Beyond X™

LV Drive Series

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



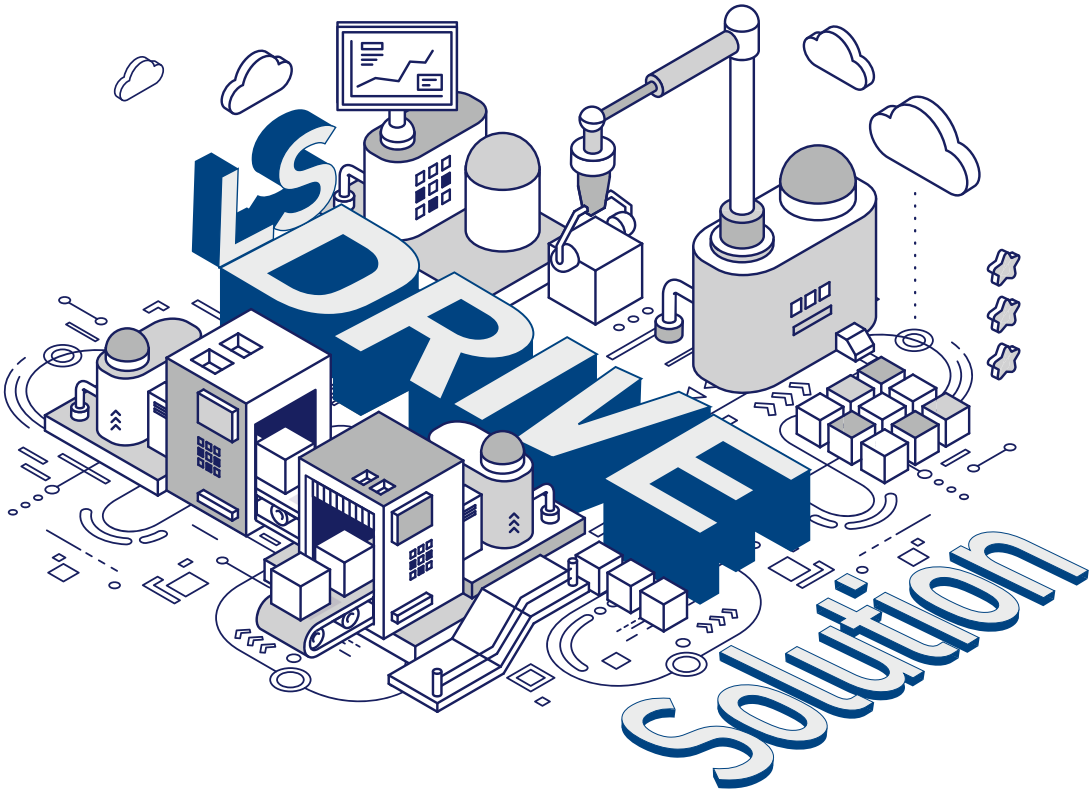
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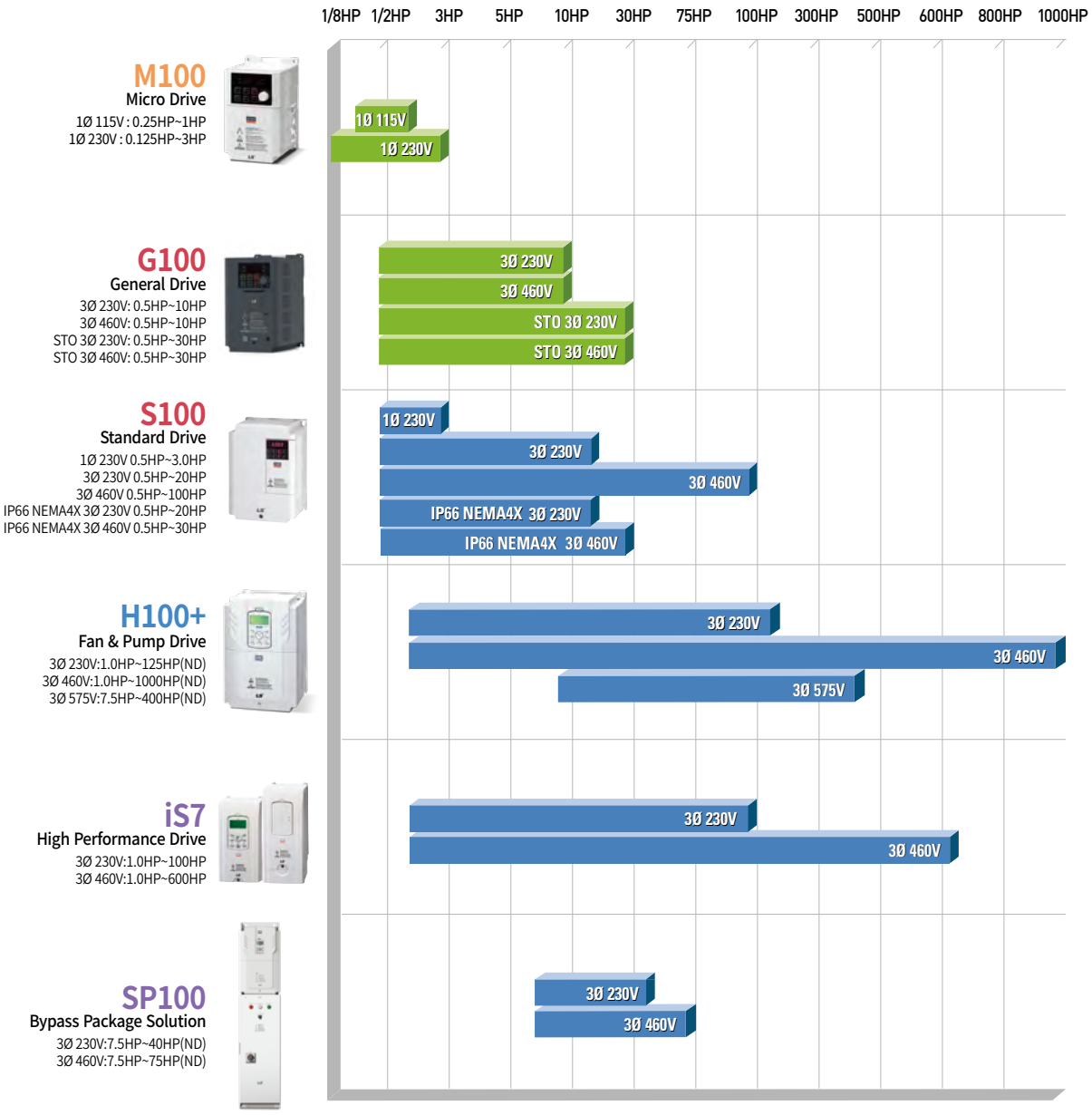


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LS Drive at a Glance

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	
		Advanced I/O	G100	G100 Safety
Voltage & Capacity		1Ø 115V : 0.25~1HP 1Ø 230V : 0.125~3HP	3Ø 230V: 0.5~10HP 3Ø 460V: 0.5~10HP	3Ø 230V 0.5~30HP 3Ø 460V 0.5~30HP
Control Method	V/F Control	Standard	Standard	
	Sensor-less Vector	-	Standard	
	Sensored Vector	-	-	
Overload Capacity *CT; Constant Torque *VT; Variable Torque *HD; Heavy Duty, *ND; Normal Duty		CT(HD): Rated Current 150%/1min	CT(HD): Rated Current 150%/1min VT(ND): Rated Current 120%/1min	
Input Terminal	Multifunction Terminal	5 Inputs (P1~P5)	5 Inputs (P1~P5)	8 Inputs (P1~P8)
	Analog Input (Current)	-	1 Input (0~20mA)	1 Input (0~20mA)
	Analog Input (Voltage)	1 Input (0~10V)	1 Input (0~10V)	1 Input (0~10V)
Output Terminal	Relay Output	2 Outputs (5 ports)	2 Outputs (5 ports)	2 Inputs (5 ports)
	Open Collector Output	-	-	-
	Analog Output	1 Output (0~10V)	1 Output (0~10V)	2 Outputs (0~10V, 0~20mA)
Enclosure Class		IP20	0.5~30HP: IP20 (Standard), UL Type 1 (Option)	
Keypad		LED 7-segment	LED 7-segment	
Remote Cable		1m/2m /3m /5m	1m/2m/3m/5m	
Braking Unit		Standard built-in (2~3HP)	Standard built-in (0.5~30HP)	
EMC Filter		Standard built-in (0.5~3HP)	Standard built-in (0.5~30HP)	
DC Reactor		-	-	
Communications	Built-in	Modbus RTU (Advanced I/O Standard built-in)	Modbus RTU	
	Options	-	CANopen, Profibus-DP, EtherNet/IP	
Cooling System		-	Forced air cooling by fan	
Ambient Temperature		Heavy Duty: 14–104°F (-10–50°C) / Normal Duty: 14–122°F (-10– 40°C) (2.5% /°C current derating at 40°C or above 75% ※ S100 IP66 models only support heavy duty, and an ambient temperature of between -10°C – +40°C.		
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		
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		

