

## ***AF-300 P11™ Adjustable Frequency Drive***

The AF-300 P11™ drive is designed for variable torque applications and is ideal for pump systems and air moving systems. Easy operation is achieved with simple commands from local or remote keypad or from facility management systems. Pre-loaded motor parameters and factory defaults are included for out-of-the-box installation. The AF-300 P11 offers 1/4 to 150 Hp ratings in 230 VAC, and 1/2 to 800 Hp ratings in 460 VAC for even greater versatility.

Standard features include Modbus RTU for simple connection to process controller. The energy saving design mode helps reduce operating costs and all models carry the global acceptance of UL, cUL, and EN/CE.

The AF-300 P11 is the perfect solution for the variable torque load such as fans & pumps. With features such as catch a spinning motor, reverse operation lockout, automatic cooling fan control, automatic restart and tripless operation via overload and acceleration time control, this drive can provide years of trouble free operation.

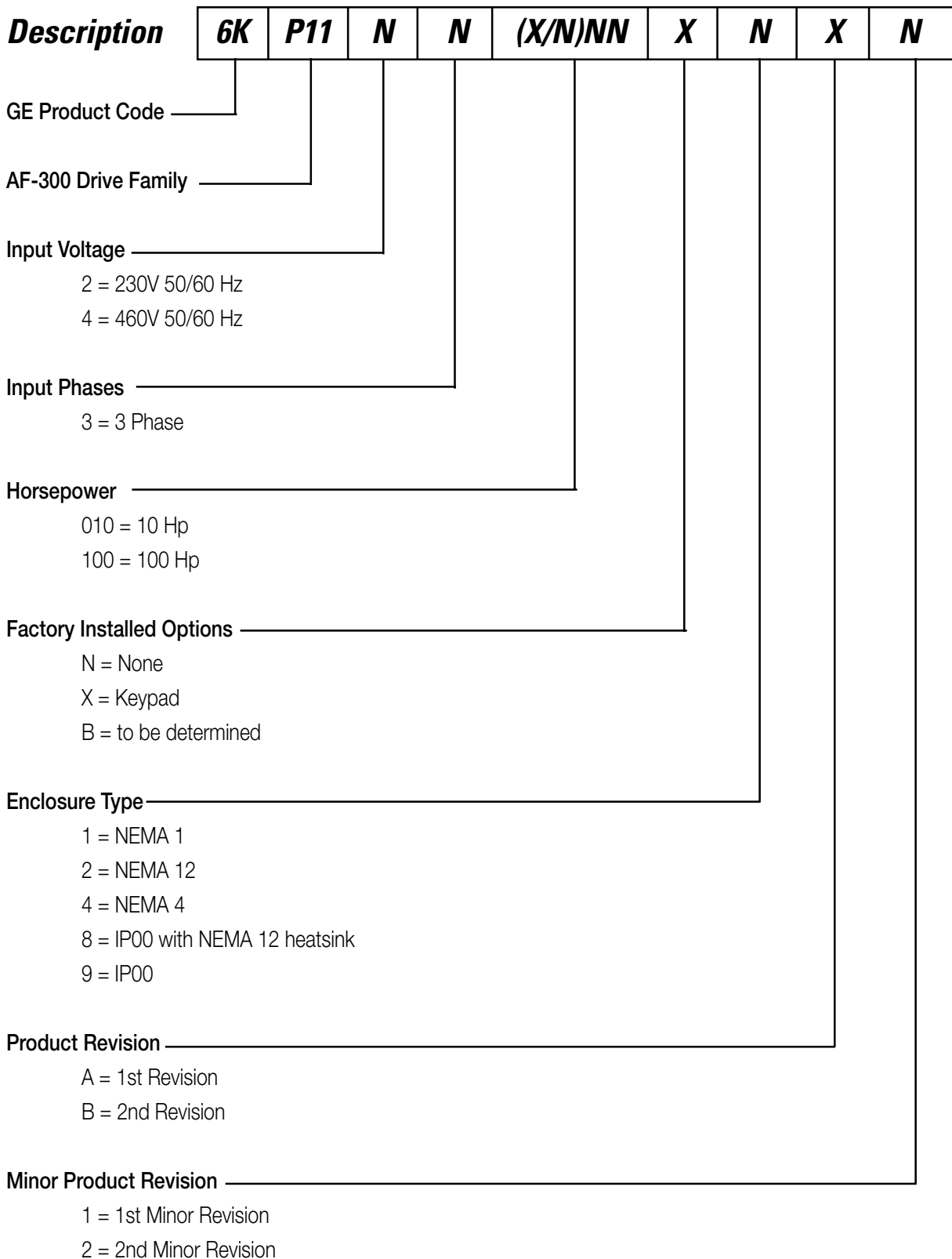
All of this power, versatility and reliability in one compact drive. In ratings of 30 Hp and less the AF-300 P11 is designed for side-by-side installation, with zero clearance for optimum use in space restricted areas.



### INDEX TO SECTION 4

Product Description .....	4-1
Model Numbering System Diagram .....	4-2
Pricing, Dimensions & Weights .....	4-3
Ratings Efficiency & Watts Loss .....	4-6
Standard Specifications .....	4-7
Replacement Parts .....	4-12
Dimensional Drawings .....	4-17
Connection Diagrams .....	4-24
<b>Options &amp; Accessories .....</b>	<b>See Section 6</b>

## AF-300 P11 Model Numbering System Diagram



4

## Pricing, Dimensions & Weights

### AF-300 P11

HP Rating	NEMA Enclosure	Rated Output Current (A)	Overload (110% 1min.)	AF-300P11 Model No.	Catalog No.	List Price GO-5P11	Dimensions H x W x D (inches)	Weight (lbs)
<b>230VAC, 3 phase, 50/60Hz Input, NEMA 1</b>								
0.25	1	1.5	1.7	6KP1123F25X1##	D6600	670	10.24 x 4.33 x 5.12	4.8
0.5	1	3	3.3	6KP1123F50X1##	D6601	720	10.24 x 4.33 x 5.12	4.8
1	1	5	5.5	6KP1123001X1##	D6602	780	10.24 x 4.33 x 5.71	5.5
2	1	8	8.8	6KP1123002X1##	D6603	840	10.24 x 5.91 x 5.71	8.4
3	1	11	12	6KP1123003X1##	D6604	895	10.24 x 5.91 x 5.71	8.4
5	1	17	19	6KP1123005X1##	D6605	990	10.24 x 5.91 x 5.71	8.4
7.5	1	22	24	6KP1123007X1##	D6606	1,100	10.24 x 8.66 x 7.68	12.6
10	1	29	32	6KP1123010X1##	D6607	1,375	10.24 x 8.66 x 7.68	12.6
15	1	42	46	6KP1123015X1##	D6608	1,670	10.24 x 8.66 x 7.68	12.6
20	1	55	61	6KP1123020X1##	D6609	2,235	15.75 x 9.84 x 7.68	22.0
25	1	67	74	6KP1123025X1##	D6610	2,820	15.75 x 9.84 x 7.68	22.0
30	1	78	86	6KP1123030X1##	D6611	3,350	15.75 x 9.84 x 7.68	23.1
40	1	115	127	6KP1123040X1##	D6612	4,905	29.7 x 13.5 x 10.0	70
50	1	145	160	6KP1123050X1##	D6613	6,030	29.7 x 13.5 x 10.0	70
60	1	180	198	6KP1123060X1##	D6614	7,350	33.1 x 14.9 x 10.6	86
75	1	215	237	6KP1123075X1##	D6615	8,720	38.0 x 14.9 x 10.6	106
100	1	283	311	6KP1123100X1##	D6616	10,280	38.0 x 14.9 x 10.6	110
125	1	346	381	6KP1123125X1##	D6617	16,400	41.3 x 21.0 x 11.2	172
150	1	415	457	6KP1123150X1##	D6618	24,800	50.4 x 26.9 x 14.2	282

### 230VAC, 3 phase, 50/60Hz Input, NEMA 4

0.25	4	1.5	1.7	6KP1123F25X4##	D6650	770	10.24 x 4.33 x 5.12	4.8
0.5	4	3	3.3	6KP1123F50X4##	D6651	830	10.24 x 4.33 x 5.12	4.8
1	4	5	5.5	6KP1123001X4##	D6652	900	10.24 x 4.33 x 5.71	5.5
2	4	8	8.8	6KP1123002X4##	D6653	970	10.24 x 5.91 x 5.71	8.4
3	4	11	12	6KP1123003X4##	D6654	1,030	10.24 x 5.91 x 5.71	8.4
5	4	17	19	6KP1123005X4##	D6655	1,140	10.24 x 5.91 x 5.71	8.4
7.5	4	22	24	6KP1123007X4##	D6656	1,350	10.24 x 8.66 x 7.68	12.6
10	4	29	32	6KP1123010X4##	D6657	1,600	10.24 x 8.66 x 7.68	12.6
15	4	42	46	6KP1123015X4##	D6658	2,000	10.24 x 8.66 x 7.68	12.6

### 230VAC, 3 phase, 50/60Hz Input, NEMA 12

20	12	55	61	6KP1123020X2##	D6659	2,650	15.75 x 9.84 x 7.68	22.0
25	12	67	74	6KP1123025X2##	D6660	3,300	15.75 x 9.84 x 7.68	22.0
30	12	78	86	6KP1123030X2##	D6661	3,900	15.75 x 9.84 x 7.68	23.1

### 230VAC, 3 phase, 50/60Hz Input, Open

40	Open	115	127	6KP1123040X9##	---	4,335	21.7 x 13.4 x 10.0	64
50	Open	145	160	6KP1123050X9##	---	5,600	21.7 x 13.4 x 10.0	64
60	Open	180	198	6KP1123060X9##	---	6,995	24.2 x 14.8 x 10.6	79
75	Open	215	237	6KP1123075X9##	---	8,370	29.1 x 14.8 x 10.6	97
100	Open	283	311	6KP1123100X9##	---	9,540	29.1 x 14.8 x 10.6	101
125	Open	346	381	6KP1123125X9##	---	15,450	29.5 x 20.9 x 11.2	154
150	Open	415	457	6KP1123150X9##	---	23,400	34.6 x 26.8 x 14.2	253

## Indicates product revision.

Note: Hp rating is shown for 230V and 460V nominal systems.

When applying at lower voltage, select the drive by rated current and not Hp rating.

### Options for AF-300 P11 see Section 6.

Note: AF-300 P11/G11 Drives rated 100 Hp and above are furnished with a DC link reactor. This reactor must be installed between terminal P1 and P+ prior to commissioning of the Drive. DC Link Reactor is provided as open type. Enclosure to be provided by others.

