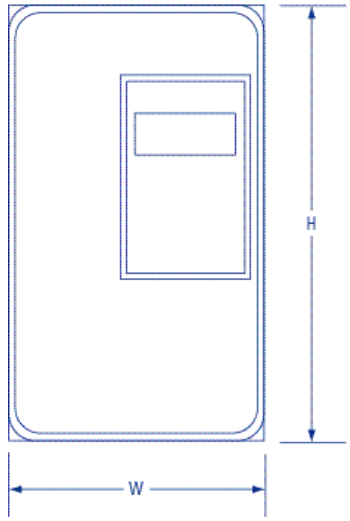
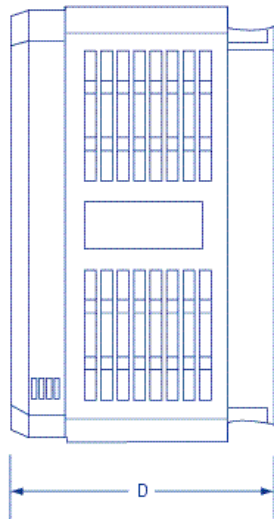
Dimensions

Rated Voltage	Inverter Part Number	Nominal HP[1]	Rated Output Current (A)	Overall Dimensions HxWxD (in.)	Approximate Weight (lbs.)
230 VAC 3-Phase	G5U20P4-N1	0.5	3.2	11.02x5.51x6.30	6.5
	G5U20P7-N1	1	6	11.02x5.51x6.30	6.5
	G5U21P5-N1	2	8	11.02x5.51x6.30	6.5
	G5U22P2-N1	3	11	11.02x5.51x7.09	10
	G5U23P7-N1	5	17.5	11.02x5.51x7.09	10
	G5U25P5-N1	7.5	25	11.81x7.87x8.07	12
	G5U27P5-N1	10	33	11.81x7.87x8.07	13
	G5U2011-N1	15	49	14.96x9.84x8.86	24
	G5U2015-N1	20	64	15.75x9.84x8.86	24
	G5U2018-N1	25	80	24.02x12.99x11.22	71
	G5U2022-N1	30	96	26.57x12.99x11.22	71
	G5U2030-N0*	40	130	26.57x16.73x13.78	134
	G5U2037-N0*	50	160	26.57x16.73x13.78	137
	G5U2045-N0*	60	183	31.50x18.70x13.78	176
	G5U2055-N0*	75	224	31.50x18.70x13.78	176
	G5U2075-N0*	100	300	36.42x22.64x15.75	298
460 VAC 3-Phase	G5U40P4-N1	1	1.9	11.02x5.51x6.30	6.5
	G5U40P7-N1	2	3.6	11.02x5.51x6.30	6.5
	G5U41P5-N1	3	5.1	11.02x5.51x7.09	10
	G5U42P2-N1	3	6.6	11.02x5.51x7.09	10
	G5U43P7-N1	5	8.5	11.02x5.51x7.09	10
	G5U44P0-N1	7.5	11.7	11.02x5.51x7.09	10
	G5U45P5-N1	10	14.8	11.81x7.87x8.07	13
	G5U47P5-N1	15	21	11.81x7.87x8.07	13
	G5U4011-N1	20	28.6	14.96x9.84x8.86	24
	G5U4015-N1	25	34	14.96x9.84x8.86	24
	G5U4018-N1	30	41	24.02x12.99x11.22	68
	G5U4022-N1	40	52	24.02x12.99x11.22	68
	G5U4030-N1	50	65	30.91x12.99x11.22	106
	G5U4037-N1	60	80	30.91x12.99x11.22	106
	G5U4045-N1	75	96	30.91x12.99x11.22	106
	G5U4055-N0*	100	128	32.28x17.91x13.78	174
	G5U4075-N0*	125	165	32.28x17.91x13.78	176
	G5U4110-N0*	150	224	36.42x22.64x14.76	298
	G5U4160-N0*	200	302	36.42x22.64x15.75	320
	G5U4185-N0*	250	340	57.09x37.40x17.13	794
	G5U4220-N0*	350	450	57.09x37.40x17.13	794
	G5U4300-N0*	500	605	62.99x37.80x17.91	926
575 VAC 3-Phase	G5U51P5-N1	2	3.5	11.02x5.51x7.09	10
	G5U52P2-N1	3	4.1	11.02x5.51x7.09	10
	G5U53P7-N1	5	6.3	11.02x5.51x7.09	10
	G5U55P5-N1	7.5	9.8	11.81x7.87x8.07	12
	G5U57P5-N1	10	12.5	11.81x7.87x8.07	12
	G5U5011-N1	15	17	14.96x9.84x8.86	24
	G5U5015-N1	20	22	14.96x9.84x8.86	24
	G5U5018-N1	25	27	29.53x15.75x11.22	97
	G5U5022-N1	30	32	29.53x15.75x11.22	97
	G5U5030-N1	40	41	33.46x22.64x11.81	159
	G5U5037-N1	50	52	33.46x22.64x11.81	159
	G5U5045-N1	60	62	33.46x22.64x11.81	159
	G5U5055-N1	75	77	41.34x22.64x12.80	199
	G5U5075-N1	100	99	41.97x22.64x12.80	199
	G5U5090-N0*	125	130	49.21x22.64x12.80	267
	G5U5110-N0*	150	172	62.99x22.64x13.78	324
	G5U5160-N0*	200	200	62.99x22.64x13.78	335





