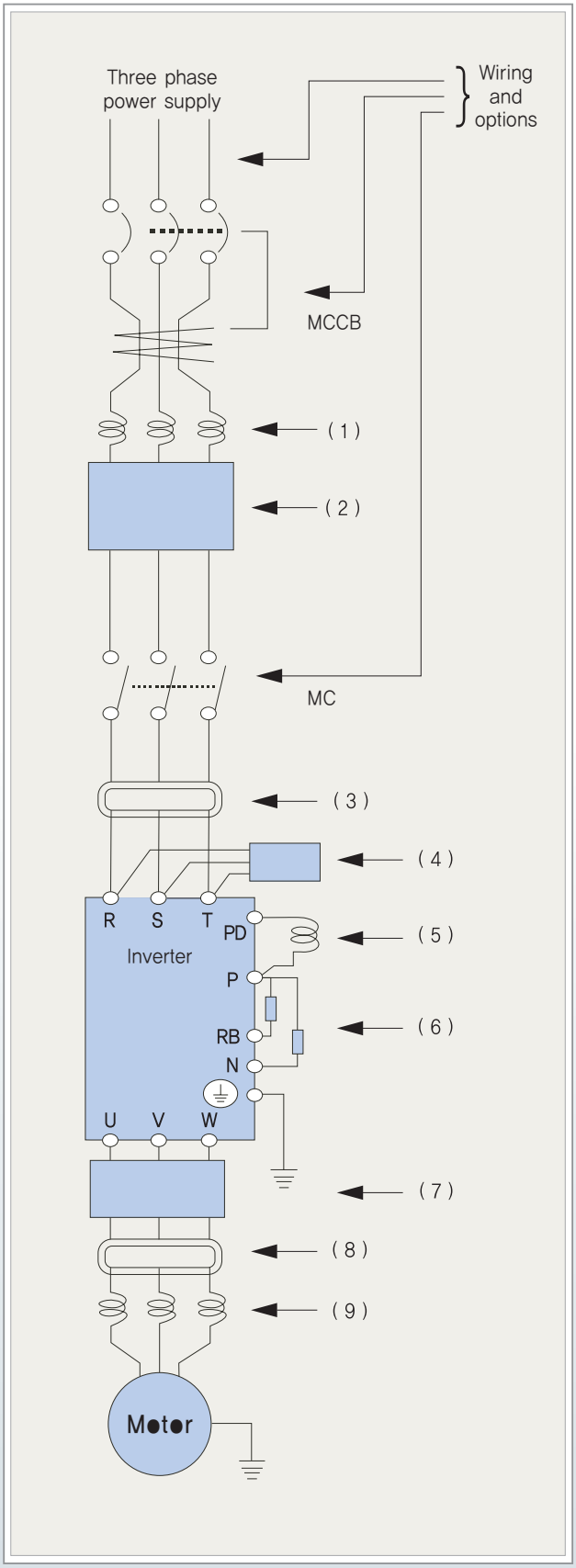
Common Applicable Tools

Class	Motor Output kW(HP)	Inverter Model	Power Lines R,S,T,U,V, W,P,PD,N(mm^2)	External Resistor Between P and RB(mm^2)	Screw Size of Terminal	Torque (N · m)	Applicable Tools		
							Circuit Breaker (MCCB)		Magnetic Contactor(MC)
200V Class	5.5(7.5)	N700-055LF	More than 6	6	M5	3.0	HBS60N	50A	HiMC32
	7.5(10)	N700-075LF	More than 10	6	M5	3.0	HBS60N	50A	HiMC32
	11(15)	N700-110LF	More than 16	6	M5	3.0	HBS100N	75A	HiMC50
	15(20)	N700-150LF	More than 25	16	M6	4.5	HBS100N	100A	HiMC65
	18.5(25)	N700-185LF	More than 30	16	M6	4.5	HBS225N	150A	HiMC80
	22(30)	N700-220LF	More than 35	16	M8	6.0	HBS225N	150A	HiMC110
	30(40)	N700-300LF	More than 25X2	-	M8	6.0	HBS225N	200A	HiMC130
	37(50)	N700-370LF	More than 35X2	-	M8	6.0	HBS225N	225A	HiMC150
	45(60)	N700-450LF	More than 35X2	-	M8	6.0	HBS400N	225A	HiMC220
	55(75)	N700-550LF	More than 70X2	-	M10	10.0	HBS400N	300A	HiMC220
400V Class	5.5(7.5)	N700-055HF	More than 4	4	M5	3.0	HBS30N	30A	HiMC18
	7.5(10)	N700-075HF	More than 4	4	M5	3.0	HBS30N	30A	HiMC18
	11(15)	N700-110HF	More than 6	6	M5	3.0	HBS60N	50A	HiMC32
	15(20)	N700-150HF	More than 10	10	M6	4.5	HBS100N	50A	HiMC40
	18.5(25)	N700-185HF	More than 16	10	M6	4.5	HBS100N	75A	HiMC40
	22(30)	N700-220HF	More than 25	10	M6	4.5	HBS100N	75A	HiMC50
	30(40)	N700-300HF	More than 25	-	M8	6.0	HBS100N	100A	HiMC65