## Pricing, Dimensions & Weights

### AF-300 P11

HP Rating	NEMA Enclosure	Rated Output Current (A)	Overload (110% 1min.)	AF-300P11 Model No.	Catalog No.	List Price GO-5P11	Dimensions H x W x D (inches)	Weight (lbs)
<b>230VAC, 3 phase, 50/60Hz Input, Open with NEMA 12 Heatsink</b>								
40	Open	115	127	6KP1123040X8##	---	4,665	21.7 x 13.4 x 10.0	64
50	Open	145	160	6KP1123050X8##	---	5,840	21.7 x 13.4 x 10.0	64
60	Open	180	198	6KP1123060X8##	---	7,175	24.2 x 14.8 x 10.6	79
75	Open	215	237	6KP1123075X8##	---	8,545	29.1 x 14.8 x 10.6	97
100	Open	283	311	6KP1123100X8##	---	9,855	29.1 x 14.8 x 10.6	101
125	Open	346	381	6KP1123125X8##	---	15,900	29.5 x 20.9 x 11.2	154
150	Open	415	457	6KP1123150X8##	---	24,050	34.6 x 26.8 x 14.2	253

### 460VAC, 3 phase, 50/60Hz Input, NEMA 1

0.5	1	1.5	1.7	6KP1143F50X1##	D6649	870	10.24 x 4.33 x 5.12	4.8
1	1	2.5	2.8	6KP1143001X1##	D6619	920	10.24 x 4.33 x 5.71	5.5
2	1	3.7	4.1	6KP1143002X1##	D6620	980	10.24 x 5.91 x 5.71	8.4
3	1	5.5	6.1	6KP1143003X1##	D6621	1,120	10.24 x 5.91 x 5.71	8.4
5	1	9	9.9	6KP1143005X1##	D6622	1,270	10.24 x 5.91 x 5.71	8.4
7.5	1	12.5	14	6KP1143007X1##	D6623	1,410	10.24 x 8.66 x 7.68	13.4
10	1	16.5	18	6KP1143010X1##	D6624	1,760	10.24 x 8.66 x 7.68	13.4
15	1	23	25	6KP1143015X1##	D6625	2,145	10.24 x 8.66 x 7.68	13.4
20	1	30	33	6KP1143020X1##	D6626	2,870	15.75 x 9.84 x 7.68	22.0
25	1	37	41	6KP1143025X1##	D6627	3,595	15.75 x 9.84 x 7.68	22.0
30	1	44	48	6KP1143030X1##	D6628	4,080	15.75 x 9.84 x 7.68	23.1
40	1	60	66	6KP1143040X1##	D6630	4,950	29.7 x 13.5 x 10.0	70
50	1	75	83	6KP1143050X1##	D6631	5,695	29.7 x 13.5 x 10.0	70
60	1	91	100	6KP1143060X1##	D6632	7,120	29.7 x 14.9 x 10.6	82
75	1	112	123	6KP1143075X1##	D6633	8,330	34.6 x 14.9 x 10.6	95
100	1	150	165	6KP1143100X1##	D6634	10,470	34.6 x 14.9 x 10.6	97
125	1	176	194	6KP1143125X1##	D6635	12,500	38.0 x 14.9 x 10.6	115
150	1	210	231	6KP1143150X1##	D6636	14,500	38.0 x 21.0 x 12.4	174
200	1	253	278	6KP1143200X1##	D6637	17,870	38.0 x 21.0 x 12.4	174
250	1	304	334	6KP1143250X1##	D6638	21,750	53.1 x 21.0 x 14.2	245
300	1	377	415	6KP1143300X1##	D6639	25,250	53.1 x 21.0 x 14.2	245
350	1	415	457	6KP1143350X1##	D6640	27,500	55.1 x 26.9 x 14.2	337
400	1	485	534	6KP1143400X1##	D6641	33,660	55.1 x 26.9 x 14.2	337
450	1	520	572	6KP1143450X1##	D6642	41,400	55.1 x 26.9 x 14.2	337
500	1	650	715	6KP1143500X1##	D6643	54,800	57.1 x 26.8 x 17.7	562
600	1	740	814	6KP1143600X1##	D6644	74,100	57.1 x 26.8 x 17.7	562
700	1	840	924	6KP1143700X1##	D6645	87,100	57.1 x 34.6 x 17.7	804
800	1	960	1056	6KP1143800X1##	D6646	99,500	57.1 x 34.6 x 17.7	804

### 460VAC, 3 phase, 50/60Hz Input, NEMA 4

0.5	4	1.5	1.7	6KP1143F50X4##	D6699	1,000	10.24 x 4.33 x 5.12	4.8
1	4	2.5	2.8	6KP1143001X4##	D6669	1,060	10.24 x 4.33 x 5.71	5.5
2	4	3.7	4.1	6KP1143002X4##	D6670	1,130	10.24 x 5.91 x 5.71	8.4
3	4	5.5	6.1	6KP1143003X4##	D6671	1,290	10.24 x 5.91 x 5.71	8.4
5	4	9	9.9	6KP1143005X4##	D6672	1,460	10.24 x 5.91 x 5.71	8.4
7.5	4	12.5	14	6KP1143007X4##	D6673	1,755	10.24 x 8.66 x 7.68	13.4
10	4	16.5	18	6KP1143010X4##	D6674	2,100	10.24 x 8.66 x 7.68	13.4
15	4	23	25	6KP1143015X4##	D6675	2,600	10.24 x 8.66 x 7.68	13.4

## Indicates product revision.

Note: Hp rating is shown for 230V and 460V nominal systems.

When applying at lower voltage, select the drive by rated current and not Hp rating.

### Options for AF-300 P11 see Section 6.

Note: AF-300 P11/G11 Drives rated 100 Hp and above are furnished with a DC link reactor. This reactor must be installed between terminal P1 and P+ prior to commissioning of the Drive. DC Link Reactor is provided as open type. Enclosure to be provided by others.

**Pricing, Dimensions & Weights****AF-300 P11**

HP Rating	NEMA Enclosure	Rated Output Current (A)	Overload (110% 1min.)	AF-300P11 Model No.	Catalog No.	List Price GO-5P11	Dimensions H x W x D (inches)	Weight (lbs)
<b>460VAC, 3 phase, 50/60Hz Input, NEMA 12</b>								
20	12	30	33	6KP1143020X2##	D6676	3,300	15.75 x 9.84 x 7.68	22.0
25	12	37	41	6KP1143025X2##	D6677	4,150	15.75 x 9.84 x 7.68	22.0
30	12	44	48	6KP1143030X2##	D6678	4,900	15.75 x 9.84 x 7.68	23.1

**460VAC, 3 phase, 50/60Hz Input, Open**

40	Open	60	66	6KP1143040X9##	---	4,545	21.7 x 13.4 x 10.0	64
50	Open	75	83	6KP1143050X9##	---	5,300	21.7 x 13.4 x 10.0	64
60	Open	91	100	6KP1143060X9##	---	6,650	21.7 x 14.8 x 10.6	75
75	Open	112	123	6KP1143075X9##	---	7,805	26.6 x 14.8 x 10.6	86
100	Open	150	165	6KP1143100X9##	---	9,910	26.6 x 14.8 x 10.6	88
125	Open	176	194	6KP1143125X9##	---	11,800	29.1 x 14.8 x 10.6	106
150	Open	210	231	6KP1143150X9##	---	13,900	29.1 x 20.9 x 12.4	154
200	Open	253	278	6KP1143200X9##	---	16,080	29.1 x 20.9 x 12.4	154
250	Open	304	334	6KP1143250X9##	---	20,040	39.4 x 20.9 x 14.2	220
300	Open	377	415	6KP1143300X9##	---	23,760	39.4 x 20.9 x 14.2	220
350	Open	415	457	6KP1143350X9##	---	25,880	39.4 x 26.8 x 14.2	308
400	Open	485	534	6KP1143400X9##	---	31,670	39.4 x 26.8 x 14.2	308
450	Open	520	572	6KP1143450X9##	---	38,950	39.4 x 26.8 x 14.2	308
500	Open	650	715	6KP1143500X9##	---	49,500	55.1 x 26.8 x 17.7	551
600	Open	740	814	6KP1143600X9##	---	66,880	55.1 x 26.8 x 17.7	551
700	Open	840	924	6KP1143700X9##	---	78,620	55.1 x 35.6 x 17.7	793
800	Open	960	1056	6KP1143800X9##	---	89,805	55.1 x 35.6 x 17.7	793

**460VAC, 3 phase, 50/60Hz Input, Open with NEMA 12 Heatsink**

40	Open	60	66	6KP1143040X8##	---	4,750	21.7 x 13.4 x 10.0	64
50	Open	75	83	6KP1143050X8##	---	5,475	21.7 x 13.4 x 10.0	64
60	Open	91	100	6KP1143060X8##	---	6,860	21.7 x 14.8 x 10.6	75
75	Open	112	123	6KP1143075X8##	---	8,065	26.6 x 14.8 x 10.6	86
100	Open	150	165	6KP1143100X8##	---	10,170	26.6 x 14.8 x 10.6	88
125	Open	176	194	6KP1143125X8##	---	12,150	29.1 x 14.8 x 10.6	106
150	Open	210	231	6KP1143150X8##	---	14,200	29.1 x 20.9 x 12.4	154
200	Open	253	278	6KP1143200X8##	---	16,580	29.1 x 20.9 x 12.4	154
250	Open	304	334	6KP1143250X8##	---	20,660	39.4 x 20.9 x 14.2	220
300	Open	377	415	6KP1143300X8##	---	24,500	39.4 x 20.9 x 14.2	220
350	Open	415	457	6KP1143350X8##	---	26,680	39.4 x 26.8 x 14.2	308
400	Open	485	534	6KP1143400X8##	---	32,650	39.4 x 26.8 x 14.2	308
450	Open	520	572	6KP1143450X8##	---	40,160	39.4 x 26.8 x 14.2	308
500	Open	650	715	6KP1143500X8##	---	52,060	55.1 x 26.8 x 17.7	551
600	Open	740	814	6KP1143600X8##	---	70,400	55.1 x 26.8 x 17.7	551
700	Open	840	924	6KP1143700X8##	---	82,755	55.1 x 35.6 x 17.7	793
800	Open	960	1056	6KP1143800X8##	---	94,535	55.1 x 35.6 x 17.7	793

## Indicates product revision.

Note: Hp rating is shown for 230V and 460V nominal systems.

When applying at lower voltage, select the drive by rated current and not Hp rating.

**Options for AF-300 P11 see Section 6.**

Note: AF-300 P11/G11 Drives rated 100 Hp and above are furnished with a DC link reactor. This reactor must be installed between terminal P1 and P+ prior to commissioning of the Drive. DC Link Reactor is provided as open type. Enclosure to be provided by others.

## Ratings Efficiency & Watts Loss (230, 460 VAC)

### AF-300P11 Drive Ratings Efficiency and Watts Loss

HP Rating	Rated Output Current (A)	Rated Output Power (KVA)	Efficiency at 2KHz (%)	Efficiency at 15KHz (%)	Watts Loss at 2KHz (W)	Watts Loss at 15KHz (W)	Internal DB (W)
<b>230VAC</b>							
0.25	1.5	0.59	92.0	90.5	25	30	N/A
0.5	3	1.1	93.5	91.7	35	45	N/A
1	5	1.9	94.9	94.0	50	60	N/A
2	8	3.1	95.7	94.1	80	110	N/A
3	11	4.3	95.9	94.9	110	140	N/A
5	17	6.7	96.2	95.4	170	210	N/A
7.5	22	8.7	96.2	95.2	210	280	N/A
10	29	11	96.5	95.3	290	370	N/A
15	42	16	96.4	95.2	410	550	N/A
20	55	21	96.9	95.9	500	670	N/A
25	67	26	96.8	95.8	630	840	N/A
30	78	31	96.5	95.5	770	1030	N/A
			2KHz (%)	10KHz (%)	2KHz (W)	10KHz (W)	
40	115	45	97.2	96.8	950	1100	N/A
50	145	57	97.0	96.7	1250	1400	N/A
60	180	71	97.1	96.6	1500	1750	N/A
75	215	85	97.3	96.6	1700	1950	N/A
100	283	112	97.4	97.0	2200	2500	N/A
			2KHz (%)	6KHz (%)	2KHz (W)	6KHz (W)	
125	346	137	97.4	97.2	2650	2800	N/A
150	415	165	97.4	97.3	3200	3350	N/A
<b>460VAC</b>							
0.5	1.5	1.1	93.5	89.3	35	60	N/A
1	2.5	1.9	95.4	91.7	45	85	N/A
2	3.7	2.9	96.7	94.1	60	110	N/A
3	5.5	4.3	97.0	94.5	80	150	N/A
5	9	7.1	97.1	95.0	130	230	N/A
7.5	12.5	9.9	97.3	95.3	160	290	N/A
10	16.5	13.1	97.3	95.4	210	370	N/A
15	23	18.3	97.6	95.9	300	520	N/A
20	30	23.9	97.9	96.5	360	610	N/A
25	37	29.4	97.8	96.4	460	770	N/A
30	44	35	97.8	96.4	530	870	N/A
			2KHz (%)	10KHz (%)	2KHz (W)	10KHz (W)	
40	60	47	97.8	96.9	750	1050	N/A
50	75	59	97.7	96.9	950	1300	N/A
60	91	72	97.8	97.0	1100	1550	N/A
75	112	89	97.8	97.0	1350	1900	N/A
100	150	119	97.8	97.1	1800	2450	N/A
			2KHz (%)	6KHz (%)	2KHz (W)	6KHz (W)	
125	176	140	98.1	97.8	1850	2200	N/A
150	210	167	98.0	97.8	2400	2750	N/A
200	253	202	98.0	97.7	2900	3350	N/A
250	304	242	98.1	97.8	3250	3800	N/A
300	377	300	98.1	97.8	4250	4900	N/A
350	415	330	98.2	97.9	4350	5100	N/A
400	485	386	98.1	97.8	5100	5900	N/A
450	520	414	98.1	97.8	5700	6650	N/A
500	650	518	98.2	97.9	6900	8050	N/A
600	740	590	98.1	97.8	8050	9350	N/A
700	840	669	98.2	97.9	8900	10400	N/A
800	960	765	98.1	97.8	10300	12100	N/A

