CIMR-G7C

Varispeed G7

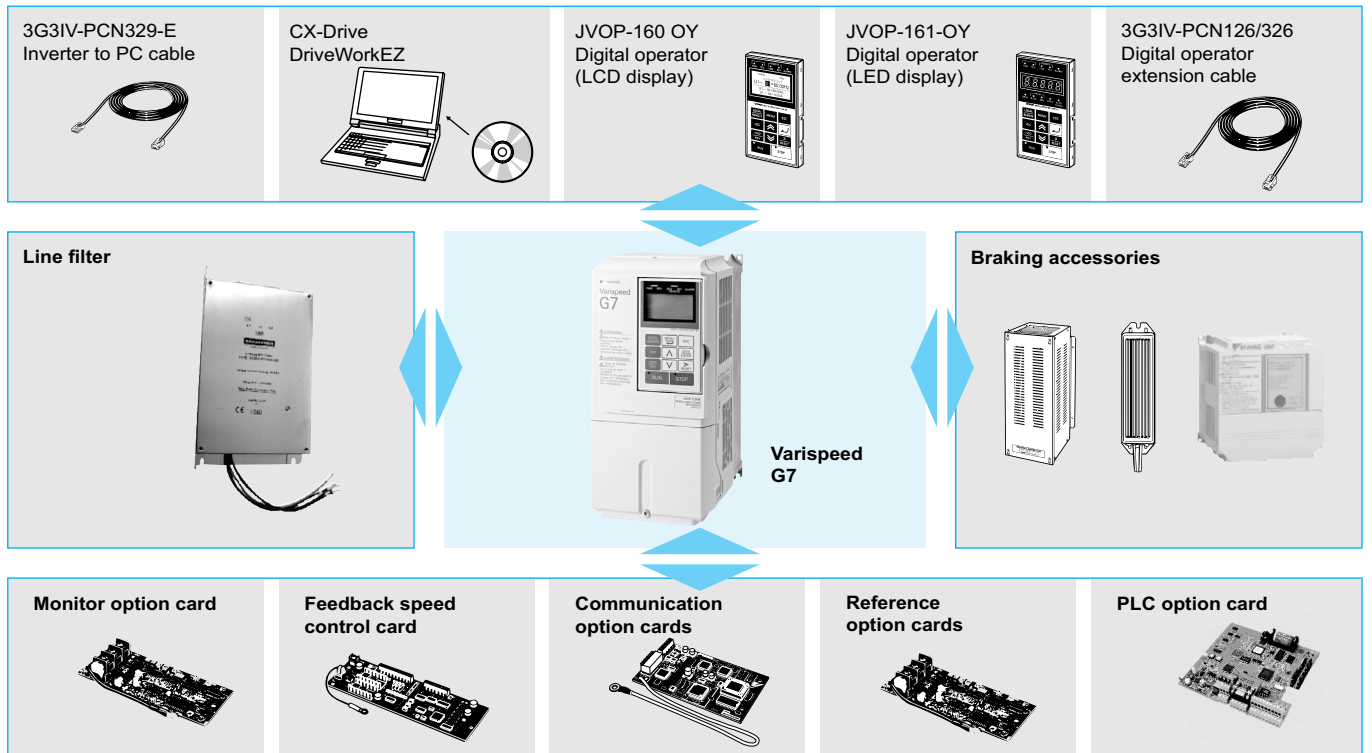## World first three level inverter architecture

- 3 level control (400 V class)
- Current vector control and V/F with or without PG
- Torque control (closed loop and open loop)
- Silent operation
- Rotary and stationary autotuning
- High slip braking function
- Energy saving function standard
- LCD operator
- Embedded OMRON PLC functionality with PLC option card
- Standard RS-485 communications - Modbus
- Fieldbus options: DeviceNet, PROFIBUS, CANOpen, LONworks, ethernet
- PC configuration tool CX-drive and DriveWorksEZ.
- CE, UL, and cUL marking
- Customised application software

Ratings

- 200 V Class three-phase 0.4 to 110 kW
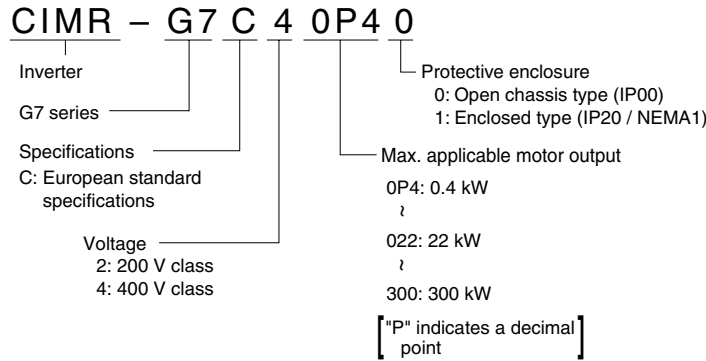- 400 V Class three-phase 0.4 to 300 kW

System configuration

3G3IV-PCN329-E Inverter to PC cable	CX-Drive DriveWorkEZ	JVOP-160 OY Digital operator (LCD display)	JVOP-161-OY Digital operator (LED display)	3G3IV-PCN126/326 Digital operator extension cable

Line filter

Varispeed G7

Braking accessories

Monitor option card	Feedback speed control card	Communication option cards	Reference option cards	PLC option card

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Varispeed G7   249

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Specifications

Type designation

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CIMR – G7 C 4 0P4 0
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- Inverter
- G7 series
- Specifications
  - C: European standard specifications
- Voltage
  - 2: 200 V class
  - 4: 400 V class
- Max. applicable motor output
  - 0P4: 0.4 kW
  - ∼
  - 022: 22 kW
  - ∼
  - 300: 300 kW
  - ["P" indicates a decimal point]
- Protective enclosure
  - 0: Open chassis type (IP00)
  - 1: Enclosed type (IP20 / NEMA1)

200 V class[1]

Model CIMR-G7C☐		20P4	20P7	21P5	22P2	23P7	25P5	27P5	2011	2015	2018	2022	2030	2037	2045	2055	2075	2090	2110
Max. applicable motor output[2] kW		0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
Output characteristics	Inverter capacity kVA	1.2	2.3	3.0	4.6	6.9	10	13	19	25	30	37	50	61	70	85	110	140	160
	Rated current A	3.2	6	8	12	18	27	34	49	66	80	96	130	160	183	224	300	358	415
	Max. voltage	3-phase, 200/208/220/230/240 V (proportional to input voltage)																	
	Max. output frequency	400 Hz (programmable)																	
Power supply	Rated input voltage and frequency	3-phase 200/208/220/230/240 V, 50/60 Hz[3]																	
	Allowable voltage fluctuation	+10%, -15%																	
	Allowable frequency fluctuation	±5%																	
Harmonic wave prevention	DC reactor	Option									Provided								
	12-pulse input	Not available									Available[4]								

1. The main circuit of 200 V class inverters uses 2-level control method.
2. Standard 4-pole motors are used for max. applicable motor output. Choose the inverter model whose rated current is allowable within the motor rated current range.
3. When using the inverter of 200 V class 30 kW or more with a cooling fan of three-phase 230 V 50 Hz or 240 V 50/60 Hz power supply, a transformer for the cooling fan is required.
4. A 3-wired transformer is required at 12-pulse input.

400 V class[1]

Model CIMR-G7C☐		40P4	40P7	41P5	42P2	43P7	45P5	47P5	4011	4015	4018	4022	4030	4037	4045	4055	4075	4090	4110	4132	4160	4185	4220	4300
Max. applicable motor output[2] kW		0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	220	300
Output characteristics	Inverter capacity kVA	1.4	2.6	3.7	4.7	6.9	11	16	21	26	32	40	50	61	74	98	130	150	180	210	250	280	340	460
	Rated current A	1.8	3.4	4.8	6.2	9	15	21	27	34	42	52	65	80	97	128	165	195	240	270	325	370	450	605
	Max. voltage	3-phase, 380/400/415/440/460/480 V (proportional to input voltage)																						
	Max. output frequency	400 Hz (programmable)																						
Power supply	Rated input voltage and frequency	3-phase 380/400/415/440/460/480 V, 50/60 Hz																						
	Allowable voltage fluctuation	+10%, -15%																						
	Allowable frequency fluctuation	±5%																						
Harmonic wave prevention	DC reactor	Option										Provided												
	12-pulse input	Not available										Available[3]												

1. The main circuit of 400 V class inverters uses 3-level control method.
2. Standard 4-pole motors are used for max. applicable motor output. Choose the inverter model whose rated current is allowable within the motor rated current range.
3. A 3-wired transformer is required at 12-pulse input.

