

G100

GENERAL DRIVE

3-ph/400Vac - 0.4kW ~ 22kW



HmT

LS ELECTRIC

Features



LS Electric G100 Drive

The LS Electric G100 drive is a versatile variable frequency drive (VFD). Designed to optimize energy usage and enhance motor control sensorless and V/F performance, the G100 drive enables precise regulation of motor speed and torque by adjusting output voltage and frequency. With integrated safety features, user-friendly interfaces, and potential communication capabilities, the G100 drive proves invaluable in industrial applications, facilitating efficient and controlled motor operations while minimizing energy consumption.

PC Tools (DriveView 9)

Allows you to view the trips that occurred in the drive.



PC Tools (DriveView 9)

KEB Operation (Kinetic Energy Buffering)

DC link voltage is maintained during power loss or blackout by using regenerative energy from the motor.

Flying Start

Select optimal flying start operation for different applications.

User Friendly

The G100 drive boasts user-friendly attributes including easy Din rail installation, operation, and maintenance. Its design simplifies setup while enabling secure mounting, and the inclusion of RAPIenet+ integrates multiple industrial Ethernet protocols (RAPIenet, EtherNET/IP, Modbus TCP) for seamless communication across diverse industrial networks.



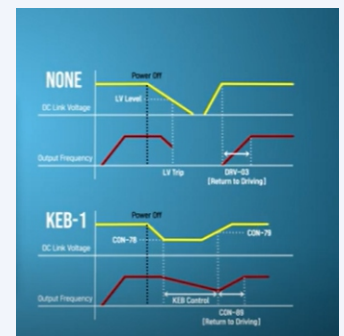
Built-in Potentiometer
Built-in RS-485

Reliability

The G100 drive exhibits a commitment to safety, reliability, and durability through its compliance with the UL 61800-5-1 standard, ensuring adherence to safety and performance criteria. Employing the trusted MIL-217Plus design methodology, the drive incorporates a reliability-focused approach, predicting failure rates of components for enhanced system dependability. Further bolstering its robustness, the drive incorporates advanced materials and manufacturing processes, indicative of a product built for resilience and optimal performance in demanding industrial settings.

Application

Suitable for most applications such as conveyor belts, packaging machines, textile machinery, material processing, food and beverage industry, automotive industry, chemical processing, mining materials and more.



Kinetic Energy Buffering





Control

Control Method	V/F, Slip compensation, sensorless vector
Frequency Setting Resolution	Digital command: 0.01Hz Analog command: 0.06Hz (maximum frequency: 60Hz)
Frequency Accuracy	1% of the maximum output frequency
V/F Pattern	Linear, squared, user V/F
Overload Capacity	HD: 150% 1 minute, ND: 120% 1 minute
Torque Boost	Manual/Automatic torque boost

Operation

Operation Mode	Select keypad, terminal strip, or communication operation		
Frequency Setting	Analog: -10~10 (V), 0~10 (V), 4~20 (mA) Digital: Keypad		
Operation Function	PID control, 3-wire operation, frequency limit, second function, anti-forward and reverse direction rotation, commercial transition, speed search, power braking, leakage reduction, up-down operation, DC braking, frequency jump, slip compensation, automatic restart, automatic tuning, energy buffering, flux braking, tire mode.		
Input	Multi-function terminal (5 p)	Function: forward run, reverse run, reset, external trip, emergency stop, jog operation, Multi-step frequency-high, middle, low, Multi-step acceleration/deceleration-high, middle, low, DC braking at stop, 2nd motor select, frequency up/down, 3-wire operation, change into normal operation during PID operation, change into main body operation during operation, analog command frequency fixing, acceleration/deceleration stop etc. NPN (Sink) / PNP (Source) Selectable.	
	Analog Input	V1: -10~10V, 12 4~20mA	
Output	Multi-function relay terminal	Fault output and drive operation status output	N.O, N.C less than AC 250V 1A, less than DC 30V 1 A
	Analog Output	0~12Vdc: Frequency, Output current, Output Voltage, DC stage voltage etc.	

