

# GA800

## AC DRIVE FOR INDUSTRIAL APPLICATIONS

The Yaskawa GA800 drive provides the ultimate combination of power, ease of use, flexibility and performance. In addition to its exceptional torque production and precise control, you'll enjoy effortless setup with GA800's high resolution display and connection to your favorite mobile device. Whether you need simple control, advanced network communications or functional safety, look no further than GA800 for all your variable speed needs.



### RATINGS

Power Output (HP)		240 V Models				480 V Models				600 V Models			
Normal Duty (ND)	Heavy Duty (HD)	Catalog Code GA80U □□□□□□□□	Output Amps		Frame	Catalog Code GA80U □□□□□□□□	Output Amps		Frame	Catalog Code GA80U □□□□□□□□	Output Amps		Frame
			ND	HD			ND	HD			ND	HD	
1.0	0.75	2004ABM	4.2	3.5	1	4002ABM	2.1	1.8	1				
1.5	1	2006ABM	6	5	1								
2	1.5	2008ABM	8	6.9	1	4004ABM	4.1	3.4	1				
3	2	2010ABM	9.6	8	1	4005ABM	5.4	4.8	1				
4	3	2012ABM	12.2	11	1	4007ABM	7.1	5.5	1.5				
5	4	2018ABM	17.5	14	1.5	4009ABM	8.9	7.2	1.5				
7.5	5	2021ABM	21	17.5	1.5	4012ABM	11.9	9.2	1.5				
10	7.5	2030ABM	30	25	1.5	4018ABM	17.5	14.8	1.5				
15	10	2042ABM	42	33	1.5	4023ABM	23.4	18	1.5				
20	15	2056ABM	56	47	2	4031ABM	31	24	2				
25	20	2070ABM	70	60	3	4038ABM	38	31	2				
30	25	2082ABM	82	75	3	4044ABM	44	39	3				
40	30	2110ABM	110	88	4	4060ABM	59.6	45	3.5				
50	40	2138ABM	138	115	6	4075ABM*	74.9	60	4				
60	50	2169ABM	169	145	7	4089ABM*	89.2	75	6				
75	60	2211ABM	211	180	7	4103ABM*	103	91	6				
100	75	2257ABM	257	215	9	4140ABM*	140	112	7				
125	100	2313ABM	313	283	9	4168ABM	168	150	7				
150	125	2360ABM	360	346	10	4208ABM	208	180	9				
150	150	2415ABM	415	415	10								
200	150					4250ABM	250	216	9				
250	200					4302ABM	302	260	9				
300	250					4371ABM	371	304	10	5289ABM	289	242	10
350	300					4414ABM	414	371	10				
400	350					4477ABM	477	414	11	5382ABM	382	336	11
450	400					4568ABM	568	477	11	5412ABM	412	382	11
500	450					4605ABM	675	605	11	5472ABM	472	412	11
600	500					4720ABM	720	605	11				

\* 480V Twelve-Pulse versions are available as models T075ABM through T720ABM with the same current and power ratings as 4075ABM through 4720ABM)

### APPROXIMATE DIMENSIONS

Frame Size	Height	Width	Depth
1	10.2 (260)	5.51 (140)	6.93 (176)
1.5	10.2 (260)	5.51 (140)	8.31 (211)
2	11.8 (300)	7.09 (180)	7.95 (202)
3	13.8 (350)	8.66 (220)	8.94 (227)
3.5	13.8 (350)	8.66 (220)	9.69 (246)
4	15.7 (400)	9.45 (240)	11.0 (280)
6	17.7 (450)	10.0 (255)	11.0 (280)
7	21.4 (543)	10.4 (264)	13.2 (335)
9	27.6 (700)	12.3 (312)	16.5 (420)
10	31.5 (800)	17.3 (440)	18.6 (472)
11	44.72 (1136)	20.1 (510)	18.9 (480)

Dimensions shown in inches (mm).