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Frequency inverters

Enclosures

<table>
<tr><td colspan="2" rowspan="3"></td><td>Model CIMR-G7C□</td><td>20P4</td><td>20P7</td><td>21P5</td><td>22P2</td><td>23P7</td><td>25P5</td><td>27P5</td><td>2011</td><td>2015</td><td>2018</td><td>2022</td><td>2030</td><td>2037</td><td>2045</td><td>2055</td><td>2075</td><td>2090</td><td>2110</td></tr>
<tr><td>Enclosed type (IEC IP20)</td><td colspan="11">Available as standard</td><td colspan="6">Available for option</td><td colspan="2">Not available</td></tr>
<tr><td>Open chassis type (IEC IP00)</td><td colspan="11">Available by removing the upper and lower cover of enclosed type</td><td colspan="8">Available as standard</td></tr>
</table>

		Model CIMR-G7C□	40P4	40P7	41P5	42P2	43P7	45P5	47P5	4011	4015	4018	4022	4030	4037	4045	4055	4075	4090	4110	4132	4160	4185	4220	4300
400 V class		Enclosed type (IEC IP20)	Available as standard										Available for option									Not available			
		Open chassis type (IEC IP00)	Available by removing the upper and lower cover of enclosed type										Available as standard												

Note: the two tables above use merged spanning cells:

200 V class:
- Enclosed type (IEC IP20): "Available as standard" (20P4–2018), "Available for option" (2022–2075), "Not available" (2090–2110)
- Open chassis type (IEC IP00): "Available by removing the upper and lower cover of enclosed type" (20P4–2018), "Available as standard" (2022–2110)

400 V class:
- Enclosed type (IEC IP20): "Available as standard" (40P4–4018), "Available for option" (4022–4160), "Not available" (4185–4300)
- Open chassis type (IEC IP00): "Available by removing the upper and lower cover of enclosed type" (40P4–4018), "Available as standard" (4022–4300)

Commom specifications

Model number CIMR-G7C□		Specification
Control characteristics	Control method	Sine wave PWM Closed loop vector control, open loop vector control 1&2, V/f control, V/f with PG control
	Torque characteristics	150% at 0.3 Hz (open loop vector control 2) 150% at 0rpm (closed vector control)
	Speed control range	1:200 (open loop vector control 2) 1:1000 (closed loop vector control)
	Speed control accuracy	± 0.2% (open loop vector control) ± 0.02% (closed loop vector control) (25 °C ± 10 °C)
	Speed control response	10 Hz (open loop vector control 2) 30 Hz (control with PG)
	Torque limits	Provided (4 quadrant steps can be changed by constant settings.) (Vector control)
	Torque accuracy	± 5%
	Frequency range	0.01 to 400 Hz
	Frequency accuracy (temperature characteristics)	Digital references: ± 0.01% (-10 °C to +40 °C) Analog references: ± 0.1% (25 °C ±10 °C)
	Frequency setting resolution	Digital references: 0.01 Hz Analog references: 0.025/50 Hz (11 bits plus sign)
	Output frequency resolution	0.001 Hz
	Overload capacity and maximum current	150% of rated output current for 1 minute 200% of rated output current for 0.5 second
	Frequency setting signal	0 to +10 V, -10 to +10 V, 4 to 20 mA, pulse train
	Accel/decel time	0.01 to 6000.0 s (4 selectable combinations of independent acceleration and deceleration time settings)
	Braking torque	Approximately 20% (Approximately 125% with braking resistor option, braking transistor built into Inverters of 15 kW or less)
	Main control functions	Restarting after momentary power loss, speed search, overtorque/undertorque detection, torque limits, 17-speed control (maximum), 4 acceleration and deceleration times, S-curve acceleration/deceleration, 3-wire control, auto-tuning (rotational or stationary), dwell function, cooling fan ON/OFF control, slip compensation, torque compensation, auto-restart after fault, jump frequencies, upper and lower limits for frequency references, DC braking for starting and stopping, high-slip braking, advanced PID control, energy-saving control, MEMOBUS communications (RS-485/422, 19.2 kbps maximum), 2 motor parameter sets, fault reset and parameter copy function.
Protective functions	Motor protection	Protection by electronic thermal overload relay.
	Instantaneous overcurrent protection	Stops at approx. 200% of rated output current.
	Fuse blown protection	Stops for fuse blown.
	Overload protection	150% of rated current for 1 minute 200% of rated current for 0.5 second
	Overvoltage protection	200 Class Inverter: stops when main-circuit DC voltage is above 410 V. 400 Class Inverter: stops when main-circuit DC voltage is above 820 V.
	Undervoltage protection	200 Class Inverter: stops when main-circuit DC voltage is below 190 V. 400 Class Inverter: stops when main-circuit DC voltage is below 380 V.
	Momentary power loss ride through	By selecting the momentary power loss method, operation can be continued if power is restored within 2 s.
	Cooling fin overheating	Protection by thermistor.
	Stall prevention	Stall prevention during acceleration, deceleration and running independently.
	Grounding protection	Protection by electronic circuits.
	Charge indicator	Illuminates when the main circuit DC voltage is approx. 10 VDC or more.
Environment	Ambient operating temperature	-10 °C to 40 °C (enclosed wall-mounted type) -10 °C to 45 °C (open chassis type)
	Ambient operating humidity	95% max. (with no condensation)
	Storage temperature	- 20 °C to + 60 °C (short-term temperature during transportation)
	Application site	Indoor (no corrosive gas, dust, etc.).
	Altitude	1000 m max.
	Vibration	10 to 20 Hz, 9.8 m/s^2 max.; 20 to 50 Hz, 2 m/s^2 max

Dimensions

Open chassis type (IEC IP00)

Fig 1

Voltage	Max. applicable motor output kW	Inverter CIMR-G7C□	Fig	Dimensions in mm									Approx. weight kg	Cooling method
				W	H	D	W1	H1	H2	D1	T1	d		
200 V class (3-phase)	0.4	------												
	0.75	------												
	1.5	------												
	2.2	------												
	3.7	------		Not available please use the IP20 type removing the upper and lower cover										
	5.5	------												
	7.5	------												
	11	2011												
	15	2015												
	18.5	2018	1	250	400	258	195	385	7.5	100	2.3	M6	21	Fan cooled
	22	2022		275	450	258	220	435					24	
	30	2030		375	600	298	250	575	12.5	130	3.2	M10	57	
	37	2037				328							63	
	45	2045		450	725	348	325	700					86	
	55	2055											87	
	75	2075		500	850	358	370	820	15	140	4.5	M12	108	
	90	2090		575	885	378	445	855					150	
	110	2110												
400 V class (3-phase)	0.4	------												
	0.75	------												
	1.5	------												
	2.2	------												
	4.0	------		Not available please use the IP20 type removing the upper and lower cover										
	5.5	------												
	7.5	------												
	11	4011												
	15	4015												
	18.5	4018	1	275	450	258	220	435	7.5	100	2.3	M6	26	Fan cooled
	22	4022												
	30	4030		325	550	283	260	535		105			37	
	37	4037												
	45	4045												
	55	4055		450	725	348	325	700	12.5	130	3.2	M10	90	
	75	4075											91	
	90	4090		500	850	358	370	820	15				109	
	110	4110											127	
	132	4132		575	916	378	445	855	45.8	140	4.5	M12	165	
	160	4160											175	
	185	4185		710	1305	415	540	1270	15	126			263	
	220	4220											280	
	300	4300		916	1475		730	1440					415	

Enclosed type (IEC IP20)

G7C20P41 to G7C25P51
G7C40P41 to G7C45P51

G7C27P51 to G7C20181
G7C47P51 to G7C40181

G7C20221 to G7C20751
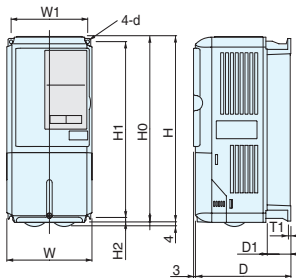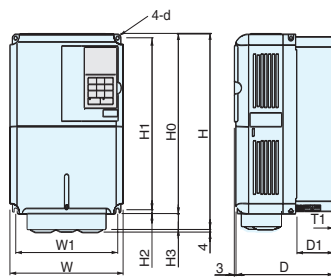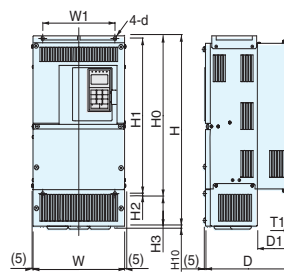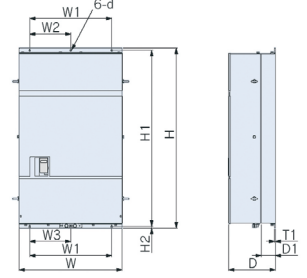G7C40221 to G7C41601

G7C4185 to G7C4300

Fig 1

Fig 2

Fig 3

Fig 4

Voltage	Max. applicable motor output kW	Inverter CIMR-G7C□	Fig	Dimensions in mm									Approx. weight kg	Cooling method
				W	H	D	W1	H1	H2	D1	T1	d		
200 V class (3-phase)	0.4	20P4	1	140	280	157	126	266	7	39	5	M5	3	Self cooled
	0.75	20P7												
	1.5	21P5												
	2.2	22P2				177				59			4	Fan cooled
	3.7	23P7												
	5.5	25P5	2	200	300	197	186	285	8	65.5		M6	6	
	7.5	27P5											7	
	11	2011		240	350	207	216	335	7.5	78	2.3		11	
	15	2015												
	18.5	2018	3	250	400	258	195	385					21	
	22	2022		275	450		220	435		100			24	
	30	2030		375	600	298	250	575	12.5		3.2	M10	57	
	37	2037				328				130			63	
	45	2045		450	725	348	325	700					86	
	55	2055											87	
	75	2075		500	850	358	370	820			4.5	M12	108	
	90	2090		575	885	378	445	855	15	140			150	
	110	2110												
400 V class (3-phase)	0.4	40P4	1	140	280	157	126	266	7	39	5	M5	3.5	Self cooled
	0.75	40P7												
	1.5	41P5				177				59			4.5	
	2.2	42P2												
	3.7	43P7												
	5.5	45P5	2	200	300	197	186	285	8	65.5		M6	7	Fan cooled
	7.5	47P5												
	11	4011		240	350	207	216	335		78			10	
	15	4015												
	18.5	4018	3	275	450	258	220	435	7.5	100	2.3		26	
	22	4022												
	30	4030		325	550	283	260	535		105			37	
	37	4037												
	45	4045												
	55	4055		450	725	348	325	700	12.5	130	3.2	M10	90	
	75	4075											91	
	90	4090		500	850	358	370	820	15				109	
	110	4110											127	
	132	4132		575	916	378	445	855	45.8	140	4.5	M12	165	
	160	4160											175	
	185	4185	4	710	1305	415	540	1270	15	126			263	
	220	4220											280	
	300	4300		916	1475		730	1440					415	

