
F: Built-in EMC
N: Non EMC

Reactor
D: Built-in DC Reactor
N: Non DC Reactor
PLUS: Sub Series Name

Main Features

Features	Description	Benefits
HVAC-only Features	Multi Motor Control, PID operation, flow (flux) compensation, scheduling operation, lead-lag function	Optimized operation for HVAC applications
Fan/Pump Protection Features	Protective functions include Soft Fill; valve deceleration time setting; pump clean; pipe breakage level detection; Underload Detection; lubrication Fire Mode	Support for optimized fan/pump system performance; extended life of machinery with load; and reduced maintenance cost
Built-in EMC Filter	400V 5.5~30kW, 110~500kW built-in(C3) 400V 37~500kW built-in option (C3) ※ With a filter, 75~90kW meets the EMC standard	Reduced electromagnetic noise and additional space and cost for parts unnecessary
Various Field Networks	RS-485 and BACnet network support for general HVAC system; Modbus-RTU, Metasys N2 and LonWorks options	Connectable with all widely-used field networks; simple maintenance of option cards and easy mounting
Reduced Product Size and Side-by-Side Installation	The product size is reduced up to 60% of its original size; simple replacement of cooling fans; installation span between products is about 2mm	Reduced installation area; and when installing multiple motors, the control panel size is significantly reduced
DC Reactor	400V 37~500kW products have a built-in DC reactor	Improved power factor; and THD reduction
Global Standard Requirement	UL Plenum-Rated; obtained a certificate of new UL 61800-5-1 (improved quality of insulation distance)	Product reliability enhanced as it meets the new global standard

Control

Control Mode	V/F control, Slip compensation
Frequency Setting Resolution	Digital command: 0.01Hz Analog command: 0.06Hz (based on 60Hz)
Frequency Level	1% of the peak output frequency
V/F Pattern	Linear, square torque reduction, user V/F
Overload Tolerance	0.75~90kW rated current: 120% 1min 110~500kW rated current: 110% 1min
Torque Boost	Passive torque boost; auto torque boost

Operation

Operation Mode	Keypad, Terminal block, Communication network options		
Frequency Setting	Analog method: -10 ~ 10V, 0 ~ 10V, 0 ~ 20mA Digital method: keypad, pulse train input		
Operation Function	PID control; 3-wire operation; frequency limit; secondary function; forward/backward rotation prohibited; power switch; speed search; power brake; leakage-reduced operation; up-down operation; DC braking; frequency jump; slip compensation; auto restart; auto tuning; energy buffering operation; flux braking; energy saving operation		
Input	Multifunctional Terminal (7 inputs)	PNP(Source), NPN(Sink) options According to the parameter setting of IN-65~71 codes, the following functions can be set. Forward operation; reset; emergency trip; switching frequency – high/middle/low; DC braking upon stop; frequency increase; 3-wire operation; acceleration or deceleration stop; MMC interlock; backward operation; external trip; job operation; acceleration/deceleration by stage – high/middle/low; second motor option; frequency decline; analogue command fixed frequency; switching to the general operation during PID operation; Pre Heat; pump cleaning; RTC (time event function)	
	Pulse Train	0~32kHz, Low Level: 0~0.8V, High Level: 3.5~12V	
Output	Multifunctional Open Collector Terminal		DC26V, 50mA or below
	Fault Relay Terminal	Fault output and drive operation mode output	N.O.: AC 250V, 2A or below; DC 30V, 3A or below N.C.: AC 250V, 1A or below; DC 30V, 1A or below
	Multifunctional Relay Terminal		AC250V, 5A or below, DC30V, 5A or below
	Analog Output	0~12Vdc(0~20mA): Frequency, output current, output voltage, DC voltage options	
	Pulse Train	Up to 32kHz, 0~12V	

H100+

Fan & Pump Drive

Three Phase 200 ~ 240 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings		Model Number	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	
Normal Duty(VT) 120%(~125HP) / 110%(150~800HP) for 60 seconds		Heavy Duty(VT)120% for 60 seconds		Normal Duty(VT) Single Phase Output						
HP	Output Current	HP	Output Current	HP	Amps					
1	5	0.5	2.5	0.5	2.9	LSLV0008H100-2CONN(PLUS_NEW)	67300001PL	6.3 X 9.1 X 7.1	7.3	
2	8	1	5	1	4.4	LSLV0015H100-2CONN(PLUS_NEW)	67300002PL			
3	12	2	8	1.5	6.4	LSLV0022H100-2CONN(PLUS_NEW)	67300003PL			
5	16	3	11	2	8.4	LSLV0037H100-2CONN(PLUS_NEW)	67300004PL			
7.5	22	5	17	3	11	LSLV0055H100-2CONN(PLUS_NEW)	67300005PL			
10	30	7.5	24	5	16	LSLV0075H100-2CONN(PLUS_NEW)	67300006PL			
15	42	10	32	5	23	LSLV0110H100-2CONN(PLUS_NEW)	67300007PL			
20	56	15	46	7.5	30	LSLV0150H100-2CONN(PLUS_NEW)	67300008PL	7.1 X 11.4 X 8.1	10.1	
25	69	20	60	10	37	LSLV0185H100-2CONN(PLUS_NEW)	67300009PL	8.7 X 13.8 X 8.8	15.6	
30	82	25	68	15	45	LSLV0220H100-2COND(PLUS_NEW)	67360010PL	10.8 X 17.7 X 11.2	55.8	
30	82	25	68	15	45	LSLV0220H100-2COFD(PLUS_NEW)	67360011PL			
40	110	30	81	20	58	LSLV0300H100-2COND(PLUS_NEW)	67360012PL	12.8 X 20.1 X 11.2	72.5	
40	110	30	81	20	58	LSLV0300H100-2COFD(PLUS_NEW)	67360013PL			
50	142	40	106	25	78	LSLV0370H100-2COFD(PLUS_NEW)	67360014PL	12.8 X 21.7 X 12.2	86.4	
60	169	50	136	30	92	LSLV0450H100-2COFD(PLUS_NEW)	67360015PL		90.6	
75	223	60	169	40	122	LSLV0550H100-2COFD(PLUS_NEW)	67360016PL	11.8 X 27.8 X 15.2	118.2	
100	264	75	195	50	145	LSLV0750H100-2COFD(PLUS_NEW)	67360017PL		121.9	
125	325	100	255	60	178	LSLV0900H100-2COFD(PLUS_NEW)	67360018PL	15.0 X 27.8 X 15.6	159.2	