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	S100		H100+		SP100	iS7
	IP20(NEMA1)	IP66(NEMA4X)				
	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~1000HP 3Ø 575V:7.5HP~400HP		3Ø 200~240V 7.5~40HP 3Ø 380~480V 7.5~75HP	3Ø 230V:1.0~100HP 3Ø 460V:1.0~600HP
	Standard		Standard		Standard	Standard
	Standard		-		-	Standard
	-		-		-	Option
	CT(HD): Rated Current 150%/1min VT(ND): Rated Current 120%/1min		1~60HP (230V), 1~125HP (460V) CT(HD) 150%/1 min. VT(ND) 120%/1 min.	75~125HP (230V), 150~1000HP (460V), 7.5~400HP (575V) CT(HD) 150%/1 min. VT(ND) 110%/1 min.	CT(HD): Rated Current 150%/1min VT(ND): Rated Current 120%/1min	CT(HD): Rated current 150%/1min VT(ND): Rated current 110%/1min
	5 Inputs (P1~P5)		7 Inputs (P1~P7)		6 Inputs (P2~P7)	8 Inputs (P1~P8)
	1 Input (0~10V or 0~20mA)		1 Input(0~10V) 1 Input(0~10V or 0~20mA)		1 Input (-10~10V)	1 Input (0~20mA)
					1 Input(0~20mA)	1 Input (0~10V, -10V~+10V)
	1 Output (3 ports)		5 Outputs		2 Outputs	2 Outputs (5 ports)
	1 Output (2 ports)		1 Output		1 Output	1 Output (2 ports)
	1 Output (0~10V or 0~20mA) Note 1)		2 Outputs (0~10V or 0~20mA)		2 Outputs (0~10V or 0~20mA)	2 Outputs (0~10V, 0~20mA)
	0.5HP~100HP: IP20 (Standard), UL Type1 (Option)	0.5HP~30HP : IP66	1-300HP: IP20 (Standard), UL Type 1 (Option) 350-1000HP: IP00 (Standard), UL Type 1 (Option) 150-1000HP: Heatsink out the back(NEMA12)		IP21 (Standard)	200V class (1~30HP), 400V class (1~100HP) : IP20 200V class (40~100HP), 400V class 120~600HP: IP00
	LED 7-segment : 0.5~30HP LCD graphic : 40~100HP	LED 7-segment : 0.5~30HP	LCD Graphic		LCD Graphic	LCD Graphic
	1m/2m/3m/5m		1m/2m/3m/5m		1m/2m/3m/5m	1m/2m/3m/5m
	Standard built-in (0.5~30HP)	Standard built-in (0.5~30HP)	Standard built-in (1~40HP)		Standard built-in (1~40HP)	Standard built-in (0.5~30HP)
	Standard built-in (400V class 7.5~30HP)	-	Standard built-in (400V class 1~75HP) (400V class 150~1000HP)		Standard built-in (400V class 7.4~40HP)	Standard built-in (1~30HP)
	Standard built-in (400V class 40~100HP)	-	Standard built-in (400V class 50~1000HP)		Standard built-in (200V class 7.5~50HP) (400V class 7.5~75HP)	Standard built-in (200V class1~30HP) (400V class1~350HP)
	Modbus RTU		Modbus RTU, Metasys N2, BACnet MS/TP		Modbus RTU, Metasys N2, BACnet MS/TP	Modbus RTU
	Modbus TCP, EtherCAT, EtherNet/IP, PROFInet, Profibus-DP, CANopen		Ethernet/IP, BACnet/IP, Lonworks, Modbus TCP		Ethernet/IP, BACnet/IP, Lonworks, Modbus TCP	DeviceNet, Profibus-DP, Modbus TCP, R-Net, F-net, LonWorks, CC Link-IE, CANopen, EtherNet/IP, Profinet
	Forced air cooling by fan					

of the rated current operable at 50°C)

to 4,000m)

overheat, I/O phase open, overload protection, communication error, frequency command loss, hardware failure, cooling fan failure, no motor trip, etc.

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

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M100 Micro Drive



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

The Optimal compact drive is that 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

LSLV	0022	M100	-	1	E	O	F	N	A

LS Low Voltage Drive Series

Motor Capacity
0001: 0.1kW~0022: 2.2kW

Series Name

Input Voltage
S: 1Ø 100V-120V
1: 1Ø 200V-240V

Keypad
E: LED Keypad

UL Type
O: UL Open Type

EMC Filter
F: Built-in EMC Filter (C2)

Reactor
N: Non-Reactor

I/O
A: Advanced

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Main Features

Features	Description	Benefits
Micro Size	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%)

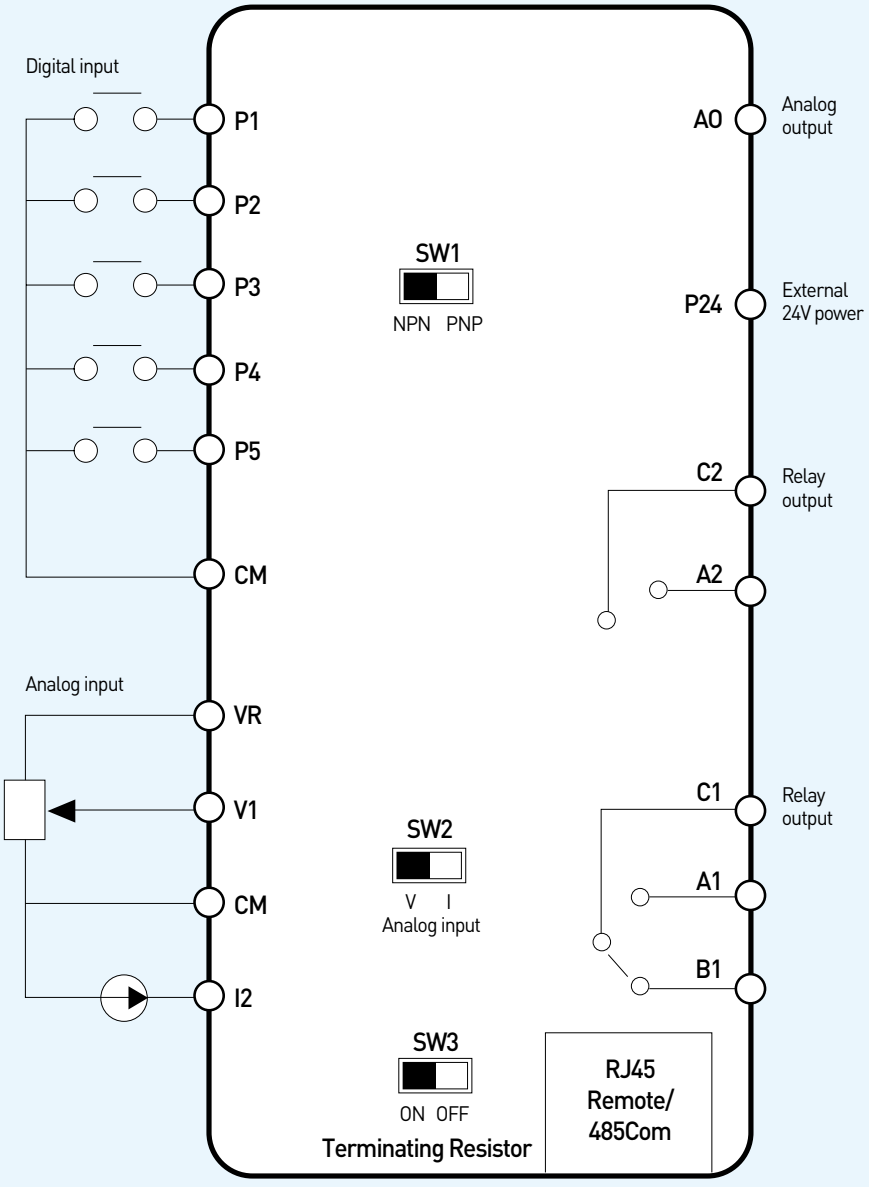
Heavy Duty(CT)150% for 60 seconds		Model Number	Order Code	Dimensions (in) WXHXD	Appox. Weight (lbs.)	Additional Data			
HP	Output Current					Keypad	Reactor	Filter	Potentiometer
0.125	0.8	LSLV0001M100-1EOFNA	66430007	3.3 X 5.7 X 3.9	1.5	Built-in 7 segment LED keypad	NO	Built-in EMC Filter	Built-in Potentiometer
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	11	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

M100 Micro Drive

Wiring



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Memo

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G100 General Drive



- 3Ø 230V: 0.5HP~10HP
- 3Ø 460V: 0.5HP~10HP
- STO 3Ø 230V: 0.5HP~30HP
- STO 3Ø 460V: 0.5HP~30HP

G100 Drive, a 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	T

LS Low Voltage Drive Series

Motor Capacity
0004: 0.4kW~0220: 22kW

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-EMC / F: Built-in EMC (C3)

Reactor
N: Non-Reactor

Safety
(blank): Non-safety / T: Safety

GOOD DESIGN

RoHS COMPLIANT

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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)
Safe Torque Off (STO)	Redundant safe input circuit standard; safe input function meets the following standards: • EN 61800-5-2:2017 SIL2 • EN ISO 13849-1:2023 Category 3, PL d • EN 61508:2010 SIL2	Satisfies the safety standards of systems with a built-in safety design

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~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/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	

Note 1) G100 provides 5 multifunction terminals and G100 STO provides 8 multifunction terminals.