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Filters

Footprint / Flat filters
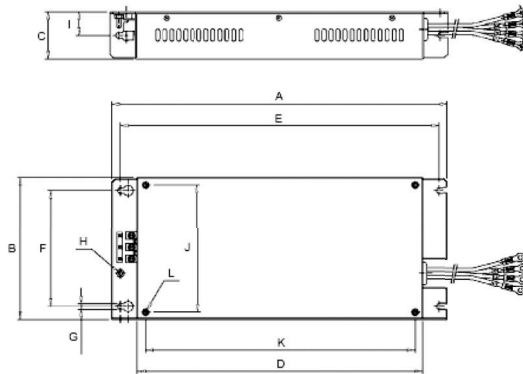
Model		Dimensions										
		A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
200 V	3G3RV-PFI2035-SE	330	141	46	281	313	115	5.5	M5	23	126	266	M5
	3G3RV-PFI2060-SE	355	206	60	302	336	175	6.5	M6	30	186	285	M6
	3G3RV-PFI2100-SE	408	236	80	355	390	205	6.5	M6	40	216	335	M6
400 V	3G3RV-PFI3010-SE	330	141	46	281	313	115	5.5	M5	23	126	266	M5
	3G3RV-PFI3018-SE	330	141	46	281	313	115	5.5	M5	23	126	266	M5
	3G3RV-PFI3021-SE	355	206	50	302	336	175	6.5	M4	25	186	285	M5
	3G3RV-PFI3035-SE	355	206	50	302	336	175	6.5	M5	25	186	285	M6
	3G3RV-PFI3060-SE	408	236	65	355	390	205	6.5	M6	32.5	216	335	M6
	3G3RV-PFI3410-SE [1]	386	115	260	306	240	235	12.0	M12	-	-	-	-
	3G3RV-PFI3600-SE [1]	386	135	260	306	240	235	12.0	M12	-	-	-	-
	3G3RV-PFI3800-SE [1]	564	160	300	516	420	275	9.0	M12	-	-	-	-
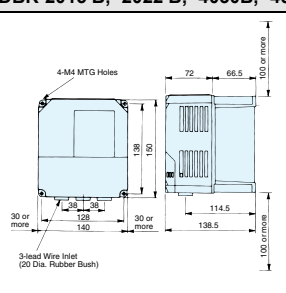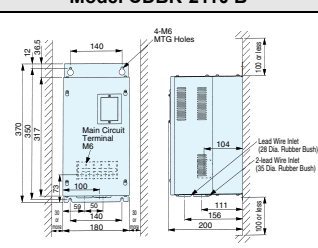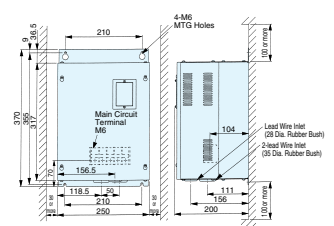
1. Flat filters are not possible to be mounted as footprint filters.

Bookform filters
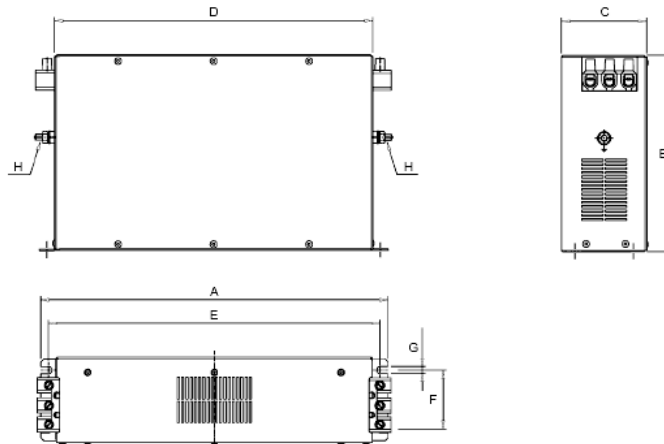
Model		Dimensions							
		A	**B**	**C**	**D**	**E**	**F**	**G**	**H**
200 V	3G3RV-PFI2130-SE	366	180	90	280	310	65	6.5	M10
	3G3RV-PFI2160-SE	451	170	120	350	380	102	6.5	M10
	3G3RV-PFI2200-SE	610	240	130	480	518	90	8.2	M10
400 V	3G3RV-PFI3070-SE	331	185	80	300	329	55	6.5	M6
	3G3RV-PFI3100-SE	326	150	90	240	270	65	6.5	M10
	3G3RV-PFI3130-SE	370	180	90	280	310	65	6.5	M10
	3G3RV-PFI3170-SE	451	170	120	350	380	102	6.5	M10
	3G3RV-PFI3200-SE	610	240	130	480	518	90	8.3	M10

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254   Frequency inverters

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Braking unit

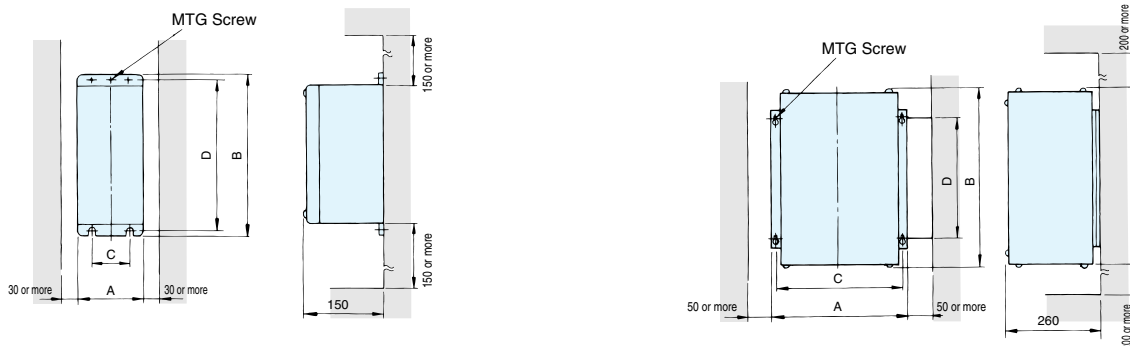| Model CDBR-2015 B, -2022 B, -4030B, -4045 B	Model CDBR-2110 B
Weight 1.8 Kg	Weight 8.5 Kg

Model CDBR-4220 B
Weight 12 Kg

Braking resistor unit (inverter-mounted type)

Weight: 0.2 kg
Model ERF-150WJ_

Note: Prepare mounting screws
(2-M4x8 tapped screws).
Screws 8mm or more and general
metric screws cannot be used.
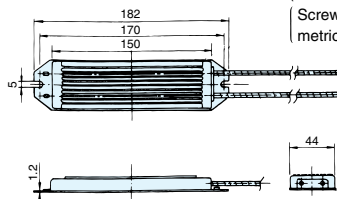
## Braking resistor unit (separately-installed type)

Voltage	Model LKEB-_	Dimensions in mm					Weight kg
		A	B	C	D	MTG Screw	
220 V class	20P7	105	275	50	260	M5 x 3	3.0
	21P5	130	350	75	335	M5 x 4	4.5
	22P2	130	350	75	335	M5 x 4	4.5
	23P7	130	350	75	335	M5 x 4	5.0
	25P5	250	350	200	335	M6 x 4	7.5
	25P5	250	350	200	335	M6 x 4	8.5
400 V class	40P7	105	275	50	260	M5 x 3	3.0
	41P5	130	350	75	335	M5 x 4	4.5
	42P2	130	350	75	335	M5 x 4	4.5
	43P7	130	350	75	335	M5 x 4	5.0
	45P5	250	350	200	332	M6 x 4	7.5
	47P5	250	350	200	332	M6 x 4	8.5

| Voltage	Model LKEB-_	Dimensions in mm					Weight kg
		A	B	C	D	MTG Screw	
220 V class	2011	266	543	246	340	M8 x 4	10
	2015	356	543	336	340	M8 x 4	15
	2018	446	543	426	340	M8 x 4	19
	2022	446	543	426	340	M8 x 4	19
400 V class	4011	350	412	330	325	M6 x 4	16
	4015	350	412	330	325	M6 x 4	18
	4018	446	543	426	340	M8 x 4	19
	4022	446	543	426	340	M8 x 4	19
	4030	356	956	336	740	M8 x 4	25
	4037	446	956	426	740	M8 x 4	33
	4045	446	956	426	740	M8 x 4	33

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Attachments

Heatsink external mounting attachment

The Varispeed G7 inverters under the 200/400 V class 15 kW or less need this attachment for mounting the heatsink externally. This attachment expands the outer dimensions of the width and height of the inverter. (Attachment is not required for inverters of 18.5 kW or more.)
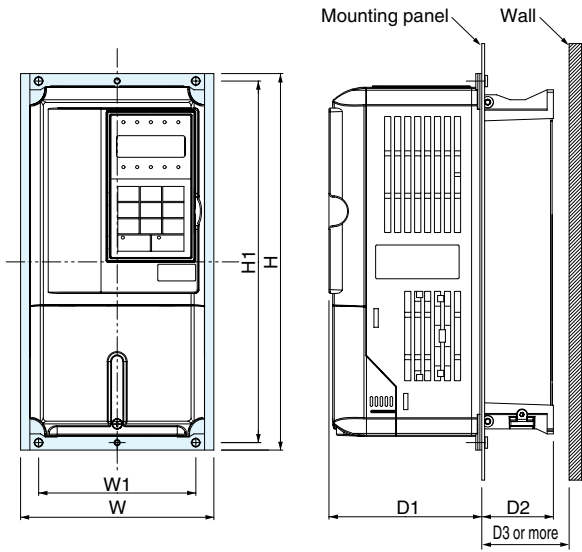
CIMR-G7C☐	Attachment order code	Dimensions in mm						
		W	H	W1	H1	D1	D2	D3
20P4	72616 -EZZ08676A	155	302	126	290	122.6	37.4	40
20P7								
21P5								
22P2							57.4	60
23P7								
25P5	72616-EZZ08676B	210	330	180	316	136.1	63.4	70
27P5								
2011	72616-EZZ08676C	250	392	216	372	133.6	76.4	85
2015								
40P4	72616-EZZ08676A	155	302	126	290	122.6	37.4	40
40P7								
41P5								
42P2							57.4	60
43P7								
45P5	72616-EZZ08676B	210	330	180	316	136.1	63.4	70
47P5								
4011	72616-EZZ08676C	250	392	216	372	133.6	76.4	85
4015								