Three Phase 380 ~ 480 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings		Model Number	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	
Normal Duty(VT) 120%(~125HP) / 110%(150~800HP) for 60 seconds		Heavy Duty(VT)120% for 60 seconds		Normal Duty(VT) Single Phase Output						
HP	Output Current	HP	Output Current	HP	Amps					
1	2.5	0.5	1.3	0.5	1.6	LSLV0008H100-4COFN(PLUS_NEW)	67310025PL	6.3 X 9.1 X 7.1	7.3	
2	4	1	2.5	1	2.4	LSLV0015H100-4COFN(PLUS_NEW)	67310026PL			
3	6	2	4.0	1.5	3.5	LSLV0022H100-4COFN(PLUS_NEW)	67310027PL			
5	8	3	5.5	2	4.6	LSLV0037H100-4COFN(PLUS_NEW)	67310028PL			
7.5	12	5	8	3	6.8	LSLV0055H100-4COFN(PLUS_NEW)	67310029PL			
10	16	7.5	12	5	9.2	LSLV0075H100-4COFN(PLUS_NEW)	67310030PL			
15	24	10	15	7.5	14	LSLV0110H100-4COFN(PLUS_NEW)	67310031PL			
20	30	15	22	10	17	LSLV0150H100-4COFN(PLUS_NEW)	67310032PL	7.1 X 11.4 X 8.1	10.1	
25	38	20	28	10	22	LSLV0185H100-4COFN(PLUS_NEW)	67310033PL		10.6	
30	45	25	35	15	26	LSLV0220H100-4COFN(PLUS_NEW)	67310034PL	8.7 X 13.8 X 8.8	16.5	
40	61	30	41	20	36	LSLV0300H100-4COFN(PLUS_NEW)	67310035PL			
50	75	40	55	25	39	LSLV0370H100-4COFD(PLUS_NEW)	67310012PL 67310036PL	10.8 x 17.7 x 11.2	57.3	
60	91	50	67	30	47	LSLV0450H100-4COFD(PLUS_NEW)	67310013PL 67310037PL			
75	107	60	81	40	55	LSLV0550H100-4COFD(PLUS_NEW)	67310014PL 67310038PL	12.8 x 20.1 x 11.2	77.2	
100	142	75	106	50	73	LSLV0750H100-4COFD(PLUS_NEW)	67310015PL			
125	169	100	136	60	86	LSLV0900H100-4COFD(PLUS_NEW)	67310016PL	12.8 x 21.7 x 12.2	94.8	
150	223	125	169	60	93	LSLV1100H100-4COFD(PLUS_NEW)	67310041PL			
200	264	150	195	75	101	LSLV1320H100-4COFD(PLUS_NEW)	67310042PL	11.8 x 27.8 x 15.2	123	
250	325	200	255	100	137	LSLV1600H100-4COFD(PLUS_NEW)	67310043PL			
300	370	250	303	125	137	LSLV1850H100-4COFD(PLUS_NEW)	67310044PL	15.0 x 27.8 x 15.6	164.7	
350	432	250	345	150	181	LSLV2200H100-4COFD(PLUS_NEW)	67310045PL			
400	481	300	375	150	218	LSLV2500H100-4COFD(PLUS_NEW)	67310046PL	17.3 x 36.3 x 17.3	264.6	
500	613	400	478	150	232	LSLV3150H100-4COFD(PLUS_NEW)	67310047PL			
550	683	450	541	200	245	LSLV3550H100-4COFD(PLUS_NEW)	67310048PL	23.6 x 39.4 x 19.7	409.0	
650	770	500	591	250	280	LSLV4000H100-4COFD(PLUS_NEW)	67310049PL			
800	962	650	740	350	361	LSLV5000H100-4COFD(PLUS_NEW)	67310050PL	30.6 x 41.5 x 19.7	584.2	

	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data			Disconnect Switch Option	
	Order Code	Order Code	Keypad	Reactor	Filter	Model Number	Order Code
	64160002	64150016	Built-in LCD keypad	NO	NO	MMS-32H,8A & HANDLE,MEH32R,115,UL	64160028
						MMS-32H,13A & HANDLE,MEH32R,115,UL	64160029
						MMS-32H,17A & HANDLE,MEH32R,115,UL	64160030
						MMS-32H,22A & HANDLE,MEH32R,115,UL	64160031
						MMS-32H,32A & HANDLE,MEH32R,115,UL	64160032
						MMS-32H,40A & HANDLE,MEH32R,115,UL	64160033
						MMS-63H,50A & HANDLE,MEH63,115,UL	64160034
	64160003	64150017	Built-in LCD keypad	YES	Built-in EMC filter	MMS-100H,75A & HANDLE,MEH100,115,UL	64160035
	64160004	64150018				MMS-100H,90A & HANDLE,MEH100,115,UL	64160036
	64150010	64150019					
	64150011	64150020					
	64150012	64150021					
	64160020	64160015					
	64160021	64160016					

	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data			Disconnect Switch Option	
	Order Code	Order Code	Keypad	Reactor	Filter	Model Number	Order Code
	64160002	64150016	Built-in LCD keypad	NO	Built-in EMC Filter	UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160037
						UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160038
						UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160039
						UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160040
						UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160041
						UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160042
						UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160043
	64160003	64150017	Built-in LCD keypad	Built-in DC Reactor	Built-in EMC Filter	UTS150LT FTU 40A 3P & HANDLE,REH2-S-12,UTS250	64160044
	64160004	64150018				UTS150LT FTU 50A 3P & HANDLE,REH2-S-12,UTS250	64160045
	64150010	64150019				UTS150LT FTU 60A 3P & HANDLE,REH2-S-12,UTS250	64160046
	64150011	64150020				UTS150LT FTU 80A 3P & HANDLE,REH2-S-12,UTS250	64160047
	64150012	64150021				UTS150LT FTU 100A 3P & HANDLE,REH2-S-12,UTS250	64160048
	64160020	64160015				UTS150LT ATU 125A 3P & HANDLE,REH2-S-12,UTS250	64160049
	64160021	64160016				UTS150LT ATU 150A 3P & HANDLE,REH2-S-12,UTS250	64160050
	64160022	64160017	Built-in LCD keypad	Built-in DC Reactor	NO	UTS250LT FTU 175A 3P & HANDLE,REH2-S-12,UTS250	64160051
	64160023	64160018				UTS250LT FTU 225A 3P & HANDLE,REH2-S-12,UTS250	64160052
	64160024	64160019					
						NONE	

Three Phase 525 ~ 600 VAC (-15% ~ +10%)

UL Three Phase Ratings				Model Number	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	
Normal Duty(VT)110% for 60 seconds		Heavy Duty(VT)120% for 60 seconds						
HP	Output Current (Amps)	HP	Output Current					
7.5	9	5	6.6	LSLV0055H100-5CEND(PLUS)	67320005PL	7.1X18.9X8.1	20.9	
10	12	7.5	9	LSLV0075H100-5CEND(PLUS)	67320006PL		21.2	
15	17	10	12	LSLV0110H100-5CEND(PLUS)	67320007PL		21.9	
20	23	15	17	LSLV0150H100-5CEND(PLUS)	67320008PL		22.1	
25	27	20	23	LSLV0185H100-5CEND(PLUS)	67320009PL		22.4	
30	34	25	27	LSLV0220H100-5CEND(PLUS)	67320010PL	8.7X21.7X8.8	31.5	
40	43	30	34	LSLV0300H100-5CEND(PLUS)	67320011PL		32.3	
50	55	40	43	LSLV0370H100-5COND(PLUS)	67320012PL	10.8X17.7X11.2	55.1	
60	64	50	55	LSLV0450H100-5COND(PLUS)	67320013PL	12.8X20.1X11.2	74.1	
75	80	60	64	LSLV0550H100-5COND(PLUS)	67320014PL		74.3	
100	104	75	80	LSLV0750H100-5COND(PLUS)	67320015PL	12.8X21.7X12.2	96.1	
125	128	100	104	LSLV0900H100-5COND(PLUS)	67320016PL		96.4	

Remote Cable with Keypad

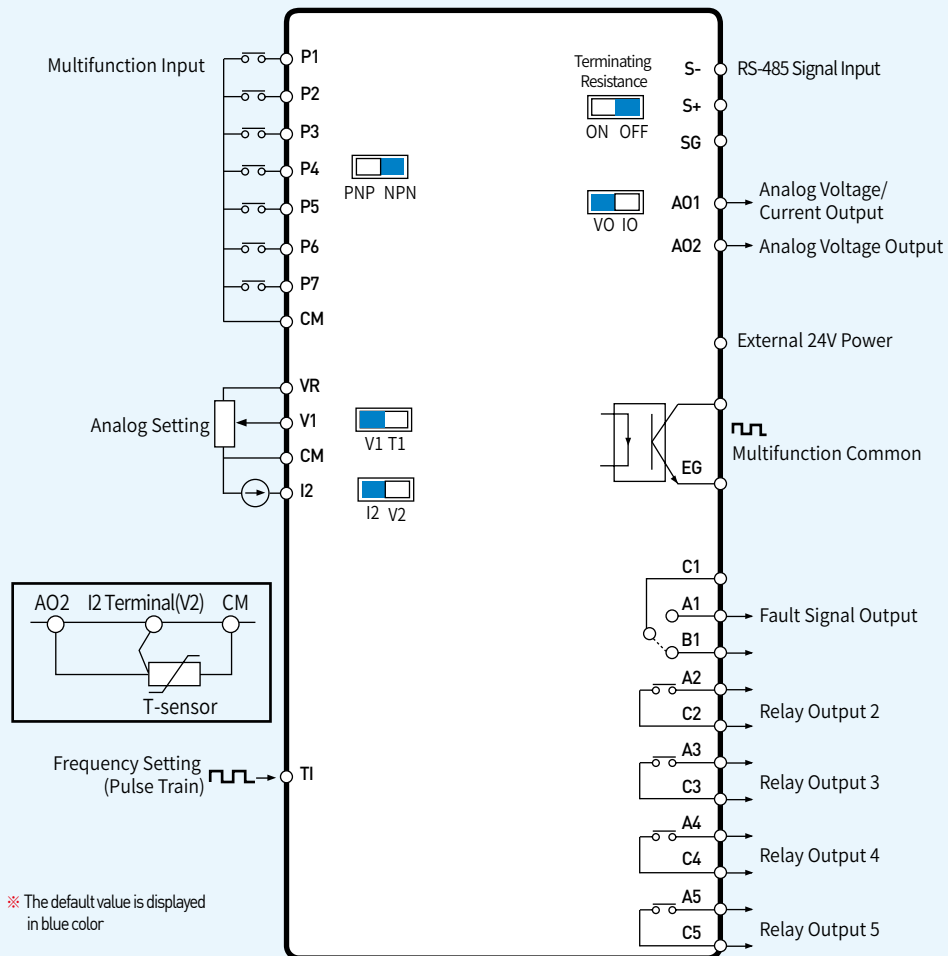
Length	Model Number	Order Code
6.6 ft	REMOTE 2M (LSLV-H100)	64110009PL
9.8 ft	REMOTE 3M (LSLV-H100)	64110010PL