G100 General Drive

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	

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	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							

G100 General Drive (Safety)

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	LSLV0004G100-2EONNT
1	5.0	2	6.0	0.5	2.8	0.75	3.6	LSLV0008G100-2EONNT
2	8.0	3	9.6	1	4.6	1	5.9	LSLV0015G100-2EONNT
3	11.0	5	12.0	1.5	6.1	1.5	6.7	LSLV0022G100-2EONNT
5	17.0	7.5	18.0	2	9.3	3	9.8	LSLV0040G100-2EONNT
7.5	24.0	10	30.0	3	12.8	5	16.3	LSLV0055G100-2EONNT
10	32.0	15	40.0	5	17.4	7.5	22	LSLV0075G100-2EONNT
15	47	20	56	7.5	26.8	10	31	LSLV0110G100-2EONNT
20	60	25	70	10	34	10	38	LSLV0150G100-2EONNT
25	75	30	82	10	41	15	45	LSLV0185G100-2EONNT
30	88	-	-	20	48	-	-	LSLV0220G100-2EONNT

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	LSLV0004G100-4EOFNT
1	2.5	2	3.1	0.5	1.4	0.75	1.9	LSLV0008G100-4EOFNT
2	4.0	3	5.1	1	2.1	1	2.8	LSLV0015G100-4EOFNT
3	5.5	5	6.9	1	2.8	2	3.6	LSLV0022G100-4EOFNT
5	9.0	7.5	10.0	3	4.9	3	5.4	LSLV0040G100-4EOFNT
7.5	12.0	10	16.0	3	6.4	5	8.7	LSLV0055G100-4EOFNT
10	16.0	15	23.0	5	8.7	7.5	12.6	LSLV0075G100-4EOFNT
15	24	20	31	10	15	10	18	LSLV0110G100-4EOFNT
20	31	25	38	10	18	15	23	LSLV0150G100-4EOFNT
25	39	30	45	15	23	20	27	LSLV0185G100-4EOFNT
30	45	-	61	20	27	25	35	LSLV0220G100-4EOFNT

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

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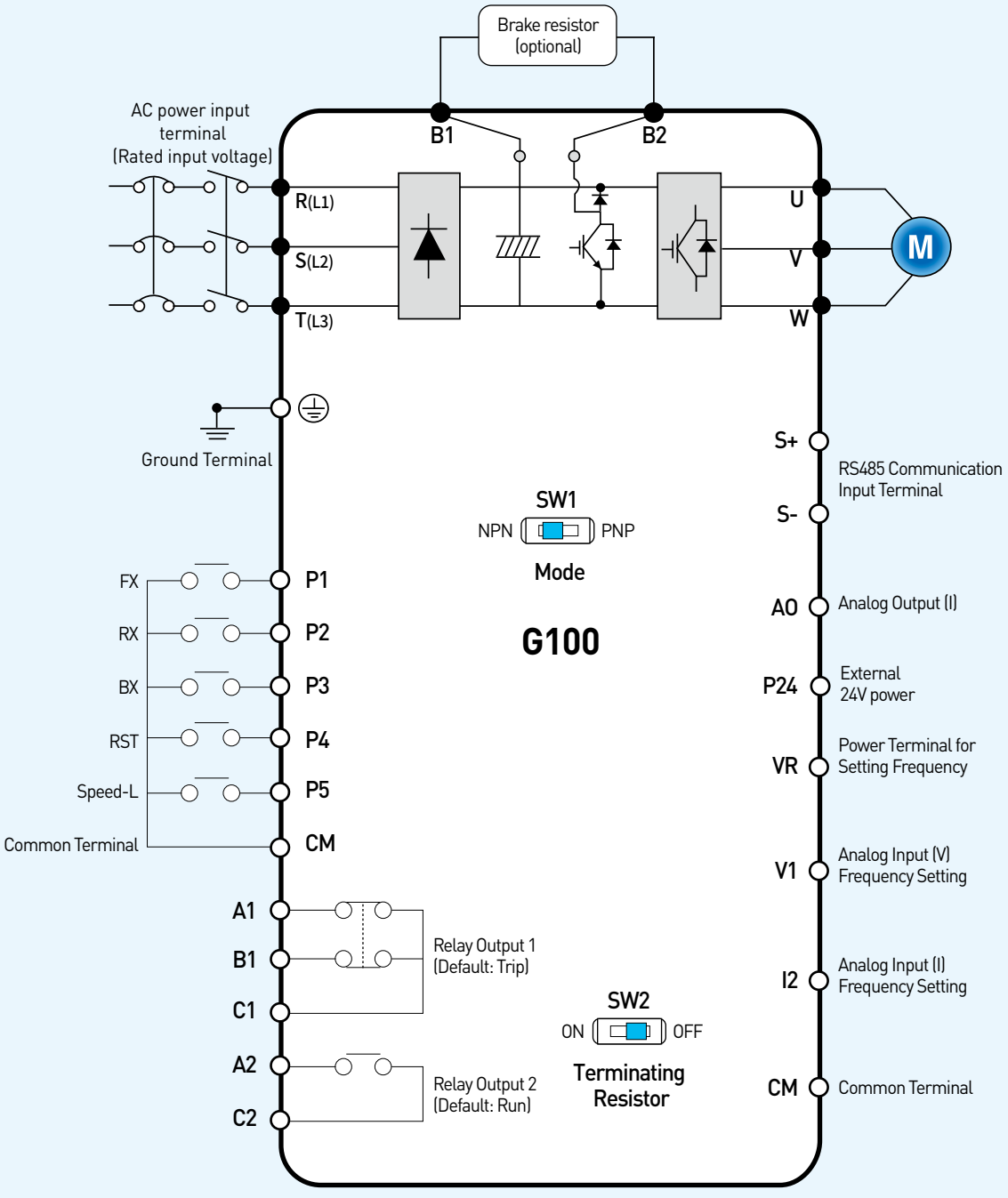
	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Conduit Connection Box NEMA1 Enclosure	Additional Data			
				Order Code	Keypad	Reactor	Filter	Potentiometer
	6040002100	3.4 X 6.5 X 5.5	2.3	64180005	Built-in 7 segment LED keypad	NO	NO	Built-in Potentiometer
	6040002200							
	6040002300	4.0 X 7.0 X 6.3	3.1	64180006				
	6040002400							
	6040002600	5.3 X 7.6 X 6.3	4.2	64180007				
	6040002700	7.1 X 9.5 X 6.0	7.0	64180008				
	6040002800							
	6040002900	7.1 X 11.5 X 7.2	10.7	64180013				
	6040003000	8.7 X 13.6 X 7.7	16.7	64180014				
	6040003100	10.2 X 15.7 X 7.7	24.7	64180015				
	6040003200							

	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
	6041007100	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
	6041007200							
	6041007300	4.0 X 7.0 X 6.3	3.1	64180006				
	6041007400							
	6041007600	5.3 X 7.6 X 6.3	4.4	64180007				
	6041007700	7.1 X 9.5 X 6.0	7.2	64180008				
	6041007800							
	6041007900	7.1 X 11.5 X 7.2	11.2	64180013				
	6041008000							
	6041008100	8.7 X 13.6 X 7.7	17.6	64180014				
	6041008200							

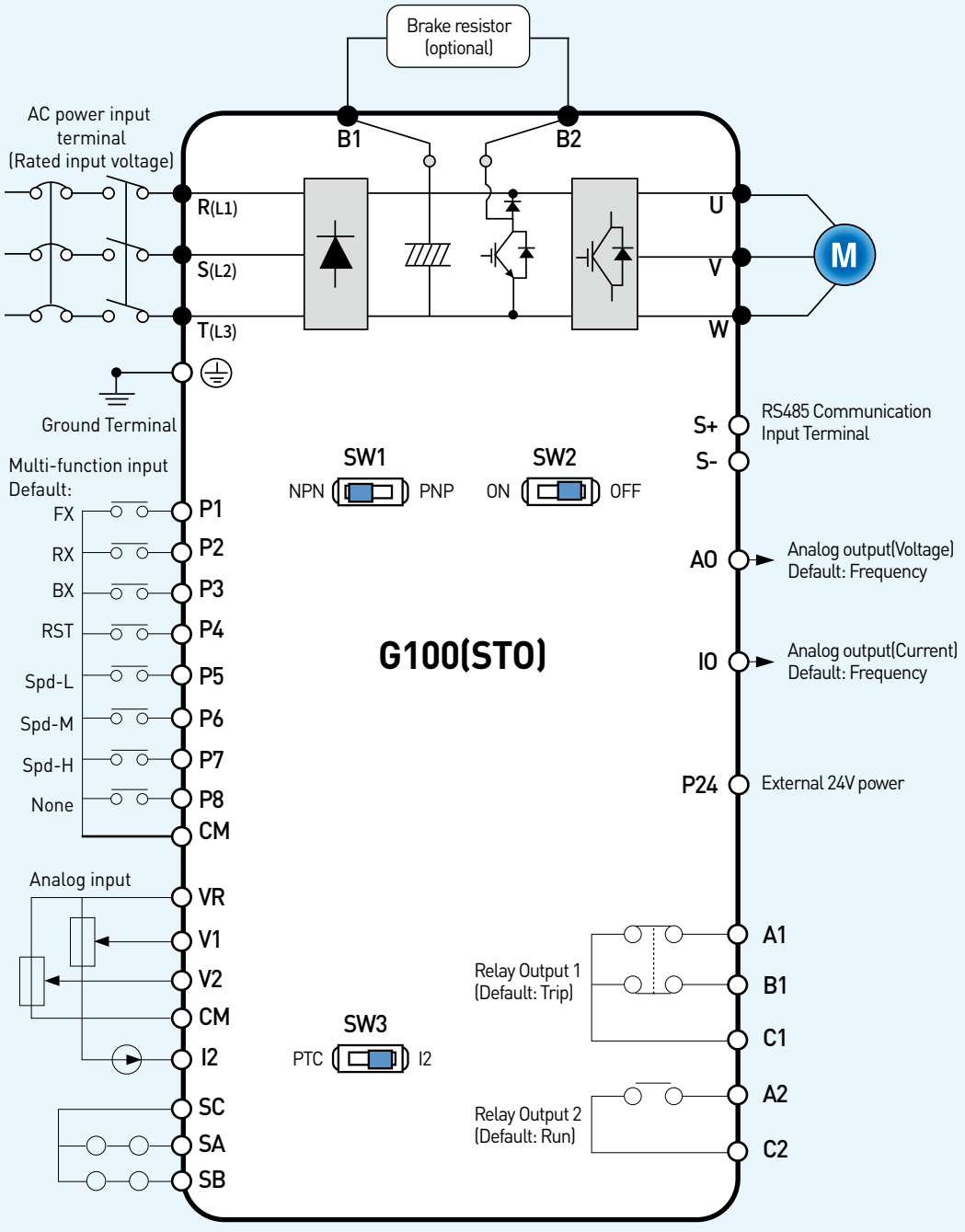
Option

	Model Number	Order Code
Ethernet I/P	Ethernet(LSLV-G100),CENT-G100	64180009
CANOpen	CANOpen(LSLV-G100),CCAN-G100	64180010
Profibus-DP	Profibus-DP(LSLV-G100),CPDP-G100	64180011