Panel cut for external mounting of cooling fin (heatsink)

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5
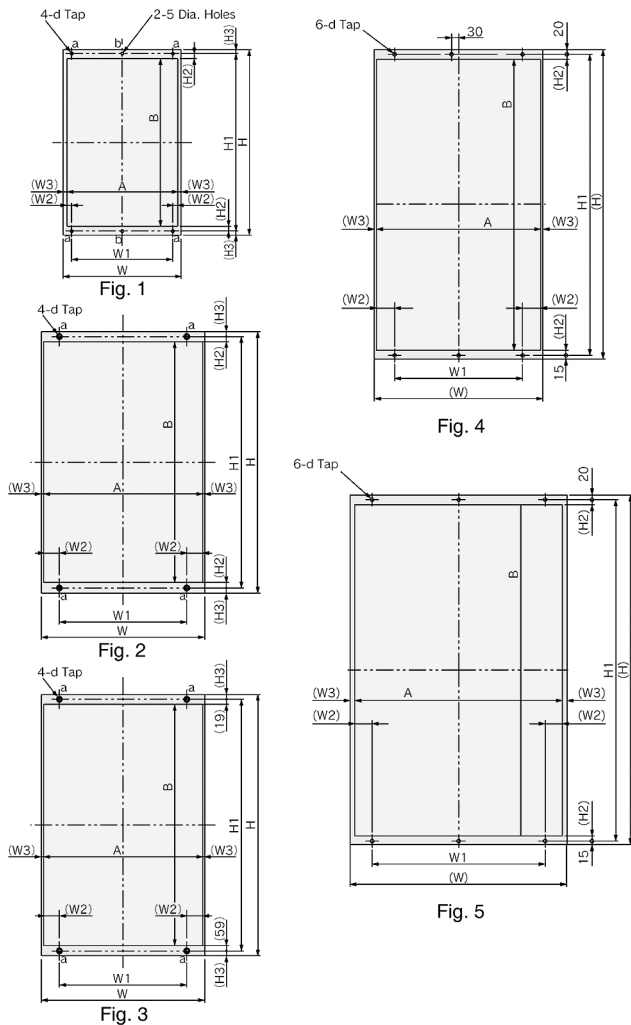
CIMR-G7C☐	Fig	Dimensions in mm										
		W	H	W1	(W2)	(W3)	H1	(H2)	(H3)	A	B	d
20P4	1	155	302	126	6	8.5	290	9.5	6	138	271	M5
20P7												
21P5												
22P2												
23P7												
25P5		210	330	180	8.5	6.5	316	9	7	197	298	
27P5												M6
2011		250	392	216		8.5	372	9.5	10	233	353	
2015												
2018	2	250	400	195	24.5	3	385	8	7.5	244	369	
2022		275	450	220			435			269	419	
2030		375	600	250	54.5	8	575	15	12.5	359	545	M10
2037												
2045		450	725	325			700	13.5		434	673	
2055												
2075		500	850	370	57	8	820	19	15	484	782	M12
2090		575	885	445	55	10	855			555	817	
2100												
40P4	1	155	302	126	6	8.5	290	9.5	6	138	271	M5
40P7												
41P5												
42P2												
43P7												
45P5		210	330	180	8.5	6.5	316	9	7	197	298	
47P5												M6
4011		250	392	216		8.5	372	9.5	10	233	353	
4015												
4018	2	275	450	220	24.5	3	435	8	7.5	269	419	
4022												
4030		325	550	260			535			309	519	
4037												
4045						8						
4055		450	725	325	54.5		700	13.5	12.5	434	673	M10
4075												
4090		500	850	370	57		820	19	15	484	782	
4110												
4132	3	575	925	445	55	10	895	see[1]	15	555	817	M12
4160												
4185	4	710	1305	540	76.5	8.5	1270	21.5	see[1]	693	1227	
4220												
4300	5	916	1475	730	72.5	20.5	1440	21.5	see[1]	875	1397	

1.The sizes are different between the top and the bottom. Refer to figs. 3 to 5

Frequency inverters

Installation

Standard connections

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Varispeed G7

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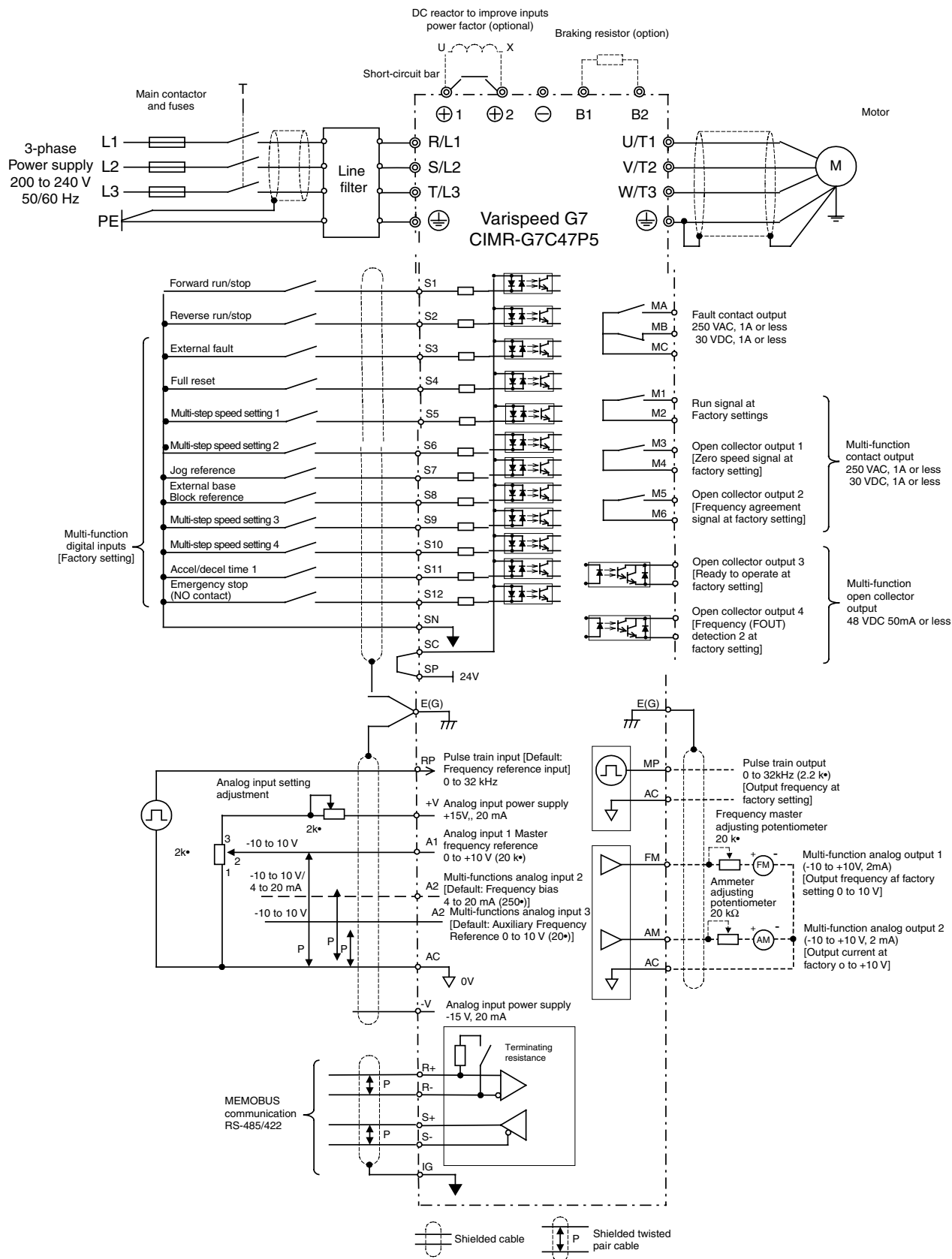
Main circuit

Voltage	200 V			400 V		
Model CIMR-G7C☐	20P4 to 2015	2018, 2022	2030 to 2110	40P4 to 4015	4018 to 4045	4055 to 4300
Max. applicable motor output	0.4 to 15 kW	18.5 to 22 kW	30 to 110 kW	0.4 to 15 kW	18.5 to 45 kW	55 to 300 kW
R/L1	Main circuit input power supply	Main circuit input power supply		Main circuit input power supply	Main circuit input power supply	
S/L2						
T/L3						
R1/L11	---	R-R1, S-S1 and T-T1 have been wired before shipment (see P59).		---	R-R1, S-S1 and T-T1 have been wired before shipment	
S1/L21						
T1/L31						
U/T1	Inverter output			Inverter output		
V/T2						
W/T3						
B1	Braking resistor unit	------		Braking resistor unit	------	
B2						
$\ominus$	•DC reactor ($\oplus 1$- $\oplus 2$) •DC power supply[1] ($\oplus 1$ - $\ominus$)	•DC power supply ($\oplus 1$- $\oplus 2$)[1] •Braking unit ($\oplus 3$ - $\ominus$)		•DC reactor ($\oplus 1$- $\oplus 2$) •DC power supply[1] ($\oplus 1$ - $\ominus$)	•DC power supply ($\oplus 1$- $\oplus 2$)[1] •Braking unit ($\oplus 3$ - $\ominus$)	
$\oplus 1$						
$\oplus 2$						
$\oplus 3$	---			---		
$\downarrow /l_2$	------		Cooling fan power supply[2]	---		
r/l$_1$						
$\downarrow$ 200 / l$_2$ 200	------			---		Cooling fan power supply[3]
$\downarrow$ 400 / l$_2$ 400						
$\oplus$	Ground terminal (100 Ω or less)			Ground terminal (10 Ω or less)		

1. $\oplus 1$ - $\ominus$ DC power input does not conform to UL/c-UL listed standard.

2. Cooling fan power supply r/l$_1$- $\downarrow$ /l$_2$: 200 to 220 VAC 50 Hz, 200 to 230 VAC 60 Hz
   (A transformer is required for 230 V 50 Hz or 240 V 50/60 Hz power supply.)

