

CIMR-A

A1000

High performance Vector Control

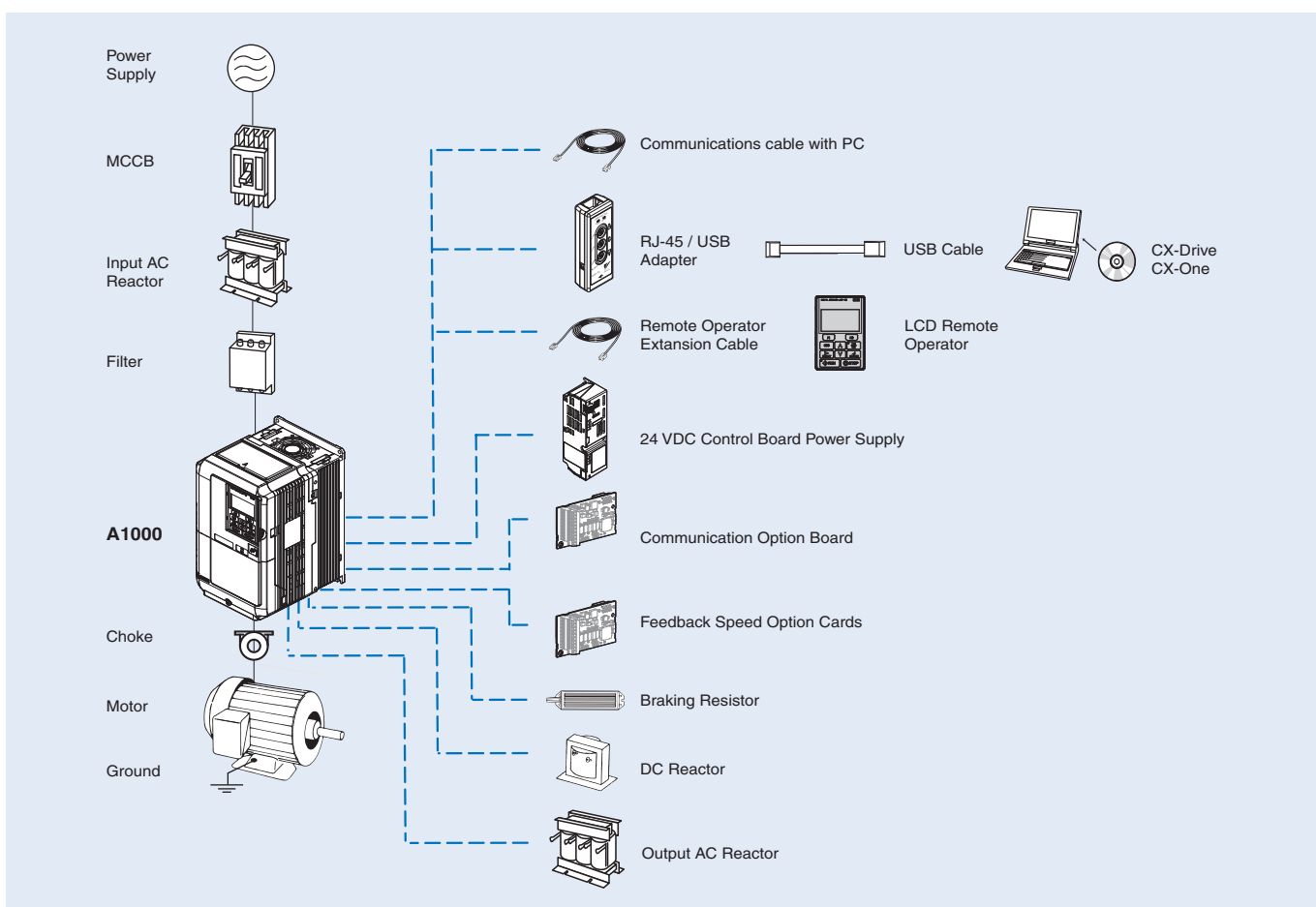
- Current vector control, with or without PG
- High starting torque (200% / 0.3 Hz, spd range 1:200 OLV), (200% at 0 r/min, spd range 1:1500 CLV)
- Double rating ND 120%/1min and HD 150%/1 min
- IM&PM motor control
- Advanced Auto-Tuning for IM & PM Motors
- Open Loop Control of PM Motors
- Low-noise Low carrier technology
- 10 years lifetime design
- Screw-less terminals
- Control Terminals with memory backup
- 24 VDC control board power supply option
- Fieldbus communications: Modbus, Profibus, CANopen, DeviceNet, ML-II, PROFINET, EtherCAT and EtherNet/IP
- Safety embedded: EN954-1 safety cat. 3, stop category 0, IEC EN 61508 SIL 2 and EN61800-5-1 with EDM
- CE, UL, cUL and TUV

Ratings

- 200 V Class three-phase 0.4 to 110 kW
- 400 V Class three-phase 0.4 to 630 kW

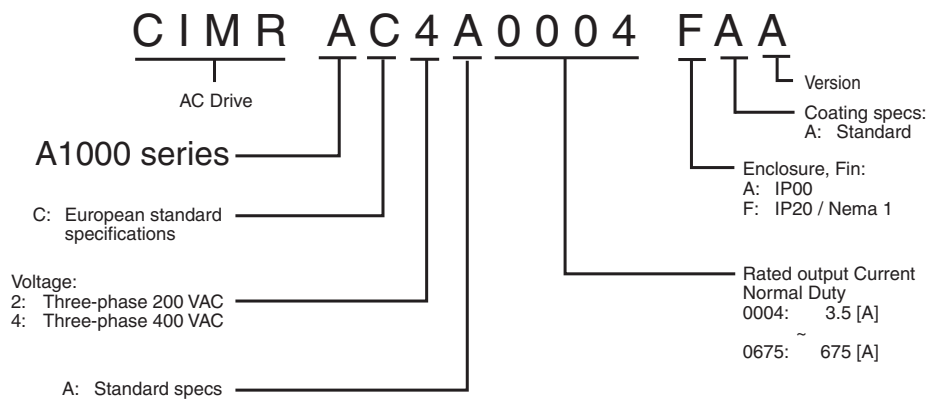


System configuration



Specifications

Type designation



200 V class

Three-phase: CIMR-A□2A		0004	0006	0010	0012	0021	0030	0040	0056	0069	0081	0110	0138	0169	0211	0250	0312	0360	0415
Motor kW ¹	For HD setting	0.40	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
	For ND setting	0.75	1.1	2.2	3.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	110
Output characteristics	Inverter capacity kVA at HD ²	1.2	1.9	3	4.2	6.7	9.5	12.6	17.9	23	29	32	44	55	69	82	108	132	158
	Inverter capacity kVA at ND ²	1.3	2.3	3.7	4.6	8	11.4	15.2	21	26	31	42	53	64	80	95	119	137	158
	Rated output current (A) at HD	3.2 ⁴	5 ⁴	8 ⁴	11 ⁴	17.5 ⁴	25 ⁴	33 ⁴	47 ⁴	60 ⁴	75 ⁴	85 ⁴	115 ⁴	145 ⁵	180 ⁵	215 ⁵	283 ⁵	346 ⁵	415 ³
	Rated output current (A) at ND ³	3.5	6	9.6	12	21	30	40	56	69	81	110	138	169	211	250	312	360	415
	Max. output voltage	Proportional to input voltage: 0..240 V																	
Power supply	Max. output frequency	400 Hz																	
	Rated input voltage and frequency	3-phase 200..240 V 50/60 Hz																	
	Allowable voltage fluctuation	-15%..+10%																	
	Allowable frequency fluctuation	+5%																	
	Input Current (A) at HD ⁶	2.9	5.8	7.5	11	18.9	28	37	52	68	80	82	111	136	164	200	271	324	394
	Input Current (A) at ND ⁶	3.9	7.3	10.8	13.9	24	37	52	68	80	96	111	136	164	200	271	324	394	471

- Based on a standard 4-pole motor for maximum applicable motor output:
- Rated Motor Capacity is calculated with a rated output voltage of 220 V:
- Carrier frequency is set to 2kHz. Current derating is required in order to raise the carrier frequency:
- Carrier frequency can be increased up to 8 kHz while keeping this current rating. Higher carrier frequency settings require derating:
- Carrier frequency can be increased up to 5 kHz while keeping this current rating. Higher carrier frequency settings require derating:
- Assumes operation at rated output current. Input current rating varies depending on the power supply transformer, input reactor, Wiring conditions, and power supply impedance.

400 V class

Three-phase: CIMR-A□4A		0002	0004	0005	0007	0009	0011	0018	0023	0031	0038	0044	0058	0072
Motor kW ¹	For HD setting	0.4	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15	18.5	22	30
	For ND setting	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15	18.5	22	30	37
Output characteristics	Inverter capacity kVA at HD ²	1.4	2.6	3.7	4.2	5.5	7	11.3	13.7	18.3	24	30	34	48
	Inverter capacity kVA at ND ²	1.6	3.1	4.1	5.3	6.7	8.5	13.3	17.5	24	29	34	44	55
	Rated output current (A) at HD	1.8 ⁴	3.4 ⁴	4.8 ⁴	5.5 ⁴	7.2 ⁴	9.2 ⁴	14.8 ⁴	18 ⁴	24 ⁴	31 ⁴	39 ⁴	45 ⁴	60 ⁴
	Rated output current (A) at ND ³	2.1	4.1	5.4	6.9	8.8	11.1	17.5	23	31	38	44	58	72
	Max. output voltage	380..480V (proportional to input voltage)												
Power supply	Max. output frequency	400 Hz												
	Rated input voltage and frequency	3-phase 380..480 VAC, 50/60 Hz												
	Allowable voltage fluctuation	-15%..+10%												
	Allowable frequency fluctuation	+5%												
	Input Current (A) at HD ⁶	1.8	3.2	4.4	6	8.2	10.4	15	20	29	39	44	49	58
	Input Current (A) at ND ⁶	2.1	4.3	5.9	8.1	9.4	14	20	24	38	44	52	58	71

Three-phase: CIMR-A□4A		0088	0103	0139	0165	0208	0250	0296	0362	0414	0515	0675	0930	1200
Motor kW ¹	For HD setting	37	45	55	75	90	110	132	160	185	220	315	450	560
	For ND setting	45	55	75	90	110	132	160	185	220	250	355	500	630
Output characteristics	Inverter capacity kVA at HD ²	57	69	85	114	137	165	198	232	282	343	461	617	831
	Inverter capacity kVA at ND ²	67	78	106	126	159	191	226	276	316	392	514	709	915
	Rated output current (A) at HD	75 ⁴	91 ⁴	112 ⁵	150 ⁵	180 ⁵	216 ⁵	260 ⁵	304 ³	370	450	605	810	1090
	Rated output current (A) at ND ³	88	103	139	165	208	250	296	362	414	515	675	930	1200
	Max. output voltage	380..480V (proportional to input voltage)												
	Max. output frequency	400 Hz												
Power supply	Rated input voltage and frequency	3-phase 380..480 VAC, 50/60 Hz												
	Allowable voltage fluctuation	-15%..+10%												
	Allowable frequency fluctuation	+5%												
	Input Current (A) at HD ⁶	71	86	105	142	170	207	248	300	346	410	584	830	1031
Input Current (A) at ND ⁶		86	105	142	170	207	248	300	346	410	465	657	922	1158

- Based on a standard 4-pole motor for maximum applicable motor output:
- Rated Motor Capacity is calculated with a rated output voltage of 440 V:
- Carrier frequency is set to 2kHz. Current derating is required in order to raise the carrier frequency:
- Carrier frequency can be increased up to 8 kHz while keeping this current rating. Higher carrier frequency settings require derating:
- Carrier frequency can be increased up to 5 kHz while keeping this current rating. Higher carrier frequency settings require derating:
- Assumes operation at rated output current. Input current rating varies depending on the power supply transformer, input reactor, wiring conditions, and power supply impedance.