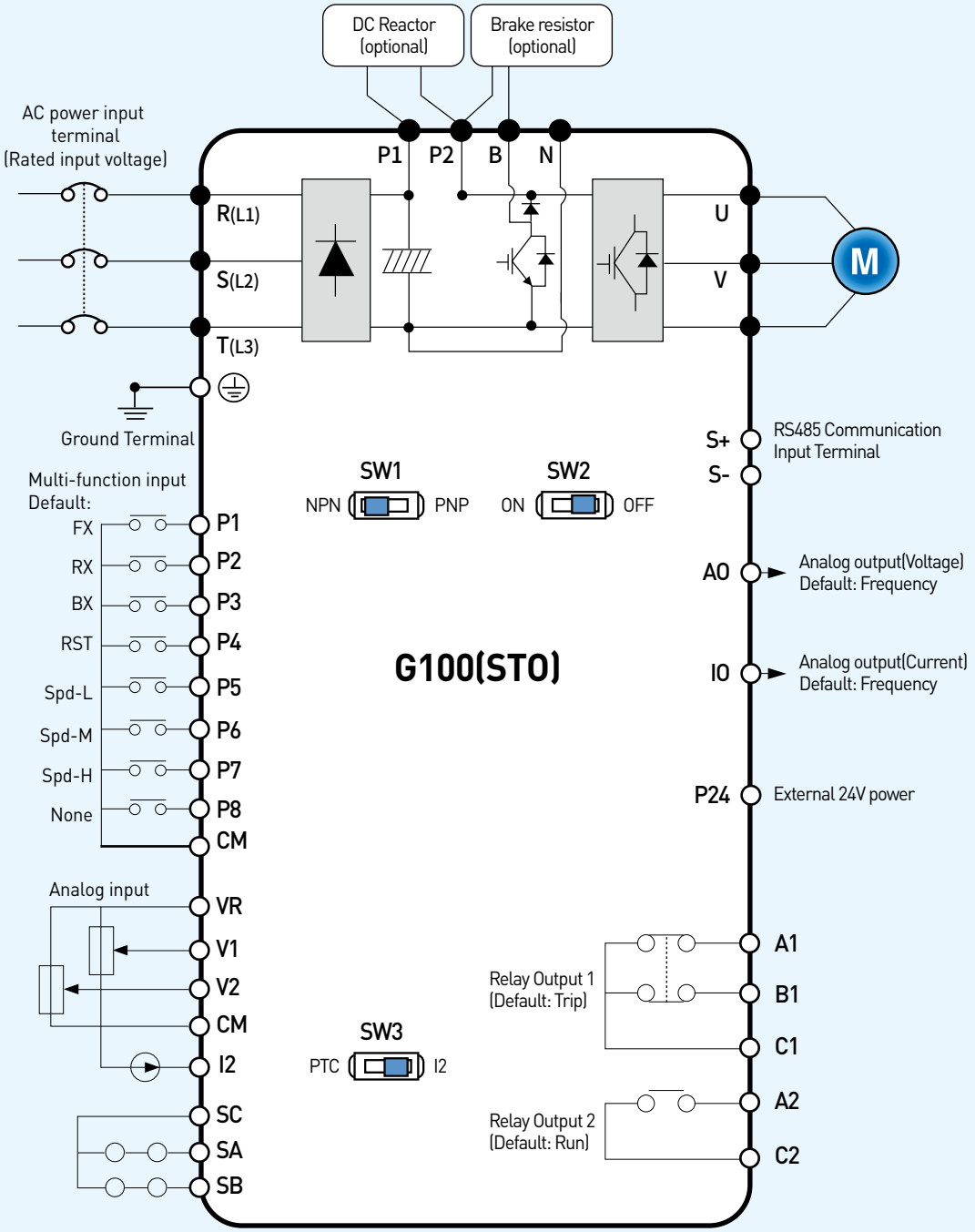
Wiring G100 (0.5-10HP)



Wiring G100 STO (0.5-10HP)



Wiring G100 STO (15~30HP)



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S100 Standard Drive



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

LSLV	0055	S100	-	4	E	O	F	N	S

LS Low Voltage Drive Series

Motor Capacity
0004: 0.4kW~0750: 75kW

Series Name

Input Voltage
1: 1Ø 200~240V / 2: 3Ø 200~240V / 4: 3Ø 380~480V

Keypad
E: LED Keypad / C: LCD Keypad

UL Type
O: UL Open Type / X: IP66 (NEMA 4X)

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

Reactor
N: Non-Reactor / D: Built-in DC Reactor

I/O
M: 3.5mm / S-5mm

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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 ※ 460V 40~100HP	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	Multifunctional Terminal Standard I/O (5 input) Multiple I/O (7 input)		NPN (Sink) / PNP (Source) option
			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	Fault output and drive operation mode output	DC 24V, 50mA or below
	Multifunctional Relay Terminal		(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	4.4	2.5	1	5.8	3.1	LSLV0004S100-1EONNS	
-	-	-	-	1	9.3	5.0	2	11.7	6.0	LSLV0008S100-1EONNS	
-	-	-	-	2	15.6	8.0	3	19.7	10.0	LSLV0015S100-1EONNS	
-	-	-	-	3	21.7	11.0	5	24.0	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	-	2.0	1.3	LSLV0004S100-4EONNS	
1	2.5	2	3.1	0.5	2.4	1.5	0.5	3.3	1.9	LSLV0008S100-4EONNS	
2	4.0	3	5.1	1	4.2	2.3	1	5.5	3.0	LSLV0015S100-4EONNS	
3	5.5	5	6.9	1	5.9	3.1	1.5	7.5	3.9	LSLV0022S100-4EONNS	
5.4	9.0	7.5	10.0	2	9.8	5.4	2	10.8	5.9	LSLV0040S100-4EONNS	
7.5	12.0	10	16.0	3	12.9	7.1	3	17.5	9.5	LSLV0055S100-4EOFNS	
10	16.0	15	23.0	3	17.5	9.5	7.5	25.4	14.0	LSLV0075S100-4EOFNS	
15	24.0	20	30.0	7.5	26.5	15.0	10	33.4	18.0	LSLV0110S100-4EOFNS	
20	30.0	25	38.0	10	33.4	18.0	10	42.5	23.0	LSLV0150S100-4EOFNS	
25	39.0	30	44.0	10	43.6	23.0	15	49.5	27.0	LSLV0185S100-4EOFNS	
30	45.0	40	58.0	15	50.7	27.0	20	65.7	35.0	LSLV0220S100-4EOFNS	
40	61.0	50	75.0	15	56	32.0	20	69.0	39.0	LSLV0300S100-4CONDS	
50	75.0	60	91.0	20	69	39.0	20	85.0	47.0	LSLV0370S100-4CONDS	
60	91.0	75	107.0	25	85	47.0	30	100.0	55.0	LSLV0450S100-4CONDS	
75	110.0	100	142.0	30	103	57.0	40	134.0	73.0	LSLV0550S100-4CONDS	
100	152.0	120	169.0	40	143	78.0	50	160.0	87.0	LSLV0750S100-4CONDS	

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	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					
	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					
	6030000300	3.9 X 5.0 X 5.1	3.3	64150005	64150014			
	6030000400	3.9 X 5.0 X 5.7	3.3					
	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					
	6031000300	3.9 X 5.0 X 5.1	3.3	64150005	64150014			
	6031000400	3.9 X 5.0 X 5.7	3.3					
	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			Built-in EMC Filter
	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							

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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	LSLV0004S100-4EXNNS,IP66	
1	2.5	0.5	2.4	1.5	LSLV0008S100-4EXNNS,IP66	
2	4.0	0.75	4.2	2.3	LSLV0015S100-4EXNNS,IP66	
3	5.5	1	5.9	3.1	LSLV0022S100-4EXNNS,IP66	
5	8.0	2	8.7	4.8	LSLV0037S100-4EXNNS,IP66	
7.5	12.0	3	12.9	7.1	LSLV0055S100-4EXNNS,IP66	
10	16.0	5	17.5	9.5	LSLV0075S100-4EXNNS,IP66	
15	24.0	7.5	26.5	15.0	LSLV0110S100-4EXNNS,IP66	
20	30.0	10	33.4	18.0	LSLV0150S100-4EXNNS,IP66	
25	39.0	10	43.6	23.0	LSLV0110S100-4EXNNS,IP66	
30	45.0	15	50.7	27.0	LSLV0150S100-4EXNNS,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