	37(50)	N700-370HF	More than 35	-	M8	6.0	HBS225N	100A	HiMC80
	45(60)	N700-450HF	More than 35	-	M8	6.0	HBS225N	150A	HiMC110
	55(75)	N700-550HF	More than 70	-	M8	6.0	HBS225N	175A	HiMC130
	75(100)	N700-750HF	More than 35X2	-	M8	6.0	HBS400	225A	HiMC180
	90(125)	N700-900HF	More than 35X2	-	M8	6.0	HBS400	225A	HiMC220
	110(150)	N700-1100HF	More than 50X2	-	M10	10.0	HBS400	350A	HiMC260
	132(200)	N700-1320HF	More than 80X2	-	M10	10.0	HBS400	350A	HiMC300

※ -Field wiring connection must be made by a UL listed and C-UL certified closed-loop terminal connector sized for the wire guage involved. Connector must be fixed using the crimp tool specified by the connector manufacturer.
-Be sure to use bigger wires for power lines if the distance exceeds 20m.

Wiring and Options



Separate by the sum (wiring distance from inverter to power supply, from inverter to motor) for the sensitive current of leak breaker (ELB).

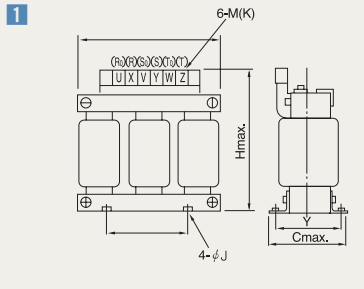
Wiring Distance	Sensitive Current(mA)
100m and less	30
300m and less	100
600m and less	200

※ When wiring CV line into the metal tube, leakage current flows.
※ IV line is high dielectric constant. So the current increases 8 times.
Therefore, use the sensitive current 8 times as large as that of the list.
And if the distance of wire is over 100m, use CV line.

