FRANKLIN
CONTROL SYSTEMS

COMPACT GS-SERIES VFD

0.5-5HP
200~230VAC, 380~480VAC,3Ø
Compact Design, Sensorless & VF Control

With sensorless control the GS series makes motor control easy.

SENSORLESS VECTOR CONTROL

- Precise speed control and powerful high torque, up to 150% at 0.5 Hz
- Improves control with varying loads
- Auto tuning simplifies commissioning
- Sensorless mode also selectable

SPACE VECTOR MODULATION FOR SUPERIOR MOTOR LIFE

- Super clean sine wave for cool running motors and high efficiency
- Minimizes heat losses in for long motor life

INTEGRATED PID

- Precise control to maintain flow-rate, pressure, temperature, etc. without any extra controllers.
- Accepts 0V to 10V, 4-20mA analog signals

DYNAMIC BRAKING CIRCUIT

- Minimizes deceleration time on high inertia loads when used with braking resistors.

The easy to use 4-direction keypad makes settings a snap.

BUILT-IN RS-485 COMMUNICATION

- Remote control and monitoring with other controllers (Modbus standard)

GROUND-FAULT PROTECTION

- Superior equipment protection

COOLING FAN CONTROL

- Quiet, low noise operation; easy to replace fan module

INTUITIVE MULTI-DIRECTION KEYPAD

- User friendly

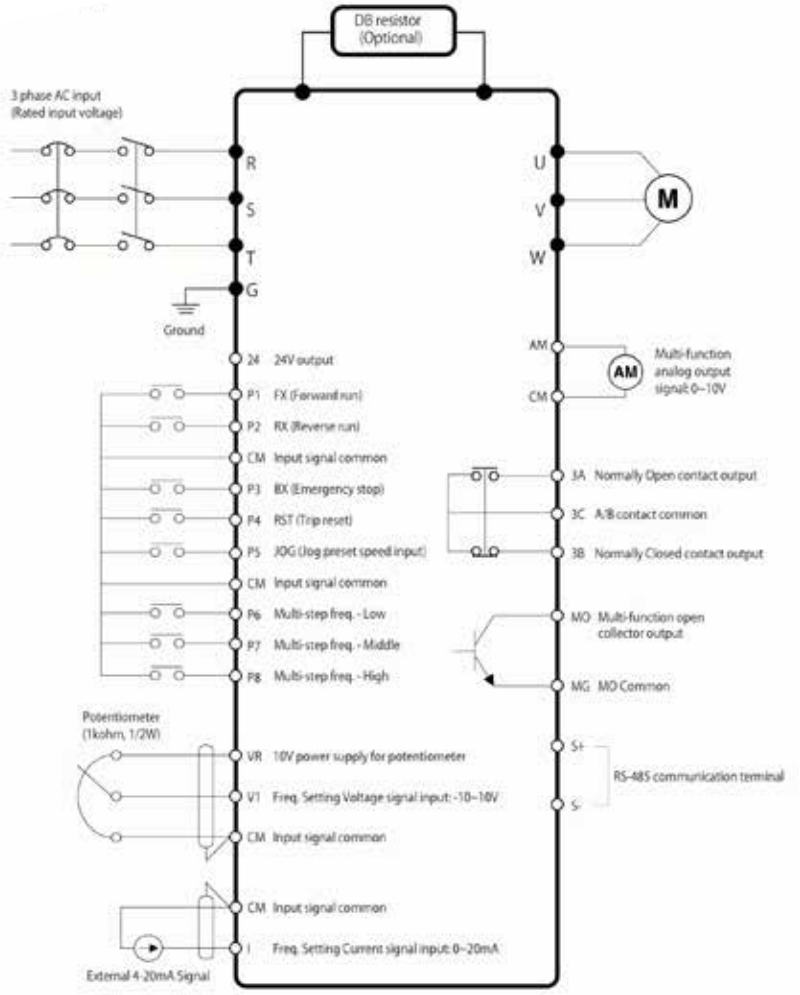
OPTIONAL EXTERNAL KEYPAD FOR REMOTE CONTROL/MONITORING

- Loader parameters can be downloaded effectively "cloning" inverters for fast set up in subsequent jobs