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

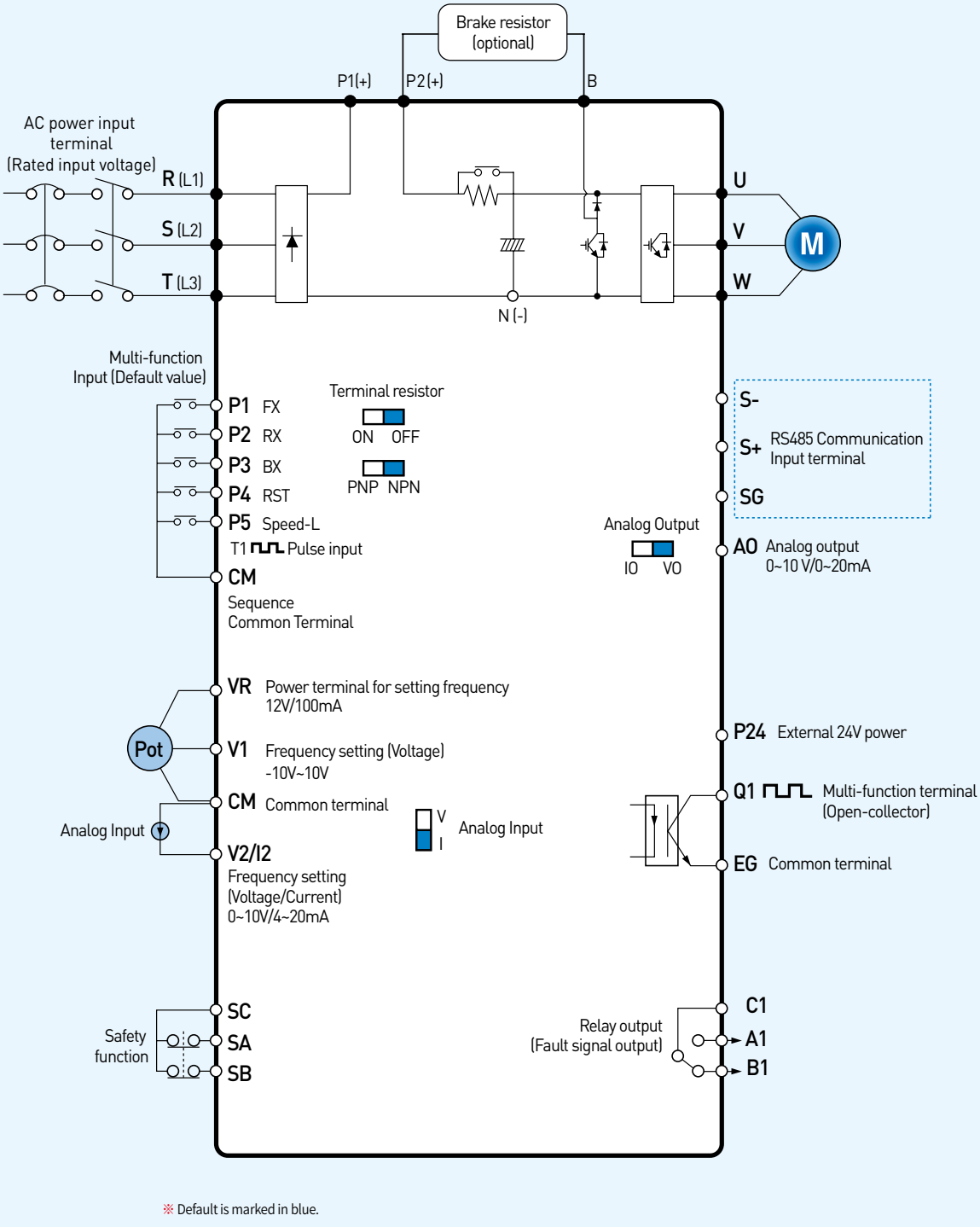
	Order Code	Dimensions(in) W X H X D	Approx. Weight (lbs.)	Additional Data		
				Keypad	Reactor	Filter
	6031004200	7.1 X 10.1 X 6.9	8.2	Built-in 7 segment LED keypad	NO	NO
	6031004300					
	6031004400	8.7 X 10.2 X 7.9	11.7			
	6031004500		12.1			
	6031004600		12.3			
	6031004800	9.8 X 12.9 X 8.9	19.4			
	6031004900					
	6031005000	10.2 X 15.7 X 9.7	21.2			
	6031005100		21.6			
	6031005200	11.8 X 18.1 X 9.8	27.3			
	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 LSLV-S100	64150042
EtherCAT	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
NEMA4X Loader Mount	LCD Loader mount (NEMA 4X) for S100	64110055

S100 Standard Drive

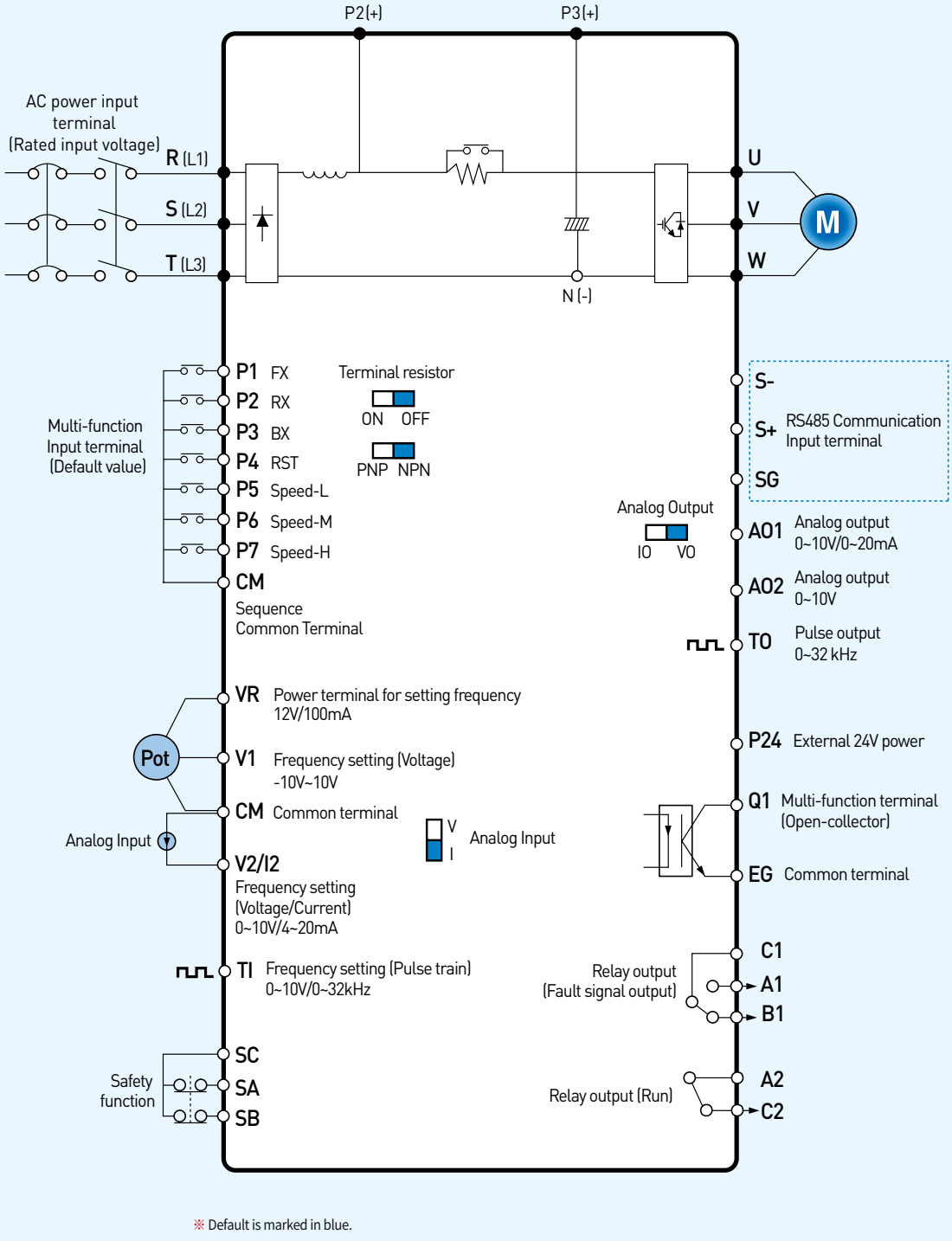
Wiring (0.5HP ~30HP)



※ Default is marked in blue.

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Wiring (40HP ~100HP)



※ Default is marked in blue.

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H100+ Fan & Pump Drive



- 3Ø 230V:1.0HP~125HP(ND)
- 3Ø 460V:1.0HP~1000HP(ND)
- 3Ø 575V:7.5HP~400HP(ND)

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~7500: 750kW

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

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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	230V 50~120HP, 460V 1~800HP built-in EMC filter (C3) ※ With a filter, 100~125HP 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	460V 50~800HP 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(IM/PM), 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	1~60HP (230V) 1~125HP (460V)	Normal Duty 120% 1 min., Heavy Duty 150% 1 min.
	75~125HP (230V) 150~1000HP (460V) 7.5~400HP (575V)	Normal Duty 110% 1 min., Heavy Duty 150% 1 min.
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 direction operation, Reverse direction operation, Reset, External trip, Emergency stop, Jog operation, Multi step speed frequency-high/med/low, Multi step acc/dec-high/med/low, DC braking during stop, Second motor selection, 3-wire, Frequency reduction, Fix analog command frequency, Transition from PID to general operation, Pre Heat, Pump Cleaning, RTC(Time Event), MMC Interlock, Select acc/dec/stop, Frequency increase, Hand State, Sleep Wake up change, Fire Mode, Damper control	
	Pulse Train	0~32kHz, Low Level: 0~0.8V, High Level: 3.5~12V	
Output	Multifunctional Open Collector Terminal	Fault output and drive operation mode output	DC26V, 50mA or below
	Fault Relay Terminal		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	