* These units are open chassis. Consult factory for NEMA 1 dimensions.

[1] Nominal HP ratings based on standard 1800RPM motor amperage.

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SB G5+SERIES-1

G5+
High Performance AC Inverters

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Get high performance control with complete configurability

The Omron IDM Controls G5+ Series Vector Drive delivers precise control in either open or closed loop vector control.

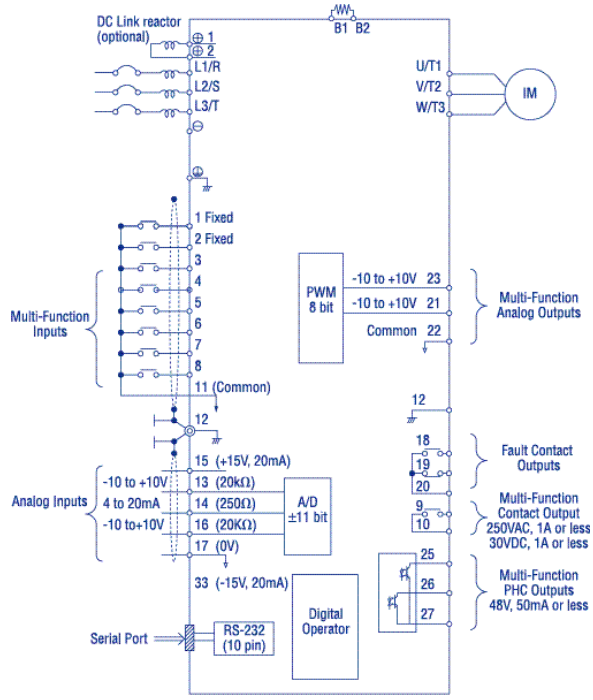
The Omron IDM Controls G5+ Series AC inverter is the right choice for all high performance, constant torque applications. This flux vector-capable inverter provides DC performance with AC convenience. Four selectable operation modes make the G5+ series inverter the most flexible drive available. The G5+ incorporates Adaptive Vector Control™ technology for extremely high starting torque. Powerful standard features, such as zero-servo, energy savings software, automatic torque boost and UL listed thermal electronic motor overload protection make the G5+ an excellent choice for your toughest applications. Options such as dynamic braking, encoder feedback, and several communication options mean that no application is too unique.

Standard Features

- 32 Bit VLSI Microprocessor Control
- 5 Stage RISC Processor
- 16 Million Instructions per Second
- Field Upgradeable Flash ROM
- Motor Auto-Tuning Function
- Two Line Multi-language LCD Display
- On Board PID Control
- Adjustable Stall Prevention

Benefits include:

- Ease of Maintenance
- Improved Process Control
- Improved Power Factor
- Powerful Programming
- Inverter & Motor Protection
- Motor 1 / 2 select
- 150% Torque at Zero Speed (Flux Vector Mode)
- 0.01% Speed Regulation (Flux Vector Mode)
- Multi-Function Analog and Digital Inputs and Outputs
- Digital Fault Diagnostics
- Power Loss Ride Through
- Zero-Servo Mode
- Hunting Prevention
- 8 Preset Speeds
- 4 Independent Accel/Decel Times
- Critical Frequency Lockout
- Electronic Thermal Overload Protection (UL Listed)
- Overcurrent Protection
- Overvoltage Protection
- Ground Fault Protection
- Overtemperature Protection
- Customizable V/F pattern



Global Construction

The G5+ Series meets international UL, cUL and CE standards for global application coverage. CE on 460V units only.