Option

	Model Number	Order Code
LCD Keypad	OPTION (H100+ LCD LOADER), LCEN-H100PLUS	64160057PL
USB-RJ45 Cable	USB-RJ45 Cable for LSLV-H100	46310162
Extension I/O	Extension I/O for LSLV-H100	64160005
Lonwork	LonWorks for LSLV-H100	64160001
Ethernet IP & Modbus TCP	Ethernet IP & Modbus TCP for H100+ Series	64160056
BACnet IP, Ethernet IP & Modbus TCP	Ethernet IP & Modbus TCP for H100+ Series	64160058

	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data			Disconnect Switch Option
	Order Code	Order Code	Keypad	Reactor	Filter	OrderCode
	Comes with conduit box as a standard	Not applicable	Built-in LCD keypad	Built into conduit option	Yes	None
	64150010	64150019		Yes		
	64150011	64150020				
	64150012	64150021			No	

Wiring





IP20

- 3Ø 230V:1.0HP~100HP
- 3Ø 460V:1.0HP~600HP

IP54

- 3Ø 230V 1.0HP~30HP
- 3Ø 460V 1.0HP~30HP

iS7, a High-performance and High-reliability Drive

iS7 is a high-performing standard drive that is applicable to any working environment.



Powerful Sensorless Vector Control

Sensorless vector algorithms developed with our accumulated technologies that demonstrate powerful control of low-speed torque and speed accuracy are built-in.



Features

Various functions are supported including V/F control, V/F PG, slip compensation, KEB, Easy Start, auto tuning at pause and Flying Start



Applications

- | | | |
|----------------------|---------------------|---------------------|
| • Extruders | • Construction lift | • Press |
| • Laminating machine | • Crane/Hoist | • Washer/Dehydrator |
| • Drawing machine | • Parking equipment | • Compressor |
| • Tire line | • Winder | • Load Sharing |
| • Elevator | • Conveyor | |

Product Type & Model

SV **0008** **iS7** - **2** **N** **O** **F** **D**

LS Drive
Starvert Series

Motor Capacity
0008: 0.75kW ~3750: 375kW

Series Name

Input Voltage
2: 3Ø 200~230V / 4: 3Ø 380~480V

Keypad
N: Non-Keypad / G: Graphic Keypad

UL Standard
O: Open / E: Enclosed UL Type 1 / P: Enclosed UL Type 12

Filter
Blank: Non-Filter / F: Built-in EMC Filter

DC Reactor
Blank: Non-DC Reactor / D: Built-in DC Reactor / R: DB Resistor (Inner mounted)



ISO9001 ISO14001

Main Features

Features	Description	Benefits
Powerful Control Performance	Sensor-less vector control, sensed control, and auto tuning	Improved accuracy in speed and torque control
Safety Card	2-channel STO (Safety Torque Off) For smaller iSTs (200HP and less), you must order from the factory with the safety option. The safety card can be field installed on iSTs (250HP and up).	Satisfies the safety standards with complete safety function provided
Various Field Networks	Profibus-DP, Ethernet IP, Modbus TCP, CANopen, PROFINET, CC link, RAPIEnet, LonWorks, R-Net/F-Net communication network options	Possible to handle various field networks; convenient maintenance of options board; and easier mounting
EMC Filter	200V/400V 0.75~22kW capacity EMC filter built-in product options	Reduced electromagnetic noise; and additional space and expenses for parts unnecessary
DC Reactor	Capacity with built-in reactors ※ 200V 0.75~22kW ※ 400V 0.75~220kW	Improved power factor, and THD reduction
Application-customized Functions	Web function (wire-drawing machine) S/W option; position and synchronization control option; and classification option	Flexibility for application used in various industrial sectors

Control

Control Mode	V/F, V/F PG, Slip compensation, Sensorless, Vector control
Frequency Setting Resolution	Digital command: 0.01Hz / Analog command: 0.06Hz (peak frequency: 60Hz)
Frequency Level	Digital command operation: 0.01% of the peak output frequency / Analog command operation: 0.1% of the peak output frequency
V/F Pattern	Linear, square torque reduction, user V/F
Overload Tolerance	CT (Heavy Duty) current rating: 150% 1min / VT (Normal Duty) current rating: 110% 1min
Torque Boost	Passive torque boost; auto torque boost

Operation

Operation Mode		Keypad / Terminal Block / Communication Network options
Frequency Setting		Analog method: 0 ~ 10 (V), -10 ~ 10 (V), 0 ~ 20 (mA) Digital method: Keypad
Operation Function		PID control; up-down operation; 3-wire operation; DC braking; frequency limit; frequency jump; secondary function; slip compensation; reverse rotation prevention; auto restart; power switching; auto tuning; speed search (Flying Start); energy buffering operation; Power Braking; Flux Braking; leakage-reduced operation; MMC; Easy Start
Input	Multifunctional Terminal (8 inputs) P1 ~ P8 Note 1)	NPN (Sink) / PNP (Source) Options
		Function: Forward operation; backward operation; reset; external trip; emergency trip; jog operation; switching frequency – high, middle, low; acceleration and deceleration by stage – high, middle, low; DC braking at pause; second motor option; frequency increase; frequency decline; 3-wire operation; switching to the general operation during PID operation; switching to body operation during option operation; analog command fixed frequency; acceleration or deceleration stop
Output	Multifunctional Open Collector Terminal	DC 26V 100mA or below
	Multifunctional Relay Terminal	Fault output and drive operation mode output (N.O., N.C.) AC 250V 1A or below, DC 30V 1A or below
	Analog Output	0 ~ 10 Vdc (20mA or below): Frequency, current, voltage, DC voltage options

Note 1) According to the parameter setting of IN-65~72, various functions related to multifunctional terminal can be set.