Common specifications

Model number CIMR-A		Specifications
Control functions	Control methods	Sine wave PWM (V/f control, V/f control with PG, Open loop vector control, Closed loop vector control, Open loop vector control for PM, Closed loop vector control for PM, Advanced Open Loop Vector Control for PM)
	Output frequency range	0.01..400 Hz
	Frequency tolerance	Digital set value: $\pm 0.01\%$ of the max. output frequency (-10..+40 °C) Analogue set value: $\pm 0.1\%$ of the max. output frequency (25 ± 10 °C)
	Resolution of frequency set value	Digital set value: 0.01 Hz Analogue set value: 0.03 Hz / 60 Hz (11 bit)
	Resolution of output frequency	0.001 Hz
	Frequency set value	-10..+10 V (20 k Ω), 0..10 V (20 k Ω), 4..20 mA (250 Ω), Pulse train input, frequency setting value (selectable)
	Starting Torque	150%/3Hz (V/f control, V/f control with PG), 200%/0.3Hz ^{*1} (Open loop vector control), 200%/ 0 r/min ^{*1} (Closed loop vector control, Closed loop vector control for PM, Advanced Open Loop Vector Control for PM), 100% / 5% speed (Open loop vector control for PM),
	Speed Control Range	1:1500 (Closed loop vector control, Closed loop vector control for PM), 1:200 (Open loop vector control), 1:40 (V/f control, V/f control with PG), 1:20 (Open Loop Vector Control for PM), 1:100 (Advanced Open Loop Vector Control for PM)
	Speed Control Accuracy	$\pm 0.2\%$ in Open loop vector control (25 ± 10 °C) ^{*2} , 0.02% in Closed loop vector control (25 ± 10 °C)
	Speed Response	10 Hz in Open loop vector control (25 ± 10 °C), 50Hz in Closed loop Vector Control (25 ± 10 °C), (excludes temperature fluctuation when performing Rotational Auto-Tuning)
	Torque Limit	All Vector Control allows separate settings in four quadrants
	Accel/Decel Time	0.00 to 6000.0 s (4 selectable combinations of independent acceleration and deceleration settings)
	Braking torque	Drives of 200/400 V 30 kW or less have a built-in braking transistor. 1. Short-time decel torque ^{*3} , over 100% for 0.4/0.75 kW motors, over 50% for 1.5 kW motors, and over 20% for 2.2 kW and above motors (over excitation braking/High-Slip Braking approx. 40%) 2. Continuous regen, torque approx. 20% (approx. 125% with dynamic braking resistor option ^{*4} , 10% ED, 10 s, internal braking transistor)
	V/f Characteristics	User-selected programs and V/f preset patterns possible
Functionality	Main Control Functions	Torque Control, Droop control, Speed/torque control switching, Feedforward control, Zero-servo control, Momentary power loss ride-thru, Speed search, Overtorque detection, Torque Limit, 17-step speed (max), Accel/Decel time switch S-curve Accel/Decel, 3-wire sequence, Auto-tuning (rotational, stationary), Online Tuning, Dwell Cooling fan on/off switch, slip compensation, Torque compensation, Frequency Jump, Upper/lower limits for frequency, DC injection braking at start and stop, Over excitation braking, High Slip braking, PID control (with sleep function), Energy saving control, MEMOBUS comm. (RS-485/422 max. 115.2kbps), Fault restart, Application presets, Removable terminal block with parameter backup function...
Protection functions	Motor protection	Motor overheat protection based on output current
	Momentary overcurrent Protection	Drive stops when output current exceeds 200% of Heavy Duty Rating
	Overload Protection	Drive stops after 60 s at 150% of rated output current (Heavy Duty Rating) ^{*5}
	Overvoltage Protection	200 V class: Stops when DC bus exceeds approx. 410 V, 400 V class: Stops when DC bus exceeds approx. 820V
	Undervoltage Protection	200 V class: Stops when DC bus exceeds approx. 190 V, 400 V class: Stops when DC bus exceeds approx. 380V
	Momentary power loss Ride-Thru	Immediately stop after 15 ms or longer power loss (default), Continuous operation during power loss than 2 s (standard) ^{*6}
	Heatsink Overheat Protection	Protected by thermister
	Braking Resistance Overheat Protection	Overheat sensor for braking resistor (optional)
	Stall prevention	Stall prevention during acceleration/deceleration and constant speed operation
	Ground fault	Protected by electronic circuit ^{*7}
Power charge indication		Charge LED remains lit until DC bus has fallen below approx. 50 V.

Ambient conditions	Area of Use	Indoor (no corrosive gas, dust, etc.)
	Ambient Temperature	-10°C...+50°C (open chassis) up to 60°C with output current derating, -10°C...+40°C (NEMA Type 1)
	Ambient humidity	95% RH or less (without condensation)
	Storage temperature	-20°C...+60°C (short-term temperature during transportation)
	Altitude	Up to 1000 meters (output derating of 1% per 100 m above 1000 m, max. 3000 m)
	Vibration / Shock	10 Hz to 20 Hz, 9.8 m/s ² max. 20 Hz to 55Hz, 5.9 m/s ² (200 V: 45kW or more, 400 V: 55kW or more) or 2.0 m/s ² max. (200 V: 55 kW or less, 400 V: 75 kW or less)
Safety Standard		EN954-1 safe category 3 stop category 0; EN ISO 13849-1; IEC EN 61508 SIL2
Protection Design		IP00 open-chassis, IP20, NEMA Type 1 enclosure

1. Requires a drive with recommended capacity.
2. Speed control accuracy may vary slightly depending on installation conditions or motor used.
3. Momentary average deceleration torque refers to the deceleration torque from 60 Hz down to 0 Hz. This may vary depending on the motor.
4. If L3-04 is enabled when using a braking resistor or braking resistor unit, the motor may not stop in the specified deceleration time.
5. Overload protection may be triggered when operating with 150% of the rated output current, if the output frequency is less than 6 Hz.
6. Varies in accordance with the drive capacity and load. Drives with a capacity of smaller than 11 kW in the 200 V (model CIMR- AA0056 or 400 V (model CIMR- AA0031) require a separate Momentary Power Loss Unit to continue operating.
7. Protection may not be provided under the following conditions as the motor windings are grounded internally during run: #Low resistance to ground from the motor cable or terminal block. #Drive already has a short-circuit when the power is turned on.

Dimensions

Open-Chassis [IP00]

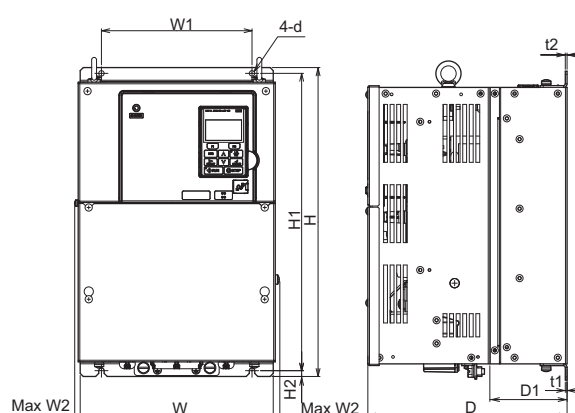


Figure 1

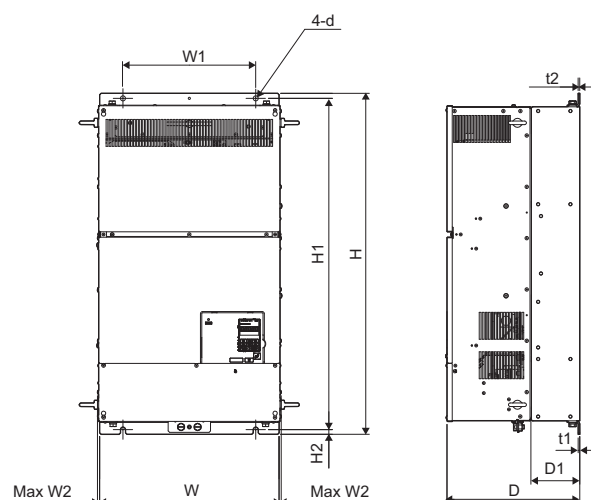


Figure 2

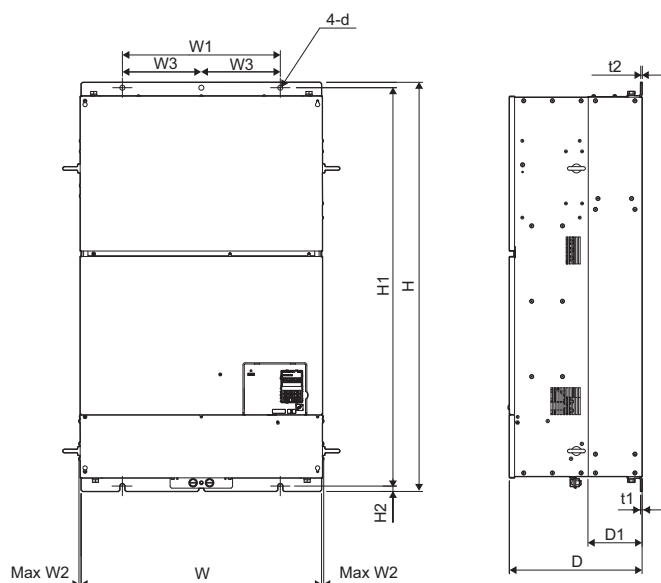


Figure 3

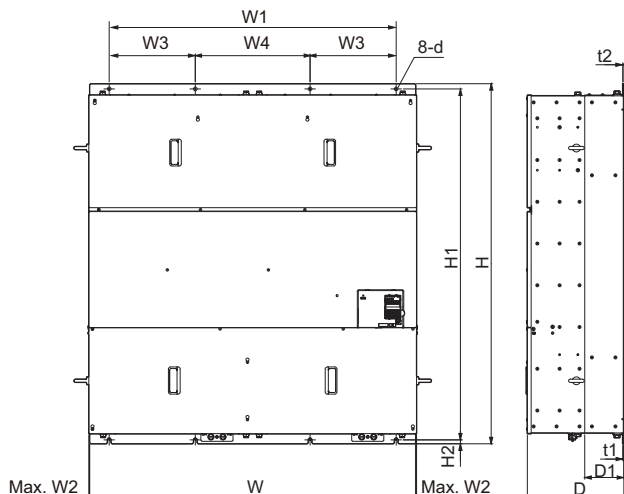


Figure 4

Voltage class	Max. applicable motor output kW		Inverter model CIMR-A□	Figure	Dimensions in mm														Weight kg
	ND	HD			W	H	D	W1	W2	W3	W4	H1	H2	D1	t1	t2	d		
Three-phase 200 V	30	22	0110	1	250	400	258	195	10	-	-	385	7.5	100	2.3	2.3	M6	21	
	37	30	0138		275	450		220				435		25					
	45	37	0169		325	550	283	260				535	110	37					
	55	45	0211									680	12.5	130				80	
	75	55	0250		450	705	330	325				773	13	130	98				
	90	75	0312												4.5	4.5	M12	99	
	110	90	0360		500	800	350	370				773	13	130	4.5	4.5	M12	99	
	110	110	0415																
Three-phase 400 V	30	22	0058	1	250	400	258	195	10	-	-	385	7.5	100	2.3	2.3	M6	21	
	37	30	0072		275	450		220				435		25					
	45	37	0088		325	510	283	260				495	105	36					
	55	45	0103									535	110	41					
	75	55	0139		450	705	330	325				680	12.5	130	42				
	90	75	0165												773	13	130	79	
	110	90	0208		500	800	350	370				680	12.5	130	3.2	3.2	M10	96	
	132	110	0250																773
	160	132	0296	2	500	800	350	370	773	13	130	4.5	4.5	M12	107				
	185	160	0362													923	135	125	
	220	185	0414	2	500	800	350	370	7.7	220	330	440	15	150	4.5	4.5	M12	216	
	250	220	0515	3					670										1140
	355	315	0675	4	1250	1380	370	1110	6	330	440	1345	15	150	4.5	4.5	M12	545	
	500	450	0930																555
	630	560	1200																555