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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%(~60HP) / 110%(75~125HP) for 60 seconds		Heavy Duty(CT)150% 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)	67360001PL	6.3 X 9.1 X 7.1	7.3	
2	8	1	5	1	4.4	LSLV0015H100-2CONN(PLUS_NEW)	67360002PL			
3	12	2	8	1.5	6.4	LSLV0022H100-2CONN(PLUS_NEW)	67360003PL			
5	16	3	11	2	8.4	LSLV0037H100-2CONN(PLUS_NEW)	67360004PL			
7.5	22	5	17	3	11	LSLV0055H100-2CONN(PLUS_NEW)	67360005PL			
10	30	7.5	24	5	16	LSLV0075H100-2CONN(PLUS_NEW)	67360006PL			
15	42	10	32	5	23	LSLV0110H100-2CONN(PLUS_NEW)	67360007PL			
20	56	15	46	7.5	30	LSLV0150H100-2CONN(PLUS_NEW)	67360008PL	7.1 X 11.4 X 8.1	10.1	
25	69	20	60	10	37	LSLV0185H100-2CONN(PLUS_NEW)	67360009PL	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(CT)150% 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)	67370001PL	6.3 X 9.1 X 7.1	7.3	
2	4	1	2.5	1	2.4	LSLV0015H100-4COFN(PLUS_NEW)	67370002PL			
3	6	2	4.0	1.5	3.5	LSLV0022H100-4COFN(PLUS_NEW)	67370003PL			
5	8	3	5.5	2	4.6	LSLV0037H100-4COFN(PLUS_NEW)	67370004PL			
7.5	12	5	8	3	6.8	LSLV0055H100-4COFN(PLUS_NEW)	67370005PL			
10	16	7.5	12	5	9.2	LSLV0075H100-4COFN(PLUS_NEW)	67370006PL			
15	24	10	15	7.5	14	LSLV0110H100-4COFN(PLUS_NEW)	67370007PL		7.5	
20	30	15	22	10	17	LSLV0150H100-4COFN(PLUS_NEW)	67370008PL	7.1 X 11.4 X 8.1	10.1	
25	38	20	28	10	22	LSLV0185H100-4COFN(PLUS_NEW)	67370009PL		10.6	
30	45	25	35	15	26	LSLV0220H100-4COFN(PLUS_NEW)	67370010PL	8.7 X 13.8 X 8.8	16.5	
40	61	30	41	20	36	LSLV0300H100-4COFN(PLUS_NEW)	67370011PL			
50	75	40	55	25	39	LSLV0370H100-4COFD(PLUS_NEW)	67370012PL	10.8 x 17.7 x 11.2	57.3	
60	91	50	67	30	47	LSLV0450H100-4COFD(PLUS_NEW)	67370014PL	12.8 x 20.1 x 11.2	77.2	
75	107	60	81	40	55	LSLV0550H100-4COFD(PLUS_NEW)	67370016PL			
100	142	75	106	50	73	LSLV0750H100-4COFD(PLUS_NEW)	67370018PL	12.8 x 21.7 x 12.2	94.8	
125	169	100	136	60	86	LSLV0900H100-4COFD(PLUS_NEW)	67370019PL			
150	223	125	169	60	93	LSLV1100H100-4COFD(PLUS_NEW)	67370020PL	11.8 x 27.8 x 15.2	123	
200	264	150	195	75	101	LSLV1320H100-4COFD(PLUS_NEW)	67370021PL			
250	325	200	255	100	137	LSLV1600H100-4COFD(PLUS_NEW)	67370022PL	15.0 x 27.8 x 15.6	164.7	
300	370	250	303	100	137	LSLV1850H100-4COFD(PLUS_NEW)	67370023PL			
350	432	250	345	150	181	LSLV2200H100-4COFD(PLUS_NEW)	67370024PL	16.8 x 36.3 x 17.3	264.6	
400	481	300	375	150	218	LSLV2500H100-4COFD(PLUS_NEW)	67370025PL			
500	613	400	478	150	232	LSLV3150H100-4COFD(PLUS_NEW)	67370026PL	23.6 x 39.4 x 19.7	409.0	
550	683	450	541	200	245	LSLV3550H100-4COFD(PLUS_NEW)	67370027PL			
650	770	500	591	200	280	LSLV4000H100-4COFD(PLUS_NEW)	67370028PL			
800	962	650	740	300	361	LSLV5000H100-4COFD(PLUS_NEW)	67370029PL	30.6 x 41.5 x 19.7	584.2	
1000	1200	900	1090	350	440	LSLV7500H100-4COFD(PLUS_NEW)	67370040PL	30.6X51.2X19.7	782.6	

	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-63H,50A & HANDLE,MEH63,115, UL	64160033
						MMS-100H,75A & HANDLE,MEH100,115,UL	64160034
	64160003	64150017				MMS-100H,100A & HANDLE,MEH100,115,UL	64160035
	64160004	64150018				MMS-100H,100A & HANDLE,MEH100,115,UL	64160036
	64150010	64150019		Built-in DC Reactor	NO	NONE	
					Built-in		
	64150011	64150020			NO		
	64150012	64150021			Built-in EMC filter		
	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				UTS150LT FTU 50A 3P & HANDLE,REH2-S-12,UTS250	64160044
						UTS150LT FTU 70A 3P & HANDLE,REH2-S-12,UTS250	64160045
	64160004	64150018				UTS150LT FTU 80A 3P & HANDLE,REH2-S-12,UTS250	64160046
						UTS150LT ATU 100A 3P & HANDLE,REH2-S-12,UTS250	64160047
	64150010	64150019		Built-in DC Reactor		UTS250LT FTU 150A 3P & HANDLE,REH2-S-12,UTS250	64160048
	64150011	64150020				UTS250LT FTU 150A 3P & HANDLE,REH2-S-12,UTS250	64160049
						UTS250LT FTU 150A 3P & HANDLE,REH2-S-12,UTS250	64160050
	64150012	64150021			NO	UTS250LT FTU 225A 3P & HANDLE,REH2-S-12,UTS250	64160051
						UTS250LT FTU 250A 3P & HANDLE,REH2-S-12,UTS250	64160052
	64160020	64160015			Built-in EMC Filter	NONE	
	64160021	64160016					
	64160022	64160017					
	64160023	64160018					
	64160024	64160019					
	64160093	64160094					

H100+ Fan & Pump Drive

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(CT)150% for 60 seconds					
HP	Output Current (Amps)	HP	Output Current (Amps)				
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
150	156	125	128	LSLV1100H100-5COND(PLUS)	67380017PL	15.0X27.8X15.6	166.6
200	200	150	156	LSLV1320H100-5COND(PLUS)	67380018PL		166.6
250	242	200	200	LSLV1600H100-5COND(PLUS)	67380019PL		166.6
300	290	250	242	LSLV2000H100-5COND(PLUS)	67380020PL		166.6
350	336	300	290	LSLV2500H100-5COND(PLUS)	67380021PL	16.8X36.3X17.3	264.6
400	400	350	336	LSLV3000H100-5COND(PLUS)	67380022PL		266.8

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

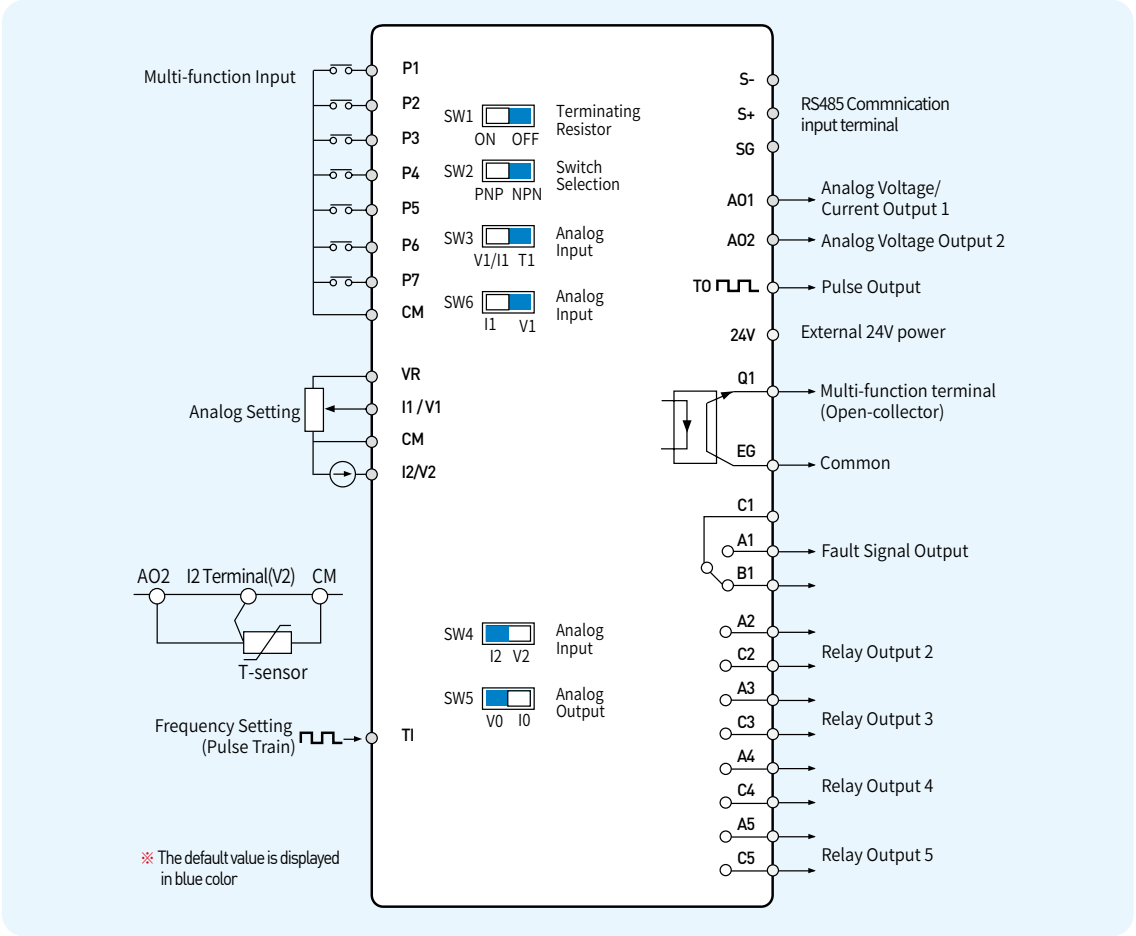
Option

	Model Number	Order Code
LCD Keypad	OPTION (H100+ LCD LOADER), LCEN-H100PLUS	64160057PL
NEMA4X Loader Mount	LCD Loader mount (NEMA 4X) for H100+	64110055
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	RAPIEnet+(LSLV-H100),CRPN-H100	64160056
BACnet IP, Ethernet IP & Modbus TCP	BACNET/Ethernet(LSLV-H100),CBAC-H100	64160058

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	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	Built-in EMC Filter	None
	64150010	64150019		Built-in DC Reactor		
	64150011	64150020				
	64150012	64150021			None	
	64160021	64160016				
	64160022	64160017				

Wiring



iS7

High Performance Drive



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

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

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 / S: Graphic Keypad

UL Standard
O: Open

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

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Main Features

Features	Description	Benefits
Powerful Control Performance	Sensor-less vector control, sensored control, and auto tuning	Improved accuracy in speed and torque control
Safety Card	2-channel STO (Safety Torque Off) For smaller iS7s (250HP and less), you must order from the factory with the safety option. The safety card can be field installed on iS7s (300HP 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 1~30HP ※ 400V 1~350HP	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