3. Cooling fan power supply r/l$_1$ - $\downarrow$ 200 / l$_2$ 200: 200 to 220 VAC 50 Hz, 200 to 230 VAC 60 Hz, r/l$_1$ - $\downarrow$ 400 / l$_2$ 400: 380 to 480 VAC 50/60 Hz

Main circuit configuration

CIMR-G7C20P4 to 2015

CIMR-G7C2018, 2022

CIMR-G7C2030 to 2110

CIMR-G7C40P4 to 4015

CIMR-G7C4018 to 4045

CIMR-G7C4055 to 4300

200V class
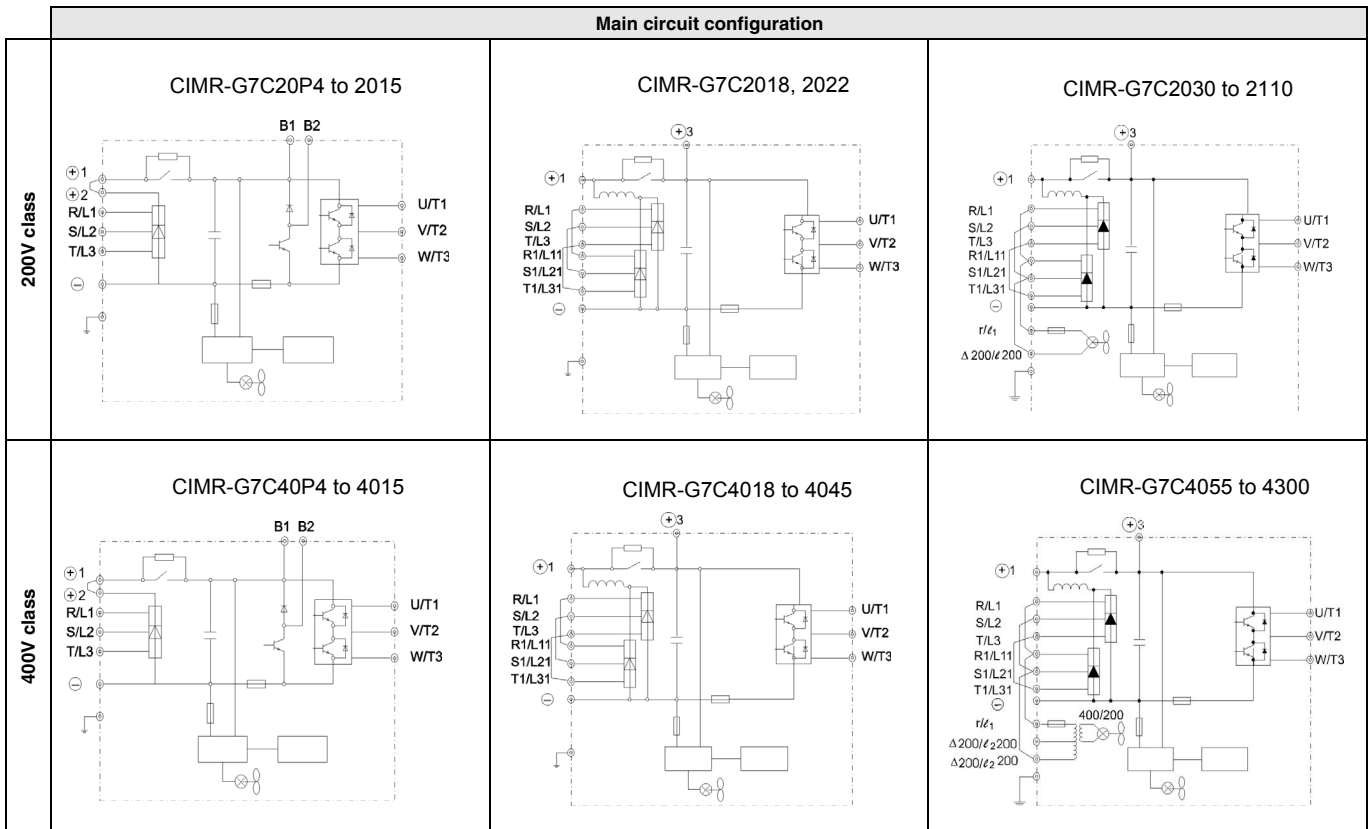
400V class

1. For 200 V class filters, consult with standard OMRON supplier.

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Frequency inverters

Control circuit

Type	No.	Signal name	Function	Signal level
Sequence input	S1	Forward run/stop signal	Forward run at "closed", stop at "open"	Photo-coupler input +24 VDC 8 mA isolation
	S2	Reverse run/stop signal	Reverse run at "closed", stop at "open"	
	S3	Multi-function input selection 1	Factory setting: external fault at "closed"	
	S4	Multi-function input selection 2	Factory setting: fault reset at "closed"	
	S5	Multi-function input selection 3	Factory setting: multi-step speed setting 1 is valid at "closed"	
	S6	Multi-function input selection 4	Factory setting: multi-step speed setting 2 is valid at "closed"	
	S7	Multi-function input selection 5	Factory setting: JOG run at "closed"	
	S8	Multi-function input selection 6	Factory setting: external baseblock at "closed"	
	S9	Multi-function input selection 7	Factory setting: multi-step speed setting 3 is valid at "closed"	
	S10	Multi-function input selection 8	Factory setting: multi-step speed setting 4 is valid at "closed"	
	S11	Multi-function input selection 9	Factory setting: accel/decel time setting 1 is valid at "closed"	
	S12	Multi-function input selection 10	Factory setting: emergency stop (NO contact) is valid at "closed"	
	SC	Sequence control input common	–	
Analog input	+V	+15 V power supply output	For analog reference +15 V power supply	+15 V (allowable current 20 mA max.)
	−V	−15 V power supply output	For analog reference -15 V power supply	-15 V (allowable current 20 mA max.)
	A1	Master speed frequency reference	-10 to +10 V/ -100 to +100%, 0 to +10 V/ 100%	-10 to +10 V, 0 to +10V (input impedance 20 k)
	A2	Multi-function analog input	4 to 20 mA/100%, -10 to +10 V/ -100 to +100%, 0 to +10 V/ 100% Factory setting: added to the terminal A1 (H3-09=0)	4 to 20 mA (input impedance 250 Ω)
	A3	Master speed frequency reference	-10 to +10 V/ -100 to +100%, 0 to +10 V/ 100% Factory setting: preset frequency reference	0 to +10 V (input impedance 20 kΩ)
	AC	Analog common	0 V	–
	E(G)	Connection to shield wire and option ground wire	–	–
Photo-coupler output	P1	Multi-function PHC output 1	Factory setting: zero speed signal "Closed" at or below zero speed level (b2-01)	+48 VDC 50 mA or less
	P2	Multi-function PHC output 2	Factory setting: frequency agreement "Closed" within ±2Hz of setting frequency	
	PC	Photo-coupler output common	–	
	P3	Multi-function PHC output 3	Factory setting: ready to operate (READY).	
	C3			
	P4	Multi-function PHC output 4	Factory setting: frequency (FOUT) detection 2	
	C4			
Relay output	MA	Fault output (NO contact)	Fault at "closed" between terminals MA and MC	Dry contact, contact capacity 250 VAC 1 A or less 30 VDC 1 A or less
	MB	Fault output (NC contact)	Fault at "open" between terminals MB and MC	
	MC	Rely contact output common	–	
	M1	Multi-function contact output (NO contact)	Factory setting: run signal Running at "closed" between terminals M1 and M2	
	M2			
Analog monitor output	FM	Multi-function analog monitor 1	Factory setting: output frequency 0 to 10 V/100% freq.	0 to +10 VDC ±5% 2 mA or less
	AM	Multi-function analog monitor 2	Factory setting: current monitor 5 V / inverter rated current	
	AC	Analog common	–	
Pulse I/O	RP	Multi-function pulse input	Factory setting: frequency reference input (H6-01=0)	0 to 32 kHz (3 kΩ)
	MP	Multi-function pulse monitor	Factory setting: output frequency (H6-06=2)	0 to 32 kHz (2.2 kΩ)
RS-485/422	R+	MEMOBUS communications input	For 2-wire RS-485, short R+ and S+ as well as R- and S-.	Differential input, photocoupler isolation
	R-			
	S+	MEMOBUS communications output		Differential input, photocoupler isolation
	S-			
	IG	Signal common	–	–

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Varispeed G7 259

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Remove the upper and lower covers for the models of 15 kW or less in 200 V and 400 V classes.

When using open chassis type inverters of 200 V/400 V 22 kW or more, secure spaces for eyebolts and wiring of the main circuit.