Enclosed Panel [NEMA Type 1]

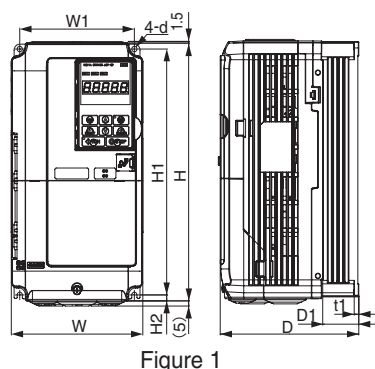


Figure 1

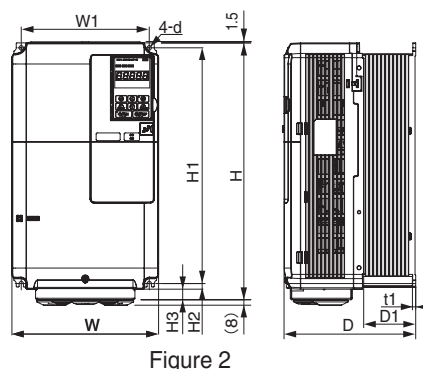


Figure 2

Voltage class	Max. applicable motor output kW		Inverter model CIMR-A□	Figure	Dimensions in mm										
	ND	HD			W	H	D	W1	H1	H2	D1	t1	t2	d	Weight kg
Three-phase 200 V	0.75	0.4	0004	1	140	260	147	122	248	6	38	5	-	M5	3.1
	1.1	0.75	0006				164				55				3.1
	2.2	1.5	0010												3.2
	3	2.2	0012												3.2
	5.5	4.0	0021												3.5
	7.5	5.5	0030				4.0								
	11	7.5	0040		4.0										
	15	11	0056		180	300	187	160	284	8	75				5.6
	18.5	15	0069	2	220	350	197	192	335	8	78	M6	8.7		
	22	18.5	0081			365							9.7		
Three-phase 400 V	0.75	0.4	0002	1	140	260	147	122	248	6	38	5	-	M5	3.2
	1.5	0.75	0004				164				55				3.2
	2.2	1.5	0005												3.2
	3	2.2	0007												3.4
	4.0	3	0009												3.5
	5.5	4.0	0011												3.5
	7.5	5.5	0018												3.9
	11	7.5	0023				3.9								
	15	11	0031		180	300	187	160	284	8	75				5.4
	18.5	15	0038		2	220	350	197	192	335	8				78
	22	18.5	0044	8.3											

Schaffner Filters

Flat filters

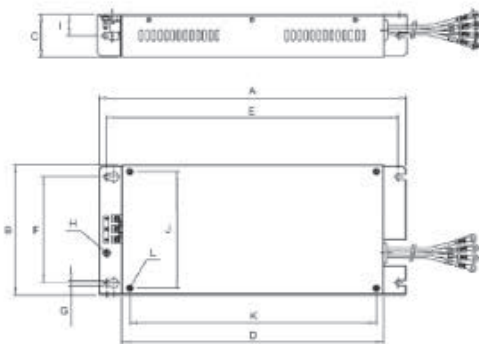


Figure 1

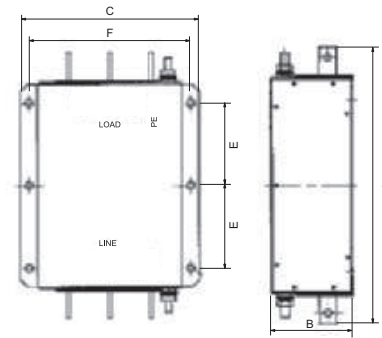
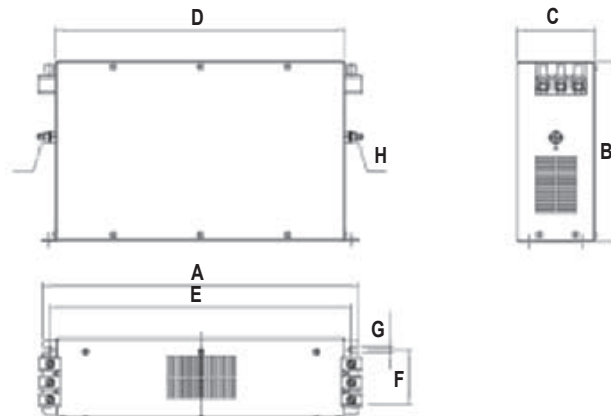


Figure 2

Flat Filters		Fig	Dimensions										Weight kg
			A	B	C	D	E	F	G	H	I	L	
200 V	3G3RV-PFI2035-SE	1	330	141	46	281	313	115	5.5	M5	23	M5	1.4
	3G3RV-PFI2060-SE		355	206	60	302	336	175	6.5	M6	30	M6	3
	3G3RV-PFI2100-SE		408	236	80	355	390	205	6.5	M6	40	M6	4.9
400 V	3G3RV-PFI3010-SE	1	330	141	46	281	313	115	5.5	M4	23	M5	1.2
	3G3RV-PFI3018-SE		330	141	46	281	313	115	5.5	M4	23	M5	1.3
	3G3RV-PFI3035-SE		355	206	50	302	336	175	6.5	M5	25	M6	2.2
	3G3RV-PFI3060-SE		408	236	65	355	390	205	6.5	M6	32.5	M6	4
	3G3RV-PFI3410-SE	2	386	115	260	-	120	235	12.0	M12	-	-	8.5
	3G3RV-PFI3600-SE		386	135	260	-	120	235	12.0	M12	-	-	11.0
	3G3RV-PFI3800-SE		564	160	300	-	210	275	9.0	M12	-	-	31.0

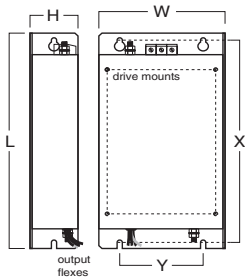
Bookform Filters



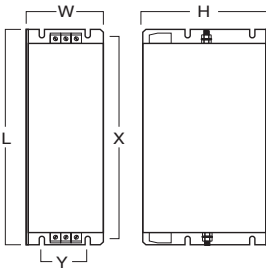
Bookform Filters		Dimensions								Weight kg
		A	B	C	D	E	F	G	H	
200 V	3G3RV-PFI2130-SE	310	180	90	280	295	65	6.5	M10	4.3
	3G3RV-PFI2160-SE	380	170	120	350	365	102	6.5	M10	6.0
	3G3RV-PFI2200-SE	518	240	130	480	498	90	8.2	M10	11.0
400 V	3G3RV-PFI3070-SE	329	185	80	300	314	55	6.5	M6	3.4
	3G3RV-PFI3130-SE	310	180	90	280	295	65	6.5	M10	4.7
	3G3RV-PFI3170-SE	380	170	120	350	365	102	6.5	M10	6.0
	3G3RV-PFI3250-SE	610	240	130	480	498	90	8.3	M10	11.7
	3G3RV-PFI3410-SE	386	115	260	-	120	235	12.0	M12	8.5
	3G3RV-PFI3600-SE	386	135	260	-	120	235	12.0	M12	11.0
	3G3RV-PFI3800-SE	564	160	300	-	210	275	9.0	M12	31.0

Rasmi Filters

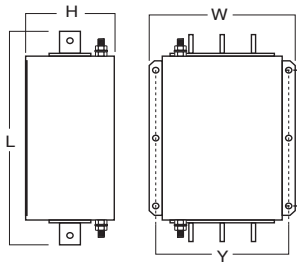
Footprint dimensions



Book type dimensions

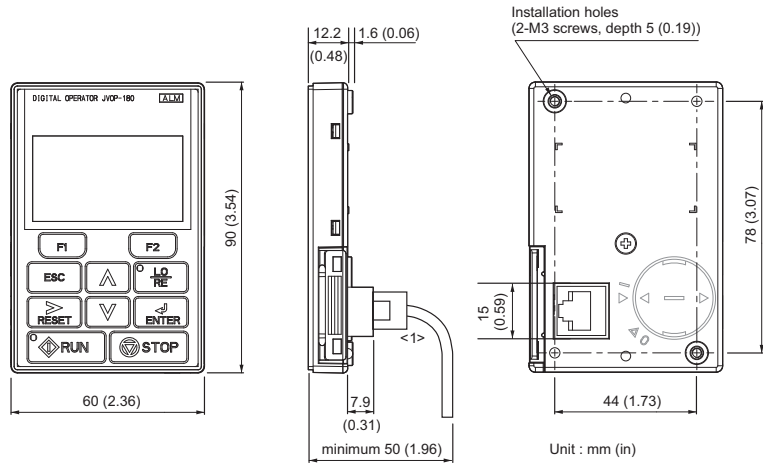


Block type dimensions



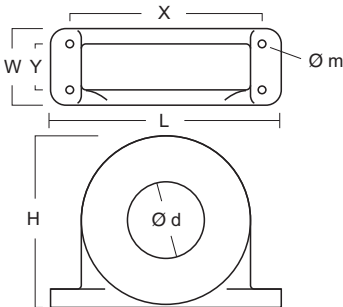
Filters		Dimensions						Filter type	Weight kg
		L	W	H	X	Y	M		
200 V	A1000-FIA3024-RE	306	150	52	290	122	M5	Footprint	2.0
	A1000-FIA2052-RE	320	150	52	290	122	M5		2.4
	A1000-FIA2068-RE	362	188	62	330	160	M5		4.2
	A1000-FIA2096-RE	415	220	62	380	192	M6	Book type	4.4
	A1000-FIA3170-RE	429	110	240	414	80	M6		9.0
	A1000-FIA3300-RE	300	260	135	120	235	M10	Block type	13.2
400 V	A1000-FIA3480-RE	300	260	135	120	235	M10		13.6
	A1000-FIA3024-RE	306	150	52	290	122	M5	Footprint	2.0
	A1000-FIA3044-RE	357	182	62	330	160	M5		2.8
	A1000-FIA3052-RE	415	220	62	380	192	M6		3.9
	A1000-FIA3071-RE	329	80	220	314	55	M6	Book type	5.3
	A1000-FIA3105-RE	379	90	220	364	65	M6		6.5
	A1000-FIA3170-RE	429	110	240	414	80	M6		9.0
	A1000-FIA3300-RE	300	260	135	120	235	M10	Block type	13.2
	A1000-FIA3480-RE	300	260	135	120	235	M10		13.6
	A1000-FIA3660-RE	350	280	170	145	255	M10		23.7

