G7 AC DRIVE

HIGH PERFORMANCE THREE-LEVEL CONTROL FOR INDUSTRIAL APPLICATIONS

This innovative drive utilizes three-level control to offer the best solution for challenging installations. Yaskawa is the only manufacturer to offer a low voltage drive with this architecture. Three-level technology minimizes drive induced problems associated with long motor cables and premature motor bearing failures. In addition, overall electrical noise is greatly reduced, resulting in the most problem free installations. Not only does the Yaskawa G7 deliver this exclusive advantage, but it also provides high flexibility and excellent vector performance for control of speed, torque, and position, available in ratings through 500HP.

RATINGS

Power Output (HP)	240 V Models			480 V Models		
Heavy Duty (HD)	Catalog Code CIMR-G7U- □□□□□□	Output Amps HD	Frame Size	Catalog Code CIMR-G7U- □□□□□	Output Amps HD	Frame Size
0.5	20P41B	3.2	1			
0.75	20P41B	3.2	1	40P41B	1.8	1
1	20P71G	6	1	40P71B	3.4	1
2	21P51B	8	1	40P71B	3.4	1
3	22P21B	12	2	41P51B	4.8	2
3				42P21B	6.2	2
5	22P71B	18	2	43P71B	9	2
7.5	25P51B	27	3A	44P01B	11	2
10	27P51B	34	3A	45P51B	15	3A
15	20111B	49	4A	47P51B	21	3A
20	20151B	66	4C	40111B	27	4B
20				40151B	34	4B
25	20181C	80	5	40181B	42	6B
30	20221B	96	6A	40221B	52	6B
40	20300B	130	7	40301B	65	9A
50	20300B	130	7			
60	20370B	160	8	40371B	80	9A
60	20450B	183	10			
75	20550B	224	10	40451B	97	9B
100	20750B	300	11	40550B	128	10
125	20900B	358	12	40750B	165	10
150	21100B	415	12	40900B	195	11
200				41100B	240	11
200				41320B	270	13
250				41600B	302	13
300				41850B	370	14
350				42200B	450	14
400				43000A	605	15
500				43000A	605	15

For enclosure types and enclosure adapters, please visit yaskawa.com

APPROXIMATE DIMENSIONS (IN.)

Frame Size	Height	Width	Depth
1	11.02	5.51	6.30
2	11.02	5.51	7.09
3A	11.81	7.87	7.87
4A	13.78	9.45	8.27
4B	13.78	9.45	8.27
4C	13.78	9.45	8.27
5	15.75	10.00	10.24
6A	17.72	10.98	10.24
7	23.62	14.76	11.81
8	23.62	14.76	12.99
10	28.54	17.72	13.78
11	33.46	19.69	14.17
12	34.84	22.64	14.96
13	36.06	22.64	14.96
14	51.38	27.95	16.34
15	58.07	36.06	16.34

Dimensions shown in inches.

Information on this page represents IP00 type enclosures. For other enclosure types and enclosure adapters, please visit yaskawa.com.

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SPECIFICATIONS

Item	Specification
Overload Capacity	150% of rated output current per minute, 200% for 5 s
Output Frequency	0.01 to 400 Hz
Control Methods	Sine wave PWM, Flux vector control, open-loop vector control 1 or 2, V/f control without PG, V/f control with PG (switched by parameter setting)
Motor Type	Induction
Input Voltage & Frequency	240V Class: 200V -15% to 240V +10%, 50/60Hz +/- 5%;
	480V Class: 380V -15% to 480V +10%, 50/60Hz +/- 5%
Protective Design Types	NEMA 1
	Protected chassis (NEMA 1 kit available)
Contamination Resistance	Pollution degree 2 or less
Ambient Operating Temperature	-10°C to 40°C (Enclosed wall-mounted type)
	10°C to 45°C (Open chassis type)
Storage Temperature	- 20°C to + 60°C (short-term temperature during transportation)
Humidity	95% max. (with no condensation)
Altitude	1000 m max.
Vibration	Tolerance for vibration frequency less than 20 Hz, 9.8 m/s^2 max.; 20 to 50 Hz, 2 m/s^2 max
Global Certifications	UL, cUL, and CE listed
Standard I/O	Analog inputs: 3 (2 programmable), -10 to +10 VDC (20k) or 4 to 20 mA (250), 11 bit plus sign
	Analog outputs: 2 programmable, -10 to +10 VDC or 4-20 mA, 9 bit plus sign
	Digital outputs: 5 programmable, 3 form A and 2 open collector
	Pulse train input: 1 programmable, 32 kHz max
	Pulse train output: 1 programmable, 32 kHz max
	Fault contact: 1 form C
I/O Expansion	Analog Input Kit (3 Inputs, 12 Bit)
	Analog Output Kit, Isolated (2 Outputs, 11 Bit)
	Digital Input Kit (8 Inputs)
	Digital Output Kit (2 Form C or 2 Form A)
Feedback (optional)	Incremental Encoder
Network Communication	RS-232/422/485: Modbus RTU
Speed Control Range	1:200 (Open-loop vector control 2), 1:1000 (Flux vector control)
Speed Control Accuracy	±0.2% (Open-loop vector control, 25C ± 10C), ±0.02% (Flux vector control, 25C ± 10C)
Speed Response	10 Hz (Open-loop vector control 2), 30 Hz (Flux vector control)
Function Block Diagrams	Supported with special firmware