Side spaces

Top and bottom spaces
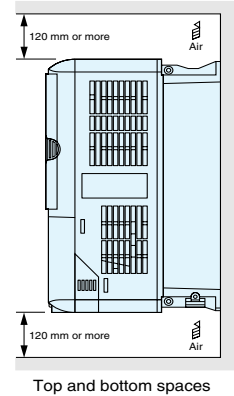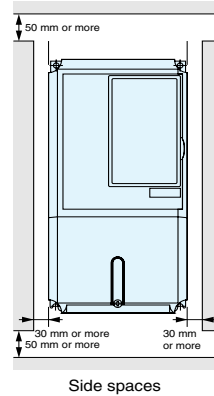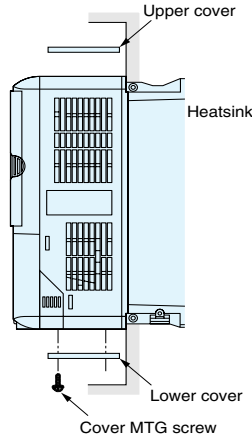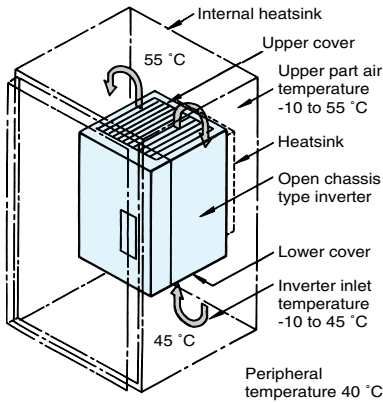
Inverter heat loss

200 V class

Model CIMR-G7C☐		20P4	20P7	21P5	22P2	23P7	25P5	27P5	2011	2015	2018	2022	2030	2037	2045	2055	2075	2090	2110
Inverter capacity	kVA	1.2	2.3	3.0	4.6	6.9	10	13	19	25	30	37	50	61	70	85	110	140	160
Rated current	A	3.2	6	8	12	18	27	34	49	66	80	96	130	160	183	224	300	358	415
Heat loss W — Fin	W	21	43	58	83	122	187	263	357	473	599	679	878	1080	1291	1474	2009	1660	2389
Heat loss W — Inside unit	W	36	42	47	53	64	87	112	136	174	242	257	362	434	510	607	823	871	1194
Heat loss W — Total heat loss	W	57	85	105	136	186	274	375	493	647	839	936	1240	1514	1801	2081	2832	2531	3583
Fin coding		Self cooled			Fan cooled														

400 V class

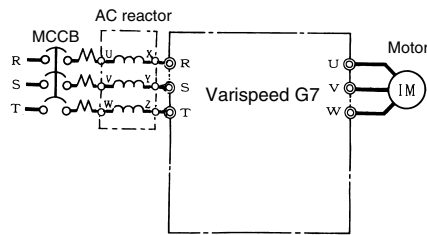| Model CIMR-G7C☐		40P4	40P7	41P5	42P2	43P7	45P5	47P5	4011	4015	4018	4022	4030	4037	4045	4055	4075	4090	4110	4132	4160	4185	4220	4300
Inverter capacity	kVA	1.4	2.6	3.7	4.7	6.9	11	16	21	26	32	40	50	61	74	98	130	150	180	194	230	280	340	460
Rated current	A	1.8	3.4	4.8	6.2	9	15	21	27	34	42	52	65	80	97	128	165	195	240	255	302	370	450	605
Heat loss W — Fin	W	10	21	33	41	76	132	198	246	311	354	516	633	737	929	1239	1554	1928	2299	2612	3614	4436	5329	6749
Heat loss W — Inside unit	W	39	44	46	49	64	79	106	116	135	174	210	246	285	340	488	596	762	928	1105	1501	1994	2205	2941
Heat loss W — Total heat loss	W	49	65	79	90	140	211	304	362	446	528	726	879	1022	1269	1727	2150	2690	3227	3717	5115	6430	7534	9690
Fin coding		Self cooled			Fan cooled																			

Connections for braking units
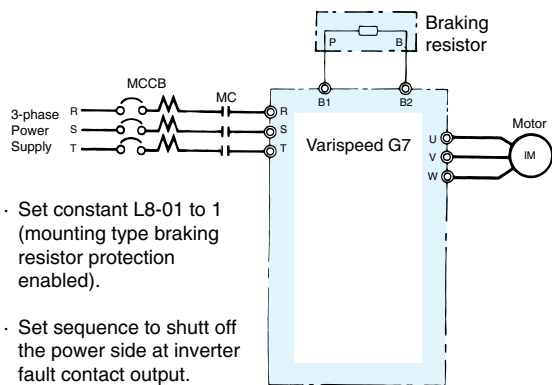
· Set constant L8-01 to 1 (mounting type braking resistor protection enabled).

· Set sequence to shut off the power side at inverter fault contact output.
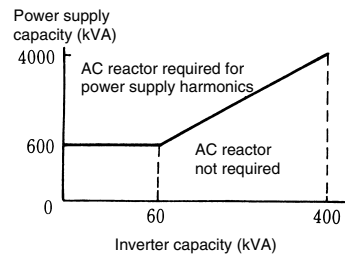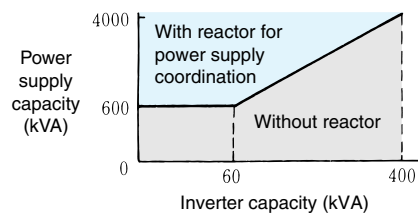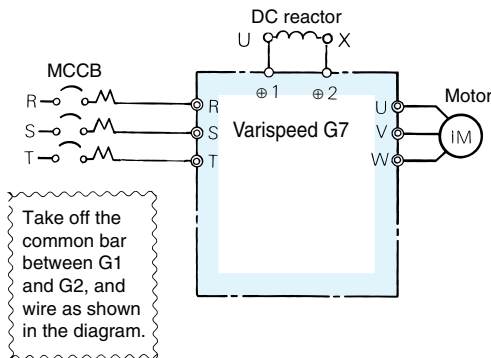
Connections for braking resistors

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Frequency inverters
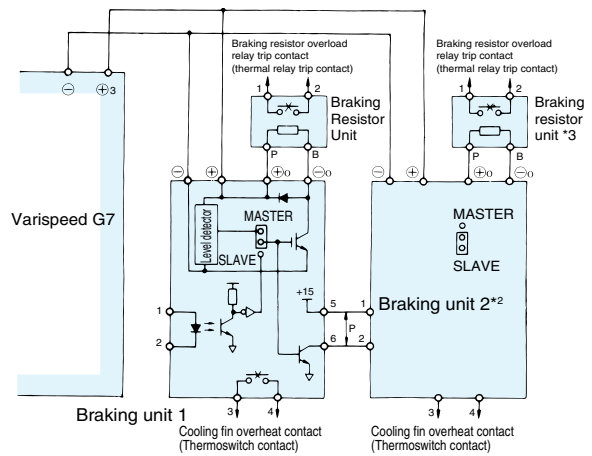
AC reactor

Connection example

Application example
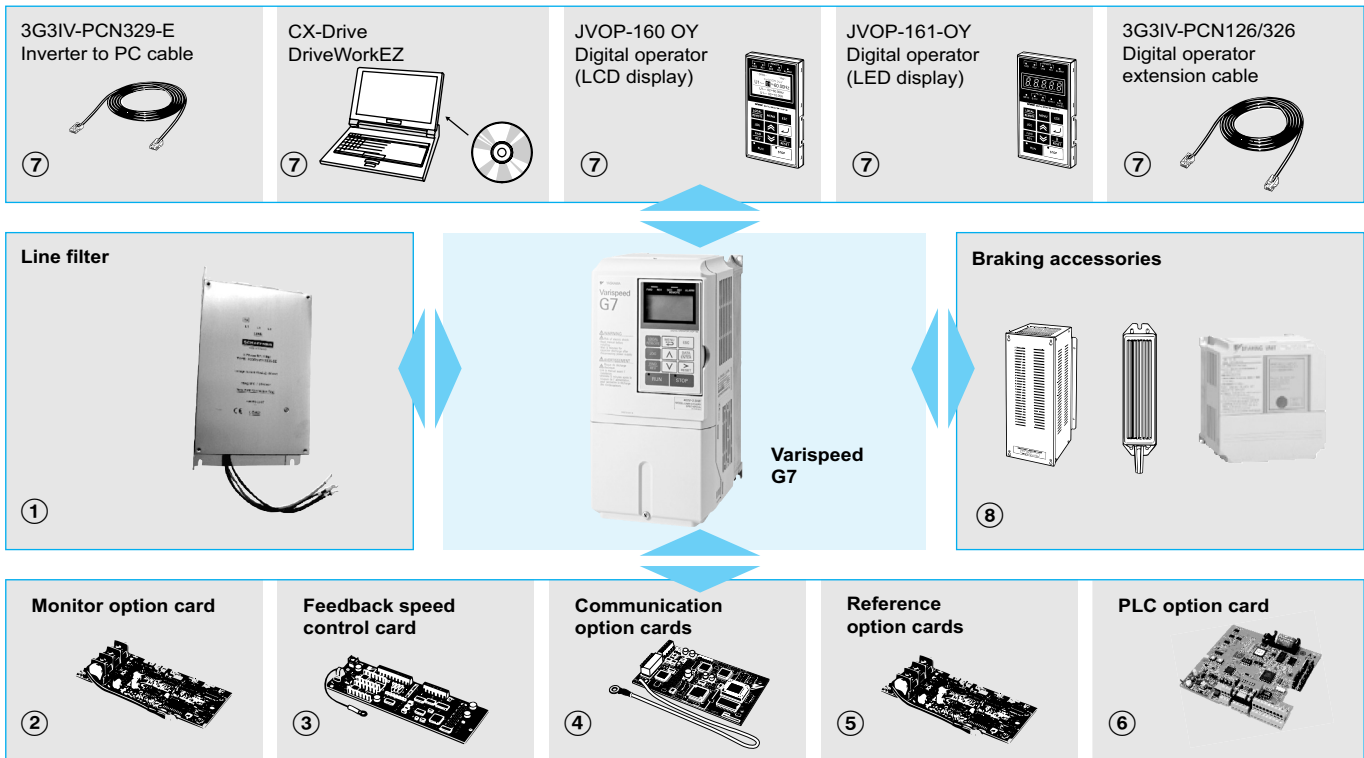

200 V Class			400 V class		
Max. applicable motor output kW	Current value A	Inductance mH	Max. applicable motor output kW	Current value A	Inductance mH
0.4	2.5	4.2	0.4	1.3	18.0
0.75	5	2.1	0.75	2.5	8.4
1.5	10	1.1	1.5	5	4.2
2.2	15	0.71	2.2	7.5	3.6
3.7	20	0.53	3.7	10	2.2
5.5	30	0.35	5.5	15	1.42
7.5	40	0.265	7.5	20	1.06
11	60	0.18	11	30	0.7
15	80	0.13	15	40	0.53
18.5	90	0.12	18.5	50	0.42
22	120	0.09	22	60	0.36
30	160	0.07	30	80	0.26
37	200	0.05	37	90	0.24
45	240	0.044	45	120	0.18
55	280	0.038	55	150	0.15
75	360	0.026	75	200	0.11
90	500	0.02	90/110	250	0.09
110	500	0.02	132/160	330	0.06
			185	490	0.04
			220		
			300	660	0.03

DC reactor

Take off the common bar between G1 and G2, and wire as shown in the diagram.