Specifications

Power Supply	200V Rated Input Voltage & Frequency		3-Phase, 200/208/220 VAC, 50Hz 3-Phase, 200/208/220/230 VAC, 60Hz
	Allowable Voltage Fluctuation		-15% of 200 VAC; +10% of 230 VAC
	400V Rated Input Voltage & Frequency		3-Phase, 380/400/415/440/460 VAC, 50Hz 3-Phase, 380/400/415/440/460 VAC, 60Hz
	Allowable Voltage Fluctuation		-15% of 380 VAC; +10% of 460 VAC
	600V Rated Input Voltage & Frequency		3-Phase, 500/575/600 VAC, 50/60Hz
	Allowable Voltage Fluctuation		-15% of 500 VAC; +10% of 600 VAC
	Allowable Frequency Fluctuation		±5%
Control Characteristics	Control Method		Sine Wave PWM
	Starting Torque		150% below 1Hz (150% at 0RPM with PG)
	Speed Control Range		100:1 (1000:1 with PG)
	Speed Control Accuracy		±0.2% (±0.02% with PG)
	Speed Response		5Hz (30Hz with PG)
	Torque Limit		Can be set by parameter: 4 steps available
	Torque Accuracy		±5%
	Torque Response		20Hz (40Hz with PG)
	Frequency Control Range		0.1 to 400 Hz
	Frequency Accuracy		Digital Command: ±0.01%, +14° to 104°F (-10° to 40°C) Analog Command: ±0.1%, 77±18°F (25±10°C)
	Frequency Setting Resolution		Digital Operator Reference: 0.01Hz Analog Reference: 0.03Hz/60Hz
	Output Frequency Resolution		0.01Hz
	Overload Capacity		150% rated output current for one minute
	Frequency Setting Signal		-10 to +10V, 0 to +10V, 4 to 20mA
	Accel/Decel		0.01 to 6000.0 sec (Accel/Decel time setting independently; 4 steps available)
	Braking Torque		Approximately 20% (Approximately 125% when using braking resistor*) *Set I3-04=0 (Stall Prevention selection during decel is disabled) when connecting braking transistors or braking resistor.
Protective Functions	Motor Overload Protection		UL-recognized electronic thermal overload relay
	Instantaneous Overcurrent		Motor coasts to a stop at approximately 200% rated output current
	Fuse Protection		Motor coasts to a stop at blown fuse
	Overload		Motor coasts to a stop after one minute at 150% rated output current Motor coasts to a stop at approximately 200% rated output current
	Overvoltage		Motor coasts to a stop if converter output voltage exceeds 410VDC at 230VAC input Motor coasts to a stop if converter output voltage exceeds 820VDC at 460VAC input Motor coasts to a stop if converter output voltage exceeds 1025VDC at 600VAC input
	Undervoltage		Motor coasts to a stop if converter output voltage drops to 190VDC or below
	Momentary Power Loss		Immediate stop after 15ms or longer power loss (setting mode before shipment)
	Fin Overheat		Thermostat
	Stall Prevention		Stall prevention during accel/decel and constant speed operation
	Ground Fault		Provided by electronic circuit (overcurrent level)
	Power Charge Indication		Charge led stays ON until bus voltage drops below 50VDC
Environmental Conditions	Location		Indoor (Protected from corrosive gases and dust)
	Humidity		95%RH (Non-condensing)
	Storage Temperature		-4 to 140°F (-20 to 60° C)
	Ambient Temperature		+14 to 104°F (-10 to 40° C) for NEMA 1 type +14 to 113°F (-10 to 45° C) for Open Chassis Type
	Elevation		1000m (3281 feet) or below
	Wiring Distance		328 ft (100 m) or less between inverter and motor
	Vibration		9.8m/s^2 (1G) less than 20HZ, up to 1.96 m/s^2 (0.2G) at 20 to 50HZ
Other Functions	Input Signals	Multi-function Inputs	3 Analog Inputs available (0-10V, -10 – +10V, 4-20mA) 8 Digital Inputs with 6 programmable for functions such as: 3 wire sequencing (2 wire is standard), multi-step speed operation, fault reset, external fault (NO or NC), jog, accel/decel time select, MOP function, speed search command, Local/Remote selection, motor 1 or 2 selection, PID disable, PID reset, trim increase or decrease, fast stop, analog signal selection, and many others.
	Output Signals	Multi-function outputs	2 Analog Outputs (0-10V) with 25 different settable functions 4 Digital Outputs (Form C fault contacts plus 3 programmable outputs [1 form A, 2 open collector]) Programmable Output functions available are: run signal, zero speed, frequency agree (2), frequency detection (4), torque level detection (2), timer output, at current/torque limit, regenerating, minor or major fault, DB overheat, loss of reference, and many others.
	Standard functions		Settable for V/Hz, open loop vector, or closed loop vector, DC injection braking, PID control, zero servo mode, energy saving mode, 4 accel/decel times with S-curve, 8 preset speeds, slip and torque compensation, 3 jump frequencies, stall prevention, auto restart, and many other standard features.