Three Phase 200 ~ 240 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings						Model Number	
Heavy Duty(CT)150% for 60 seconds		Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	Normal Duty(VT) Single Phase Input		Normal Duty(VT) 3 Phase Output		
HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Amps	Amps	HP	Amps	Amps		
1	5.0	2	8.0	0.5	4.3	2.6	0.75	6.8	4.1	SV0008IS7-2NOFD	
2	8.0	3	12.0	0.75	6.9	4.0	1	10.6	6.0	SV0015IS7-2NOFD	
3	12.0	5	16.0	1.5	11.2	6.2	2	14.9	8.2	SV0022IS7-2NOFD	
5	16.0	7.5	24.0	2	14.9	8.1	3	21.3	12.0	SV0037IS7-2NOFD	
7.5	24.0	10	32.0	3	22.1	12.0	5	28.6	16.0	SV0055IS7-2NOFD	
10	32.0	15	46.0	5	28.6	16.0	7.5	41.2	23.0	SV0075IS7-2NOFD	
15	46.0	20	60.0	7.5	44.3	24.0	10	54.7	31.0	SV0110IS7-2NOFD	
20	60.0	25	74.0	10	55.9	31.0	10	69.7	38.0	SV0150IS7-2NOFD	
25	74.0	30	88.0	10	70.8	38.0	15	82.9	45.0	SV0185IS7-2NOFD	
30	88.0	40	124.0	15	85.3	45.0	20	116.1	64.0	SV0220IS7-2NOFD	
40	116.0	50	146.0	20	121	60.0	25	152.0	75.0	SV0300IS7-2SO	
50	146.0	60	180.0	25	154	75.0	30	190.0	93.0	SV0370IS7-2SO	
60	180.0	75	220.0	30	191	93.0	40	231.0	114.0	SV0450IS7-2SO	
75	220.0	100	288.0	40	233	114.0	50	302.0	149.0	SV0550IS7-2SO	
100	288.0	125	345.0	50	305	149.0	60	362.0	178.0	SV0750IS7-2SO	

Three Phase 380 ~ 480 VAC (-15% ~ +10%)

UL Three Phase Ratings				UL Single Phase Ratings						Model Number	
Heavy Duty(CT)150% for 60 seconds		Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	Normal Duty(VT) Single Phase Input		Normal Duty(VT) 3 Phase Output		
HP	Output Current (Amps)	HP	Output Current (Amps)	HP	Amps	Amps	HP	Amps	Amps		
1	2.5	2	4.0	0.5	2.2	1.4	0.75	3.7	2.2	SV0008IS7-4NOFD	
2	4.0	3	6.0	0.75	3.6	2.1	1	5.7	3.2	SV0015IS7-4NOFD	
3	6.0	5	8.0	1	5.5	2.8	2	7.7	4.1	SV0022IS7-4NOFD	
5	8.0	7.5	12.0	2	7.5	4.1	3	11.1	6.1	SV0037IS7-4NOFD	
7.5	12.0	10	16.0	3	11	6.1	5	14.7	8.1	SV0055IS7-4NOFD	
10	16.0	15	24.0	5	14.4	8.1	5	21.9	12.0	SV0075IS7-4NOFD	
15	24.0	20	30.0	7.5	22	12.0	7.5	26.4	16.0	SV0110IS7-4NOFD	
20	30.0	25	39.0	10	26.6	16.0	10	35.5	20.0	SV0150IS7-4NOFD	
25	39.0	30	45.0	10	35.6	20.0	15	41.1	23.0	SV0185IS7-4NOFD	
30	45.0	40	61.0	15	41.6	23.0	20	55.7	31.0	SV0220IS7-4NOFD	
40	61.0	50	75.0	20	55.5	32.0	25	67.5	39.0	SV0300IS7-4NOD	
50	75.0	60	91.0	25	67.9	39.0	30	81.7	47.0	SV0370IS7-4NOD	
60	91.0	75	110.0	30	82.4	47.0	40	101.8	57.0	SV0450IS7-4NOD	
75	110.0	100	152.0	40	102.6	57.0	50	143.6	78.0	SV0550IS7-4NOD	
100	152.0	125	183.0	50	143.4	78.0	60	173.4	94.0	SV0750IS7-4NOD	
125	183.0	150	223.0	60	174.7	95.0	75	212.9	116.0	SV0900IS7-4SOD	
150	223.0	200	264.0	75	213.5	116.0	100	254.2	138.0	SV1100IS7-4SOD	
200	264.0	250	325.0	100	255.6	134.0	125	315.3	165.0	SV1320IS7-4SOD	
250	325.0	300	370.0	125	316.3	166.0	150	359.3	189.0	SV1600IS7-4SOD	
300	370.0	350	432.0	-	-	-	-	-	-	SV1850IS7-4SOD	
350	432.0	400	547.0	-	-	-	-	-	-	SV2200IS7-4SOD	
400	547.0	500	613.0	-	-	-	-	-	-	SV2800IS7-4SO	
500	613.0	600	731.0	-	-	-	-	-	-	SV3150IS7-4SO	
600	731.0	700	877.0	-	-	-	-	-	-	SV3750IS7-4SO	

	Order Code	Dimensions(in) H x W x D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data		
				Order Code	Order Code	Keypad	Reactor	Filter
	6120000100	5.9 X 11.2 X 7.9	12.1	64110016	64110027	NO	Built-in DC Reactor	Built-in EMC Filter
	6120000200							
	6120000300							
	6120000400							
	6120000500	7.9 X 14.0 X 8.9	22.0	64110017	64110029			
	6120000600							
	6120000700	9.8 X 15.2 X 11.2	44.1	64110018	64110030			
	6120000800							
	6120000900	11 X 18.2 X 11.7	66.1	64110019	64110031			
	6120001000							
	6120005200	11.8 X 22.4 X 10.4	65.0	64110040	Not Available	Built-in LCD Keypad	NO	NO
	6120005300	14.6 X 24.8 X 11.1	97.0	64110041				
	6120005400							
	6120005500	18.3 X 29.5 X 14.0	159.8	64110042				
	6120005600							

	Order Code	Dimensions(in) H x W x D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Flange Mount Kit Heat Sink Out the Back	Additional Data		
				Order Code	Order Code	Keypad	Reactor	Filter
	6121000100	5.9 X 11.2 X 7.9	12.1	64110016	64110027	NO	Built-in DC Reactor	Built-in EMC Filter
	6121000200							
	6121000300							
	6121000400							
	6121000500							
	6121000600	7.9 X 14.0 X 8.9	22.0	64110017	64110029			
	6121000700	9.8 X 15.2 X 11.2	44.1	64110018	64110030			
	6121000800							
	6121000900	11 X 18.2 X 11.7	66.1	64110019	64110032			
	6121001000							
	6121001100	11.8 X 23.4 X 11.9	90.4	64110020	64110033			
	6121001200							
	6121001300	14.6 X 26.1 X 14.7	138.9	64110021	64110034			
	6121001400							
	6121001500							
	6121005100	20.1 X 30.9 X 16.7	222.7	6411006463	64110053	Built-in LCD Keypad	NO	
	6121005200							
	6121005300	20.1 X 33.9 X 16.7	251.3					
	6121005400							
	6121014900	27.2 X 42.4 X 17.7	440.9	6411006563	64110054			
	6121015000	30.4 X 44.8 X 17.3	555.6	6411006663	Not Available			
	6121015100							
	6121015200	36.3 X 51.3 X 19.5	776.0	6411006763		NO		
	6121015300							

Three Phase 200 ~ 240 VAC (-15% ~ +10%)

UL Three Phase Ratings		UL Single Phase Ratings						Model Number	
Heavy Duty(CT)150% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	Normal Duty(VT) Single Phase Input		Normal Duty(VT) 3 Phase Output		
HP	Output Current (Amps)	HP	Amps	Amps	HP	Amps	Amps		
1	5.0	0.5	4.3	2.6	0.75	6.8	4.1	SV0008IS7-2SP	
2	8.0	0.75	6.9	4.0	1	10.6	6.0	SV0015IS7-2SP	
3	12.0	1.5	11.2	6.2	2	14.9	8.2	SV0022IS7-2SP	
5	16.0	2	14.9	8.1	3	21.3	12.0	SV0037IS7-2SP	
7.5	24.0	3	22.1	12.0	5	28.6	16.0	SV0055IS7-2SP	
10	32.0	5	28.6	16.0	7.5	41.2	23.0	SV0075IS7-2SP	
15	46.0	7.5	44.3	24.0	10	54.7	31.0	SV0110IS7-2SP	
20	60.0	10	55.9	31.0	10	69.7	38.0	SV0150IS7-2SP	
25	74.0	10	70.8	38.0	15	82.9	45.0	SV0185IS7-2SP	
30	88.0	15	85.3	45.0	20	116.1	64.0	SV0220IS7-2SP	

Three Phase 380 ~ 480 VAC (-15% ~ +10%)