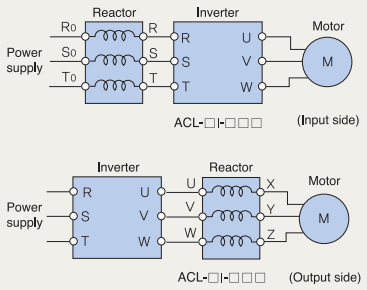
Name		Function
(1)	Input-side AC Reactor (harmonic control, electrical coordination, power-factor improvement)	As a measure of suppressing harmonics induced on the power supply lines, it is applied when imbalance of the major power voltage exceeds 3% (and power source capacity is more than 500kVA) or when the power voltage is rapidly charged. It also improves the power factor.
(2)	Radio Noise Filter (zero-phase reactor)	Electrical noise interference may occur on nearby equipment such as radio receivers. This magnetic choke filter helps reduce radiated noise (can also be used on output).
(3)	EMI Filter	Reduces the conducted noise on the power supply wiring generated by the inverter. Connect to the inverter input side.
(4)	Radio Noise Filter (capacitive filter)	This capacitive filter reduces radiated noise from the main power wires in the inverter input side.
(5)	DC Link Choke	Suppresses harmonics generated by the inverter.
(6)	Breaking Resistor Regenerative Breaking Unit	This is useful for increasing the inverter's control torque for high duty-cycle (on-off) applications, and improving the decelerating capability.
(7)	Output-side Noise Filter	Reduces radiated noise from wiring in the inverter output side. It reduces wave fault to radio and TV, and it is used for preventing malfunction of sensor and measuring instruments.
(8)	Radio Noise Filter (zero-phase reactor)	Electrical noise interference may occur on nearby equipment such as radio receivers. This magnetic choke filter helps reduce radiated noise (can also be used on input)
(9)	Output-side AC Reactor (To reduce the vibration and to prevent thermal relay misapplication)	This reactor reduces the vibration in the motor caused by the inverter's switching waveforms, by smoothing the waveforms to approximate commercial power quality. When wiring from the inverter to the motor is more than 10m in length, inserting inverter prevents thermal relay's malfunction by harmonic generated by inverter's high switching.
	LCR Filter	Sine-wave shaping filter for the output side.

Input & Output AC Reactor

■ Dimension



■ Connecting Diagram



Dimension of Input-side AC Reactor

ACL-L I-2.5

L: 3-phase 200V
H: 3-phase 400V
Input
Inverter output capacity(kVA)

- Suppress harmonics
- Improve voltage imbalance
- Power factor correction

Dimension of Output-side AC Reactor

ACL-L-2.5

L: 3-phase 200V
H: 3-phase 400V
Motor capacity(kW)

- Reduction of vibration
- Thermal relay
- Prevention of malfunction

Dimension of Input AC Reactor

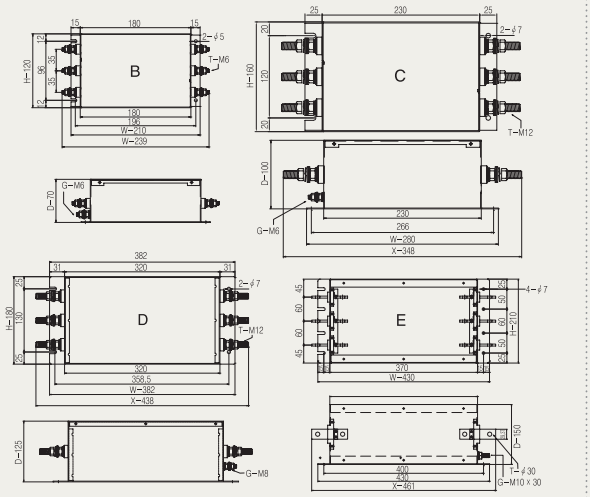
Voltage	Model	Inverter Capacity (kW)	Dimension(mm)						Ⓚ	Weight (kg)	See
			A	C	H	X	T	J			
200V Class	ACL-LI-1.5	0.75	110	80	110	40	52	6	4	1.85	1
	ACL-LI-2.5	1.5	130	90	130	50	67	6	4	3.0	1
	ACL-LI-3.5	2.2	130	95	130	50	70	6	4	3.4	1
	ACL-LI-5.5	3.7	130	100	130	50	72	6	4	3.9	1
	ACL-LI-7.5	5.5	130	115	130	50	90	6	4	5.2	1
	ACL-LI-11	7.5	180	120	190	60	80	6	5	8.6	1
	ACL-LI-15	11	180	120	190	100	80	6	6.7	10.0	2
	ACL-LI-22	15	220	130	200	90	90	6	8	11.0	1
	ACL-LI-33	18.5/22	220	130	200	125	90	6	8	15.0	1
	ACL-LI-40	30	270	130	250	100	90	6	8	15.0	2
	ACL-LI-50	37	270	130	250	100	90	7	8.3	16.0	2
	ACL-LI-60	45	270	135	250	100	95	7	8.3	16.5	2
	ACL-LI-70	55	270	130	250	125	112	7	8.3	24.0	2
400V Class	ACL-HI-5.5	3.7	130	90	130	50	75	6	4	3.9	1
	ACL-HI-7.5	5.5	130	105	130	50	90	6	4	5.1	1
	ACL-HI-11	7.5	160	110	160	60	95	6	4	8.7	1
	ACL-HI-15	11	180	100	190	100	80	6	4	10	2
	ACL-HI-22	15	180	110	190	100	80	6	5	10	1
	ACL-HI-33	18.5/22	180	140	190	100	100	6	5	12	1
	ACL-HI-40	30	270	120	210	100	100	7	6.7	14	2
	ACL-HI-50	37	270	120	250	100	90	7	8.3	15.5	2
	ACL-HI-60	45	270	125	250	100	95	7	8.3	16	2
	ACL-HI-70	55	270	130	250	125	112	7	8.3	23.5	2
	ACL-HI-100	75	270	140	250	125	112	7	10.3	26.5	2
	ACL-HI-120	90	320	150	300	125	125	7	10.3	31	2
	ACL-HI-150	110	320	170	300	125	140	7	13	38	2
	ACL-HI-180	132	320	170	300	125	140	7	13	38	2
	ACL-HI-220	160	320	160	300	125	130	7	13	40	2