200 V class			400 V class		
Max. applicable motor output kW	Current value A	Inductance mH	Max. applicable motor output kW	Current value A	Inductance mH
0.4	5.4	8	0.4	3.2	28
0.75			0.75		
1.5	18	3	1.5	5.7	11
2.2			2.2		
3.7			3.7	12	6.3
5.5	36	1	5.5	23	3.6
7.5			7.5		
11	72	0.5	11	33	1.9
15			15		
18.5	90	0.4	18.5	47	1.3
22 to 110	Built-in		22 to 300	Built-in	

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Varispeed G7   261

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Fuse installation

To protect the inverter, it is recommended to use semiconductor fuses as shown in the table below

Inverter type	FUSE		
	Voltage (V)	Current (A)	I^2t (A^{2}s)
20P4	240	10	12~25
20P7	240	15	23~55
21P5	240	20	34~98
22P2	240	30	82~220
23P7	240	40	220~610
25P5	240	60	290~1300
27P5	240	80	450~5000
2011	240	100	1200~7200
2015	240	130	1800~7200
2018	240	150	870~16200
2022	240	180	1500~23000
2030	240	240	2100~19000
2037	240	300	2700~55000
2045	240	350	4000~55000
2055	240	450	7100~64000
2075	240	550	11000~64000
2090	240	600	13000~83000
2110	240	700	13000~83000
40P4	480	5	16~660
40P7	480	10	19~660
41P5	480	10	46~660
42P2	480	15	78~660
43P7	480	20	110~660
44P0	480	25	220~660
45P5	480	30	240~900
47P5	480	40	320~900
4011	480	50	1000~18000
4015	480	60	1500~4100
4018	480	70	530~5800
4022	480	90	1130~5800
4030	480	110	1700~5800
4037	480	140	2000~13000
4045	480	160	3000~13000
4055	480	220	6800~55000
4075	480	300	3800~55000
4090	480	330	12000~23000
4110	480	400	18000~64000
4132	480	450	28000~25000
4160	480	540	40000~250000
4185	480	750	63000~400000
4220	480	750	63000~400000
4300	480	1000	94000~920000

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Ordering information

3G3IV-PCN329-E Inverter to PC cable ⑦	CX-Drive DriveWorkEZ ⑦	JVOP-160 OY Digital operator (LCD display) ⑦	JVOP-161-OY Digital operator (LED display) ⑦	3G3IV-PCN126/326 Digital operator extension cable ⑦

Line filter ①

Varispeed G7

Braking accessories ⑧

Monitor option card ②	Feedback speed control card ③	Communication option cards ④	Reference option cards ⑤	PLC option card ⑥

Varispeed G7

200 V

Inverter Model	Line Filters			
Varispeed G7	Type	EN55011 Class	Current (A)	Weight (kg)
CIMR-G7C20P4	3G3RV-PFI3010-SE	B, 25 m A, 100 m	10	1.2
CIMR-G7C20P7				
CIMR-G7C21P5	3G3RV-PFI3018-SE	B, 25 m A, 100 m	18	1.3
CIMR-G7C22P2	3G3RV-PFI2035-SE	B, 25 m A, 100 m	35	1.4
CIMR-G7C23P7				
CIMR-G7C25P5	3G3RV-PFI2060-SE	B, 25 m A, 100 m	60	3
CIMR-G7C27P5				
CIMR-G7C2011	3G3RV-PFI2100-SE	B, 25 m A, 100 m	100	4.9
CIMR-G7C2015				
CIMR-G7C2018				
CIMR-G7C2022	3G3RV-PFI2130-SE	A, 100 m	130	4.3
CIMR-G7C2030	3G3RV-PFI2160-SE	A, 100 m	160	6.0
CIMR-G7C2037	3G3RV-PFI2200-SE	A, 100 m	200	11.0
CIMR-G7C2045				
CIMR-G7C2055	3G3RV-PFI3410-SE	A, 100 m	400	8.6
CIMR-G7C2075				
CIMR-G7C2090				
CIMR-G7C2110	3G3RV-PFI3600-SE	A, 100 m	600	11.0

400 V

Inverter Model	Line Filters			
Varispeed G7	Type	EN55011 Class	Current (A)	Weight (kg)
CIMR-G7C40P4	3G3RV-PFI3010-SE	B, 25 m A, 100 m	10	1.2
CIMR-G7C40P7				
CIMR-G7C41P5				
CIMR-G7C42P2	3G3RV-PFI3018-SE	B, 25 m A, 100 m	18	1.3
CIMR-G7C43P7				
CIMR-G7C44P0				
CIMR-G7C45P5	3G3RV-PFI3021-SE	B, 25 m A, 100 m	21	1.8
CIMR-G7C47P5	3G3RV-PFI3035-SE	B, 25 m A, 100 m	35	2.2
CIMR-G7C4011	3G3RV-PFI3060-SE	B, 25 m A, 100 m	60	4.0
CIMR-G7C4015				
CIMR-G7C4018	3G3RV-PFI3070-SE	B, 25 m A, 100 m	70	3.4
CIMR-G7C4022				
CIMR-G7C4030	3G3RV-PFI3100-SE	A, 100 m	100	4.5
CIMR-G7C4037				
CIMR-G7C4045	3G3RV-PFI3130-SE	A, 100 m	130	4.7
CIMR-G7C4055	3G3RV-PFI3170-SE	A, 100 m	170	6.0
CIMR-G7C4075	3G3RV-PFI3200-SE	A, 100 m	250	11
CIMR-G7C4090	3G3RV-PFI3410-SE	A, 100 m	400	8.6
CIMR-G7C4110				
CIMR-G7C4132				
CIMR-G7C4160				
CIMR-G7C4185	3G3RV-PFI3600-SE	A, 100 m	600	11
CIMR-G7C4220	3G3RV-PFI3800-SE	A, 100 m	800	31.0
CIMR-G7C4300				

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① **Line filters**

200 V

Inverter model	Line filters			
Varispeed G7	Type	EN55011 class	Current (A)	Weight (kg)
CIMR-G7C20P4	3G3RV-PFI3010-SE	B, 25 m	10	1.2
CIMR-G7C20P7		A, 100 m		
CIMR-G7C21P5	3G3RV-PFI3018-SE	B, 25 m A, 100 m	18	1.3
CIMR-G7C22P2	3G3RV-PFI2035-SE	B, 25 m	35	1.4
CIMR-G7C23P7		A, 100 m		
CIMR-G7C25P5	3G3RV-PFI2060-SE	B, 25 m	60	3
CIMR-G7C27P5		A, 100 m		
CIMR-G7C2011	3G3RV-PFI2100-SE	B, 25 m	100	4.9
CIMR-G7C2015		A, 100 m		
CIMR-G7C2018				
CIMR-G7C2022	3G3RV-PFI2130-SE	A, 100 m	130	4.3
CIMR-G7C2030	3G3RV-PFI2160-SE	A, 100 m	160	6.0
CIMR-G7C2037	3G3RV-PFI2200-SE	A, 100 m	200	11.0
CIMR-G7C2045				
CIMR-G7C2055	3G3RV-PFI3410-SE	A, 100 m	400	8.6
CIMR-G7C2075				
CIMR-G7C2090				
CIMR-G7C2110	3G3RV-PFI3600-SE	A, 100 m	600	11.0

400 V

Inverter model	Line filters			
Varispeed G7	Model	EN 55011 class	Current (A)	Weight (kg)
CIMR-G7C40P4	3G3RV-PFI3010-SE	B, 25 m	10	1.2
CIMR-G7C40P7		A, 100 m		
CIMR-G7C41P5				
CIMR-G7C42P2	3G3RV-PFI3018-SE	B, 25 m	18	1.3
CIMR-G7C43P7		A, 100 m		
CIMR-G7C44P0				
CIMR-G7C45P5	3G3RV-PFI3021-SE	B, 25 m A, 100 m	21	1.8
CIMR-G7C47P5	3G3RV-PFI3035-SE	B, 25 m A, 100 m	35	2.2
CIMR-G7C4011	3G3RV-PFI3060-SE	B, 25 m	60	4.0
CIMR-G7C4015		A, 100 m		
CIMR-G7C4018	3G3RV-PFI3070-SE	B, 25 m	70	3.4
CIMR-G7C4022		A, 100 m		
CIMR-G7C4030	3G3RV-PFI3100-SE	A, 100 m	100	4.5
CIMR-G7C4037				
CIMR-G7C4045	3G3RV-PFI3130-SE	A, 100 m	130	4.7
CIMR-G7C4055	3G3RV-PFI3170-SE	A, 100 m	170	6.0
CIMR-G7C4075	3G3RV-PFI3200-SE	A, 100 m	250	11
CIMR-G7C4090	3G3RV-PFI3410-SE	A, 100 m	400	8.6
CIMR-G7C4110				
CIMR-G7C4132				
CIMR-G7C4160				
CIMR-G7C4185	3G3RV-PFI3600-SE	A, 100 m	600	11.0
CIMR-G7C4220	3G3RV-PFI3800-SE	A, 100 m	800	31.0
CIMR-G7C4300				

② **Monitor option cards**

Type	Model	Description	Function
Monitor option card	AO-08 / 3G3IV-PAO08	Analog monitor card	• Outputs analog signal for monitoring inverter output state (output freq., output current etc.) after absolute value conversion. • Output resolution: 8 bits (1/256) • Output voltage: 0 to {10 V (non isolated) EOutput channel: 2 channels
	AO-12 / 3G3IV-PAO12		• Outputs analog signal for monitoring inverter output state (output freq., output current etc.) • Output resolution: 11 bits (1/2048) + code • Output voltage: l10 to {10 V (non isolated) EOutput channel: 2 channels
	DO-08 / 3G3IV-PDO08	Digital output card	• Outputs isolated type digital signal for monitoring inverter run state (alarm signal, zero speed detection etc.) . • Output channel: photo coupler 6 channels (48 V, 50 mA or less) Relay contact output 2 channels (250 VAC, 1 A or less 30 VDC, 1 A or less)
	DO-02C / 3G3IV-PDO02C	2C-relay output card	• Two multi-function contact outputs (2C-relay) can be used other than those of the inverter proper unit.