UL Three Phase Ratings		UL Single Phase Ratings						Model Number	
Heavy Duty(CT)150% for 60 seconds		Heavy Duty(CT) Single Phase Input		Heavy Duty(CT) 3 Phase Output	Normal Duty(VT) Single Phase Input		Normal Duty(VT) 3 Phase Output		
HP	Output Current (Amps)	HP	Amps	Amps	HP	Amps	Amps		
1	2.5	0.5	2.2	1.4	0.75	3.7	2.2	SV0008IS7-4SP	
2	4.0	0.75	3.6	2.1	1	5.7	3.2	SV0015IS7-4SP	
3	6.0	1	5.5	2.8	1.5	7.7	4.1	SV0022IS7-4SP	
5	8.0	2	7.5	4.1	3	11.1	6.1	SV0037IS7-4SP	
7.5	12.0	3	11	6.1	3	14.7	8.1	SV0055IS7-4SP	
10	16.0	5	14.4	8.1	5	21.9	12.0	SV0075IS7-4SP	
15	24.0	7.5	22	12.0	7.5	26.4	16.0	SV0110IS7-4SP	
20	30.0	10	26.6	16.0	10	35.5	20.0	SV0150IS7-4SP	
25	39.0	10	35.6	20.0	10	41.1	23.0	SV0185IS7-4SP	
30	45.0	15	41.6	23.0	15	55.7	31.0	SV0220IS7-4SP	

	Order Code	Dimensions(in) H x W x D	Approx. Weight (lbs.)	Frame Size	Additional Data		
					Keypad	Reactor	Filter
	6120004100	8.0 X 16.5 X 8.2	14.8	1 (NEMA12)	Built-in 7 segment LED keypad	NO	NO
	6120004200						
	6120004300						
	6120004400						
	6120004500	10.0 X 18.1 X 9.1	20.9	2 (NEMA12)			
	6120004600		21.2				
	6120004700	12.3 X 23.3 X 11.6	43.2	3 (NEMA12)			
	6120004800		43.9				
	6120004900	13.5 X 22.5 X 12.4	65.9	4 (NEMA12)			
	6120005000		59.7				

	Order Code	Dimensions(in) H x W x D	Approx. Weight (lbs.)	Frame Size	Additional Data		
					Keypad	Reactor	Filter
	6121007100	8.0 X 16.5 X 8.2	14.8	1 (NEMA12)	Built-in 7 segment LED keypad	NO	NO
	6121007200						
	6121007300						
	6121007400						
	6121007500	10.0 X 18.1 X 9.1	20.9	2 (NEMA12)			
	6121007600		21.2				
	6121007700	12.3 X 23.3 X 11.6	43.2	3 (NEMA12)			
	6121007800		43.9				
	6121007900	13.5 X 22.5 X 12.4	65.9	4 (NEMA12)			
	6121008000		59.7				

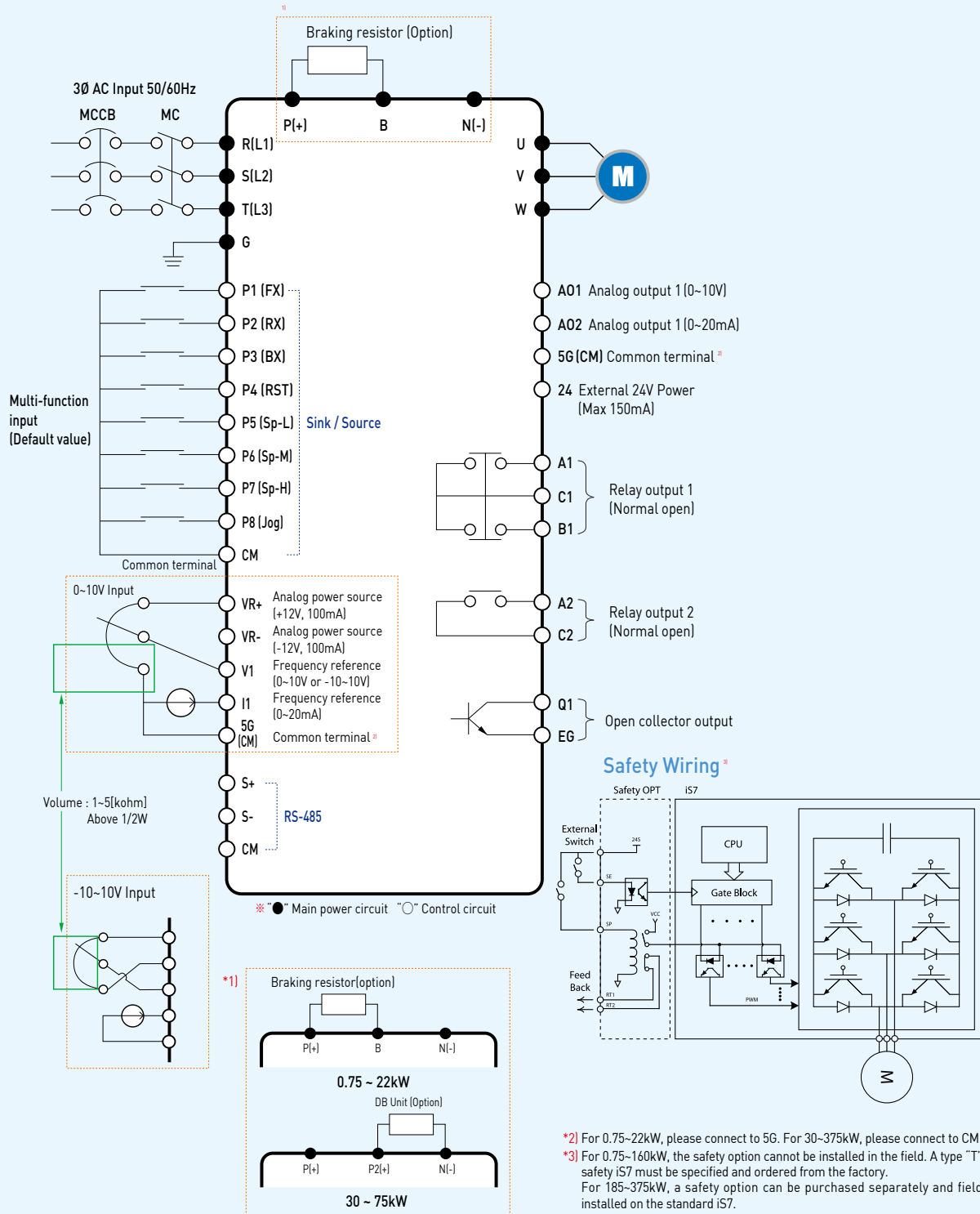
Remote Cable with Keypad

Length	Model Number	Order Code
6.6 ft	REMOTE 2M (SV-iS7)	64110009
9.8 ft	REMOTE 3M (SV-iS7)	64110010

Option

	Model Number	Order Code
LCD Keypad	LCD Keypad for SV-iS7	64110038
RS232C-RJ45 Cable	RS232C-RJ45 Cable for SV	76676236322
Isolation I/O	OPTION ISOLATION I/O,SV-iS7	64110003
Extension I/O	OPTION EXTENSION I/O,SV-iS7	64110004
Encoder	ENCODER OPTION,SV-iS7	64110002
CC-Link	OPTION CC-Link,SV-iS7	64110023
Ethernet I/P dual port	OPTION RAPIENET+,SV-iS7,(CI-S7M2),HKMC	64110068HD
Profibus-DP	OPTION PROFIBUS-DP,SV-iS7	64110005
PLC	OPTION PLC,SV-iS7	64110006
RNET	OPTION RNET/FNET(CR-S7M1),SV-iS7	64110007
Devicenet	OPTION DEVICENET,SV-iS7	64110013
Lonworks	OPTION LONWORKS,SV-iS7	64110014
CANopen	OPTION CANopen,SV-iS7	64110012
Profinet	OPTION PROFINET,SV-iS7,(CJ-S7M1)	64110052

Wiring



NEW



- 3Ø 230V:7.5HP~40HP
- 3Ø 460V:7.5HP~75HP



OSHDPD

New SP100, VFD Packaged Solution for Variable Torque Fan and Pump Applications

HVAC applications are optimized with the H100+ Bypass. The bypass series offers security with no downtime and energy savings using the H100+ VFD. The New SP100 provides new various features with H100+.