Dimension of Output AC Reactor

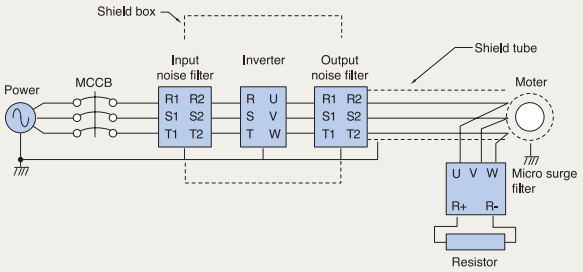
Voltage	Model	Inverter Capacity (kW)	Dimension(mm)						Ⓚ	Weight (kg)	See
			A	C	H	X	T	J			
200V Class	ACL-L-0.4	0.4	110	90	110	40	65	6	4	2.7	1
	ACL-L-0.75	0.75	130	105	130	50	80	6	4	4.2	1
	ACL-L-1.5	1.5	160	100	160	80	75	6	4	6.6	1
	ACL-L-2.2	2.2	180	110	190	90	90	6	4	11.5	1
	ACL-L-3.7	3.7	220	110	210	125	90	6	4	14.8	1
	ACL-L-5.5	5.5	220	110	220	125	90	6	5.3	15.0	2
	ACL-L-7.5	7.5	220	130	220	120	112	7	6.7	22.0	2
	ACL-L-11	11	220	130	220	125	112	7	6.7	24.0	2
	ACL-L-15	15	270	155	250	140	125	7	6.7	37.0	2
	ACL-L-18.5	18.5	270	155	250	140	135	7	8.3	40.5	2
	ACL-L-22	22	270	170	250	140	140	7	8.3	43.0	2
	ACL-L-30	30	270	180	250	160	150	10	8.3	60.6	2
	ACL-L-37	37	270	180	250	160	150	10	8.3	62.0	2
400V Class	ACL-L-45	45	270	180	250	160	160	10	8.3	73.0	2
	ACL-L-55	55	270	190	250	160	180	10	10.3	76.0	2
	ACL-H-0.4	0.4	110	85	110	40	65	6	4	2.7	1
	ACL-H-0.75	0.75	130	100	130	50	80	6	4	4.2	1
	ACL-H-1.5	1.5	150	105	160	80	75	6	4	6.6	1
	ACL-H-2.2	2.2	180	105	190	90	90	6	4	11	1
	ACL-H-3.7	3.7	180	110	190	125	90	6	4	14.8	1
	ACL-H-5.5	5.5	180	110	190	125	90	6	4	15.5	1
	ACL-H-7.5	7.5	180	130	190	125	112	7	4	22	1
	ACL-H-11	11	180	130	200	125	112	7	5.3	24	2
	ACL-H-15	15	270	150	250	140	125	7	6.7	37	2
	ACL-H-18.5	18.5	270	165	250	140	135	7	6.7	40	2
	ACL-H-22	22	270	175	250	140	140	7	6.7	43	2
	ACL-H-30	30	270	180	250	160	150	10	8.3	60	2
	ACL-H-37	37	270	180	250	160	150	10	8.3	62	2
	ACL-H-45	45	270	190	250	160	160	10	8.3	72	2
	ACL-H-55	55	270	200	250	160	180	10	8.3	75	2
	ACL-H-75	75	270	220	250	160	190	10	8.3	93	2
	ACL-H-90	90	320	240	330	160	200	10	10.3	117	2
	ACL-H-110	110	320	280	330	160	250	10	10.3	140	2
	ACL-H-132	132	320	230	330	160	200	10	10.3	96	2