Specifications

Output ratings	Voltage (V)	Three phase, 200~230V or Three phase, 380~480V
	Frequency (Hz)	0~400Hz
Input ratings	Voltage (V)	Three phase, 200~230V (+10%, -15%) or Three phase, 380~480V (+10%, -15%)
	Frequency (Hz)	50~60Hz (±5%)
Operation	Control method	Sensorless Vector, V/F control (Space vector PWM)
	Frequency setting resolution	Digital reference: 0.01Hz (below 99Hz) & 0.1Hz (100Hz and over); Analog reference: 0.03Hz at 50Hz
	Frequency setting accuracy	Digital: 0.01% of maximum output frequency; Analog: 0.1% of maximum output frequency
	V/F ratio	Linear; Square; User V/F
	Overload capacity	1 minute at 150%; 30 seconds at 200% (with inverse characteristic proportional to time)
	Torque boost	Auto; Manual (0~15%)
	Assigned terminals	FX (forward), RX (reverse), BX (inverter gate blocking), RST (reset), JOG (jog)
	Programmable input	8 digital inputs
	Analog output	0~10V linear
Input signal	Operator control	4 digit LED display/keypad, Terminals, ModBus communication
	Frequency setting	Analog: 0~10V, 4~20mA, Digital: Keypad, Communication: ModBus
	Start signal	Forward, Reverse
	Multi-step operation	Setting up to 8 speeds (using multi-function terminal)
	Multi-step accel./decel. time	0.1~6000 seconds. Maximum 8 pre-defined steps using multi-function terminals
	Operational functions	DC braking, Frequency limit, Frequency jump, function, Slip compensation, Reverse rotation prevention
	Emergency stop	Stops output from inverter
	Jog	Jog operation
	Fault reset	Resets fault signal when protective function is active
Output signal	Operational status	Frequency detection, Overload alarm, Stall, Overvoltage, Undervoltage, Inverter overheat, Run, Stop, Constant speed, Speed search, Fault output (relay and open collector output)
	Indicator	Output frequency, Output current, Output voltage, DC voltage, rpm
Protective functions	Trip	Overvoltage, Undervoltage, Overcurrent, Inverter overheat, Motor overheat, I/O phase loss, Overload, Speed command loss, Hardware fault, Communication error, etc.
	Alarm	Stall, Overload
Operating environment	Ambient temperature	-10°~ 50° C (14°~122° F)
	Storage temperature	-20°~ 65° C (-4°~149.5° F)
	Humidity	95% Relative Humidity maximum (non-condensing)
	Altitude & Vibration	1000m max, 5.9m/sec^2(0.6g) max.
	Application site	No corrosive gas, flammable gas, oil mist or dust
Dimensions (H x W x D)	CI-000-GS2/GS4, CI-001-GS2/GS4	5.04" x 2.76" x 5.12" (Height is 6.90" w/ NEMA kit)
	CI-002-GS2/GS4	5.04" x 3.94" x 5.12" (Height is 6.90" w/ NEMA kit)
	CI-003-GS2/GS4, CI-005-GS2/GS4	5.04" x 5.51" x 6.10" (Height is 6.90" w/ NEMA kit)
Weight (lbs)	CI-000-GS2/GS4, CI-001-GS2/GS4	1.7 lbs
	CI-002-GS2/GS4	2.5 lbs
	CI-003-GS2/GS4, CI-005-GS2/GS4	4.1 lbs

GS-SERIES WIRING



For general reference only, not field wiring. Consult installation instructions.

3-Phase, 200~230V *GS - Series VFD*

HP	kW	Capacity (kVA)	FLA	Part Number	NEMA 1 Kit	3% Line Reactor*
1/2	0.4	0.95	2.5	**CI-000-GS2**	**CI-NEMA1-GS/A**	**KDRULA54LE01**
1	0.75	1.9	5	**CI-001-GS2**	**CI-NEMA1-GS/A**	**KDRULA25LE01**
2	1.5	3	8	**CI-002-GS2**	**CI-NEMA1-GS/B**	**KDRULA27LE01**
3	2.2	4.5	12	**CI-003-GS2**	**CI-NEMA1-GS/C**	**KDRULA28LE01**
5	3.7	6.1	16	**CI-005-GS2**	**CI-NEMA1-GS/C**	**KDRULB22LE01**

** Line Reactors housed in separate UL Type 1 Enclosure*

3-Phase, 380~480V *GS - Series VFD*

HP	kW	Capacity (kVA)	FLA	Part Number	NEMA 1 Kit	3% Line Reactor*
1/2	0.4	0.95	1.25	**CI-000-GS4**	**CI-NEMA1-GS/A**	**KDRULA6LE01**
1	0.75	1.9	2.5	**CI-001-GS4**	**CI-NEMA1-GS/A**	**KDRULA8LE01**
2	1.5	3	4	**CI-002-GS4**	**CI-NEMA1-GS/B**	**KDRULA1LE01**
3	2.2	4.5	6	**CI-003-GS4**	**CI-NEMA1-GS/C**	**KDRULA2LE01**
5	3.7	6.1	8	**CI-005-GS4**	**CI-NEMA1-GS/C**	**KDRULA3LE01**

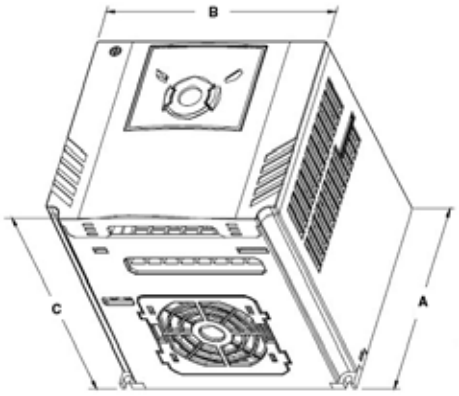
** Line Reactors housed in separate UL Type 1 Enclosure*

Options

Description	Part Number
Remote Keypad Mounting Kit (2 Meter Cable)	**CI-RKPK-EXT2M-GS**
Remote Keypad Mounting Kit (3 Meter Cable)	**CI-RKPK-EXT3M-GS**
Remote Keypad Mounting Kit (5 Meter Cable)	**CI-RKPK-EXT5M-GS**

GS-SERIES DIMENSIONS

***ALL MEASUREMENTS IN INCHES**



GS-Series Drive	H x W x D, (A x B x C)
CI-000-GS2	5.04"x 2.76"x 5.12" (H = 6.90" w/NEMA kit)
CI-000-GS4	
CI-001-GS2	
CI-001-GS4	
CI-002-GS2	5.04"x 3.94"x 5.12" (H = 6.90" w/NEMA kit)
CI-002-GS4	
CI-003-GS2	5.04"x 5.51"x 6.10" (H = 6.90" w/NEMA kit)
CI-003-GS4	
CI-005-GS2	
CI-005-GS4	