Features

- 3 Contactor Bypass
- HAND/OFF/AUTO selectable
- Compact Size Built-in AC/DC Reactor (Option)
- Easy Wiring and Installation
- Built-in Operation Indicator
- Auto Bypass Function
- Motor OL Trip Detection
- Easy Maintenance
- Built in Bacnet MS/TP, Modbus and Modbus Protocols
- NEMA 1 Enclosure
- KEB, Kinetic Energy Buffering
- Fire Mode
- Built-in Five Relay Outputs
- Real Time Clock



Applications

- All HVAC Applications

Product Type & Model

LSLV - ##### - SP100 - # C E X X 3

Product Type Prefix

Horsepower Rating

0055 = 5.5kW(2-7.5HP) 0220 = 22kW(30HP)
 0075 = 7.5kW(10HP) 0300 = 30kW(40HP)
 0110 = 11kW(15HP) 0370 = 37kW(50HP)
 0150 = 15kW(20HP) 0450 = 45kW(60HP)
 0185 = 18.5kW(25HP) 0550 = 55kW(75HP)

Series Name

Input Voltage

2 = 208VAC / 230VAC, 3-Phase, 60Hz
 4 = 460VAC, 3-Phase, 60Hz

LCD Keypad

Enclosure

UL Type 1

EMC Filter

F = Built-in EMC Filter (C3 type filter / Only available for 460V, 2~40hp)
 N = No EMC Filter

Reactor Type

D = DC Link Reactor (Provided as Standard) / Model for the Quick Ship Program
 A = 3% Impedance AC Line Reactor

Configuration

3 = 3 contactor Basic Bypass

Environmental

Enclosure	Type 1
Ambient Temperature	+14°F to +104°F (-10°C to +40°C)
Storage Temperature	-4°F to +149°F (-20°C to +65°C)
Humidity	5% to 95% with no condensation
Altitude	0 to 3,300 ft. (1,000m) without derating, derate output current by 1% for each additional 330 ft (100m)

Codes and Standards

UL, cUL Listed per UL508A
Conforms to applicable NEMA ICS, NFPA, & IEC Standards

Electrical

Input Voltage: Nominal - Phase	208VAC, 230VAC, 460VAC - 3 Phase
Input Voltage: Tolerance, Unbalance	+/-10%, ≤3%
Input Frequency	60Hz +/-5%
Displacement Power Factor	≥0.97
Output Frequency	0.00 ~ 400.00Hz
Motor Control Method	V/F, Slip compensation
PWM Switch Frequency	1 ~ 15kHz (2~ 40HP) 1 ~ 10kHz (50 ~ 75HP)
Drive Overload Capacity	120% for 1 min - 208V/230V: 2~25HP, 460V: 2~75HP
Motor Overload	Programmable overload / EMPR
Torque Boost	Manual 0~15% boost, automatic torque boost available
Speed Reference	Keypad, 0~10V, -10~10V, 0~20mA, RS485, Fieldbus, Pulse - 208V/230V: 2~25HP, 460V: 2~75HP
Speed Reference Resolution	Digital command: 0.01Hz Analog command: 0.06Hz (60Hz standard)
Acceleration/Deceleration Time	0.00 ~ 6000.0 seconds
Jump Frequencies	3 programmable jump frequency
Output Signals	Qty 4: N.O. dry contacts rated 5A @ 230V max, functionality: Drive Run, Drive Fault, Bypass Run, & Damper Control Qty 1: Open Collector rated 50mA @ 26VDC max, functionality: Drive Run Qty 1: Form C dry contacts rated 2A @ 230V max, functionality: Drive Fault Qty 1: 0 to 10VDC or 4 to 20mA, user selectable programmable analog signal

Main Features

Soft Fill	Prevents pump damage caused by dramatic pressure changes during initial operation.
Start/End Ramp	Prevents pump damage by changing the acceleration and deceleration ramp profile during initial pump operation and stop.
Decel Valve Ramp	Prevents pump or pipe damage caused by sudden pressure changes when pumps are stopped or valves are closed.
Scheduling (Time Event: Real Time Clock)	Real Time Clock allows sequencing of selected functions during pre-defined time periods.
Flow Compensation	Compensates for hydraulic losses due to elevation or long pipe lengths.
Pump Clean	Removes foreign substances from the pump cavity to extend life and improve efficiency.
Load Tuning	Establishes load curves (current & power) to define load characteristics for under torque and pump clean functions.
Fire Mode	Operates continuously to protect critical systems during emergency situations under set frequency and direction.
Energy Savings Display	Commercial energy consumption is compared to the energy utilized by the VFD to calculate the amount energy savings.
Power-On Resume	Automatic restart upon power interruption.
Sleep, Sleep Boost, Wake-up	Standby mode during PID operation for energy savings and reduction of pump wear.
Auto Torque Boost	Manual or automatic voltage compensation for varying load profiles.
Lubrication Control	Lubrication output signal for a defined time period prior to drive control starting.
Damper Control	Damper control with end-switch confirmation with programmable time period.
Level Detection	User defined low and high detection limits based upon voltage, current or feedback.
Pipe Break Detection	Upon PID operation, pipe breakage or leakage is detected to display a warning or fault condition.
Underload Detection	No flow or pump dry detection with selectable response.
Motor Pre-heat	Prevents condensation in the motor by injecting direct current during idle states.
Kinetic Energy Buffering	Upon loss or momentary power interruption, the drive maintains DC bus voltage by controlled regeneration of the load.
Macro Setting	Application specific parameter groups for commonly used functions.
Bypass Features	Manual bypass selection.
	Automatic transfer to bypass.
	Bypass run indication.
	Motor overload indication.
	Power on indication.
	Hand/Off/Auto selector switch.
	VFD/Off/Bypass selector switch.
	Adjustable trip class for bypass contactor.
	Damper end switch logic with notification.
	Drive and bypass input/output contactors.
	Drive input isolation contactor.
	Control power transformer with fusing.
	Five built-in relay outputs.
	Built-in DC reactor. / Built-in 3% AC Line reactor as an option.

Three Phase 200 ~ 240 VAC (-15% ~ +10%)