4

## Standard Specifications

### Environmental Condition

Enclosures	NEMA 1 Standard (NEMA 4, NEMA 12), IP00 (open)
Installation Location:	NEMA 1 Intended for indoor use only, less than 1000 meters (3300 feet) elevation, not in contact with corrosive gas, oil mist, dust or direct sunlight.
	NEMA 4 Intended for use indoors or outdoors to protect the enclosed equipment against splashing water, seepage of water, falling or hose directed water and severe external condensation. Installation should be less than 1000 meters (3300 feet) elevation, not in contact with corrosive gas, oil mist or direct sunlight.
	NEMA 12 Intended for indoor use only, less than 1000 meters (3300 feet) elevation, not in contact with corrosive gas, oil mist, dust or direct sunlight.
Stored Temperature	-25 to + 65°C (-13° to + 149°F)
Ambient Temperature	-10 to 50°C (+14 to 122°F) Ventilating covers must be removed under conditions exceeding +40°C (+104°F) for models rated at 30 Hp or less.
Humidity	5% to 95% relative humidity (non-condensing).
Vibration	3mm peak from 2-9 Hz, 9.8 m/s <sup>2</sup> from 9-20 Hz, 2 m/s <sup>2</sup> from 20-55 Hz, 2 m/s <sup>2</sup> from 55-200 Hz.
Cooling Method	1 Hp and below – Convection Above 1 Hp – Fan-cooled

### Output

Rated Output Voltage	230 VAC, 3-Phase, 200V/50 Hz or 3-Phase, 200V, 220V, 230V/60 Hz 460 VAC, 3-Phase, 380V, 400V, 415V, 440V, 50 Hz or 3-Phase 380V, 400V, 440V, 460V, 60 Hz
Frequency Range	0.1 to 120 Hz
Overload Current Rating	110% of drive's rated current for 1 min.

### Power Supply

Rated Input AC Voltage	230 VAC: 200 to 230 VAC 50/60 Hz, 3 phase (1/4 to 30 Hp) 230 VAC: 200 to 220 VAC/50 Hz, 200 to 230 VAC/60 Hz, 3 phase (40 Hp or more) 460 VAC: 380 to 480 VAC 50/60 Hz, 3 phase (1/2 to 30 Hp) 460 VAC: 380 to 440 VAC/50 Hz, 380 to 480 VAC/60 Hz, 3 phase (40 Hp or more) Voltage: +10%, -15%; Voltage Unbalance - Within 3% Frequency: +/-5%
Control System	Sinusoidal PWM Control (V/Hz Control, Dynamic Torque Vector Control)
Momentary Voltage Dip	230 VAC: When the input voltage is 165 VAC or more, the drive can be operated continuously. 460 VAC: When the input voltage is 310 VAC or more, the drive can be operated continuously. When the input voltage drops below 165/310 VAC from rated voltage, the drive can be operated for 15ms. The smooth recovery method is selectable.

**Standard Specifications (Continued)****Control**

Starting Torque	100% (50% default) with Dynamic Torque Control selected.
Carrier Frequency	0.75-15 kHz -30 Hp or less 0.75-10 kHz -40 Hp to 100 Hp 0.75- 6 kHz -125 Hp or more
Frequency Setting Resolution	Analog: 1/3000 of max. frequency (0.02 Hz/60 Hz; 0.05 Hz/150 Hz) Digital: 0.01 Hz (max. frequency up to 99.99 Hz); 0.1 Hz (max. frequency of 100 Hz or more)
Output Frequency Accuracy (Stability)	Analog setting: $\pm 0.2\%$ or less of max. frequency (@ $25 \pm 10^\circ\text{C}$ ) Digital setting: $\pm 0.01\%$ or less of max. frequency (@ $-10$ to $+50^\circ\text{C}$ )
Voltage/Frequency Characteristics (V/F)	Output voltage at base frequency can be adjusted separately, such as 80 to 240 V (230V series) or 320 to 480V (460V series)
Torque Boost	Auto: Optimum control corresponding to the load torque 0.0 setting Manual: 0.1 to 20.0 code setting for constant/variable torque load
Acceleration/Deceleration Characteristics	0.01 to 3600 seconds (Four acceleration/deceleration time settings are possible independent of each other by selecting digital input signals)
Operating Sound Selection	The drive carrier frequency can be changed to reduce audible noise and sound tone.
Analog/Pulse Output	Scale calibration of externally connected analog meter (10 VDC, 0-200% gain setting and pulse output (300 to 6,000 P/S)
Data Protection	Data lock is possible to ensure that the data codes are not changed.
Pattern Operation	Seven independent stages (frequency up to 120 Hz, duration up to 6,000 seconds each). Configuration:   Single cycle Repeating cycling Single cycle with continuous last setting speed
Momentary Power Loss Ride Thru	Six selections available. (Refer to Power Supply Specification.)
High/Low Limiter	Output frequency upper and lower range limit 0 to 120 Hz; 1 Hz step settings.
Bias	Magnitude of the zero offset can be set from -120 to 120 Hz (0.1 Hz steps.)
Gain	Output frequency gain corresponding to the reference signal can be set from 0.0 to 200.0 (0.1% steps.)
Programmable Jump Frequency	Three selectable frequencies can be set to avoid a mechanical resonant point. Width is adjustable from 0 to 120 Hz (1 Hz steps.)
Slip Compensation Control	Maintains motor at constant speed with load fluctuations. Adjustable from 0.00 Hz to +15.00 Hz.
Torque Limit Control	Output torque can be controlled within a range of 20% to 150% (1% steps.)

15 Step Preset Speed	15 programmable preset speeds selectable by 4 contact closures.
PID	Normal or Inverse operation can be selected.
Momentary or Maintained Operation	Selection between the maintained contact operation/stop command (2-Contact wired operation) or the momentary contact (3-wire operation).
Terminal Function Change	Multi-Use terminals changed via Function Code settings. X1 to X9 inputs; Y1 to Y4 transistor output and Y5 relay output.
Line to Drive Transition Logic	Provides the logic for transferring a motor from AC line to drive operation in a bypass system.
Sensorless Vector Control (Dynamic Torque Vector Control)	Improves torque characteristics throughout speed range. Improves speed regulation.

### Operation

Frequency Reference Signal	Speed potentiometer: 0 to +10 VDC, 10 to 0 VDC 4 to 20 mA, 20 to 4mA 0 to ±10 VDC
Digital Input Signal	Multi-step frequency selection (1 to 15 steps) Acceleration and deceleration time selection (3 steps) Self-Hold selection (HLD) Coast-to-Stop command (BX) Alarm Reset (RST) External Alarm (THR) Jogging (JOG) Frequency setting 2 / Frequency setting 1 (Hz2 / Hz1) Motor 2 / Motor 1 (M2 / M1) DC injection brake command (DCBRK) Torque limit 2 / Torque limit 1 (TL2 / TL1) Switching operation from line to drive (50 Hz) (SW50) Switching operation from line to drive (60 Hz) (SW60) UP command (UP) DOWN command (DOWN) Edit permission command (data change permission) (WE-KP) PID control cancellation (Hz/PID) Normal/inverse switching (Terminals 12 and C1) (IVS) Interlock (52-2) (IL) Link operation selection (Standard: RS485, Option: BUS) (LE) Universal DI (U-DI) Pick up start mode (STM) Timed alarm stop command (STOP 1) Timed alarm stop command with Deceleration time 4 (STOP 4)

**Standard Specifications (Continued)**

## Digital Output Signals

One Dry, Form C "fault" output contact rated 250 VAC, 0.3 amp.  
 One auxiliary relay contact rated 250 VAC, 0.3 amp  
 Four Open collector outputs each rated 27 VDC, 50 mA from external power. One relay and four open collector output can be configured to provide one of the following functions:

- Operating (RUN)
- Frequency arrival (FAR)
- Frequency detection (FDT1)
- Stopping due to overvoltage (LV)
- Torque polarity detection (B/D)
- Torque limiting (TL)
- Restarting after momentary power failure (IPF)
- Overload- early warning (OLI)
- During Keypad panel operation (KP)
- Drive stopping (STP)
- Ready for operation (RDY)
- Operation switching between line and drive (SW88)
- Operation switching between line and drive (SW52-2)
- Operation switching between line and drive (SW52-1)
- Motor 2 switching (SWM2)
- Terminal AX function (AX)
- Pattern operation stage change (TU)
- Pattern operation cycle operation completed (TO)
- Pattern operation stage number (STG1)
- Pattern operation stage number (STG2)
- Pattern operation stage number (STG4)
- Alarm detail (AL1)
- Alarm detail (AL2)
- Alarm detail (AL4)
- Alarm detail (AL8)
- Cooling fan operating (FAN)
- Retry function operating (TRY)
- Universal DO (U-DO)
- Heatsink overheat- early warning (OH)
- 2nd frequency level detection (FDT2)
- 2nd OL level- early warning (OL2)
- Terminal C1 off signal (C1OFF)

## Protective Functions

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| - Overcurrent                     | - Motor 2 Overload                 |
| - Ground Fault                    | - Inverter Overload                |
| - Overvoltage                     | - Blown Fuse                       |
| - Undervoltage                    | - Memory Error                     |
| - Input Phase Loss                | - Keypad Panel Communication Error |
| - Overheating of Heatsink         | - CPU Error                        |
| - External Alarm                  | - Option Error                     |
| - Overheating Internally          | - Operating Error                  |
| - Overheating of Braking Resistor | - Output Wiring Error              |
| - Motor 1 Overload                | - Modbus RTU Error                 |

Keypad Features                      Digital Display - 4 digit LED  
     Six Languages (English, German, French, Spanish, Italian, Japanese)  
     Graphic Display - LCD, with backlight  
     Nine program menu includes data copy function

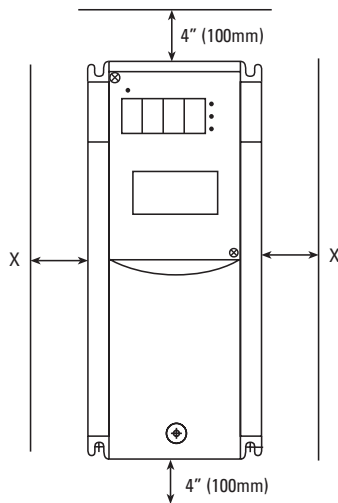
Keypad Display                      - Output frequency 1 (before slip compensation)  
     - Output frequency 2 (after slip compensation)  
     - Setting Frequency  
     - Output Current  
     - Output Voltage (specified value)  
     - Synchronous Speed  
     - Line Speed  
     - Load Rotation Speed  
     - Torque Calculation Value  
     - Power Consumption  
     - PID Setting Value  
     - PID Remote Setting Value  
     - PID Feedback Value  
     - Program Menu Mode

Keypad Display in Program Mode    Function Code and setting data displayed (see Operation Panel paragraph)

RS485 RTU Serial Communication    - Physical Level                      EIA/RS485  
     - Transmission Distance            500m max.  
     - Number of nodes                    32 total  
     - Transmission Speed                19200, 9600, 4800, 2400 (bits/s)  
     - Transmission mode                 Half duplex  
     - Transmission protocol            Modbus RTU  
     - Character code                      Binary  
     - Character length                    8 bits  
     - Error check                         CRC

Charge Lamp (LED)                      Lights when DC Link capacitor voltage is present.