<table>
<tr><td colspan="2">Operation Mode</td><td colspan="2">Keypad / Terminal Block / Communication Network options</td></tr>
<tr><td colspan="2">Frequency Setting</td><td colspan="2">Analog method: 0 ~ 10 (V), -10 ~ 10 (V), 0 ~ 20 (mA)
Digital method: Keypad</td></tr>
<tr><td colspan="2">Operation Function</td><td colspan="2">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</td></tr>
<tr><td rowspan="2">Input</td><td rowspan="2">Multifunctional Terminal (8 inputs)
P1 ~ P8 Note 1)</td><td colspan="2">NPN (Sink) / PNP (Source) Options</td></tr>
<tr><td colspan="2">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</td></tr>
<tr><td rowspan="3">Output</td><td>Multifunctional Open Collector Terminal</td><td rowspan="2">Fault output and drive operation mode output</td><td>DC 26V 100mA or below</td></tr>
<tr><td>Multifunctional Relay Terminal</td><td>(N.O., N.C.) AC 250V 1A or below, DC 30V 1A or below</td></tr>
<tr><td>Analog Output</td><td colspan="2">0 ~ 10 Vdc (20mA or below): Frequency, current, voltage, DC voltage options</td></tr>
</table>

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

iS7 High Performance Drive

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) 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
	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) 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
	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	7.9 X 14.0 X 8.9	22.0	64110017	64110029			
	6121000600							
	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			NO
	6121001200							
	6121001300							
	6121001400	14.6 X 26.1 X 14.7	138.9	64110021	64110034			
	6121001500							
	6121005100	20.1 X 30.9 X 16.7	222.7	6411006463	64110053	Built-in LCD Keypad		
	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							
	6121015100	30.4 X 44.8 X 17.3	555.6	6411006663	Not Available		NO	
	6121015200	36.3 X 51.3 X 19.5	776.0	6411006763				
	6121015300							

Remote Cable with Keypad

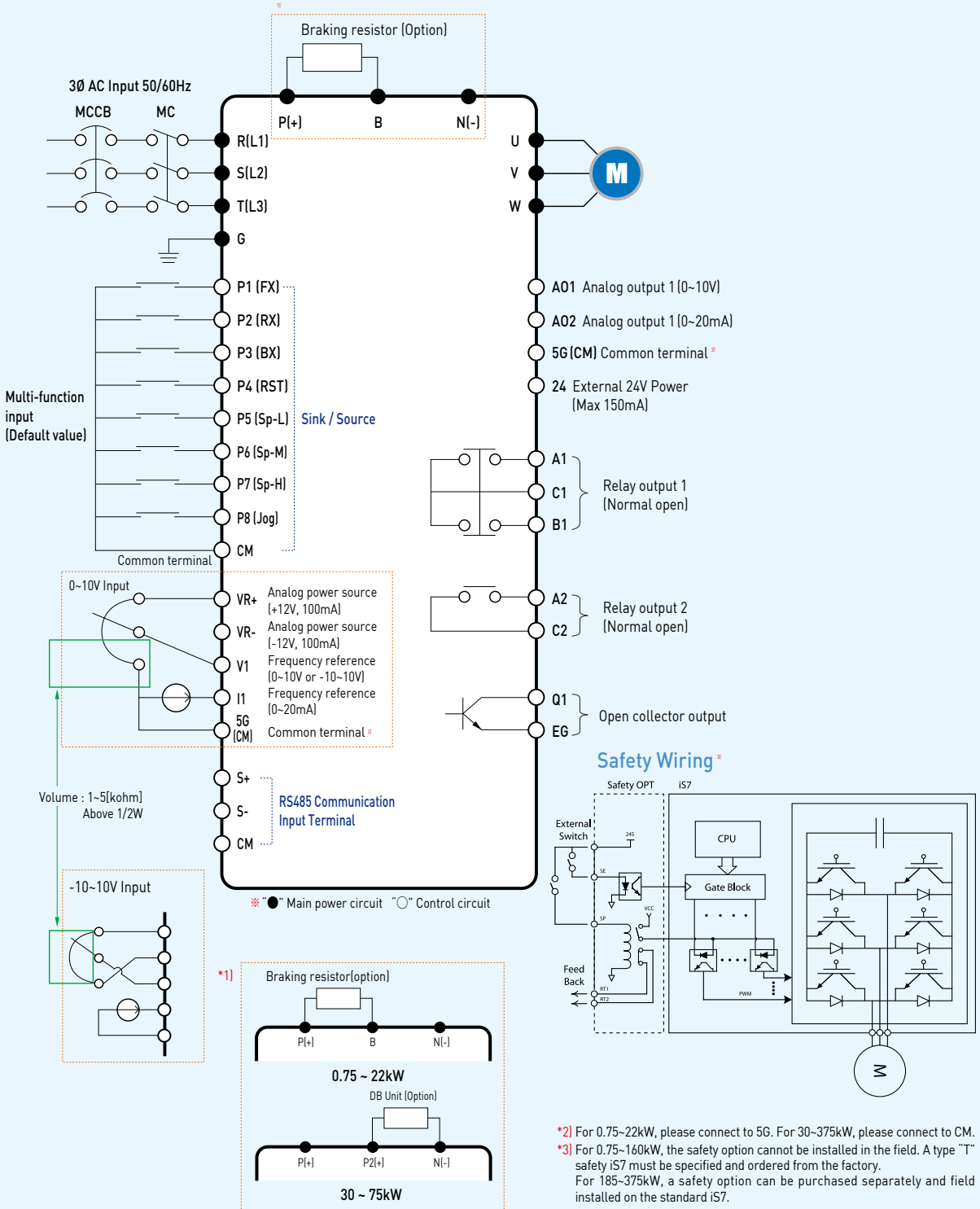
Length	Model Number	Order Code
6.6 ft	REMOTE 2M (SV-iS7)	64110009
9.8 ft	REMOTE 3M (SV -iS7)	64110010

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

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Wiring



*2] For 0.75~22kW, please connect to 5G. For 30~375kW, please connect to CM.
*3] For 0.75~160kW, the safety option cannot be installed in the field. A type "T" safety iS7 must be specified and ordered from the factory.
For 185~375kW, a safety option can be purchased separately and field installed on the standard iS7.

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SP100 Bypass Package Solution



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

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

Designed for HVAC applications, the new SP100 Bypass offers a stable operation with reduced downtime and energy savings using the H100+ series drive.

Features

- 3 Contactor Bypass
- HAND/OFF/AUTO LCD Keypad
- Compact Size Built-in DC Reactor
- Easy Wiring and Installation
- Built-in Operation Indicator
- Auto Bypass Function
- Motor OL Trip Detection
- Short-Circuit Current Rating 65 KAIC
- Easy Maintenance
- Built in Bacnet MS/TP, Metasys and Modbus Protocols
- NEMA 1 Enclosure
- KEB, Kinetic Energy Buffering
- Fire Mode
- Built-in Five Relay Outputs
- Real Time Clock
- Include all H100+ functions!

Applications

- All HVAC Applications

Product Type & Model

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

Product Type Prefix

Horsepower Rating

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

Configuration

3 = 3 contactor Basic Bypass

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Environmental

Enclosure	UL 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 (7.5~ 40HP) 1 ~ 10kHz (50 ~ 75HP)
Drive Overload Capacity	Normal duty: 120% for 1min (ND 110% for 1min : 200V 30/40HP)
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: 7.5~25HP, 460V: 7.5~75HP
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

SP100 Bypass Package Solution

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	Estabilishes load curves (current & power) to define load characteristics for under torque and pump clean funtions.
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.

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

Normal Duty(VT)120% for 60 seconds		Model Number	Order Code	Dimensions(in) W x H x D	Approx. Weight (lbs.)	Additional Data		
HP	Output Current (Amps)					Keypad	Reactor	Filter
7.5	22.0	LSLV0055SP100-2CEND	6736001900	6.65 X 36.61 X 8.93	37.5	Built-in LCD keypad	Built-in DC Reactor	NO
10	30.0	LSLV0075SP100-2CEND	6736002000					
15	42.0	LSLV0110SP100-2CEND	6736002100	8.26 X 46.41 X 10.65	81.6			
20	56.0	LSLV0150SP100-2CEND	6736002200					
25	69.0	LSLV0185SP100-2CEND	6736002300	9.83 X 51.65 X 11.71	97			
30	82.0	LSLV0220SP100-2CEND	6736002400	13.27 X 57.48 X 13.53	157.2			
40	110.0	LSLV0300SP100-2CEND	6736002500		180.8			

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

Normal Duty(VT)120% for 60 seconds		Model Number	Order Code	Dimensions(in) W x H x D	Approx. Weight (lbs.)	Additional Data		
HP	Output Current (Amps)					Keypad	Reactor	Filter
7.5	12.0	LSLV0055SP100-4CEFD	6737003000	6.65 X 36.51 X 8.93	37.5	Built-in LCD keypad	Built-in DC Reactor	Built-in EMC Filter
10	16.0	LSLV0075SP100-4CEFD	6737003100					
15	24.0	LSLV0110SP100-4CEFD	6737003200					
20	30.0	LSLV0150SP100-4CEFD	6737003300	8.26 X 46.41 X 10.65	81.6			
25	38.0	LSLV0185SP100-4CEFD	6737003400					
30	45.0	LSLV0220SP100-4CEFD	6737003500	9.83 X 51.65 X 11.71	97			
40	61.0	LSLV0300SP100-4CEFD	6737003600					
50	75.0	LSLV0370SP100-4CEND	6737003700	13.27 X 57.48 X 13.53	158.7			NO
60	91.0	LSLV0450SP100-4CEND	6737003800		180.8			
75	107.0	LSLV0550SP100-4CEND	6737003900					