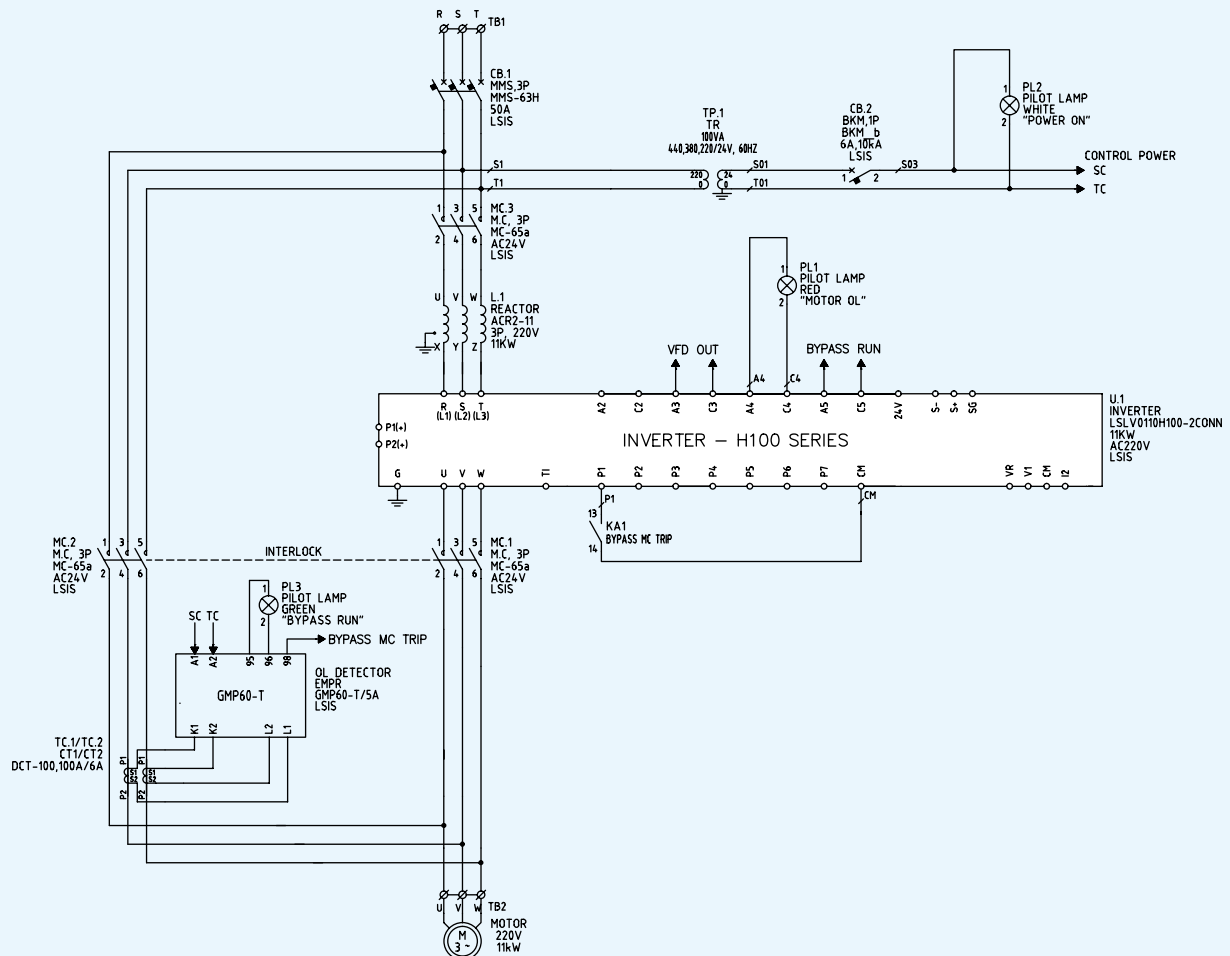
Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT)150% for 60 seconds		Model Number	Order Code	Dimensions(in) W x H x D	Approx. Weight (lbs.)	Additional Data		
HP	Output Current (Amps)	HP	Output Current (Amps)					Keypad	Reactor	Filter
7.5	22.0	5	17.0	LSLV0055SP100-2CEND(EXPORT)	6736001900	6.65 X 36.51 X 8.55	37.5	Built-in LED keypad	Built-in DC Reactor	NO
10	30.0	7.5	24.0	LSLV0075SP100-2CEND(EXPORT)	6736002000					
15	42.0	10	32.0	LSLV0110SP100-2CEND(EXPORT)	6736002100	8.26 X 46.41 X 10.27	81.6			
20	56.0	15	46.0	LSLV0150SP100-2CEND(EXPORT)	6736002200					
25	69.0	20	60.0	LSLV0185SP100-2CEND(EXPORT)	6736002300	9.83 X 51.65 X 11.33	97			
30	82.0	25	68.0	LSLV0220SP100-2CEND(EXPORT)	6736002400					
40	110.0	30	81.0	LSLV0300SP100-2CEND(EXPORT)	6736002500	13.27 X 57.48 X 13.53	157.2			

Three Phase 380 ~ 480 VAC (-15% ~ +10%)

Normal Duty(VT)120% for 60 seconds		Heavy Duty(CT)150% for 60 seconds		Model Number	Order Code	Dimensions(in) W x H x D	Approx. Weight (lbs.)	Additional Data								
HP	Output Current (Amps)	HP	Output Current (Amps)					Keypad	Reactor	Filter						
7.5	12.0	5	8.0	LSLV0055SP100-4CEFD(EXPORT)	6737003000	6.65 X 36.51 X 8.55	37.5	Built-in LED keypad	Built-in DC Reactor	Built-in EMC Filter						
10	16.0	7.5	12.0	LSLV0075SP100-4CEFD(EXPORT)	6737003100											
15	24.0	10	15.0	LSLV0110SP100-4CEFD(EXPORT)	6737003200											
20	30.0	15	22.0	LSLV0150SP100-4CEFD(EXPORT)	6737003300	8.26 X 46.41 X 10.27	81.6									
25	38.0	20	28.0	LSLV0185SP100-4CEFD(EXPORT)	6737003400											
30	45.0	25	35.0	LSLV0220SP100-4CEFD(EXPORT)	6737003500	9.83 X 51.65 X 11.33	97									
40	61.0	30	41.0	LSLV0300SP100-4CEFD(EXPORT)	6737003600											
50	75.0	40	55.0	LSLV0370SP100-4CEND(EXPORT)	6737003700	13.27 X 57.48 X 13.53	158.7			NO						
60	91.0	50	67.0	LSLV0450SP100-4CEND(EXPORT)	6737003800		180.8									
75	107.0	60	81.0	LSLV0550SP100-4CEND(EXPORT)	6737003900											

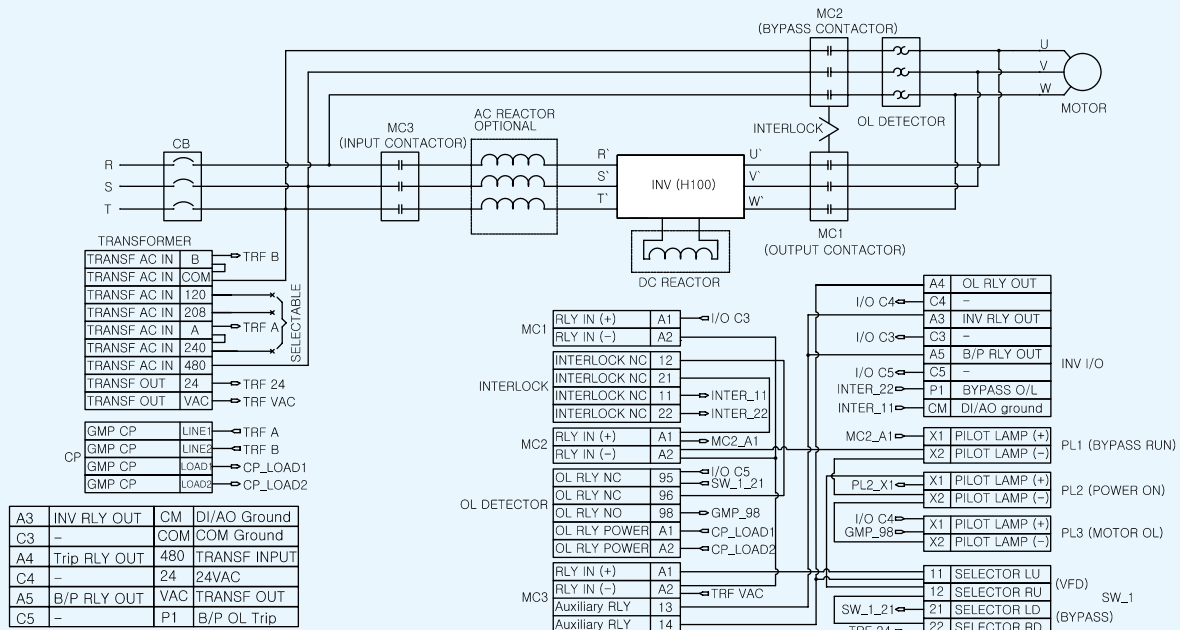
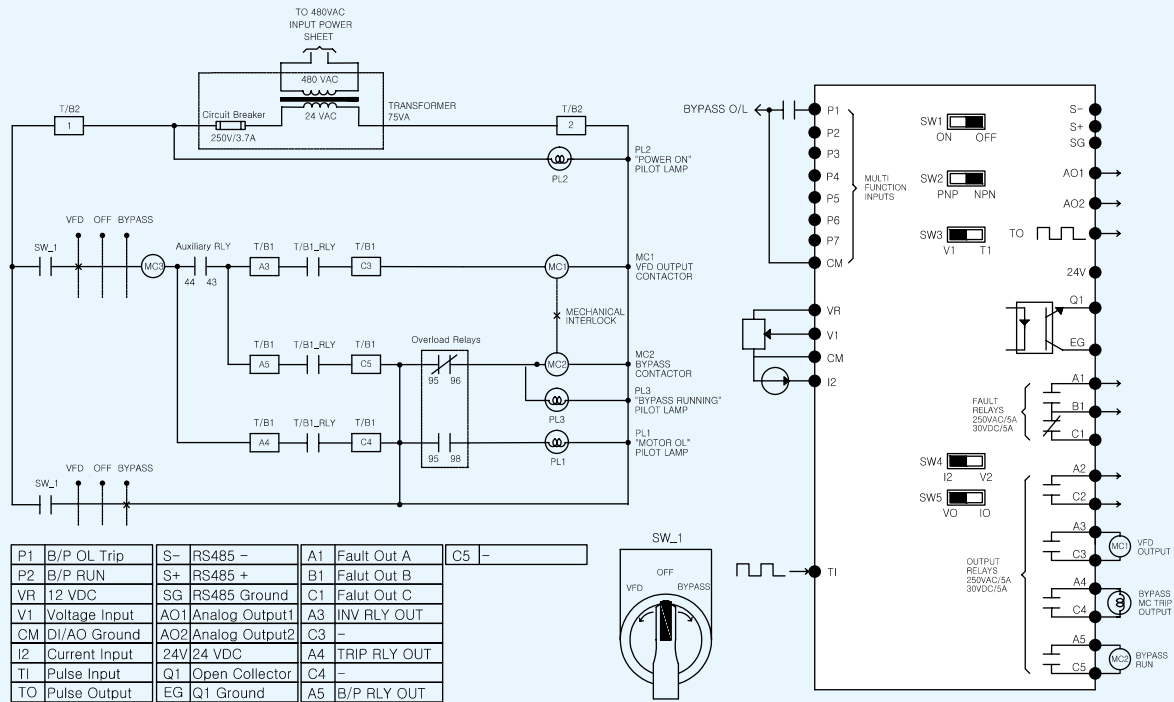
Wiring