Protective Function

Trip	Over current trip, external signal trip, ARM short current fault trip, over heat trip, input imaging trip, ground trip, motor over heat trip, I/O board link trip, no motor trip, parameter writing trip, emergency stop trip, command loss trip, external memory error, CPU watchdog trip, motor light load trip.	Over voltage trip, temperature sensor trip, inverter over heat, option trip, output image trip, inverter overload trip, fan trip, pre-PID operation failure external brake trip, low voltage trip during operation, low voltage trip, analog input error, motor overload trip, over torque trip, under torque trip.
Alarm	Command loss trip warning, overload warning, light load warning, inverter overload warning, fan operation warning, braking resistance braking rate warning, rotor time constant tuning error, inverter pre-overheat warning, over torque warning, under torque warning.	
Momentary Power Loss	HD below 15ms (ND below 8ms): Continuous operation (to be within rated input voltage, rated output). HD above 15ms (ND above 8ms): Automatic restart option enable.	

Environment

Cooling Type	Forced fan cooling structure
Protection Degree	IP20/UL Open (default), UL enclosed type 1 (option)
Ambient Temperature	(Condition: No ice or frost) HD: -10~50°C / ND -10~40°C
Humidity	Relative humidity below 95% RH (no dew formation)
Storage Temperature	-20~65°C
Location	No corrosive gas, flammable gas, oil mist and dust. Indoors (pollution degree 2 environment)
Altitude, Vibration & Pressure	Below 1,000m (from 1000 to 4000m, the rated input voltage and rated output current of the drive must be derated by 1% for every 100m) Below 9.8m/sec ² (1G) 70 ~ 106kPA



3-Phase 400V Class (0.4 ~ 22kW)

G100-4			0004	0008	0015	0022	0040	0055	0075	0110	0150	0185	0220
Motor Rating	Heavy Duty [HD]	[kW]	0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22
		[HP]	0.5	1.0	2.0	3.0	5.4	7.5	10	15	20	25	30
	Normal Duty [ND]	[kW]	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30
		[HP]	1.0	2.0	3.0	5.4	7.5	10	15	20	25	30	40
Output Rating	Capacity [kVA]	Heavy Duty (HD)	1.0	1.9	3.0	4.2	6.5	9.1	12.2	18.3	23.6	29.7	34.3
		Normal Duty (ND)	1.5	2.4	3.9	5.3	7.6	12.2	17.5	23.6	29.0	34.3	46.5
	Rated Current [A]	Heavy Duty (HD)	1.3	2.5	4.0	5.5	9.0	12.0	16.0	24	31	39	45
		Normal Duty (ND)	2.0	3.1	5.1	6.9	10.0	16.0	23.0	31	38	45	61
	Rated Current [A] (1-Phase Power Input)	Heavy Duty (HD)	0.7	1.4	2.1	2.8	4.9	6.4	8.7	15	18	23	27
		Normal Duty (ND)	1.3	1.9	2.8	3.6	5.4	8.7	12.6	18	23	27	35
	Frequency [Hz]	0~400Hz (IM sensorless: 0~120Hz)											
Voltage [V]	3-Phase 380~480V												
Input Rating	Voltage [V]	3-Phase 380~480VAC (-15%~+10%)											
	Frequency [Hz]	50~60Hz (±5%)											
	Rated Current [A]	Heavy Duty [HD]	1.1	2.4	4.2	5.9	9.8	12.9	17.5	27.2	35.3	44.5	51.9
Normal Duty [ND]		2.0	3.3	5.5	7.5	10.8	17.5	25.4	35.3	43.3	51.9	70.8	
Weight [kg]			1.02 (1.04)	1.06 (1.08)	1.4 (1.44)	1.42 (1.46)	1.92 (1.98)	3.08 (3.24)	3.12 (3.28)	4.89 (5.04)	4.91 (5.06)	7.63 (7.96)	7.65 (7.98)

Drive Capacity

0.4 kW

0.75 kW

1.5 kW

2.2 kW

4.0 kW

5.5 kW

7.5 kW

⋮

22 kW

3 - Phase 400V

LSLV0004G100-4E0(F)N

LSLV0008G100-4E0(F)N

LSLV0015G100-4E0(F)N

LSLV0022G100-4E0(F)N

LSLV0040G100-4E0(F)N

LSLV0055G100-4E0(F)N

LSLV0075G100-4E0(F)N

⋮

LSLV0220G100-4E0(F)N

LSLV

LS Low Voltage
Drive Series

0008

Drive Capacity

0004 : 0.4kW

0220 : 22kW

G100

Series Name

-

4

Input Voltage

4 : 3-phase 380~480[V]

E

Keypad

E : LED Keypad

O

UL Type

O : UL Open

F

EMC Filter

F : Built-in EMC Filter

N : Non-EMC Filter

N

Reactor

N : Non-DC Reactor

D : Built-in DC Reactor

HMT