**Mounting Clearance**



30 Hp or less: Gap X can be zero (side-by-side installation)  
 40 Hp or more: Gap X > = 2.0" (50mm)

**AF-300 P11 Replacement Parts**

Catalog No.	Rating	Drive HP & Quantity per drive												List Price per Unit	
		1/4	1/2	1	2	3	5	7.5	10	15	20	25	30		
<b>AF-300P11 230VAC, 30HP and Below</b>															
<b>Main Control Card</b>															
G11CPCBB1		1	1	1	1	1	1	1	1	1	1	1	1	1	850
<b>Gate Driver &amp; Power Supply Card</b>															
G11PPCBG2002		1													960
G11PPCBG2004			1												960
G11PPCBG2008				1											960
G11PPCBG2015					1										1,060
G11PPCBG2022						1									1,060
G11PPCBG2037							1								1,060
G11PPCBG2055								1	1						1,060
G11PPCBG2075										1					1,155
G11PPCBG2110											1				1,155
G11PPCBG2150												1			1,345
G11PPCBG2185													1		1,345
<b>KEYPAD PANEL (Only one type per drive)</b>															
TPAG11S	NEMA Type1	1	1	1	1	1	1	1	1	1	1	1	1	1	400
TPAG11S4	NEMA Type4	1	1	1	1	1	1	1	1	1	1	1	1	1	450
<b>CAPACITOR UNIT</b>															
G11CAP01	PCB	*	*	*											75
G11CAP02	PCB				1										95
G11CAP03	PCB					1									145
G11CAP09	2700 $\mu$ Fx1							1	1			2			290
G11CAP10	3900 $\mu$ Fx1										1		2		290
G11CAP11	4700 $\mu$ Fx2													2	385
* Located on Gate drive & Power supply Card															
<b>FAN</b>															
G11FAN01					1	1	1								50
G11FAN202								1	1	1	2	2	2		100
<b>POWER MODULE</b>															
PS11046	30A 600V	*	*	*		1	1								575
PS11047	50A 600V						1								770
6MBP75RS060	75A 600V							1	1						770
6MBP100RS060	100A 600V									1					960
6MBP150RS060	150A 600V										1	1			1,155
6MBP200RS060	200A 600V												1		1,250
* Located on Gate drive & Power supply Card															
<b>RECTIFIER MODULE</b>															
PVC758	75A 800V	*	*	*	*	*	*			1	1	1			435
CLK120AA80	120A 800V											1	1		480
CLK180AA80	180A 800V													1	575
* Located on Gate drive & Power supply Card															
<b>CHARGE RESISTOR</b>															
30W66	30W 6.6WJ	*	*	*	*	*	*			1	1	1			15
80W25	80W 2.5WJ											1	1	1	20
* Located on Gate drive & Power supply Card															
<b>FRONT COVER</b>															
G11UPCG008P		1	1	1											20
G11UPCG040P					1	1	1								25
G11UPCG075P								1	1	1					30
G11UPCG220P											1	1	1		50

**AF-300 P11 Replacement Parts**

Catalog No.	Rating	Drive HP & Quantity per drive							List Price per Unit
		40	50	60	75	100	125	150	
<b>AF-300P11 230VAC, 40HP and Above</b>									
<b>Main Control Card</b>									
EP4113B1		1	1	1	1	1	1	1	1,600
<b>Gate Driver &amp; Power Supply Card</b>									
EP3956C1		1	1						2,500
EP3956C2				1					2,695
EP3956C3					1	1			2,695
EP3957C1							1		3,845
EP3957C2								1	3,845
<b>KEYPAD PANEL</b>									
TPAG11S4		1	1	1	1	1	1	1	450
<b>DC CAPACITOR</b>									
LNT2G302MSMAFF	400V 3000 $\mu$ F	4	4						290
HCGHA2G362N3K	400V 3600 $\mu$ F			4					310
HCGHA2G452NE3K	400V 4500 $\mu$ F				4				385
HCGHA2G592N3K	400V 5900 $\mu$ f					4	5	6	500
<b>FAN</b>									
FBA09A24H1B0		1	1	1	2	2	2	4	80
<b>(Standard)</b>									
4715PS22TB30		2	2						115
2750MTP15				2	2		3	4	290
6250MG1						2			290
<b>(For NEMA12 Heatsink)</b>									
UHS4556MLOT1		2	2						355
2750MTP150T1				2	2		3	4	365
U6250MKG1LTPOT1						2			385
<b>IGBT MODULE</b>									
2MBi300NB060		3	3						865
CM400DU12H206				3					1,345
2MBi300NB06001					6	6	9	12	1,345
<b>RECTIFIER MODULE</b>									
PD1008AC		3	3	6	6	9	9	9	215
<b>CHARGE RESISTOR</b>									
HF5C5504	80W 7.5ohm	1	1	1	1	1	2	2	30
<b>DC CONTACTOR</b>									
FC3UL	AC220VAUX2B	1	1						175
FC1UL	AC220VAUX2B			2	2	2			175
FC4UL	AC220VAUX2B								385
SC7NUL	AC200-240V								1,345
<b>DC FUSE</b>									
CR2L260UL		1	1	1					195
CR2L400UL					1	1			230
A50P6004							1	1	500
<b>INPUT MODULE CARD</b>									
EP3985C1		1	1	1	1	1			290
EP3985C3							1	1	290

**AF-300 P11 Replacement Parts**

Catalog No.	Rating	Drive HP & Quantity per drive											List Price per Unit
		1/2	1	2	3	5	7.5	10	15	20	25	30	

**AF-300P11 460VAC, 30HP and Below****Main Control Card**

G11CPCBB1		1	1	1	1	1	1	1	1	1	1	1	1	850
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**Gate Driver & Power Supply Card**

G11PPCBG4004		1												1,155
G11PPCBG4008			1											1,155
G11PPCBG4015				1										1,250
G11PPCBG4022					1									1,250
G11PPCBG4037						1								1,250
G11PPCBG4055							1	1						1,250
G11PPCBG4075									1					1,345
G11PPCBG4110										1				1,345
G11PPCBG4150											1			1,345
G11PPCBG4185												1		1,445

**KEYPAD PANEL (Only one type per drive)**

TPAG11S	NEMA Type1	1	1	1	1	1	1	1	1	1	1	1	1	400
TPAG11S4	NEMA Type4	1	1	1	1	1	1	1	1	1	1	1	1	450

**CAPACITOR UNIT**

		*	*											
G11CAP04	PCB			1										175
G11CAP05	PCB				1									195
G11CAP06	PCB					1								240
G11CAP07	1500 $\mu$ Fx2						2	2						240
G11CAP08	2000 $\mu$ Fx2								2					290
G11CAP09	2700 $\mu$ Fx2									2				290
G11CAP10	3900 $\mu$ Fx2										2			290
G11CAP11	4700 $\mu$ Fx2											2		385

\* Located on Gate drive &amp; Power supply Card

**FAN**

G11FAN01				1	1	1								50
G11FAN02							1	1	1	2	2	2		100

**POWER MODULE**

		*	*											
PS12046	15A 1200V			1	1									580
PS12047	25A 1200V					1								770
6MBP50RS120	50A 1200V						1	1	1					965
6MBP75RS120	75A 1200V									1	1			1,540
6MBP100RS120	100A 1200V											1		1,925

\* Located on Gate drive &amp; Power supply Card

**RECTIFIER MODULE**

		*	*	*	*	*								
PVC7516	75A 1600V						1	1	1					435
CLK70AA160	70A 1600V									1	1			435
CLK100AA160	100A 1600V											1		465

\* Located on Gate drive &amp; Power supply Card

**CHARGE RESISTOR**

		*	*	*	*	*								
30W200	30W 20WJ						1	1	1					15
80W100	80W 10WJ									1	1	1		20

\* Located on Gate drive &amp; Power supply Card

**FRONT COVER**

G11UPCG008P		1	1											20
G11UPCG040P				1	1	1								25
G11UPCG075P							1	1	1					30
G11UPCG220P										1	1	1		50

# AF-300 P11 Replacement Parts

Catalog No.	Rating	Drive HP & Quantity per drive																List Price per Unit
		40	50	60	75	100	125	150	200	250	300	350	400	450	500	600	700	

## AF-300P11 460VAC, 40HP and Above

### Main Control Card

EP4113B1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1,600
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### Gate Driver & Power Supply Card

EP3959C1		1	1																2,885
EP3959C2				1															2,885
EP3959C3					1	1													3,465
EP3959C4							1												3,465
EP3959C5								1	1										3,845
EP3957C3										1	1								3,845
EP3957C4												1	1	1					3,845
EP3957C5														1	1	1	1		*

### GATE DRIVE AMPLIFIER CARD

EP4142																3	3	3	3	*
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### KEYPAD PANEL

TPAG11S4		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	450
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### DC CAPACITOR

LNT2G302MSMAFF	400V 3000µF	4	4																	290
HCGHA2G362N3K	400V 3600µF			4																310
HCGHA2G452NE3K	400V 4500µF				4			6												385
HCGHA2G592N3K	400V 5900µF					4	4		6	8		12								500
HCGHA2G742N3K	400V 7400µF										8		12	12						750
HCGHA2G932N3KG	400V 9300µF														20	20	26	26		*

### FAN UNIT

FBA09A24H1B0		1	1	1	1	1	2	2	2	3	3	4	4	4	4	4				80
MRS18-DUL															3	3	4	4		*
THB1-UHS4556M																	4	4		*

### (Standard)

4715PS22TB30		2	2																	115
2750MTP15				2	2			3	3											290
6250MG1						2	2			3	3	4	4	4						290

### (For NEMA12 Heatsink)

UHS4556MLOT1		2	2																	355
2750MTP15OT1				2	2			3	3											365
U6250MKG1LTPOT1						2	2			3	3	4	4	4						385

### IGBT MODULE

2MBi150PC14002		3	3																	865
CM200DU24H203				3																1,445
2MBi300P14002					3	3														1,445
CM200DU24H202							6													1,345
2MBi300P14003								6	6	9	9	12	12	12	18	18	24	24		1,500

### RECTIFIER MODULE

PD6016A		3	3	3						12	12									195
PD10016A					3	3	6	6	6			12	12	12	24	24	30	30		230

\*Consult factory for pricing.