Noise Filter for Inverter

■ Dimension



■ Connecting Diagram



Input Noise Filter

Model	Inverter Rated Current	Name	Specification(mm)					Type
			V	A	Size(W X H X D * X)	G	T	
200V class								
055LF	24A	FT-20301S-A	250V	30A	210 X 120 X 70 * 239	M6	M6	B
075LF	32A	FT-20401S-A	250V	40A	210 X 120 X 70 * 239	M6	M6	B
110LF	46A	FT-20501S-A	250V	50A	210 X 120 X 70 * 239	M6	M6	B
150LF	64A	FT-20701S-A	250V	70A	280 X 160 X 100 * 348	M6	M12	C
185LF	76A	FT-20801S-A	250V	80A	280 X 160 X 100 * 348	M6	M12	C
220LF	95A	FT-21001S-A	250V	100A	382 X 180 X 125 * 438	M8	M12	D
300LF	121A	FT-21301S-A	250V	130A	382 X 180 X 125 * 438	M8	M12	D
370LF	145A	FT-21501S-A	250V	150A	430 X 210 X 150 * 461	M10	M10	E
450LF	182A	FT-22001S-A	250V	200A	430 X 210 X 150 * 461	M10	M10	E
550LF	220A	FT-22501S-A	250V	250A	430 X 210 X 150 * 461	M10	M10	E
400V class								
055HF	12A	FT-40201S-A	450V	20A	210 X 120 X 70 * 239	M6	M6	B
075HF	16A	FT-40201S-A	450V	20A	210 X 120 X 70 * 239	M6	M6	B
110HF	23A	FT-40301S-A	450V	30A	210 X 120 X 70 * 239	M6	M6	B
150HF	32A	FT-40401S-A	450V	40A	210 X 120 X 70 * 239	M6	M6	B
185HF	38A	FT-40401S-A	450V	40A	210 X 120 X 70 * 239	M6	M6	B
220HF	48A	FT-40501S-A	450V	50A	210 X 120 X 70 * 239	M6	M6	B
300HF	58A	FT-40601S-A	440V	60A	210 X 120 X 70 * 239	M6	M6	B
370HF	75A	FT-40801S-A	440V	80A	280 X 160 X 100 * 348	M6	M12	C
450HF	90A	FT-41001S-A	440V	100A	382 X 180 X 125 * 438	M8	M12	D
550HF	110A	FT-41201S-A	440V	120A	382 X 180 X 125 * 438	M8	M12	D
750HF	149A	FT-41501S-A	440V	150A	430 X 210 X 150 * 461	M10	M10	E
900HF	176A	FT-41801S-A	440V	180A	430 X 210 X 150 * 461	M10	M10	E
1100HF	217A	FT-42201S-A	440V	220A	430 X 210 X 150 * 461	M10	M10	E
1320HF	260A	FT-42601S-A	440V	260A	430 X 210 X 150 * 461	M10	M10	E