Remote LCD operator

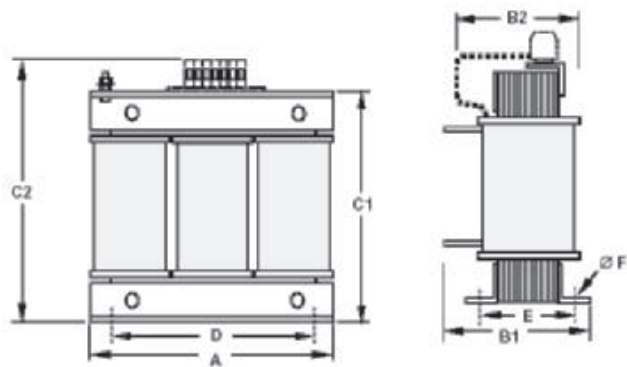


Chokes

Description	D diameter	Motor KW	Dimensions						Weight kg
			L	W	H	X	Y	m	
AX-FER2102-RE	21	< 2.2	85	22	46	70	-	5	0.1
AX-FER2515-RE	25	< 15	105	25	62	90	-	5	0.2
AX-FER5045-RE	50	< 45	150	50	110	125	30	5	0.7
AX-FER6055-RE	60	≥ 55	200	65	170	180	45	6	1.7

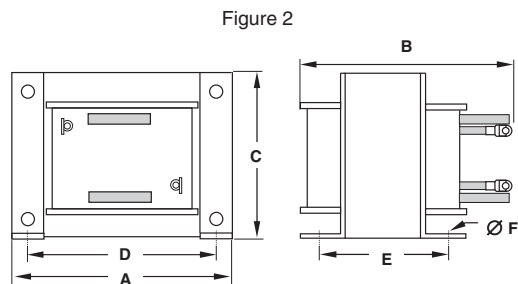
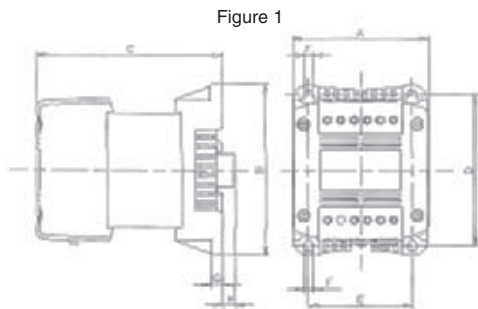


Input AC Reactor



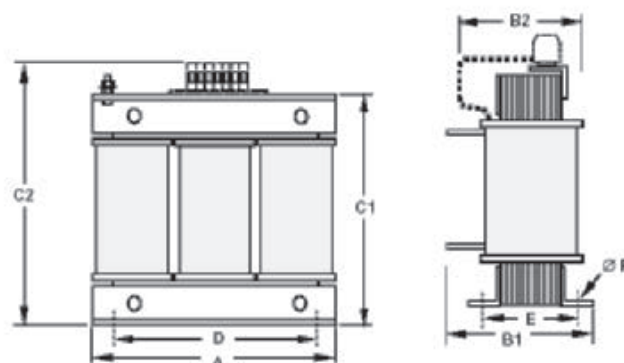
Voltage	Reference	Dimensions								Weight kg
		A	B1	B2	C1	C2	D	E	F	
200 V	AX-RAI02800080-DE	120	-	70	-	120	80	52	5.5	1.78
	AX-RAI00880200-DE			80		62	2.35			
	AX-RAI00350335-DE	180		85	190	140	55	6	5.5	
	AX-RAI00180670-DE			205	85		6.5			
	AX-RAI00091000-DE						150		-	11.7
	AX-RAI00071550-DE			120	-					-
	AX-RAI00042300-DE									
400 V	AX-RAI07700050-DE	120		70	-	120	80	52	5.5	1.78
	AX-RAI03500100-DE			80		62	2.35			
	AX-RAI01300170-DE	180		75	195	140	55	6	5.5	
	AX-RAI00740335-DE			85	190				6.5	
	AX-RAI00360500-DE			205	75		11.2			
	AX-RAI00290780-DE						200		110	16.0
	AX-RAI00191150-DE	275		75						
	AX-RAI00111850-DE	180		-	210	-		110		25.4
	AX-RAI00072700-DE									

DC Reactor



200 V										400 V											
Reference AX-RC	Fig	Dimensions								kg	Reference AX-RC	Fig	Dimensions								kg
		A	B	C	D	E	F	G	H				A	B	C	D	E	F	G	H	
10700032-DE	1	84	113	96	101	66	5	7.5	2	1.22	43000020-DE	1	84	113	96	101	66	5	7.5	2	1.22
06750061-DE										27000030-DE											
03510093-DE										14000047-DE											
02510138-DE										10100069-DE											
01600223-DE		108	135	124	120	82	6.5	9.5	3.20	06400116-DE	108	135	133	120	82	6.5	9.5	3.70			
01110309-DE		120	152	136	135	94	7		9.5	5.20	04410167-DE	120	152	136	135	94		7	9.5	-	5.20
00840437-DE				146				6.00		03350219-DE	146			6.00							
00590614-DE		150	177	160	160	115	7	2	11.4	02330307-DE	150	177	160	160	115	7	2	-	11.4		
00440859-DE				183					14.3	01750430-DE			183						14.3		
00301275-DE		2	195	161	163	185	88	10	-	-	17.0	01200644-DE	2	195	161	163	185	88	10	-	-

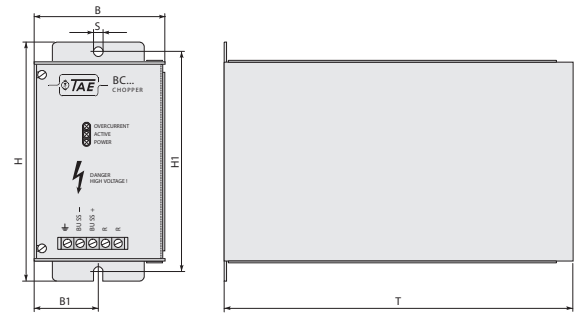
Output AC Reactor



Reference	Dimensions								Weight kg
	A	B1	B2	C1	C2	D	E	F	
AX-RAO11500026-DE	120	-	70	-	120	80	52	5.5	1.78
AX-RAO07600042-DE									
AX-RAO04100075-DE									
AX-RAO03000105-DE	120	-	80	-	120	80	62	5.5	2.35
AX-RAO01830160-DE									
AX-RAO01150220-DE									
AX-RAO00950320-DE	180	-	85	-	205	140	55	6	6.5
AX-RAO00630430-DE									
AX-RAO00490640-DE									
AX-RAO00390800-DE	240	-	110	-	275	200	75	6	16.0
AX-RAO00330950-DE									
AX-RAO00251210-DE									
AX-RAO00191450-DE	240	-	120	-	275	200	85	6	18.6
AX-RAO00161820-DE									
AX-RAO00132200-DE									
AX-RAO16300038-DE	300	-	145	-	320	200	125	6	33.5
AX-RAO11800053-DE									
AX-RAO07300080-DE									
AX-RAO04600110-DE	180	-	85	-	190	140	55	6	5.5
AX-RAO03600160-DE									
AX-RAO02500220-DE									
AX-RAO02000320-DE	240	-	110	-	275	200	75	6	16.0
AX-RAO01650400-DE									
AX-RAO01300480-DE									
AX-RAO01030580-DE	240	-	120	-	275	200	85	6	18.6
AX-RAO00800750-DE									
AX-RAO00680900-DE									
AX-RAO00531100-DE	300	-	125	-	330	200	105	6	27.9
AX-RAO00401490-DE									
AX-RAO00331760-DE									
AX-RAO00262170-DE	360	230	-	315	-	300	150	8	55.0
AX-RAO00212600-DE									
AX-RAO00212600-DE	420	255	-	360	-	300	145	8	102.0

Braking Units

Reference	Dimensions					
	B	B1	H	H1	T	S
AX-BCR4017068-TE	82.5	40.5	150	138	220	6
AX-BCR2035090-TE	130	64.5	205	193	208	6
AX-BCR2070130-TE						
AX-BCR4035090-TE						
AX-BCR4070130-TE						
AX-BCR4090240-TE	131	64.5	298	280	300	9