# AF-300 P11 Replacement Parts

Catalog No.	Rating	Drive HP & Quantity per drive																List Price per Unit
		40	50	60	75	100	125	150	200	250	300	350	400	450	500	600	700	

## AF-300P11 460VAC, 40HP and Above

### IGBT MODULE

2MBi150PC14002		3	3																	865
CM200DU24H203				3																1,445
2MBi300p14002					3	3														1,445
CM200DU24H202							6													1,345
2MBi300P14003								6	6	9	9	12	12	12	18	18	24	24		1,500

### RECTIFIER MODULE

PD6016A		3	3	3							12	12								195
PD10016A					3	3	6	6	6				12	12	12	24	24	30	30	230

### CHARGE RESISTOR

HF5C5504	80W 7.5ohm	1	1	1	1	1	1	2	2	2	3	3	4	4						30
GRZG400															2	2	2	2		*

### DC CONTACTOR

FC1UL	AC220VAUX2B	1	1	1	1	1	2	2	2											175
FC4UL	AC220VAUX2B									2	2									385
SC7NUL	AC200-240V											1								1,345
SC8NUL	AC200-240V												1	1						1,500
SCN8	AC200-240V														2	2	2	2		*

### DC FUSE

CR6L150UL	600V 150A	1	1	1																90
CR6L200UL	600V 200A				1															135
CR6L300UL	600V 300A					1	1													195
A70Q4004								1	1											215
A70Q5004										1										365
A70Q6004											1	1								365
A70QS8004													1	1						415
A70P16004TA															1	1				*
A70P20004																	1	1		*

### TRANSFORMER

HF5C55025512VA		1	1																	90
HF5C550312524VA				1	1	1	1													125
HF5B661330016VA								1	1	1	1	1	1	1						200
HF5B395170020VA															1	1	1	1		*

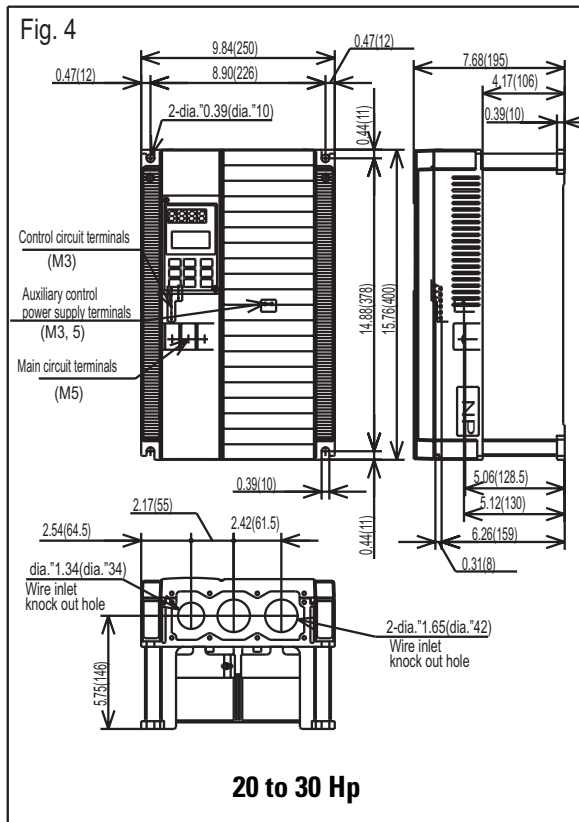
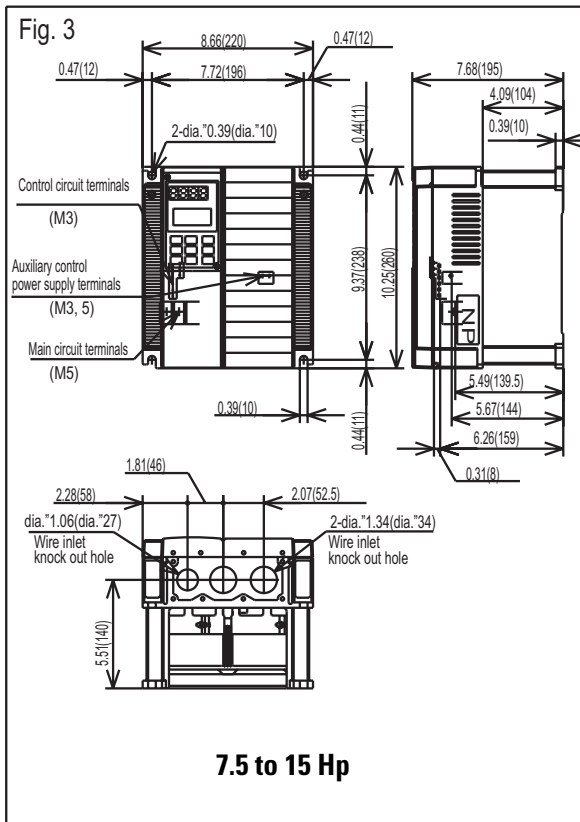
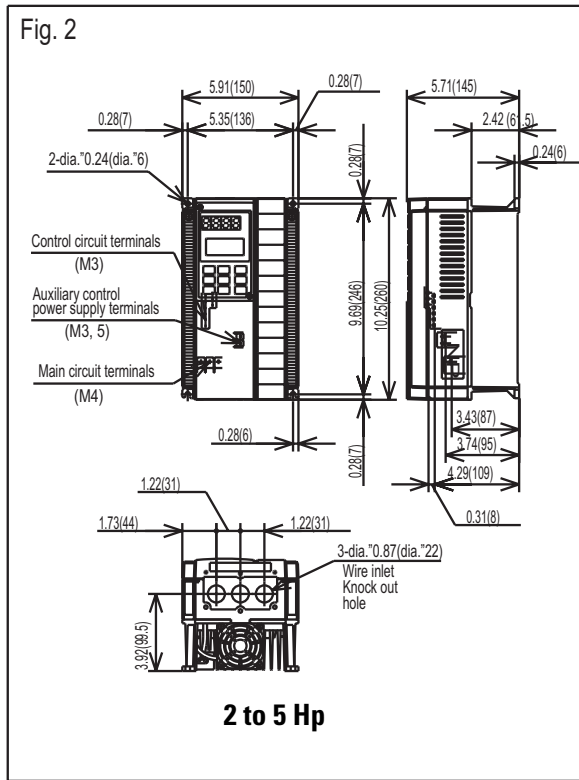
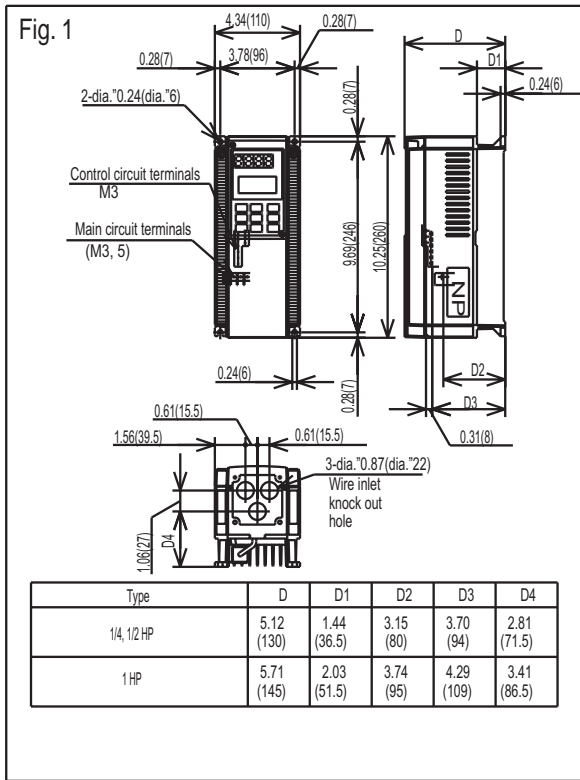
### INPUT MODULE CARD

EP3985C2		1	1	1	1	1	1	1												290
EP3985C4										1	1	1	1	1	1	1	1	1		350

\*Consult factory for pricing.

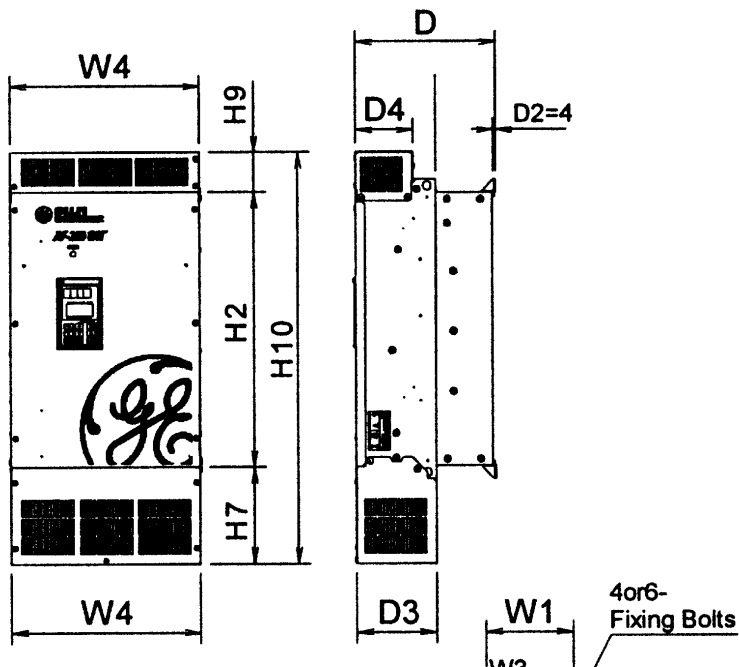
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**Dimensions .25- 30 Hp**



# Dimensions NEMA 1

## Surface Mount



### Outline Dimensions NEMA 1

#### 230V Series NEMA 1

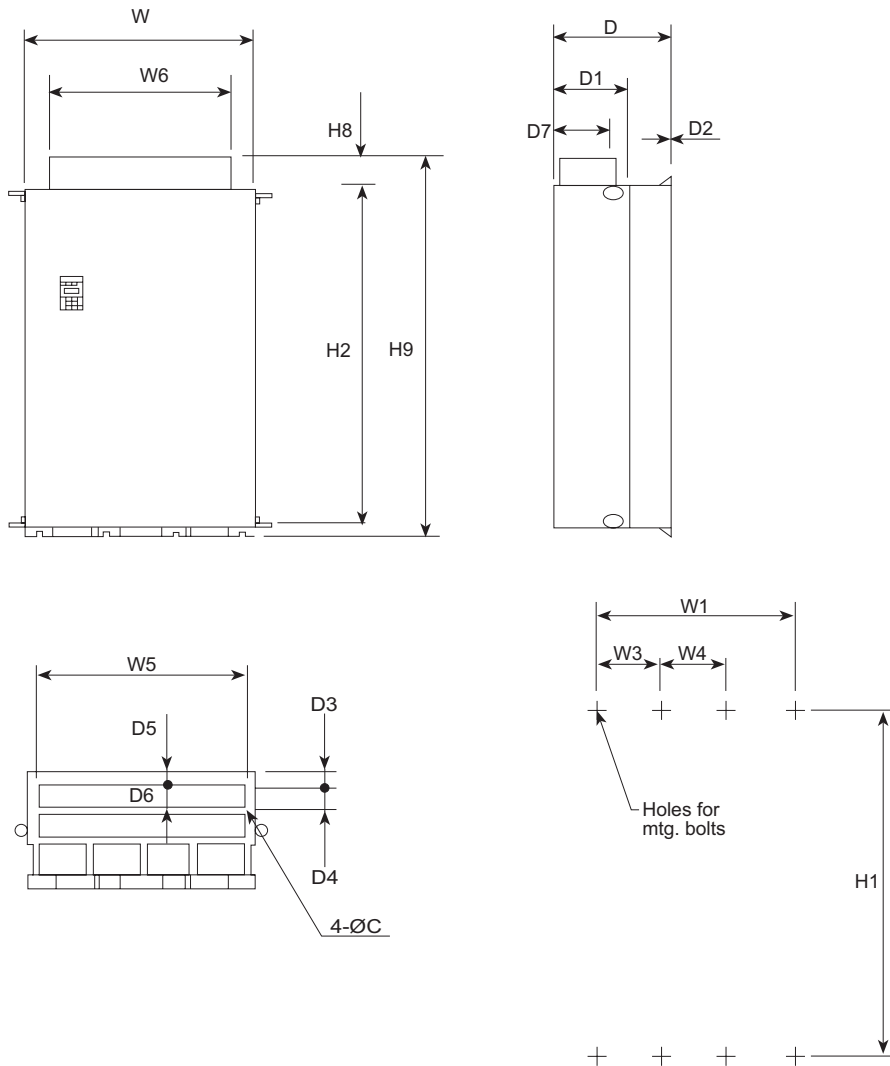
Hp	DIMENSIONS inches (mm)															Mtg. Bolts	Wt. Lb (kg)
	W1	W2	W3	W4	H1	H2	H3	H6	H7	H9	H10	D	D2	D3	D4		
40	9.4	12.8	-	13.5	20.9	19.7	20.2	0.4	7.1	3	29.7	10	0.2	5.7	4.1	M8	70
50	(240)	(326)		(342)	(530)	(500)	(512)	(9)	(180)	(75)	(755)	(255)	(4)	(145)	(105)		(32)
60	10.8	14.2		14.9	23.4	22.2	22.7		7.9		33.1	10.6					86
75	(275)	(361)		(377)	(595)	(565)	(577)		(200)		(840)	(270)					106
100					28.3	27.2	27.6				38						(48)
125	16.9	20.0		21		27	27.4	0.5	11.1	3.3	41.3	11.2			3.6	M12	172
	(430)	(510)		(533)		(685)	(695)	(13)	(283)	(83)	(1050)	(285)			(91)		(78)
150	22.8	26	11.4	26.9	33.5	32.1	32.5		15.1		50.4	14.2		8.7	6.5		282
	(580)	(660)	(290)	(683)	(850)	(815)	(825)		(383)		(1280)	(360)		(220)	(166)	(128)	