Information on this page represents IP20 type enclosures. For other enclosure types and enclosure adapters, please visit [yaskawa.com](http://yaskawa.com).

# GA800 SPECIFICATIONS

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Item	Specification
Overload Capacity	150% for 60 sec. (HD), 110% for 60 sec. (ND)
Output Frequency	0 to 590 Hz
Control Methods	Open and Closed Loop Current Vector, Open and Closed Loop V/f
Motor Types	Induction, Surface Permanent Magnet, Interior Permanent Magnet, Synchronous Reluctance
Input Voltage & Frequency	<b>240V Class:</b> 200V -15% to 240V +10%, 50/60 Hz +/-5%, <b>480V Class:</b> 380V -15% to 480V +10%, 50/60 Hz +/-5%, <b>600V Class:</b> 480V -10% to 600V +10%, 50/60 Hz +/-5%, <b>All Voltage Classes:</b> Overvoltage Category III
Protective Design Types	IP20 (NEMA 1 kit available) Flange (Type 12 backside)
Contamination Resistance	Pollution degree 2 or less. Additionally, meets IEC 60721-3-3, Class 3C2 (chemical gases), Class 3S3 (solid particles)
Ambient Operating Temperature	-10 to +50°C (IP20 and flange types) -10 to +40°C (with NEMA 1 kit) Up to +60°C (with derate)
Storage Temperature	-40 to +70°C (short-term temperature during transportation)
Humidity	95% RH or less (non-condensing)
Altitude	Up to 1000 m without derating, up to 4000 m with derating
Vibration	10 Hz to 20 Hz: 1 G (9.8 m/s <sup>2</sup> , 32.15 ft/s <sup>2</sup> ) 20 Hz to 55 Hz: 2004 to 2211, 4002 to 4168: 0.6 G (5.9 m/s <sup>2</sup> , 19.36 ft/s <sup>2</sup> ) 2257 to 2415, 4208 to 4720, 5289 to 5472: 0.2 G (2.0 m/s <sup>2</sup> , 6.56 ft/s <sup>2</sup> )
Global Certifications	UL, CSA, CE, RCM, RoHS
Functional Safety	Safe Torque Off, SIL3 according to IEC 62061, PLe according to ISO 13849-1 (600 V models pending, consult factory)
Standard I/O	(8) multi-function digital inputs (24Vdc) (3) multi-function analog inputs (0 +/- 10 VDC, 4-20 mA) (1) multi-function pulse inputs (2) Safe Torque Off inputs (1) fault relay output (form C) (3) multi-function relay outputs (form A) (2) multi-function analog output (0 +/- 10 VDC, 4-20mA) (1) multi-function pulse output
I/O Expansion	(3) Analog Inputs -10 to +10V, 13 bit plus sign, 4 to 20mA (16) Digital Inputs (2) Analog Outputs (-10 to +10V, 11 bit magnitude) (8) Digital Outputs (6 transistor, 2 relay)
Feedback (optional)	Incremental Absolute (Stegmann, Heidenhain, Resolver)
Network Communication	Standard: Modbus RTU, RS-485, 115 kbps Optional: EtherNet/IP, DeviceNet, Modbus TCP/IP, PROFINET, PROFIBUS-DP
Speed Control Range	1500:1 Closed Loop Vector (IM and PM Motors) 200:1 Open Loop Vector (IM Motors) 100:1 Open Loop Vector (PM Motors)
Speed Control Accuracy	≤ 0.02%: Closed Loop Vector; ≤ 0.2%: Open Loop Vector
Speed Response	≥ 50 Hz: Closed Loop Vector (Induction Motors) ≥ 250 Hz: Closed Loop Vector (PM Motors) ≥ 20 Hz: Open Loop Vector (Induction Motors) ≥ 40 Hz: Open Loop Vector (PM Motors)
Function Block Diagrams	Up to 200 connections, 500 μs program scan time

IT'S PERSONAL