

# 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 GA800 □□□□□□□□	Output Amps		Frame	Catalog Code GA800 □□□□□□□□	Output Amps		Frame	Catalog Code GA800 □□□□□□□□	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	5002ABM	1.7	1.3	1.5
1.5	1	2006ABM	6	5	1								
2	1.5	2008ABM	8	6.9	1	4004ABM	4.1	3.4	1	5003ABM	2.7	2.4	1.5
3	2	2010ABM	9.6	8	1	4005ABM	5.4	4.8	1	5004ABM	3.9	2.7	1.5
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	5006ABM	6.1	3.9	1.5
7.5	5	2021ABM	21	17.5	1.5	4012ABM	11.9	9.2	1.5	5009ABM	9	6.1	1.5
10	7.5	2030ABM	30	25	1.5	4018ABM	17.5	14.8	1.5	5011ABM	11	9	1.5
15	10	2042ABM	42	33	1.5	4023ABM	23.4	18	1.5	5017ABM	17	11	2
20	15	2056ABM	56	47	2	4031ABM	31	24	2	5022ABM	22	17	2
25	20	2070ABM	70	60	3	4038ABM	38	31	2	5027ABM	27	22	3
30	25	2082ABM	82	75	3	4044ABM	44	39	3	5032ABM	32	27	3
40	30	2110ABM	110	88	4	4060ABM	59.6	45	3.5	5041ABM	41	32	4
50	40	2138ABM	138	115	6	4075ABM	74.9	60	4	5052ABM	52	41	4
60	50	2169ABM	169	145	7	4089ABM	89.2	75	6	5062ABM	62	52	7
75	60	2211ABM	211	180	7	4103ABM <sup>1</sup>	103	91	6	5077ABM	77	62	7
100	75	2257ABM	257	215	9	4140ABM <sup>1</sup>	140	112	7	5099ABM	99	77	7
125	100	2313ABM	313	283	9	4168ABM <sup>1</sup>	168	150	7	5125ABM	125	99	9
150	125	2360ABM	360	346	10	4208ABM <sup>1</sup>	208	180	9	5144ABM	144	125	9
150	150	2415ABM	415	415	10								
200	150					4250ABM <sup>1</sup>	250	216	9	5192ABM	192	172	10
250	200					4302ABM <sup>1</sup>	302	260	9	5242ABM	242	192	10
300	250					4371ABM <sup>1</sup>	371	304	10	5289ABM	289	242	10
350	300					4414ABM <sup>1</sup>	414	371	10				
400	350					4477ABM <sup>1</sup>	477	414	11	5382ABM	382	336	11
450	400					4568ABM <sup>1</sup>	568	477	11	5412ABM	412	382	11
500	450					4605ABM <sup>1</sup>	675	605	11	5472ABM	472	412	11
600	500					4720ABM <sup>1</sup>	720	605	11				
700	600					4810AAM <sup>2</sup>	810	720	12				
800	700					4930AAM <sup>2</sup>	930	810	12				
900	800					4H11AAM <sup>2</sup>	1090	930	12				
1000	900					4H12AAM <sup>2</sup>	1200	1090	12				

### 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)
12	53.84 (1368)	29.92 (760)	17.32 (440)

Dimensions shown in inches (mm).

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

\*1: 480V Twelve-Pulse versions are available as models T103AAM through T720AAM with the same current and power ratings as 4103ABM through 4720ABM.

\*2: Models 4810AAM to 4H12AAM are user-configurable for either 6-Pulse (3-Phase) or 12-Pulse (6-Phase) input.

# GA800 SPECIFICATIONS

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Item	Specification
<b>Overload Capacity</b>	150% for 60 sec. (HD), 110% for 60 sec. (ND)
<b>Output Frequency</b>	0 to 590 Hz
<b>Control Methods</b>	Open and Closed Loop Current Vector, Open and Closed Loop V/f
<b>Motor Types</b>	Induction, Surface Permanent Magnet, Interior Permanent Magnet, Synchronous Reluctance
<b>Input Voltage &amp; Frequency</b>	<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
<b>Protective Design Types</b>	IP20 (NEMA 1 kit available) Flange (Type 12 backside) IP00/20 (model dependent)
<b>Contamination Resistance</b>	Pollution degree 2 or less. Additionally, meets IEC 60721-3-3, Class 3C2 (chemical gases), Class 3S3 (solid particles)
<b>Ambient Operating Temperature</b>	-10 to +50°C (IP20 and flange types) -10 to +40°C (with NEMA 1 kit) Up to +60°C (with derate)
<b>Storage Temperature</b>	-40 to +70°C (short-term temperature during transportation)
<b>Humidity</b>	95% RH or less (non-condensing)
<b>Altitude</b>	Up to 1000 m without derating, up to 4000 m with derating
<b>Vibration</b>	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, 5002 to 5099: 0.6 G (5.9 m/s <sup>2</sup> , 19.36 ft/s <sup>2</sup> ) 2257 to 2415, 4208 to 4H12, 5125 to 5472: 0.2 G (2.0 m/s <sup>2</sup> , 6.56 ft/s <sup>2</sup> )
<b>Global Certifications</b>	UL, CSA, CE, RCM, RoHS, SEMI-F47, IEEE1668
<b>Functional Safety</b>	Safe Torque Off, SIL3 according to IEC 62061, PLe according to ISO 13849-1 (600 V models pending, consult factory)
<b>Standard I/O</b>	(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
<b>I/O Expansion</b>	(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)
<b>Feedback (optional)</b>	Incremental Absolute (Stegmann, Heidenhain, Resolver)
<b>Network Communication</b>	Standard: Modbus RTU, RS-485, 115 kbps Optional: EtherNet/IP, DeviceNet, Modbus TCP/IP, PROFINET, PROFIBUS-DP
<b>Speed Control Range</b>	1500:1 Closed Loop Vector (IM and PM Motors) 200:1 Open Loop Vector (IM Motors) 100:1 Open Loop Vector (PM Motors)
<b>Speed Control Accuracy</b>	≤ 0.02%: Closed Loop Vector; ≤ 0.2%: Open Loop Vector
<b>Speed Response</b>	≥ 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)
<b>Function Block Diagrams</b>	Up to 200 connections, 500 μs program scan time

IT'S PERSONAL