#### 460V Series NEMA 1

Hp	DIMENSIONS inches (mm)															Mtg. Bolts	Wt. Lb (kg)
	W1	W2	W3	W4	H1	H2	H3	H6	H7	H9	H10	D	D2	D3	D4		
40	9.4	12.8	-	13.5	20.9	19.7	20.2	0.4	7.1	3	29.7	10	0.2	5.7	4.1	M8	70
50	(240)	(326)		(342)	(530)	(500)	(512)	(9)	(180)	(75)	(755)	(255)	(4)	(145)	(105)		(32)
60	10.8	14.2		14.9								10.6					82
75	(275)	(361)		(377)	25.8	24.6	25.1				34.6						(37)
100					(655)	(625)	(637)				(880)						95
125					28.3	27.2	27.6		7.9		38						(43)
					(720)	(690)	(702)		(200)		(965)						115
150	16.9	20.0		21	28	26.6	27	0.5	8.2	3.3		12.4		6.9	4.7	M12	174
200	(430)	(510)		(533)	(710)	(675)	(685)	(13)	(208)	(83)		(315)		(175)	(121)		(79)
250					38	37	37		13		53.1	14.2		8.7	7		245
300					(970)	(935)	(945)		(333)		(1350)	(360)		(220)	(166)		(111)
350	22.8	26	11.4	26.9					15.1		55.1						337
400	(580)	(660)	(290)	(683)					(383)		(1400)						(153)
450																	

# Dimensions NEMA 1

## Surface Mount



### 460V Series NEMA 1

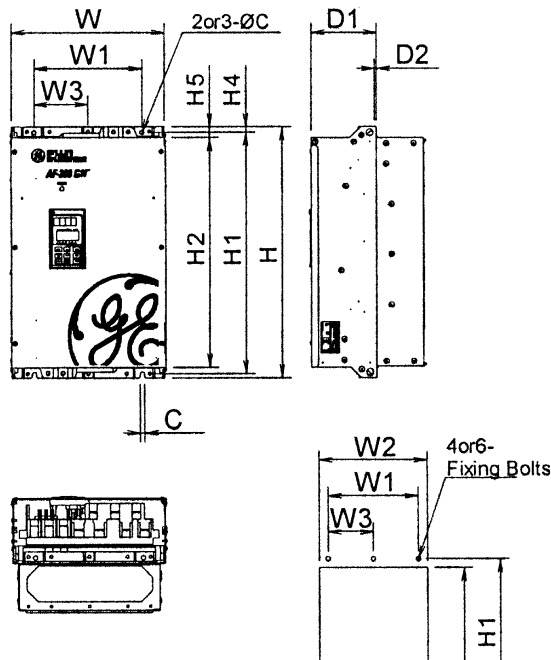
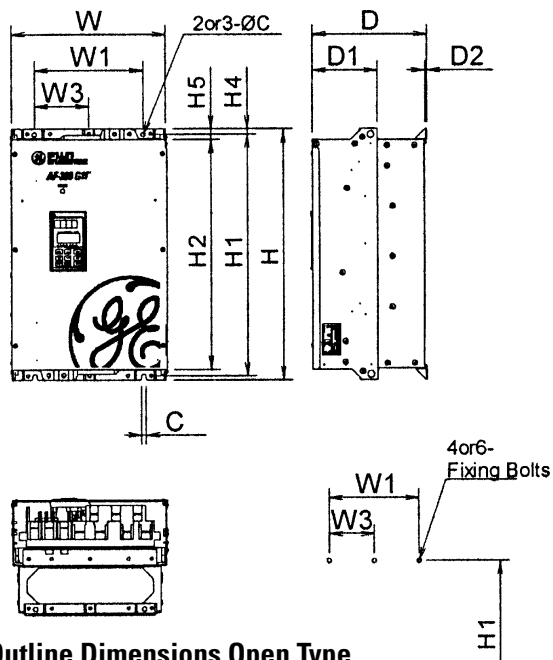
Hp	DIMENSIONS inches (mm)												
	W	W1	W3	W4	W5	W6	H1	H2	H4	H8	H9	D	D1
500	26.8	22.8	11.4	—	24.0	21.9	53.9	52.4	52.6	3.3	57.1	17.7	11.2
600	(680)	(580)	(290)		(610)	(555)	(1370)	(1330)	(1335)	(084)	(1450)	(450)	(285)
700	34.6	30.7	10.2	10.2	31.9	29.7							
800	(880)	(780)	(260)	(260)	(810)	(755)							

Hp	DIMENSIONS inches (mm)						Mtg. Bolts	Wt. Lb (kg)
	D2	D3	D4	D5	D6	D7		
500	0.3	2.0	3.9	1.4	4.5	8.7	M12	562
600	(604)	(050)	(100)	(035)	(115)	(220)		(255)
700								804
800								(365)

# Dimensions Open Type

## Surface Mount

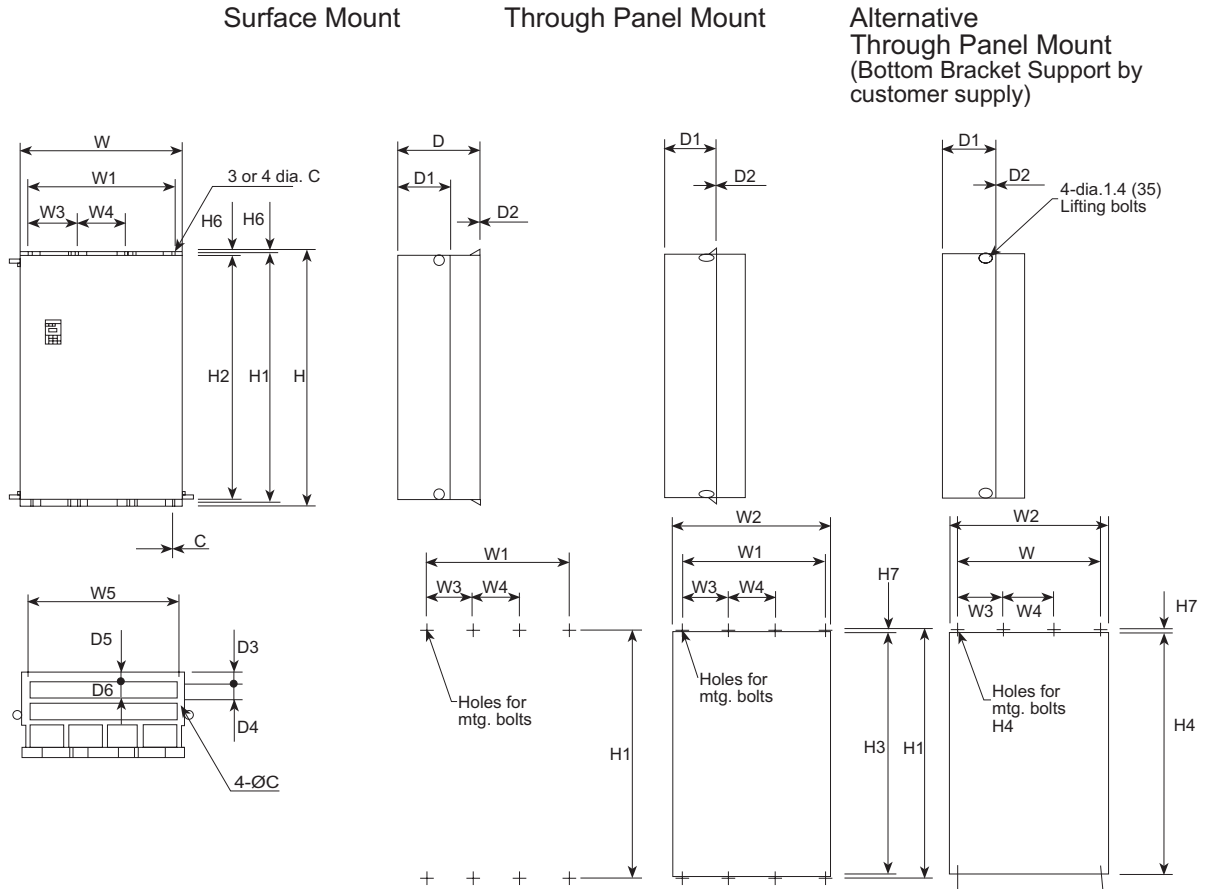
## Through Panel Mount



Outline Dimensions Open Type

230V Series																Mtg. Bolts	Weight Lb (kg)
HP	DIMENSION Inch (mm)																
230V	W	W1	W2	W3	H	H1	H2	H3	H4	H5	H6	D	D1	D2	C		
40	13.4	9.4	12.8		21.7	20.9	19.7	20.2	0.5	1	0.4	10	5.7	0.2	0.4	M8	64
50	(340)	(240)	(326)		(550)	(530)	(500)	(512)	(12)	(25)	(9)	(255)	(145)	(4)	(10)		(29)
60	14.8	10.8	14.2		24.2	23.4	22.2	22.7				10.6					79
75	(375)	(275)	(361)		(615)	(595)	(565)	(577)				(270)					(36)
100					29.1	28.3	27.2	27.6									97
					(740)	(720)	(690)	(702)								(44)	
125	20.9	16.9	20.1		29.5		27	27.4	0.6	1.3	0.5	11.2			0.6	M12	154
	(530)	(430)	(510)		(750)		(685)	(695)	(16)	(33)	(13)	(285)			(15)		(70)
150	26.8	22.8	26		34.6	33.5	32.1	32.5				14.2	8.7				253
	(680)	(580)	(660)		(880)	(850)	(815)	(825)				(360)	(220)			(115)	
460V Series																Mtg. Bolts	Weight Lb (kg)
HP	DIMENSION Inch (mm)																
460V	W	W1	W2	W3	H	H1	H2	H3	H4	H5	H6	D	D1	D2	C		
40	13.4	9.4	12.8		21.7	20.9	19.7	20.2	0.5	1	0.4	10	5.7	0.2	0.4	M8	64
50	(340)	(240)	(326)		(550)	(530)	(500)	(512)	(12)	(25)	(9)	(255)	(145)	(4)	(10)		(29)
60	14.8	10.8	14.2		24.2	23.4	22.2	22.7				10.6					75
75	(375)	(275)	(361)		(615)	(595)	(565)	(577)				(270)					(34)
100					26.6	25.8	24.6	25.1									86
					(675)	(655)	(625)	(637)								(39)	
125					29.1	28.3	27.2	27.6								106	
					(740)	(720)	(690)	(702)								(48)	
150	20.9	16.9	20.1		28	26.6	27		0.6	1.3	0.5	12.4	6.9		0.6	M12	154
200	(530)	(430)	(510)		(710)	(675)	(682)		(16)	(32.5)	(12.5)	(315)	(175)		(15)		(70)
250					39.4	38.2	36.8	37.2				14.2	8.7				220
300					(1000)	(970)	(935)	(945)				(360)	(220)				(100)
350	26.8	22.8	26	11.4													308
400	(680)	(580)	(660)	(290)												(140)	
450																	