Resistor

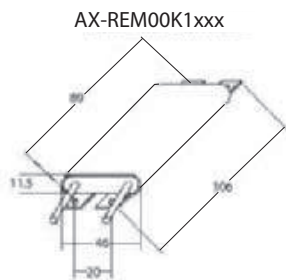


Fig 3

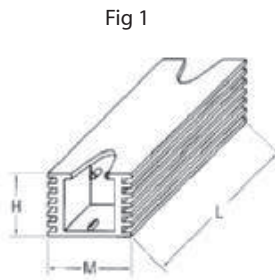


Fig 1

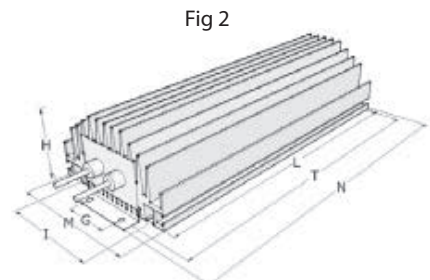


Fig 2

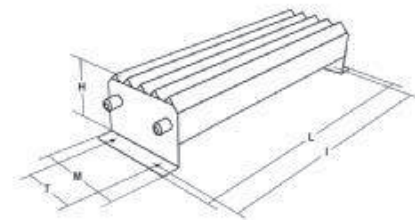


Fig 4

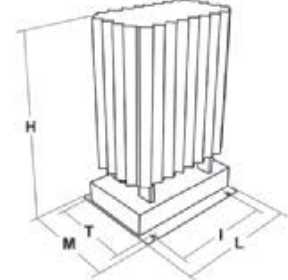
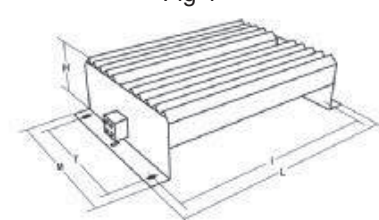
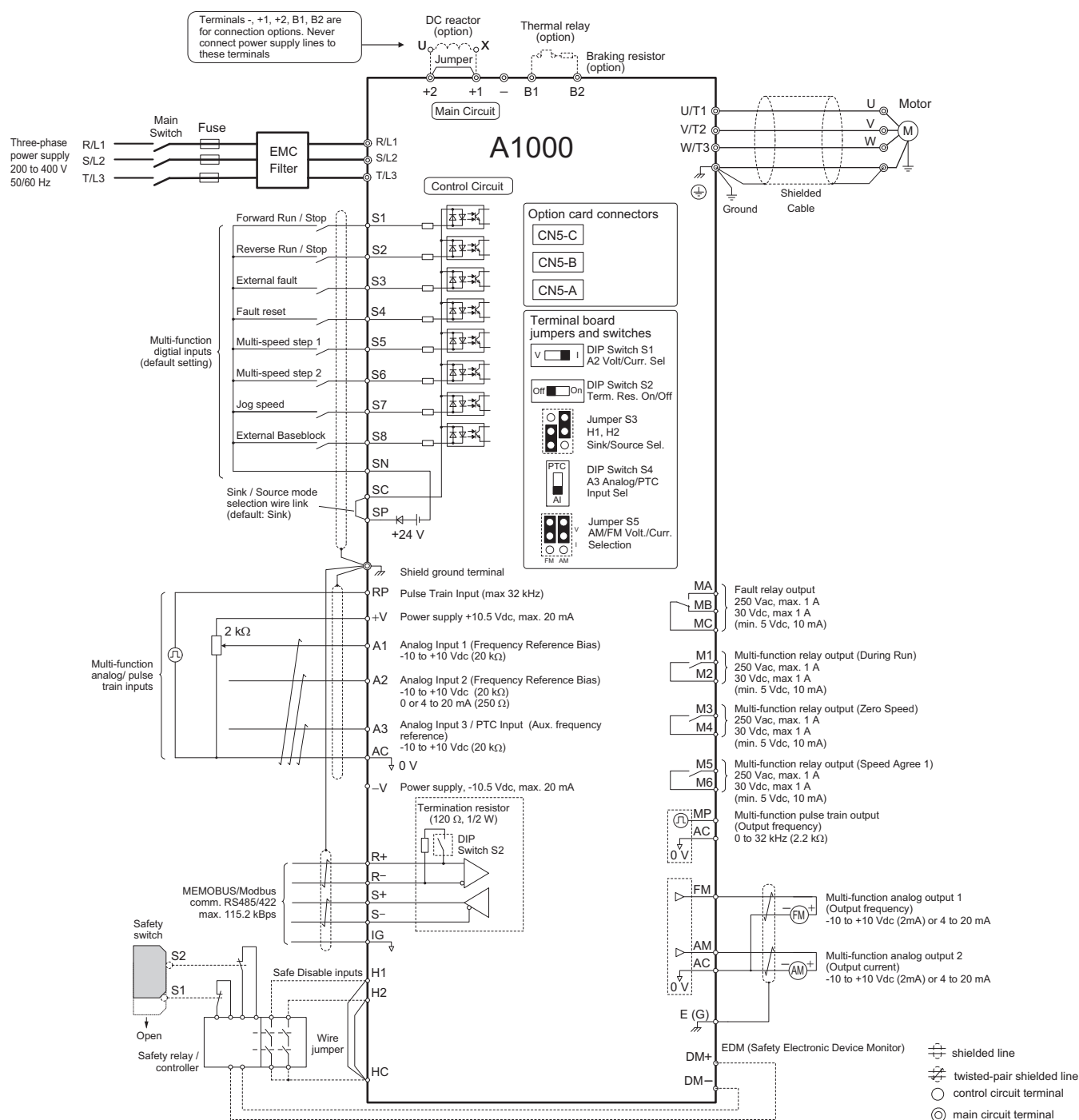


Fig 5

Type	Fig.	Dimensions							Weight kg
		L	H	M	I	T	G	N	
AX-REM00K2070-IE	1	105	27	36	94	-	-	-	0.2
AX-REM00K2120-IE									
AX-REM00K2200-IE									
AX-REM00K4075-IE									
AX-REM00K4035-IE									
AX-REM00K6100-IE	2	200	27	36	309	-	-	-	0.73
AX-REM00K6035-IE									
AX-REM00K9070-IE									
AX-REM00K9020-IE	3	365	73	105	350	70	-	-	4
AX-REM01K9070-IE	4	310	100	240	295	210	-	-	7
AX-REM02K1017-IE									
AX-REM03K5035-IE									
AX-REM03K5010-IE	5	206	350	140	190	50	-	-	8.1
AX-REM19K0006-IE									
AX-REM19K0008-IE									
AX-REM19K0020-IE									
AX-REM19K0030-IE									
AX-REM38K0012-IE		306	350	140	290	50	-	-	14.5

Installation

Standard connections



Main circuit

Terminal	Name	Function (signal level)
R/L1, S/L2, T/L3	Main circuit power supply input	Used to connect line power to the drive.
U/T1, V/T2, W/T3	Inverter output	Used to connect the motor
B1, B2	Braking resistor connection	Available for connecting a braking resistor or the braking resistor unit option.
+2, +1	DC reactor connection	Remove the short bar between +2 and +1 when connecting DC reactor (option)
+1, -	DC power supply input	For power supply input (+1: positive electrode; - : negative electrode)*
+3	Braking Unit	Connection for Braking Unit between terminals +3 and -
⊕	Grounding	For grounding (grounding should conform to the local grounding code.)

Control Circuit

Type	No.	Signal name	Function	Signal level
Digital input signals	S1	Multi-function input selection 1	Factory setting: runs when CLOSED, stops when OPEN.	24 VDC, 8 mA photocoupler insulation
	S2	Multi-function input selection 2	Factory setting: runs when CLOSED, stops when OPEN.	
	S3	Multi-function input selection 3	Factory setting: External Fault (N.O.)	
	S4	Multi-function input selection 4	Factory setting: Fault reset	
	S5	Multi-function input selection 5	Factory setting: Multi-step speed cmd 1	
	S6	Multi-function input selection 6	Factory setting: Multi-step speed cmd 2	
	S7	Multi-function input selection 7	Factory setting: Jog Frequency	
	S8	Multi-function input selection 8	Factory setting: Closed gives external baseblock	
	SC	Multi-function input selection Common	Common for control signal	
Analog input signals	+V	Power Supply for Frequency Setting	+10.5 V (allowable max current 20 mA)	
	–V	Power Supply for Frequency Setting	–10.5 V (allowable max current 20 mA)	
	A1	Multi-function analogue input 1	Main Frequency Reference -10 to +10 VDC, 0 to +10 VDC (20 k Ω)	
	A2	Multi-function analogue input 2	Voltage input or current input –10 to +10 VDC, 0 to +10 VDC (20 k Ω) 4 to 20 mA (250 Ω)	
	A3	Multi-function analogue input 3	–10 to +10 V, 0 to +10 V (20 k Ω)	
	AC	Frequency reference common	0 V	
Safety input	HC	Safety Input Common	+24 V (max allowable current 10 mA)	
	H1	Safety Input 1	Open: Stop Closed: Normal Operation	Photocoupler 24 V DC, 8 mA
	H2	Safety Input 2		
Safety monitor output	DM+	Safety monitor output	Open: Safety inputs 1 and 2 are open	48 Vdc, 50mA or less
	DM–	Safety monitor output common		
Digital output signals	MA	NO contact output	Factory setting: "fault"	Contact capacity 250 VAC, 1 A or less 30 VDC, 1 A or less
	MB	NC Output		
	MC	Relay Output common		
	M1	Multi-function contact output (N.O.)	Factory setting Closed: During run	
	M2			
	P1	Photocoupler output 1	Factory setting: Zero speed	Photocoupler output: +48 VDC, 50 mA or less
	P2	Photocoupler output 2	Factory setting: Frequency Agree	
	PC	Photocoupler output common	0 V	
Analog output signals	FM	Multi-function analog monitor (1)	Factory setting: Output frequency	–10 to 10 V $\pm$ 5%, (2 mA or less) 0 to 10 V 4 - 20 mA
	AM	Multi-function analog monitor (2)	Factory setting: "Current monitor, 5 V/drive rated current	
	AC	Analog monitor common	0 V	
Pulse/O	RP	Main Speed Cmd Pulse Train Input	32 kHz max. (3 k Ω)	
	MP	Pulse Train Output	Factory setting: Frequency reference input (H6-01=0) 0 to 33 kHz (2.2 k Ω)	
RS-485/422	R+	Communication input (+)	For MEMOBUS communication operation by RS-485 or RS-422 communication is available.	RS-485/422 MEMOBUS protocol
	R–	Communication input (–)		
	S+	Communication output (+)		
	S–	Communication output (–)		

Inverter heat loss

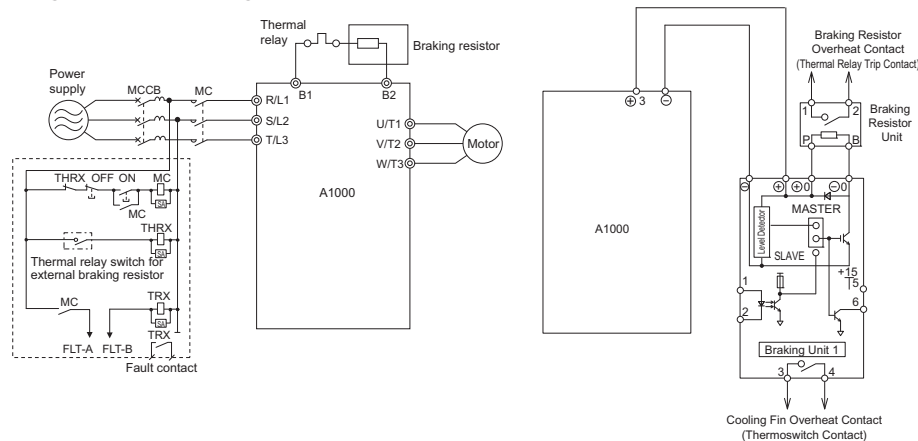
Three-phase 200 V class

Model Number CIMR-A□	Heavy Duty				Normal Duty			
	Rated Amps (A)	Heatsink Loss (W)	Interior Unit Loss (W)	Total Loss (W)	Rated Amps (A)	Heatsink Loss (W)	Interior Unit Loss (W)	Total Loss (W)
2A0004	3.2	14.8	44	59	3.5	18.4	47	66
2A0006	5.0	24	48	72	6.0	31	51	82
2A0010	8.0	43	52	95	9.6	57	58	115
2A0012	11.0	64	58	122	12.0	77	64	141
2A0021	17.5	101	67	168	21	138	83	222
2A0030	25	194	92	287	30	262	117	379
2A0040	33	214	105	319	40	293	145	437
2A0056	47	280	130	410	56	371	175	546
2A0069	60	395	163	558	69	491	205	696
2A0081	75	460	221	681	81	527	257	785
2A0110	85	510	211	721	110	719	286	1005
2A0138	115	662	250	912	138	842	312	1154
2A0169	145	816	306	1122	169	1014	380	1394
2A0211	180	976	378	1354	211	1218	473	1691
2A0250	215	1514	466	1980	250	1764	594	2358
2A0312	283	1936	588	2524	312	2020	665	2686
2A0360	346	2564	783	3347	360	2698	894	3591
2A0415	415	2672	954	3626	415	2672	954	3626