Output Noise Filter

Model	Inverter Rated Current	Name	Specification(mm)					Type
			V	A	Size(W X H X D * X)	G	T	
200V class								
055LF	24A	FT-20301S-A	250V	30A	210 X 120 X 70 * 239	M6	M6	B
075LF	32A	FT-20401S-A	250V	40A	210 X 120 X 70 * 239	M6	M6	B
110LF	46A	FT-20501S-A	250V	50A	210 X 120 X 70 * 239	M6	M6	B
150LF	64A	FT-20701S-A	250V	70A	280 X 160 X 100 * 348	M6	M12	C
185LF	76A	FT-20801S-A	250V	80A	280 X 160 X 100 * 348	M6	M12	C
220LF	95A	FT-21001S-A	250V	100A	382 X 180 X 125 * 438	M8	M12	D
300LF	121A	FT-21301S-A	250V	130A	382 X 180 X 125 * 438	M8	M12	D
370LF	145A	FT-21501S-A	250V	150A	430 X 210 X 150 * 461	M10	M10	E
450LF	182A	FT-22001S-A	250V	200A	430 X 210 X 150 * 461	M10	M10	E
550LF	220A	FT-22501S-A	250V	250A	430 X 210 X 150 * 461	M10	M10	E
400V class								
055HF	12A	FT-40201S-A	450V	20A	210 X 120 X 70 * 239	M6	M6	B
075HF	16A	FT-40201S-A	450V	20A	210 X 120 X 70 * 239	M6	M6	B
110HF	23A	FT-40301S-A	450V	30A	210 X 120 X 70 * 239	M6	M6	B
150HF	32A	FT-40401S-A	450V	40A	210 X 120 X 70 * 239	M6	M6	B
185HF	38A	FT-40401S-A	450V	40A	210 X 120 X 70 * 239	M6	M6	B
220HF	48A	FT-40501S-A	450V	50A	210 X 120 X 70 * 239	M6	M6	B
300HF	58A	FT-40601S-A	440V	60A	210 X 120 X 70 * 239	M6	M6	B
370HF	75A	FT-40801S-A	440V	80A	280 X 160 X 100 * 348	M6	M12	C
450HF	90A	FT-41001S-A	440V	100A	382 X 180 X 125 * 438	M8	M12	D
550HF	110A	FT-41201S-A	440V	120A	382 X 180 X 125 * 438	M8	M12	D
750HF	149A	FT-41501S-A	440V	150A	430 X 210 X 150 * 461	M10	M10	E
900HF	176A	FT-41801S-A	440V	180A	430 X 210 X 150 * 461	M10	M10	E
1100HF	217A	FT-42201S-A	440V	220A	430 X 210 X 150 * 461	M10	M10	E
1320HF	260A	FT-42601S-A	440V	260A	430 X 210 X 150 * 461	M10	M10	E

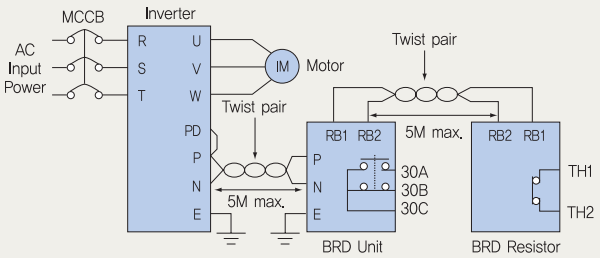
Specification

Item	Voltage	200V Class				400V Class							
	Model	BRD-K3				BRD-VZ3							
	Type	370L		550L		370H		550H		750H	750H(x2)		
Inverter Capacity (kW) 1)		30	37	45	55	30	37	45	55	75	90	110	132
Max DC Voltage (P-N)		DC 400V				DC 800V							
Operating Voltage (P-N)		362±5V				725±5V							
Average Braking Torque		130%				130%							
Allowable Braking Rate		20~30%				20~30%							