# Dimensions Open Type



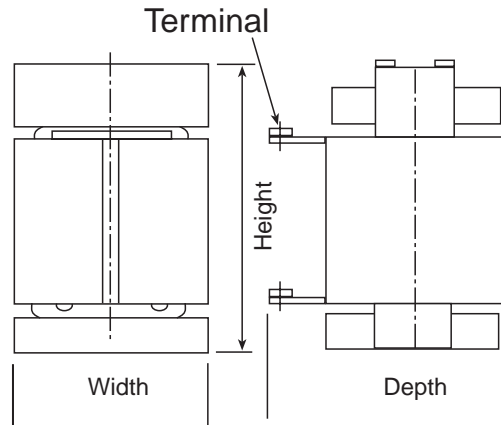
**460V Series Open Type**

Hp	DIMENSIONS inches (mm)															
	W	W1	W2	W3	W4	W5	H	H1	H2	H3	H4	H5	H6	H7	D	D1
500	26.8	22.8	26.0	11.4	-	24.0	55.1	53.9	52.4	52.8	52.6	0.6	1.4	0.6	17.7	11.2
600	(680)	(580)	(660)	(290)		(610)	(1400)	(1370)	(1330)	(1340)	(1335)	(016)	(035)	(015)	(450)	(285)
700	34.6	30.7	33.8	10.2	10.2	31.9										
800	(880)	(780)	(860)	(260)	(260)	(810)										

Hp	DIMENSIONS inches (mm)						Mtg. Bolts	Wt. Lb (kg)
	D2	D3	D4	D5	D6	C		
500	0.3	2	3.9	1.4	4.5	0.6	M12	551
600	(006)	(050)	(100)	(035)	(115)	(015)		(250)
700								793
800								(360)

## Drive Link Reactor

Dimensions in inches



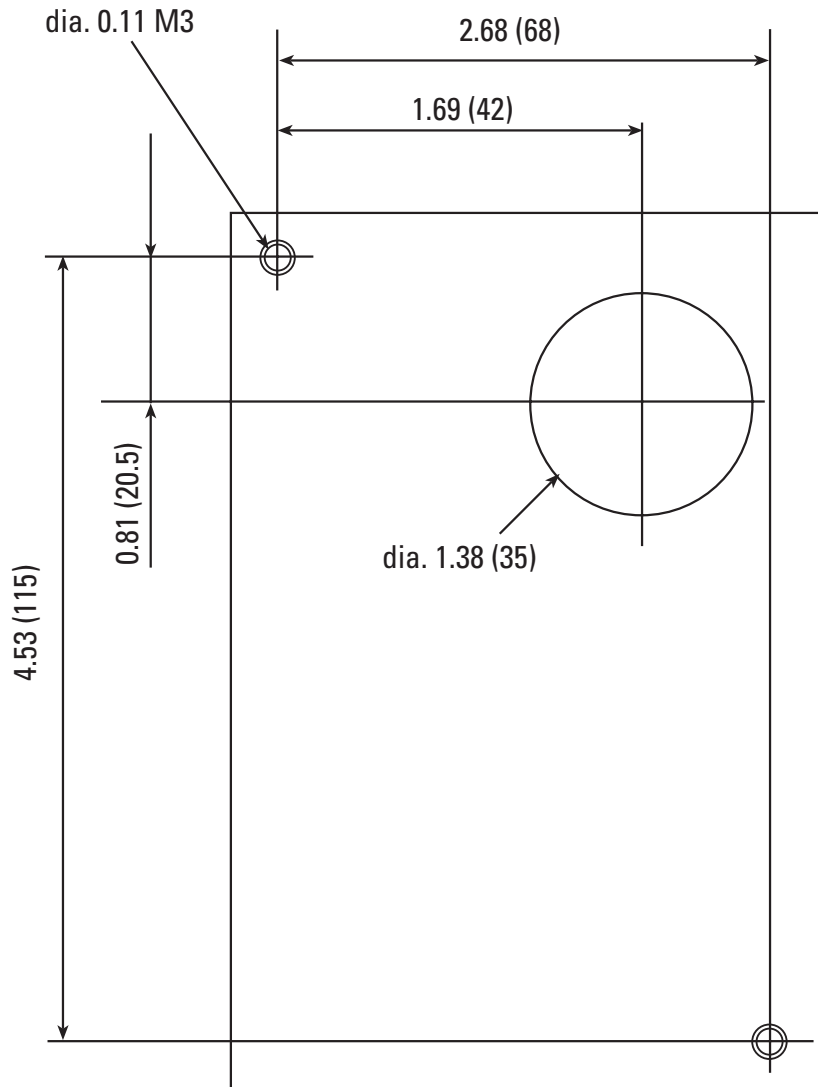
Hp	Model No.	Width	Depth	Height	Weight	Loss [W]
<b>230V P11</b>						
100	DCR2-75B	7.87	10.63	7.09	37	55
125	DCR2-90B	7.09	11.02	8.46	37	57
150	DCR2-110B	7.48	12.99	9.05	46	67
<b>460V P11</b>						
100	DCR4-75B	7.48	10.63	6.89	35	58
125	DCR4-90B	7.48	11.02	7.87	44	64
150	DCR4-110B	7.48	11.02	7.87	46	73
200	DCR4-132B	7.87	11.02	8.07	55	84
250	DCR4-160B	8.27	12.6	8.07	68	90
300	DCR4-200B	8.27	12.99	9.06	75	126
350	DCR4-220B	8.66	13.78	9.06	81	131
400	DCR4-280B	8.66	14.57	9.65	95	133
450	DCR4-280B	8.66	14.57	9.65	95	150
500	DCR4-355B	9.84	12.99	8.78	99	205
600	DCR4-400B	9.84	13.78	9.17	106	215
700	DCR4-450B	10.63	13.78	10.35	121	272
800	DCR4-500B	11.1	14.17	10.35	143	292

**Note:**

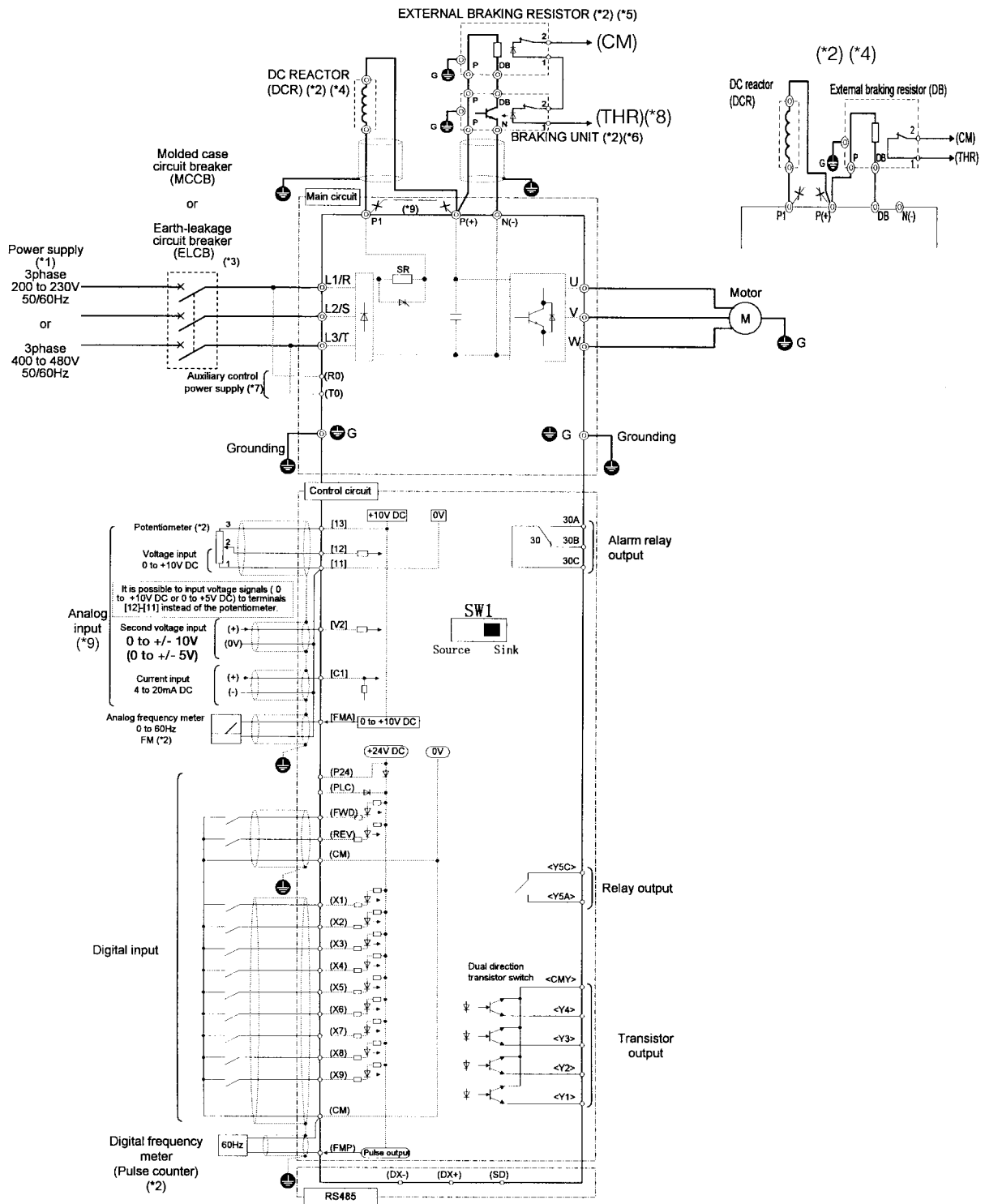
- AF-300 P11/G11 Drives rated 100 Hp and above are furnished with a DC link reactor. This reactor must be installed between terminal P1 and P+ prior to commissioning of the Drive.
- The weight of the DC Link Reactor is not included with that of the Drive.
- DC Link Reactor is provided as open type. Enclosure to be provided by others.

## Keypad Mounting Hole (Panel Cutting)

Dimensions in inches (mm)



# Basic Connection Diagram (Sink Logic, Mainly America)



Note: The control circuit common terminals [11], (CM) and <CMY> are isolated

(\*1) Use a drive with rated voltage matching the power supply voltage.

(\*2) Option. Use as required.

(\*3) Use this peripheral device when necessary.

(\*4) Remove the jumper wire (\*9) between P1 and P(+) before connecting a DC REACTOR.