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

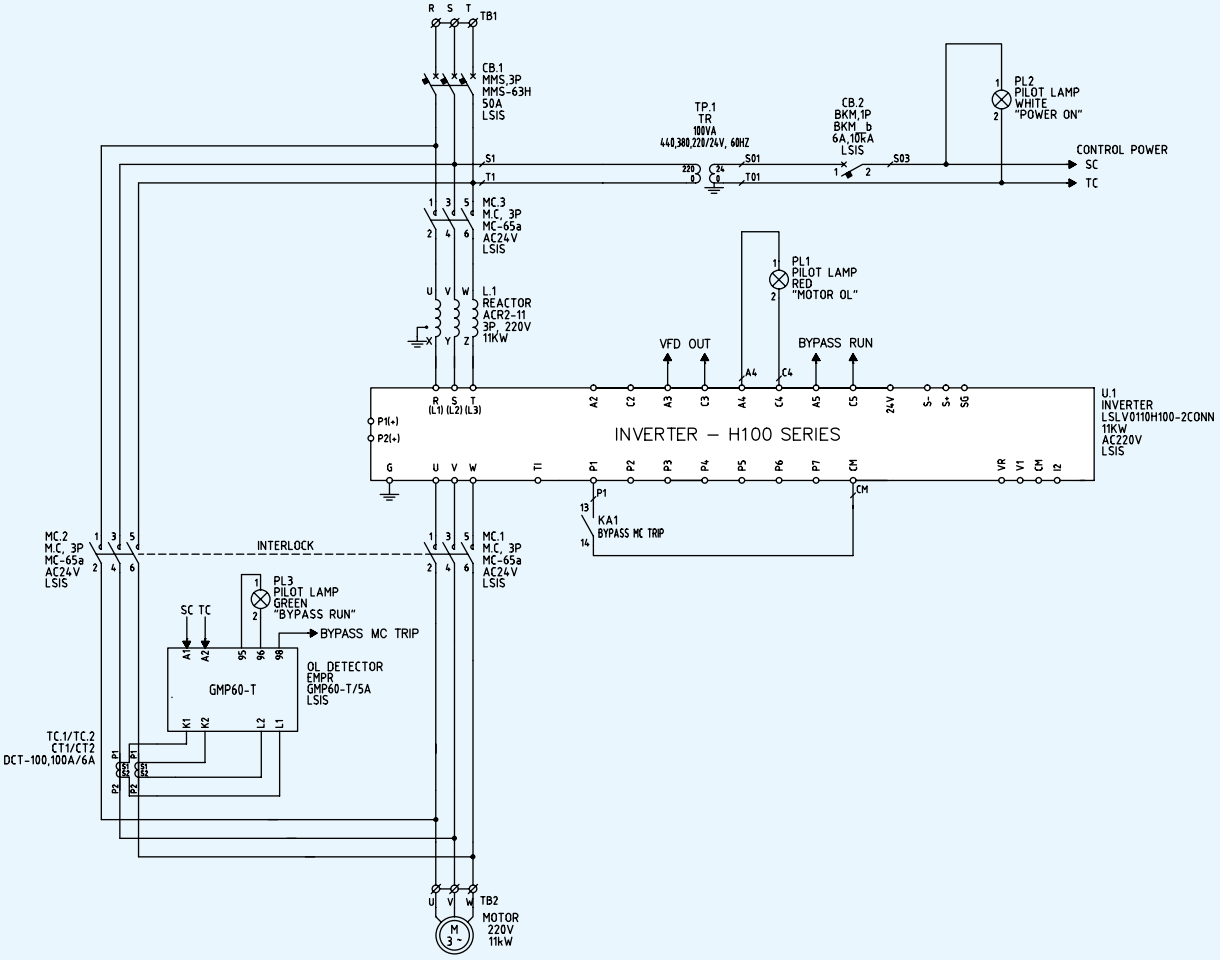
Option

	Model Number	Order Code
LCD Keypad	OPTION (H100+ LCD LOADER), LCEN-H100PLUS	64160057PL
NEMA4X Loader Mount	LCD Loader mount (NEMA 4X) for H100+	64110055
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

SP100 Bypass Package Solution

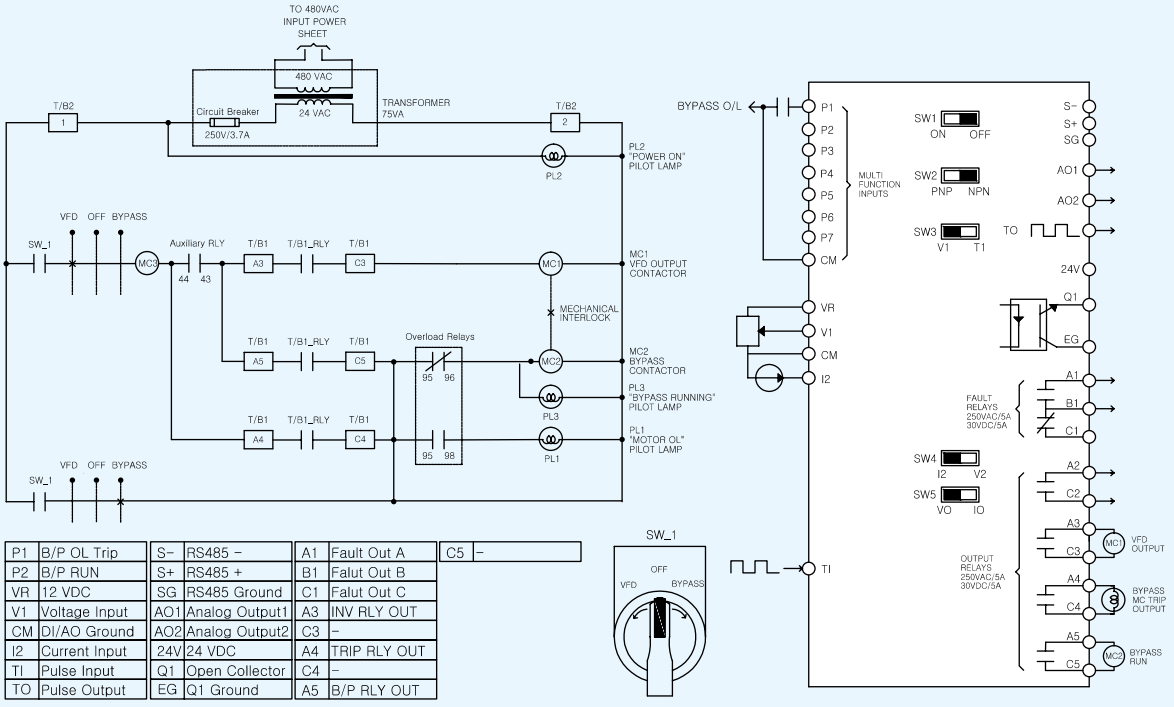
Wiring

Main

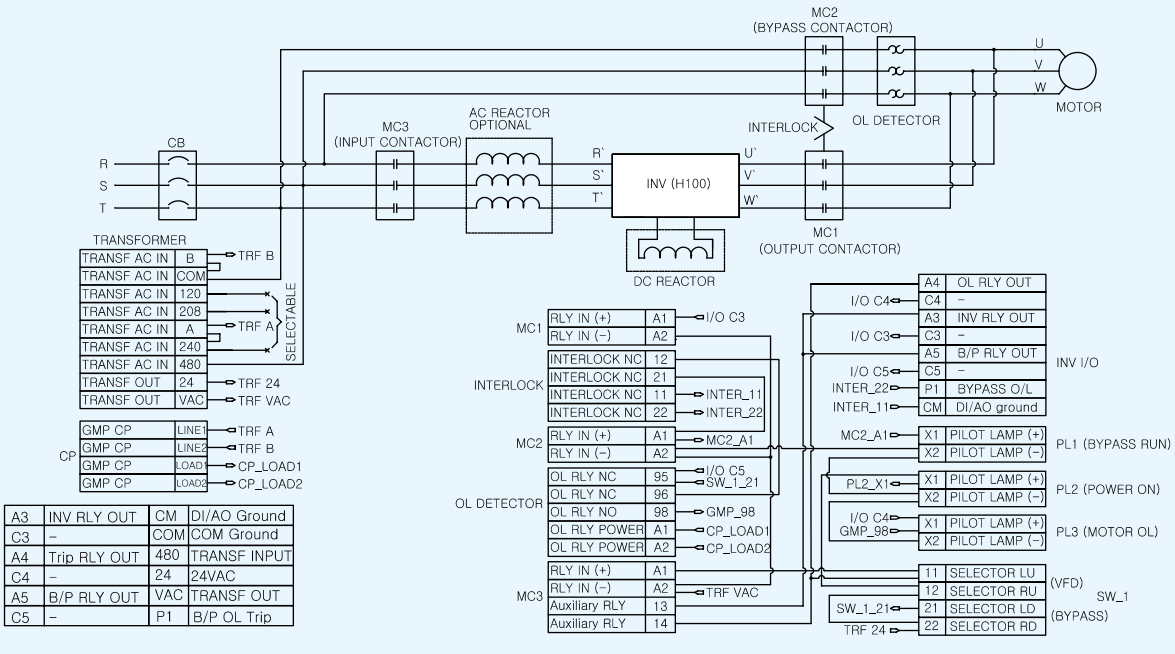


Wiring

Control Circuit Overview



P1	B/P OL Trip	S-	RS485 -	A1	Fault Out A	C5	-
P2	B/P RUN	S+	RS485 +	B1	Falut Out B		
VR	12 VDC	SG	RS485 Ground	C1	Falut Out C		
V1	Voltage Input	AO1	Analog Output1	A3	INV RLY OUT		
CM	DI/AO Ground	AO2	Analog Output2	C3	-		
I2	Current Input	24V	24 VDC	A4	TRIP RLY OUT		
TI	Pulse Input	Q1	Open Collector	C4	-		
TO	Pulse Output	EG	Q1 Ground	A5	B/P RLY OUT		



A3	INV RLY OUT	CM	DI/AO Ground
C3	-	COM	COM Ground
A4	Trip RLY OUT	480	TRANSF INPUT
C4	-	24	24VAC
A5	B/P RLY OUT	VAC	TRANSF OUT
C5	-	P1	B/P OL Trip

SP100 Memo

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