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③ Feedback speed control cards

Type	Model	Description	Function
Feedback speed control card	PG-A2 / 3G3FV-PPGA2	PG speed controller card (used for V/f control with PG or flux vector)	• Phase A pulse (single pulse) inputs (voltage, complementary, open collector input) • PG frequency range: Approx. 30 kHz max. [Power supply output for PG: +12 V, max. current 200 mA] • Pulse monitor output: +12 V, 20 mA
	PG-B2 / 3G3FV-PPGB2		• Phase A and B pulse inputs (exclusively for complementary input) • PG frequency range: Approx. 30 kHz max. [Power supply output for PG: +12 V, Max. current 200 mA] • Pulse monitor output: Open collector, +24 V, Max. current 30 mA
	PG-D2 / 3G3FV-PPGD2		• Phase A pulse (differential pulse) input for V/f control (RS-422 input) • PG frequency range: Approx. 300 kHz max. [Power supply output for PG: +5 V or +12 V, Max. current 200 mA] • Pulse monitor output: RS-422
	PG-X2 / 3G3FV-PPGX2		• Phase A, B and Z pulse (differential pulse) inputs (RS-422 input) • PG frequency range: Approx. 300 kHz max. [Power supply output for PG: +5 V or +12 V, Max. current 200 mA] • Pulse monitor output: RS-422

④ Communication option cards

Type	Model	Description	Function
Communication option card	SI-N1	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-P1	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-S1	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-J	LONWORKS option card	• Used for HVAC control, running or stopping the inverter, setting or referencing parameters, and monitoring output current, watt-hours, or similar items through LONWORKS communications with peripheral devices.
	SI-T	MECHATROLINK-II option board	• High speed motion bus • 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. • Host contoller: Trajexia, MCH and MP series [1]
	CM090	Ethernet option card	• Modbus TCP/IP ethernet interface unit

1. Please refer to Trajexia, MCH or MP series for host controllers detailed information.
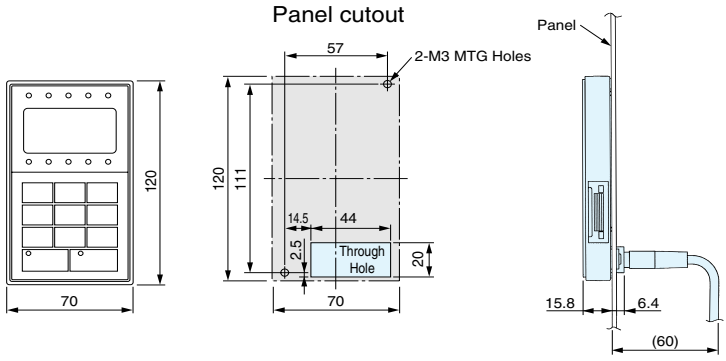
⑤ Reference option cards

Type	Model	Description	Function
Reference option card	AI-14U / 3G3IV-PAI14U	Analog input card	• 2 channel high resolution analog input card • Channel 1: 0 to 10 V (20 KΩ) • Channel 2: 4 to 20 mA (250 Ω) • Resolution 14 bit
	AI-14B / 3G3IV-PAI14B		• 3 Channel high resolution analog input card • Signal level: -10 to +10 V (20 KΩ) • 4 to 20 mA (250 Ω) •Resolution: 13 bit + sign
	DI-08 / 3G3IV-PDI08	Digital reference card	• 8 bit digital speed reference input card
	DI-16H2 / 3G3IV-PDI16H2		• 16 bit digital speed reference input card

⑥ PLC option boards

Type	Model	Description	Function
PLC option	3G3RV-P10ST8-E	PLC option	• Full PLC features, wireless installation and seamless access to the inverter parameters and analogue/digital inputs and outputs. • Embedded Compubus/S fieldbus • Standard OMRON tools can be used for programming
	3G3RV-P10ST8-DRT-E	PLC option with DeviceNet	• Same features as standard models with DeviceNet support.

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⑦ Accessories

Type	Model	Description	Installation
Digital operator	JVOP-160-OY	5 lines LCD digital operator 7 language support	Panel cutout Panel cutout installation
	JVOP-161-OY	7 segment LED digital operator	
Accessories	3G3IV-PCN126 3G3IV-PCN326	Digital operator extension cable 1 meter 3 meters	-----
	3G3IV-PCN329-E	PC configuration cable	-----

⑦ Accessories

Type	Model	Description	Function
Software	CX-drive 1.1	Computer software	Configuration and monitoring software tool for drives (Version 1.1 or higher)
	DriveWorksEZ	Computer software	Programming special functionality software tool for drives
	CX-One	Computer software	Complete automation software including CX-drive.

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266 Frequency inverters

⑧ Braking unit, braking resistor unit

| Inverter | | | Braking unit | | Braking resistor unit[1] | | | | | | | | |
| | | | | | Inverter-mounted type (3 %ED, 10 sec max)[2] | | | | Separately-installed type (10 %ED, 10 sec. max.)[3] | | | | |
Voltage	Max. applicable motor output kW	Model CIMR-G7C_	Model CDBR_	No. of used	Model ERF-150WJ_	Resis-tance	No. of Used	Braking torque %	Model LKEB_	Specifications of resistor	No. of Used	Braking torque %	Connectable min resistance value Ω
200 V class	0.4	20P4			201	200 Ω	1	220	20P7	70 W	200 Ω	1	220	48
	0.75	20P7			201	200 Ω	1	125	20P7	70 W	200 Ω	1	125	48
	1.5	21P5			101	100 Ω	1	125	21P5	260 W	100 Ω	1	125	48
	2.2	22P2			700	70 Ω	1	120	22P2	260 W	70 Ω	1	120	16
	3.7	23P7	Built-in		620	62 Ω	1	100	23P7	390 W	40 Ω	1	125	16
	5.5	25P5							25P5	520 W	30 Ω	1	115	16
	7.5	27P5							27P5	780 W	20 Ω	1	125	9.6
	11	2011							2011	2400 W	13.6 Ω	1	125	9.6
	15	2015							2015	3000 W	10 Ω	1	125	9.6
	18.5	2018							2015	3000 W	10 Ω	1	125	9.6
	22	2022	2022B	1	---	---			2022	4800 W	6.8 Ω	1	125	6.4
	30	2030	2015B	2					2015	3000 W	10 Ω	2	125	9.6
	37	2037	2015B	2					2015	3000 W	10 Ω	2	100	9.6
	45	2045	2022B	2					2022	4800 W	6.8 Ω	2	120	6.4
	55	2055	2022B	2					2022	4800 W	6.8 Ω	2	100	6.4
	75	2075	2110B	1					2022	4800 W	6.8 Ω	3	110	1.6
	90	2090	2110B	1					2022	4800 W	6.8 Ω	4	120	1.6
	110	2110	2110B	1					2018	4800 W	8 Ω	5	100	1.6
400 V class	0.4	40P4			751	750 Ω	1	230	40P7	70 W	750 Ω	1	230	96
	0.75	40P7			751	750 Ω	1	130	40P7	70 W	750 Ω	1	130	96
	1.5	41P5			401	400 Ω	1	125	41P5	260 W	400 Ω	1	125	64
	2.2	42P2			301	300 Ω	1	115	42P2	260 W	250 Ω	1	135	64
	3.7	43P7	Built in		201	200 Ω	1	110	43P7	390 W	150 Ω	1	135	32
	4.0	44P0												
	5.5	45P5							45P5	520 W	100 Ω	1	135	32
	7.5	47P5							47P5	780 W	75 Ω	1	130	32
	11	4011							4011	1040 W	50 Ω	1	135	20
	15	4015							4015	1560 W	40 Ω	1	125	20
	18.5	4018							4018	4800 W	32 Ω	1	125	19.2
	22	4022	4030B	1	---	---			4022	4800 W	27.2 Ω	1	125	19.2
	30	4030	4030B	1					4030	6000 W	20 Ω	1	125	19.2
	37	4037	4045B	1					4037	9600 W	16 Ω	1	125	12.8
	45	4045	4045B	1					4045	9600 W	13.6 Ω	1	125	12.8
	55	4055	4030B	2					4030	6000 W	20 Ω	2	135	19.2
	75	4075	4045B	2					4045	9600 W	13.6 Ω	2	145	12.8
	90	4090	4220B	1					4030	6000 W	20 Ω	3	100	3.2
	110	4110	4220B	1					4030	6000 W	20 Ω	3	100	3.2
	132	4132	4220B	1					4045	9600 W	13.6 Ω	4	140	3.2
	160	4160	4220B	1					4045	9600 W	13.6 Ω	4	140	3.2
	185	4185	4220B	1					4045	9600 W	13.6 Ω	4	120	3.2
	220	4220	4220B	1					4037	9600 W	16 Ω	5	110	3.2
	300	4300	4220B	2					4045	9600 W	13.6 Ω	6	110	3.2

1. When connecting a mounting type resistor or braking resistor unit, set system constant L3-04 to 0 (stall prevention disabled during deceleration). If operating without changing the constant, motor does not stop at set deceleration time.
2. When connecting mounting type braking resistor, set system constant L8-01 to 1 (braking resistor protection enabled).
3. Load factor during deceleration to stop a load with constant torque. With constant output or continuous regenerative braking, the load factor is smaller than the specified value.
4. Resistance value per one braking unit. Select a resistance value that is larger than connectable minimum resistance value to obtain enough braking torque.
5. For an application with large regenerative power such as hoisting, the braking torque or other items may exceed the capacity of a braking unit with a braking resistor in a standard combination (can result in capacity overload). Contact your OMRON representatives when the braking torque or any other item exceeds the values in the table.

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ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.