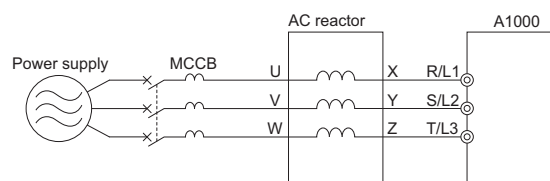
Three-phase 400 V class

Model Number CIMR-A□	Heavy Duty				Normal Duty			
	Rated Amps (A)	Heatsink Loss (W)	Interior Unit Loss (W)	Total Loss (W)	Rated Amps (A)	Heatsink Loss (W)	Interior Unit Loss (W)	Total Loss (W)
4A0002	1.8	15.9	45	61	2.1	20	48	68
4A0004	3.4	25	46	70	4.1	32	49	81
4A0005	4.8	37	49	87	5.4	45	53	97
4A0007	5.5	48	53	101	6.9	62	59	121
4A0009	7.2	53	55	108	8.8	66	60	126
4A0011	9.2	69	61	130	11.1	89	73	162
4A0018	14.8	135	86	221	17.5	177	108	285
4A0023	18.0	150	97	247	23	216	138	354
4A0031	24	208	115	323	31	295	161	455
4A0038	31	263	141	403	38	340	182	521
4A0044	39	330	179	509	44	390	209	599
4A0058	45	349	170	518	58	471	215	686
4A0072	60	484	217	701	72	605	265	870
4A0088	75	563	254	817	88	684	308	993
4A0103	91	723	299	1022	103	848	357	1205
4A0139	112	908	416	1325	139	1215	534	1749
4A0165	150	1340	580	1920	165	1557	668	2224
4A0208	180	1771	541	2313	208	1800	607	2408
4A0250	216	2360	715	3075	250	2379	803	3182
4A0296	260	2391	787	3178	296	2448	905	3353
4A0362	304	3075	985	4060	362	3168	1130	4298
4A0414	370	3578	1164	4742	414	3443	1295	4738
4A0515	450	3972	1386	5358	515	4850	1668	6518
4A0675	605	4191	1685	5875	675	4861	2037	6898
4A0930	810	6912	2455	9367	930	8476	2952	11428
4A1200	1090	7626	3155	10781	1200	8572	3612	12184

Connections for braking unit and braking resistor

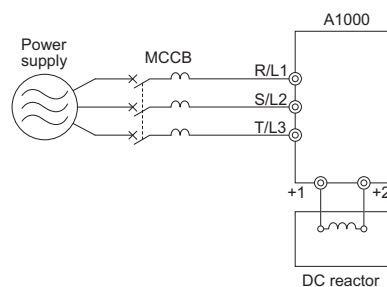


Input AC reactor



200 V class				400 V class			
Max. applicable motor output kW	Reference	Current value A	Inductance mH	Max. applicable motor output kW	Reference	Current value A	Inductance mH
0.4 to 1.5	AX-RAI02800080-DE	8.0	2.8	0.4 to 1.5	AX-RAI07700050-DE	5.0	7.7
2.2 to 4.0	AX-RAI00880200-DE	20.0	0.88	2.2 to 4.0	AX-RAI03500100-DE	10.0	3.5
5.5 to 7.5	AX-RAI00350335-DE	33.5	0.35	5.5 to 7.5	AX-RAI01300170-DE	17.0	1.3
11.0 to 15.0	AX-RAI00180670-DE	67.0	0.18	11.0 to 15.0	AX-RAI00740335-DE	33.5	0.74
18.5 to 22.0	AX-RAI00091000-DE	100.0	0.09	18.5 to 22.0	AX-RAI00360500-DE	50.0	0.36
30.0 to 37.0	AX-RAI00071550-DE	155.0	0.07	30.0 to 37.0	AX-RAI00290780-DE	78.0	0.29
45.0 to 55.0	AX-RAI00042300-DE	230.0	0.04	45.0 to 55.0	AX-RAI00191150-DE	115.0	0.19
75.0	-	360.0	0.026	75.0 to 90.0	AX-RAI00111850-DE	185.0	0.11
90.0	-	500.0	0.02	110.0 to 132.0	AX-RAI00072700-DE	270.0	0.07
110.0	-	600.0	0.02	160.0 to 220.0	-	490.0	0.04
				315.0	-	660.0	0.03
				450.0	-	2 x 490.0	2 x 0.04
				500.0	-	2 x 490.0	2 x 0.04
				560.0	-	2 x 660.0	2 x 0.03
				630.0	-	2 x 660.0	2 x 0.03

DC reactor



200 V class				400 V class			
Max. applicable motor output kW	Reference	Current value A	Inductance mH	Max. applicable motor output kW	Reference	Current value A	Inductance mH
0.4	AX-RC10700032-DE	3.2	10.7	0.4	AX-RC43000020-DE	2.0	43.0
0.7	AX-RC06750061-DE	6.1	6.75	0.7	AX-RC27000030-DE	3.0	27.0
1.5	AX-RC03510093-DE	9.3	3.51	1.5	AX-RC14000047-DE	4.7	14.0
2.2	AX-RC02510138-DE	13.8	2.51	2.2	AX-RC10100069-DE	6.9	10.1
3.7	AX-RC01600223-DE	22.3	1.60	4.0	AX-RC06400116-DE	11.6	6.4
5.5	AX-RC01110309-DE	30.9	1.11	5.5	AX-RC04410167-DE	16.7	4.41
7.5	AX-RC00840437-DE	43.7	0.84	7.5	AX-RC03350219-DE	21.9	3.35
11.0	AX-RC00590614-DE	61.4	0.59	11.0	AX-RC02330307-DE	30.7	2.33
15.0	AX-RC00440859-DE	85.9	0.44	15.0	AX-RC01750430-DE	43.0	1.75
18.5	AX-RC00301275-DE	127.5	0.30	18.5	AX-RC01200644-DE	64.4	1.20
22.0 to 110.0	Built-in			22.0 to 630.0	Built-in		

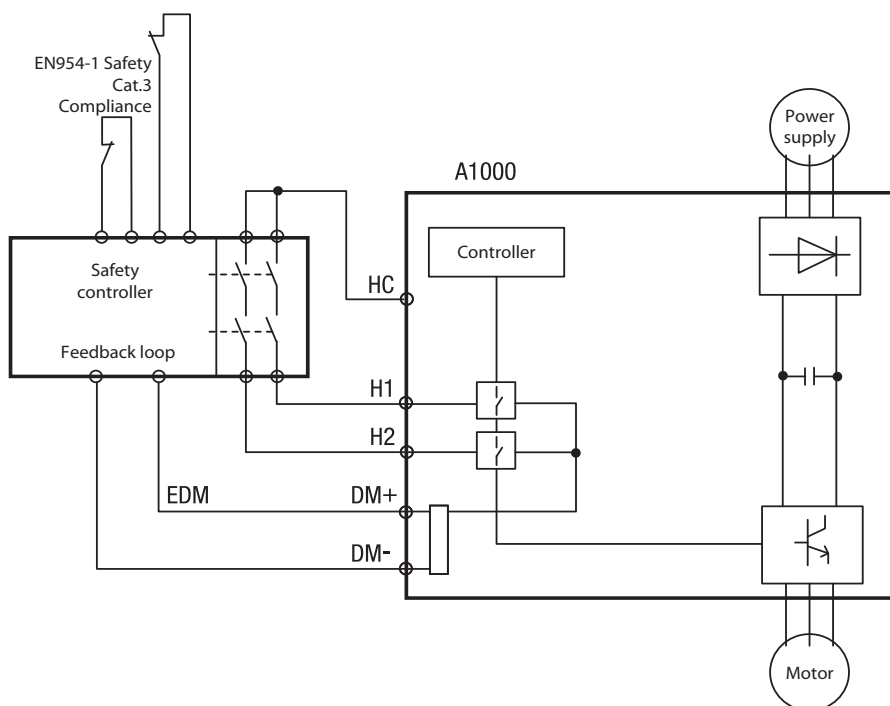
Output AC reactor

200 V class				400 V class			
Max. applicable motor output kW*1	Reference	Current value A	Inductance mH	Max. applicable motor output kW*1	Reference	Current value A	Inductance mH
0.4	AX-RAO11500026-DE	2.6	11.5	0.4 to 1.5	AX-RAO16300038-DE	3.8	16.3
0.75	AX-RAO07600042-DE	4.2	7.6	2.2	AX-RAO11800053-DE	5.3	11.8
1.5	AX-RAO04100075-DE	7.5	4.1	4.0	AX-RAO07300080-DE	8.0	7.3
2.2	AX-RAO03000105-DE	10.5	3.0	5.5	AX-RAO04600110-DE	11.0	4.6
3.7	AX-RAO01830160-DE	16.0	1.83	7.5	AX-RAO03600160-DE	16.0	3.6
5.5	AX-RAO01150220-DE	22.0	1.15	11.0	AX-RAO02500220-DE	22.0	2.5
7.5	AX-RAO00950320-DE	32.0	0.95	15.0	AX-RAO02000320-DE	32.0	2.0
11.0	AX-RAO00630430-DE	43.0	0.63	18.5	AX-RAO01650400-DE	40.0	1.65
15.0	AX-RAO00490640-DE	64.0	0.49	22.0	AX-RAO01300480-DE	48.0	1.3
18.5	AX-RAO00390800-DE	80.0	0.39	30.0	AX-RAO01030580-DE	58.0	1.03
22.0	AX-RAO00330950-DE	95.0	0.33	37.0	AX-RAO00800750-DE	75.0	0.8
30.0	AX-RAO00251210-DE	121.0	0.25	45.0	AX-RAO00680900-DE	90.0	0.68
37.0	AX-RAO00191450-DE	145.0	0.19	55.0	AX-RAO00531100-DE	110.0	0.53
45.0	AX-RAO00161820-DE	182.0	0.16	75.0	AX-RAO00401490-DE	149.0	0.4
55.0	AX-RAO00132200-DE	220.0	0.13	90.0	AX-RAO00331760-DE	176.0	0.33
75.0 to 110.0	-	-	-	110.0	AX-RAO00262170-DE	217.0	0.26
-				132.0	AX-RAO00212600-DE	260.0	0.21
				160.0 to 630.0	-	-	-