Main



Wiring

Control Circuit Overview

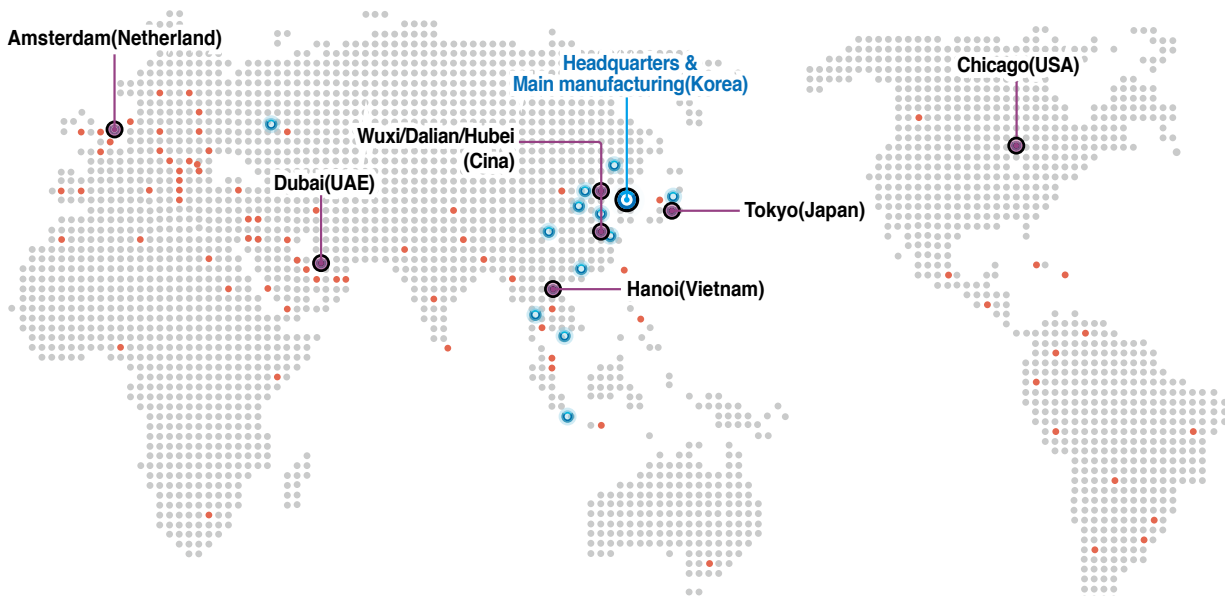


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Cheonan factory (Korea)



Busan factory (Korea)



PT&T (Testing laboratory)



Shanghai R&D Center



Wuxi factory (China)



Dalian factory (China)



Hanoi factory (Vietnam)



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.



www.lselectricamerica.com

■ Headquarter

LS-ro 127(Hogye-dong) Dongan-gu, Anyang-si, Gyeonggi-Do, 14119, Korea

■ Seoul Office

LS Yongsan Tower, 92, Hangang-daero, Yongsan-gu, Seoul, 04386, Korea

Tel: 82-2-2034-4644(Europe), 4982(USA), 4884(East Asia)

Fax: 82-2-2034-4588 E-mail: drivesales@ls-electric.com

■ LS ELECTRIC America Inc. (Chicago, USA)

625 Heathrow Drive, Lincolnshire, IL 60069 USA

Tel: 1-800-891-2941 E-mail: sales.us@lselectricamerica.com

■ Overseas Subsidiaries

• LS ELECTRIC Japan Co., Ltd. (Tokyo, Japan)

Tel: 81-3-6268-8241 E-mail: japan@ls-electric.com

• LS ELECTRIC (Dalian) Co., Ltd. (Dalian, China)

Tel: 86-411-8730-6495 E-mail: china.dalian@lselectric.com.cn

• LS ELECTRIC (Wuxi) Co., Ltd. (Wuxi, China)

Tel: 86-510-6851-6666 E-mail: china.wuxi@lselectric.com.cn

• LS ELECTRIC Middle East FZE (Dubai, U.A.E.)

Tel: 971-4-886-5360 E-mail: middleeast@ls-electric.com

• LS ELECTRIC Europe B.V. (Hoofddorp, Netherlands)

Tel: 31-20-654-1424 E-mail: europartner@ls-electric.com

• LS ELECTRIC Türkiye Co., Ltd.

Tel: 90-212-806-1225 E-mail: Türkiye@ls-electric.com

■ Overseas Branches

• LS ELECTRIC Tokyo Office (Japan)

Tel: 81-3-6268-8241 E-mail: tokyo@ls-electric.com

• LS ELECTRIC Beijing Office (China)

Tel: 86-10-5095-1631 E-mail: china.auto@lselectric.com.cn

• LS ELECTRIC Shanghai Office (China)

Tel: 86-21-5237-9977 E-mail: china.auto@lselectric.com.cn

• LS ELECTRIC Guangzhou Office (China)

Tel: 86-20-3818-2883 E-mail: china.auto@lselectric.com.cn

• LS ELECTRIC Chengdu Office (China)

Tel: 86-28-8670-3201 E-mail: china.auto@lselectric.com.cn

• LS ELECTRIC Qingdao Office (China)

Tel: 86-532-8501-2065 E-mail: china.auto@lselectric.com.cn

• LS ELECTRIC Nanjing Office (China)

Tel: 86-25-8467-0005 E-mail: china.auto@lselectric.com.cn

• LS ELECTRIC Bangkok Office (Thailand)

Tel: 66-90-950-9683 E-mail: thailand@ls-electric.com

• LS ELECTRIC Jakarta Office (Indonesia)

Tel: 62-21-2933-7614 E-mail: indonesia@ls-electric.com

• LS ELECTRIC Moscow Office (Russia)

Tel: 7-499-682-6130 E-mail: info@lselectric-ru.com

• LS ELECTRIC America Western Office (Irvine, USA)

Tel: 1-949-333-3140 E-mail: america@ls-electric.com

• LS ELECTRIC Italy office (Italy)

Tel: 39-030-8081-833 E-mail: italia@ls-electric.com

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