(\*5) Be sure to use the braking unit (option)(\*6) when connecting the external braking resistor (option)(\*5)

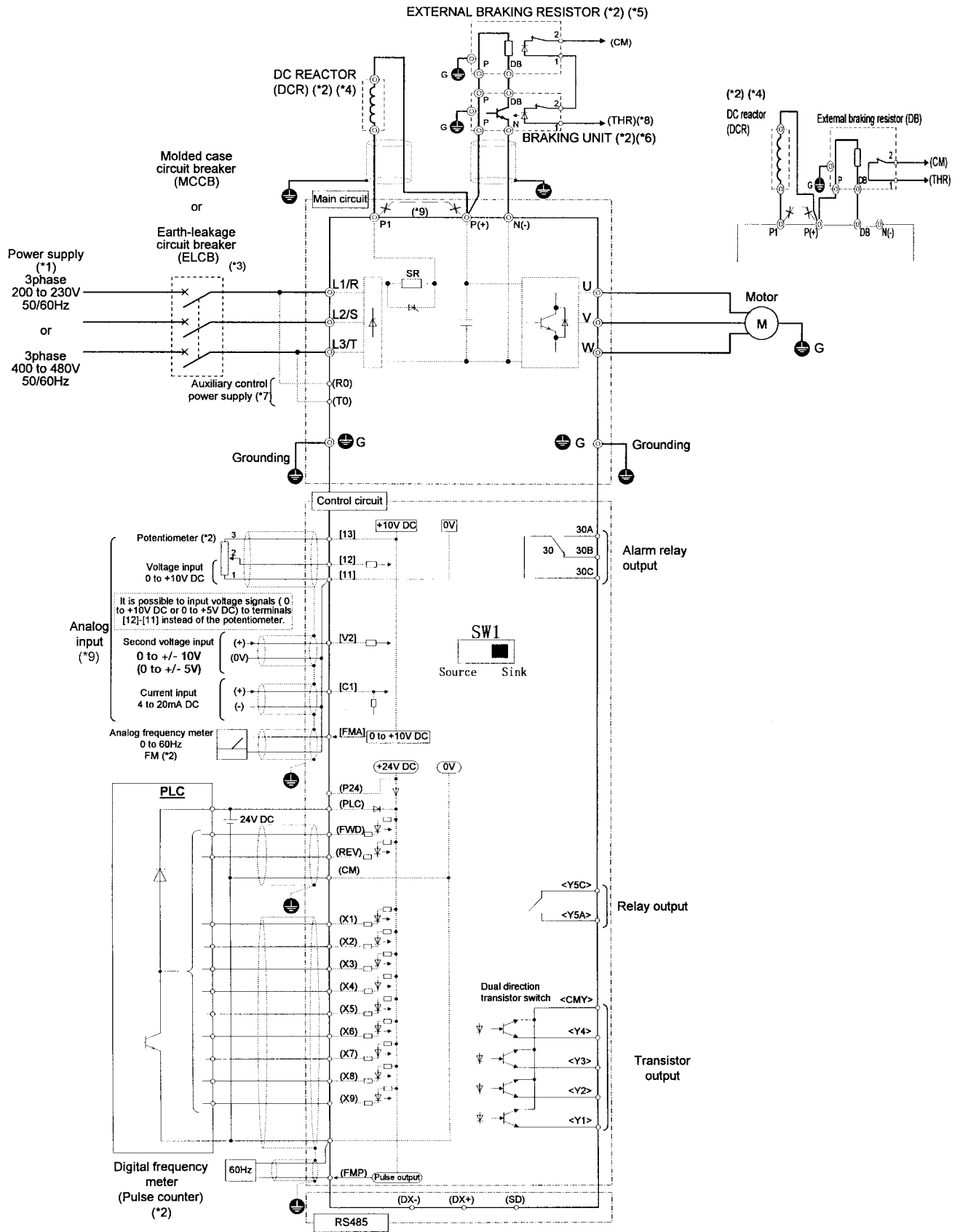
(\*6) Connect the braking unit to P(+) and N(-). The auxiliary terminals [1] and [2] have polarity. Connect them as shown in the figure above.

(\*7) The drive can be operated without connecting the auxiliary control power supply.

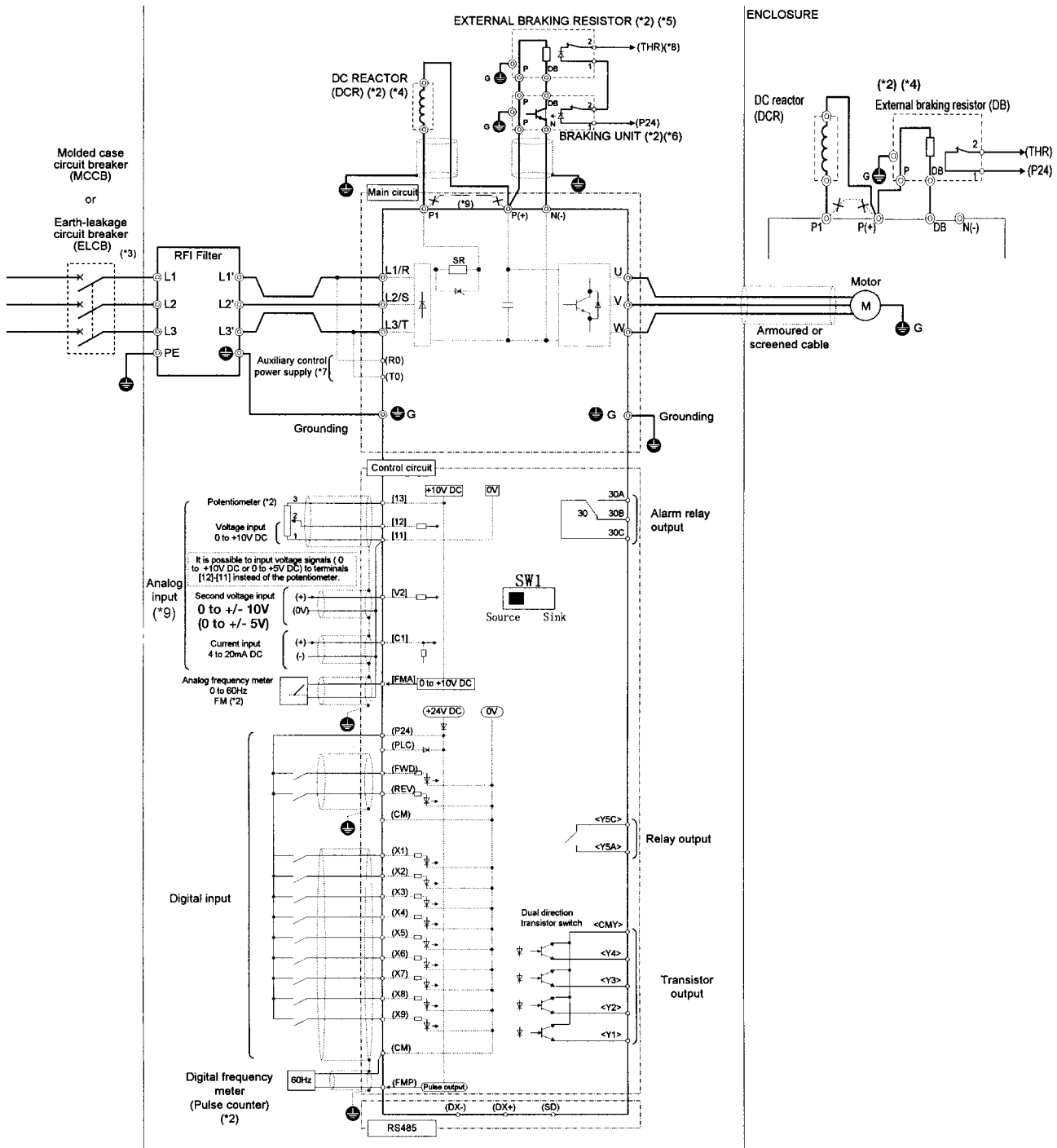
(\*8) Terminal (X1) to (X9) can be preset (THR) (\*E01 to E09: 9).

(\*9) Use only one terminal -V<sub>2</sub> or C<sub>1</sub>, exclusively.

# Basic Connection Diagram to PLC (Sink Logic, Mainly America)



# Basic Connection Diagram (Source Logic, Mainly Europe)



Note: The control circuit common terminals [11], (CM) and <CMY> are isolated

(\*1) Use a drive with rated voltage matching the power supply voltage.

(\*2) Option. Use as required.

(\*3) Use this peripheral device when necessary.

(\*4) Remove the jumper wire (\*9) between P1 and P(+) before connecting a DC REACTOR.

(\*5) Be sure to use the braking unit (option)(\*6) when connecting the external braking resistor (option)(\*5)

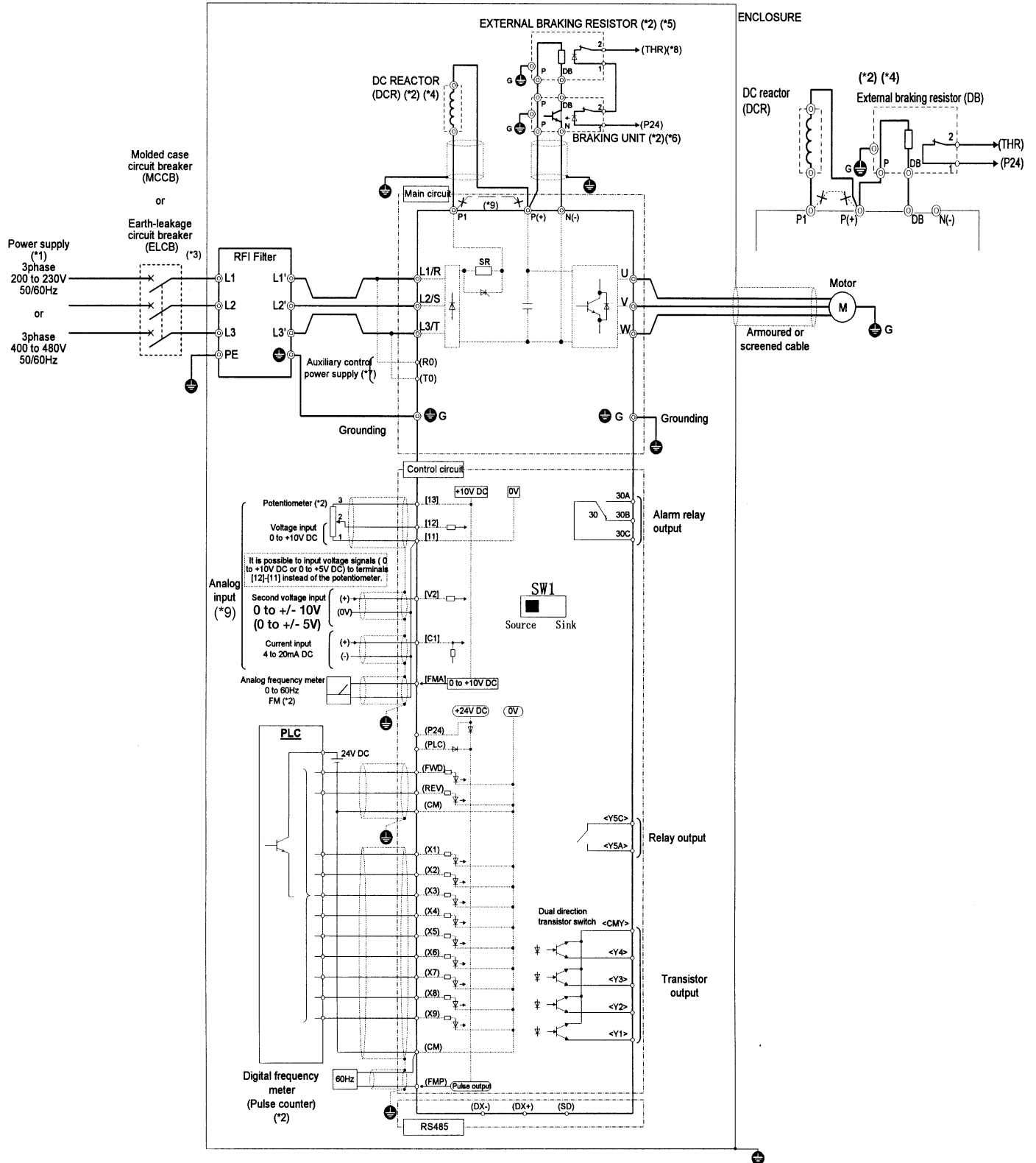
(\*6) Connect the braking unit to P(+) and N(-). The auxiliary terminals [1] and [2] have polarity. Connect them as shown in the figure above.

(\*7) The drive can be operated without connecting the auxiliary control power supply.

(\*8) Terminal (X1) to (X9) can be preset (THR) (\*E01 to E09: 9).

(\*9) Use only one terminal -V<sub>2</sub> or C<sub>1</sub>, exclusively.

# Basic Connection Diagram to PLC (Source logic, Mainly Europe)



**Notes**

**4**