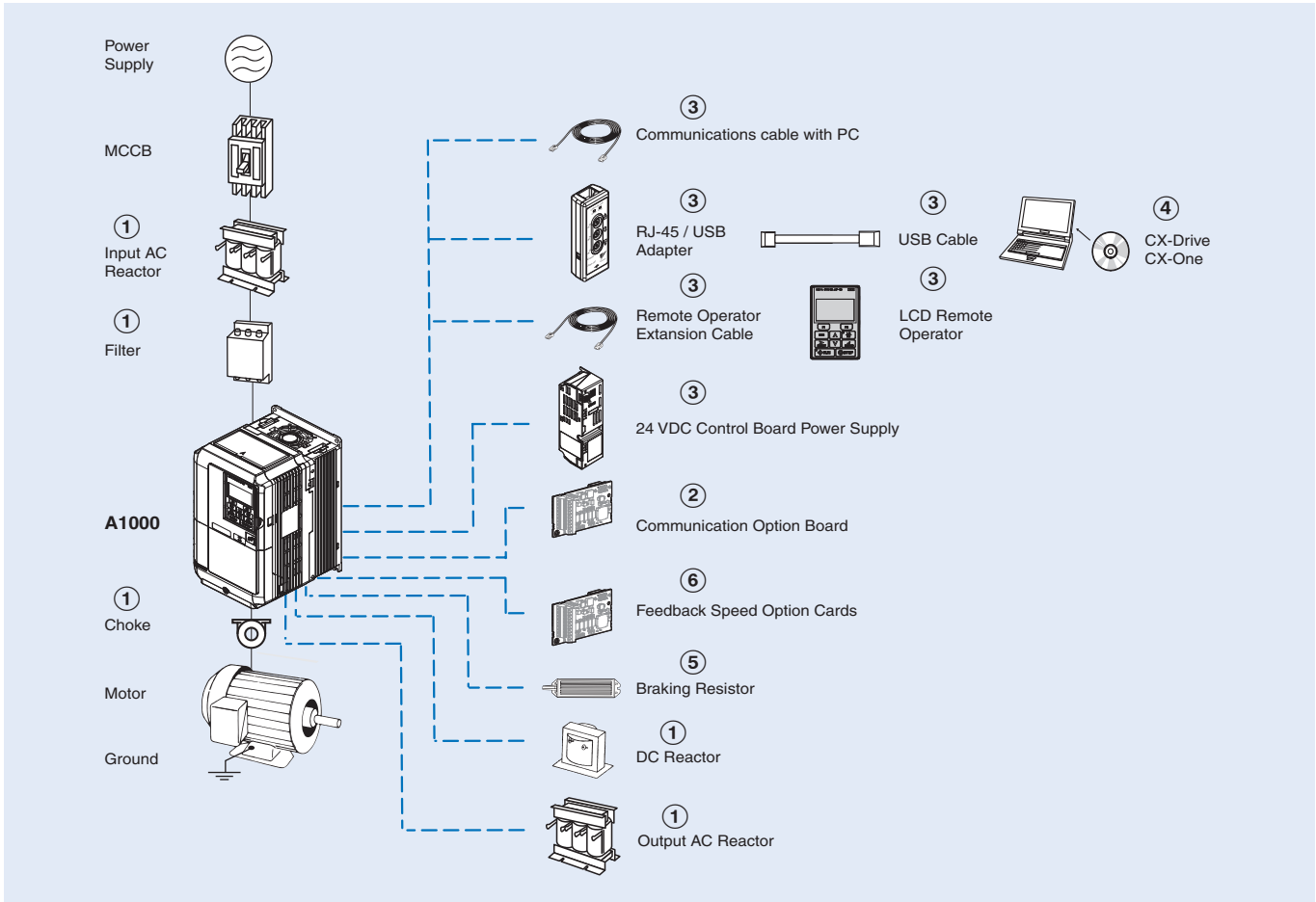
*1. The motor sizes are for heavy duty applications.

Safety System

- A1000 provides Safe Torque Off (STO) functional safety in compliance with EN954-1 safety category 3 stop category 0, EN ISO 13849-1, PLC, IEC/EN61508 SIL2.
- An External Device Monitor (EDM) function has also been added to monitor the safety status of the drive.



Ordering information



A1000

Specifications					Model
200 V	Heavy Duty		Normal Duty		Standard
	0.4 kW	3.2 A	0.75 kW	3.5 A	CIMR-AC2A0004FAA
	0.75 kW	5.0 A	1.1 kW	6.0 A	CIMR-AC2A0006FAA
	1.5 kW	8.0 A	2.2 kW	9.6 A	CIMR-AC2A0010FAA
	2.2 kW	11.0 A	3.0 kW	12.0 A	CIMR-AC2A0012FAA
	4.0 kW	17.5 A	5.5 kW	21.0 A	CIMR-AC2A0021FAA
	5.5 kW	25.0 A	7.5 kW	30.0 A	CIMR-AC2A0030FAA
	7.5 kW	33.0 A	11.0 kW	40.0 A	CIMR-AC2A0040FAA
	11 kW	47.0 A	15.0 kW	56.0 A	CIMR-AC2A0056FAA
	15 kW	60.0 A	18.5 kW	69.0 A	CIMR-AC2A0069FAA
	18.5 kW	75 A	22 kW	81 A	CIMR-AC2A0081FAA
	22 kW	85 A	30 kW	110 A	CIMR-AC2A0110AAA
	30 kW	115 A	37 kW	138 A	CIMR-AC2A0138AAA
	37 kW	145 A	45 kW	169 A	CIMR-AC2A0169AAA
	45 kW	180 A	55 kW	211 A	CIMR-AC2A0211AAA
	55 kW	215 A	75 kW	250 A	CIMR-AC2A0250AAA
	75 kW	283 A	90 kW	312 A	CIMR-AC2A0312AAA
	90 kW	346 A	110 kW	360 A	CIMR-AC2A0360AAA
	110 kW	415 A	110 kW	415 A	CIMR-AC2A0415AAA

Specifications					Model
	Heavy Duty		Normal Duty		Standard
400 V	0.4 kW	1.8 A	0.75 kW	2.1 A	CIMR-AC4A0002FAA
	0.75 kW	3.4 A	1.5 kW	4.1 A	CIMR-AC4A0004FAA
	1.5 kW	4.8 A	2.2 kW	5.4 A	CIMR-AC4A0005FAA
	2.2 kW	5.5 A	3.0 kW	6.9 A	CIMR-AC4A0007FAA
	3.0 kW	7.2 A	4.0 kW	8.8 A	CIMR-AC4A0009FAA
	4.0 kW	9.2 A	5.5 kW	11.1 A	CIMR-AC4A0011FAA
	5.5 kW	14.8 A	7.5 kW	17.5 A	CIMR-AC4A0018FAA
	7.5 kW	18.0 A	11.0 kW	23.0 A	CIMR-AC4A0023FAA
	11 kW	24.0 A	15.0 kW	31.0 A	CIMR-AC4A0031FAA
	15 kW	31.0 A	18.5 kW	38.0 A	CIMR-AC4A0038FAA
	18.5 kW	39 A	22 kW	44 A	CIMR-AC4A0044FAA
	22 kW	45 A	30 kW	58 A	CIMR-AC4A0058AAA
	30 kW	60 A	37 kW	72 A	CIMR-AC4A0072AAA
	37 kW	75 A	45 kW	88 A	CIMR-AC4A0088AAA
	45 kW	91 A	55 kW	103 A	CIMR-AC4A0103AAA
	55 kW	112 A	75 kW	139 A	CIMR-AC4A0139AAA
	75 kW	150 A	90 kW	165 A	CIMR-AC4A0165AAA
	90 kW	180 A	110 kW	208 A	CIMR-AC4A0208AAA
	110 kW	216 A	132 kW	250 A	CIMR-AC4A0250AAA
	132 kW	260 A	160 kW	296 A	CIMR-AC4A0296AAA
	160 kW	304 A	185 kW	362 A	CIMR-AC4A0362AAA
	185 kW	370 A	220 kW	414 A	CIMR-AC4A0414AAA
	220 kW	450 A	250 kW	515 A	CIMR-AC4A0515AAA
	315 kW	605 A	355 kW	675 A	CIMR-AC4A0675AAA
	450 kW	810 A	500 kW	930 A	CIMR-AC4A0930AAA
	560 kW	1090 A	630 kW	1200 A	CIMR-AC4A1200AAA

① Line filters

Inverter		Line filter						
		Rasmi			Schaffner			
Voltage	Model CIMR-AC□ (Normal duty)	Reference	Current (A)	Weight (kg)	Reference	Current (A)	Weight (kg)	
3-Phase 200 VAC	2A0004 / 2A0006	A1000-FIA3024-RE	24	2.0	3G3RV-PFI3010-SE	10	1.2	
	2A0010 / 2A0012 / 2A0021				3G3RV-PFI3018-SE	18	1.3	
	2A0030 / 2A0040	A1000-FIA2052-RE	52	2.4	3G3RV-PFI2035-SE	35	1.4	
	2A0056	A1000-FIA2068-RE	68	4.2				
	2A0069 / 2A0081	A1000-FIA2096-RE	96	4.4	3G3RV-PFI2060-SE	60	3.0	
	2A0110 / 2A0138	A1000-FIA3170-RE	170	9.0	3G3RV-PFI2100-SE	100	4.9	
	2A0169				3G3RV-PFI3170-SE	170	6.0	
	2A0211	A1000-FIA3300-RE	300	13.2	-	-	-	
	2A0250				-	-	-	
	2A0312 / 2A0360 / 2A0415	A1000-FIA3480-RE	480	13.6	-	-	-	
3-Phase 400 VAC	4A0002 / 4A0004 / 4A0005 / 4A0007	A1000-FIA3024-RE	24	2.0	3G3RV-PFI3010-SE	10	1.2	
	4A0009 / 4A0011				3G3RV-PFI3018-SE	18	1.3	
	4A0018 / 4A0023				3G3RV-PFI3035-SE	35	2.2	
	4A0031	A1000-FIA3044-RE	44	2.8	3G3RV-PFI3060-SE	60	4.0	
	4A0038							
	4A0044	A1000-FIA3052-RE	52	3.9				3G3RV-PFI3100-SE
	4A0058	A1000-FIA3071-RE	71	5.3				
	4A0072							
	4A0088	A1000-FIA3105-RE	105	6.5	3G3RV-PFI3170-SE	170	6.0	
	4A0103							
	4A0139 / 4A0165	A1000-FIA3170-RE	170	9.0	3G3RV-PFI3200-SE	250	11.0	
	4A0208 / 4A0250	A1000-FIA3300-RE	300	13.2				
	4A0296					3G3RV-PFI3400-SE	400	8.5
	4A0362	A1000-FIA3480-RE	480	13.6				
	4A0414 / 4A0515					3G3RV-PFI3600-SE	600	11.0
	4A0675	A1000-FIA3660-RE	660	23.7	3G3RV-PFI3800-SE	800	31.0	
	4A0930 / 4A1200							
		-	-	-	-	-	-	

① Input AC reactors

3-phase 200 VAC		3-phase 400 VAC	
Model CIMR-AC□	Input AC reactor	Model CIMR-AC□	Input AC reactor
2A0004 / 2A0006 / 2A0010	AX-RAI02800100-DE	4A0002 / 4A0004 / 4A0005	AX-RAI07700050-DE
2A0012 / 2A0021	AX-RAI00880200-DE	4A0007 / 4A0009 / 4A0011	AX-RAI03500100-DE
2A0030 / 2A0040	AX-RAI00350335-DE	4A0018 / 4A0023	AX-RAI01300170-DE
2A0056 / 2A0069	AX-RAI00180670-DE	4A0031 / 4A0038	AX-RAI00740335-DE
2A0081 / 2A0110	AX-RAI00091000-DE	4A0044 / 4A0058	AX-RAI00360500-DE
2A0138 / 2A0169	AX-RAI00071550-DE	4A0072 / 4A0088	AX-RAI00290780-DE
2A0211 / 2A0250	AX-RAI00042300-DE	4A0103 / 4A0139	AX-RAI00191150-DE
2A0312 / 2A0360 / 2A0415	-	4A0165 / 4A0208	AX-RAI00111850-DE
		4A0250 / 4A0296	AX-RAI00072700-DE
		4A0362 / 4A0414 / 4A0515 / 4A0675 / 4A0930 / 4A1200	-

① DC reactors

3-phase 200 VAC		3-phase 400 VAC	
Model CIMR-AC□	DC Reactor	Model CIMR-AC□	DC Reactor
2A0004	AX-RC10700032-DE	4A0002	AX-RC43000020-DE
2A0006	AX-RC06750061-DE	4A0004	AX-RC27000030-DE
2A0010	AX-RC03510093-DE	4A0005	AX-RC14000047-DE
2A0012	AX-RC02510138-DE	4A0007	AX-RC10100069-DE
2A0021	AX-RC01600223-DE	4A0009 / 4A0011	AX-RC06400116-DE
2A0030	AX-RC01110309-DE	4A0018	AX-RC04410167-DE
2A0040	AX-RC00840437-DE	4A0023	AX-RC03350219-DE
2A0056	AX-RC00590614-DE	4A0031	AX-RC02330307-DE
2A0069	AX-RC00440859-DE	4A0038	AX-RC01750430-DE
2A0081	AX-RC00301275-DE	4A0044	AX-RC01200644-DE

① Output AC reactors

3-phase 200 VAC		3-phase 400 VAC	
Model CIMR-AC□	Output AC reactor	Model CIMR-AC□	Output AC reactor
2A0004	AX-RAO11500026-DE	4A0002 / 4A0004 / 4A0005	AX-RAO16300038-DE
2A0006	AX-RAO07600042-DE	4A0007	AX-RAO11800053-DE
2A0010	AX-RAO04100075-DE	4A0009 / 4A0011	AX-RAO07300080-DE
2A0012	AX-RAO03000105-DE	4A0018	AX-RAO04600110-DE
2A0021	AX-RAO01830160-DE	4A0023	AX-RAO03600160-DE
2A0030	AX-RAO01150220-DE	4A0031	AX-RAO02500220-DE
2A0040	AX-RAO00950320-DE	4A0038	AX-RAO02000320-DE
2A0056	AX-RAO00630430-DE	4A0044	AX-RAO01650400-DE
2A0069	AX-RAO00490640-DE	4A0058	AX-RAO01300480-DE
2A0081	AX-RAO00390800-DE	4A0072	AX-RAO01030580-DE
2A0110	AX-RAO00330950-DE	4A0088	AX-RAO00800750-DE
2A0138	AX-RAO00251210-DE	4A0103	AX-RAO00680900-DE
2A0169	AX-RAO00191450-DE	4A0139	AX-RAO00531100-DE
2A0211	AX-RAO00161820-DE	4A0165	AX-RAO00401490-DE
2A0250	AX-RAO00132200-DE	4A0208	AX-RAO00331760-DE
2A0312 / 2A0360 / 2A0415	-	4A0250	AX-RAO00262170-DE
		4A0296	AX-RAO00212600-DE
		4A0362 / 4A0414 / 4A0515 / 4A0675 / 4A0930 / 4A1200	-

Note: This table corresponds with HD rating. When ND is used, please choose the reactor for the next size inverter.

① Chokes

Model	Diameter	Description
AX-FER2102-RE	21	For 2.2 KW motors or below
AX-FER2515-RE	25	For 15 KW motors or below
AX-FER5045-RE	50	For 45 KW motors or below
AX-FER6055-RE	60	For 55 KW motors or below

② Communication cards

Type	Model	Description	Function
Communication option board	SI-N3	DeviceNet option card	• Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through DeviceNet communication with the host controller.
	SI-P3	PROFIBUS-DP option card	• Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through PROFIBUS-DP communication with the host controller.
	SI-S3	CANopen option card	• Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through CANopen communication with the host controller.
	SI-T3	MECHATROLINK-II option card	• Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through MECHATROLINK-II communication with the host controller.
	SI-ES3	EtherCAT option card	• Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through EtherCAT communication with the host controller.
	SI-EP3	PROFINET option card	• Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through PROFINET communication with the host controller.
	SI-EN3	EtherNet/IP option card ^{*1}	• Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through EtherNet/IP communication with the host controller.

*1. EtherNet/IP option card not available for CIMR-AC4A0930 and CIMR-AC4A1200 models.

③ Accessories

Types	Model	Description	Functions
Digital operator	JVOP-180	LCD remote operator	LCD Display operator with language support
	3G3AX-CAJOP300-EE	Remote operator cable	3 meters cable for connecting remote operator
Accessories	JVOP-181	USB converter / USB cable	USB converter unit with copy and backup function
	PS-A10LB	24 VDC option board	24V DC control board power supply, 200 V class
	PS-A10HB		24V DC control board power supply, 400 V class
	A1000-CAVPC232-EE	PC connection cable	RS232 PC tool connection cable

④ Computer software

Types	Model	Description	Installation
Software	CX-Drive	Computer software	Configuration and monitoring software tool
	CX-One	Computer software	Configuration and monitoring software tool

⑤ Braking unit, braking resistor unit

Inverter			Braking unit		Braking Resistor [†] (10% ED)				Connectable min. resistance Ω
Max. Applicable Motor kW	Model CIMR-A□□A_	Model	Qty	Model	Specifications of Resistor		Qty		
200 V Class	0.4	0004 HD	Built-in		AX-REM00K2070-IE	200W	70Ω	1	48
	0.75	0004 ND							48
		0006 HD							48
	1.1	0006 ND			AX-REM00K4075-IE	400W	75Ω	1	48
		0008 HD							48
	0008 ND	48							
	1.5	0010 HD			AX-REM00K4035-IE	400W	35Ω	1	16
		0010 ND							16
	0012 HD	16							
	2.2	0012 ND			AX-REM00K6035-IE	600W	35Ω	1	16
		0018 HD							16
	0018 ND	16							
	3.0	0021 HD			AX-REM00K9020-IE	900W	20Ω	1	9.6
		0021 ND							9.6
	0030 HD	9.6							
	3.7	0030 ND			AX-REM02K1017-IE	2100W	17Ω	1	9.6
		0040 HD							9.6
	0040 ND	9.6							
	5.5	0056 HD			AX-REM03K5010-IE	3500W	10Ω	1	9.6
		0056 ND							9.6
	0069 HD	9.6							
	7.5	0069 ND			AX-REM03K5010-IE	3500W	10Ω	1	9.6
		0081 HD							9.6
	0081 ND	9.6							
	11	0110 HD			AX-REM03K5010-IE	3500W	10Ω	1	9.6
		0110 ND							9.6
	0138 HD	9.6							
	15	0138 ND			AX-REM03K5010-IE	3500W	10Ω	1	9.6
		0169 HD							9.6
	0169 ND	9.6							
18.5	0211 HD	AX-REM19K0008-IE	19000W	8Ω	1	6.4			
	0211 ND					6.4			
0250 HD	6.4								
22	0250 ND	AX-REM19K0008-IE	19000W	8Ω	1	6.4			
	0312 HD					6.4			
0312 ND	6.4								
30	0360 HD	AX-REM19K0006-IE	19000W	6Ω	2	1.6			
	0360 ND					1.6			
0415 HD	1.6								
37	0415 ND	AX-REM19K0006-IE	19000W	6Ω	2	1.6			
	0415 ND					1.6			
0415 ND	1.6								
45	0415 ND	AX-REM19K0006-IE	19000W	6Ω	2	1.6			
	0415 ND					1.6			
0415 ND	1.6								
55	0415 ND	AX-REM19K0006-IE	19000W	6Ω	2	1.6			
	0415 ND					1.6			
0415 ND	1.6								
75	0415 ND	AX-REM19K0006-IE	19000W	6Ω	2	1.6			
	0415 ND					1.6			
0415 ND	1.6								
90	0415 ND	AX-REM19K0006-IE	19000W	6Ω	2	1.6			
	0415 ND					1.6			
0415 ND	1.6								
110	0415 ND	AX-REM19K0006-IE	19000W	6Ω	2	1.6			
	0415 ND					1.6			
0415 ND	1.6								

Inverter			Braking unit		Braking Resistor ¹ (10% ED)				Connectable min resistance Ω				
Max. Applicable Motor kW	Model CIMR-A□□A_	Model	Qty	Model	Specifications of Resistor		Qty						
400 V Class	0.4	0002 HD	Built in		AX-REM00K1200-IE	100W	200Ω	1	96				
	0.75	0002 ND							96				
		0004 HD											
	1.5	0004 ND			AX-REM00K2200-IE	200W	200Ω	1	96				
		0005 HD							64				
	2.2	0005 ND							64				
		0007 HD							64				
	3.0	0007 ND							AX-REM00K4075-IE	400W	75Ω	1	32
		0009 HD											32
	0009 ND												
	3.7	0011 HD			AX-REM00K6100-IE	600W	100Ω	1	32				
		0011 ND											
	0018 HD												
	7.5	0018 ND			AX-REM00K9070-IE	900W	70Ω	1	32				
		0023 HD											
	11	0023 ND							AX-REM01K9070-IE	1900W	70Ω	1	32
		0031 HD			20								
	15	0031 ND			AX-REM03K5035-IE	3500W	35Ω	1					20
		0038 HD											
	18.5	0038 ND							AX-REM19K0030-IE	19000W	30Ω	1	20
		0044 HD			19.2								
	22	0044 ND			19.2								
		0058 HD											
	30	0058 ND			AX-REM19K0020-IE	19000W	20Ω	1	19.2				
		0072 HD							19.8				
	37	0072 ND							12.8				
		0088 HD							12.8				
	45	0088 ND							AX-REM19K0030-IE	19000W	30Ω	1	19.2
		0103 HD											19.2
	0103 ND	12.8											
	55	0139 HD			AX-REM19K0020-IE	19000W	20Ω	1	12.8				
		0139 ND											
	0165 HD												
	90	0165 ND			AX-REM19K0006-IE	19000W	6Ω	1	3.2				
		0208 HD											
	0208 ND												
	110	0250 HD			AX-REM38K0012-IE	38000W	12Ω	1	3.2				
		0250 ND							3.2				
	0296 HD												
	132	0296 ND			AX-REM19K0006-IE	19000W	6Ω	3	3.2				
		0362 HD							3.2				
	0362 ND												
	160	0362 ND			AX-REM19K0006-IE	19000W	6Ω	3	3.2				
		0414 HD							3.2				
	0414 ND												
	220	0515 HD			AX-REM19K0006-IE	19000W	6Ω	3	3.2				
		0515 ND							3.2				
	0675 HD	3.2											
	0675 ND	3.2											
355	0675 ND	3.2											

- When connecting a mounting type resistor or braking resistor unit, set system constant L3-04 to 0 (Stall prevention disabled during deceleration). Motor will not stop at set deceleration time if this constant is not changed. Additionally the Internal braking transistor protection (L8-55) should be set to "0" when a external braking unit (CDBR-) is used.

⑥ Feedback speed option card

Type	Model	Description	Function
PG option card	PG-B3	Motor PG feedback open collector interface	- For speed feedback input by connecting a motor encoder - Input: 3 track (one or two tracks), for HTL encoder connection, 50 KHz max - Output: 3 track, open collector - Encoder power supply: 12 V, 200 mA max
	PG-X3	Motor PG feedback line driver interface	- For speed feedback input by connecting a motor encoder - Input: 3 track (one or two tracks), line driver, 300 kHz max - Output: 3 track, line driver - Encoder power supply: 5 V or 12 V, 200 mA max
	PG-F3 ¹	EnDat encoder	- For speed feedback input by connecting a motor encoder - Encoder type: EnDat 2.1/01, EnDat 2.2/01, EnDat 2.2/22 (HEIDENHAIN) - Maximum input frequency: 50 kHz - Pulse monitor: Matches RS-422 level - Output voltage: 5V±5%, 8V±10% - Maximum output current: 200 mA - Wiring length: 20 m max. for the encoder, 30 m max. for the pulse monitor
	PG-RT3	Motor feedback resolver interface	- For motor speed feedback by connecting a resolver (TS2640N321E64 by Tamagawa Seiki Co., LTD) - Input voltage: 7 VAC rms 10 kHz - Transformation ratio: 0.5±5% - Maximum input current: 100 mA rms

1. This option card can only be used in CLV/PM.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.