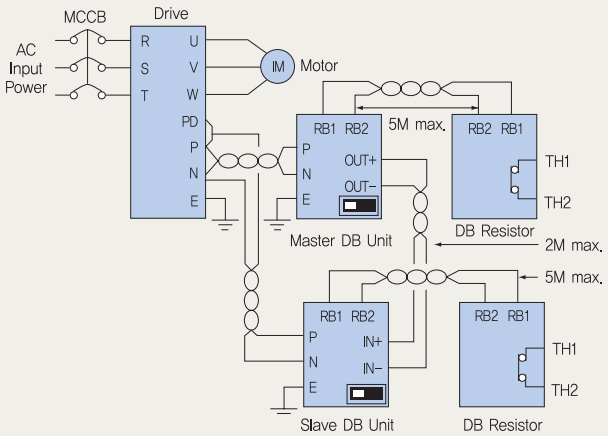
※1) Inverter, up to 22kW, has a built-in BRD.

Wiring Diagram

■ Single Operation

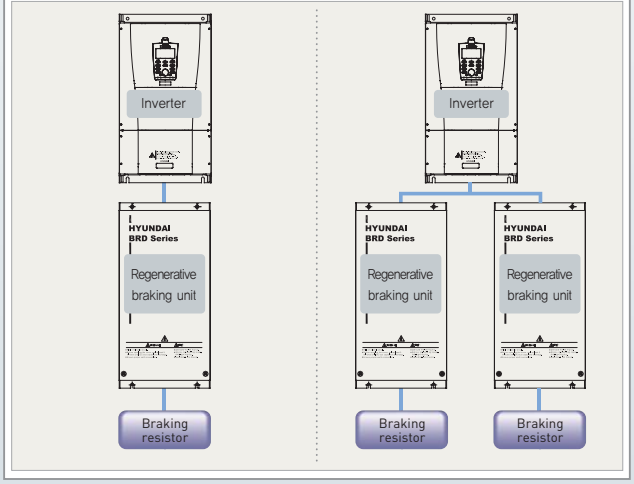


■ Master/Slave Operation

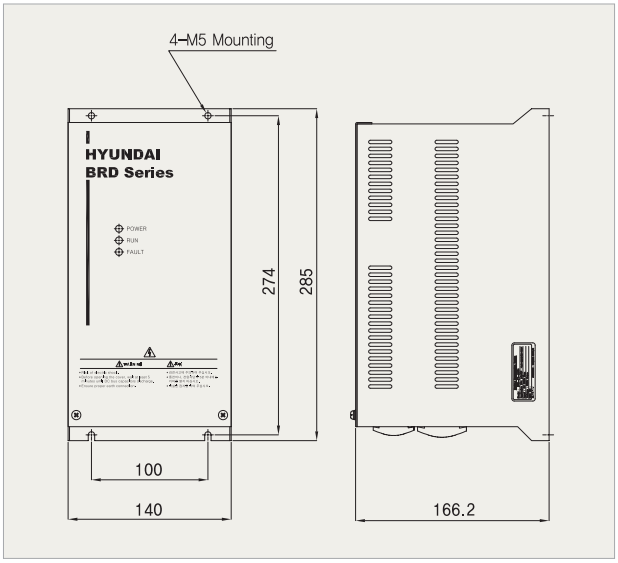


Wiring of Regenerative Braking Unit and Braking Resistor

Inverter Model : N700-055~750LF/HF (200V/400V class)	Inverter Model : N700-900~1320LF/HF (200V/400V class)



Outline

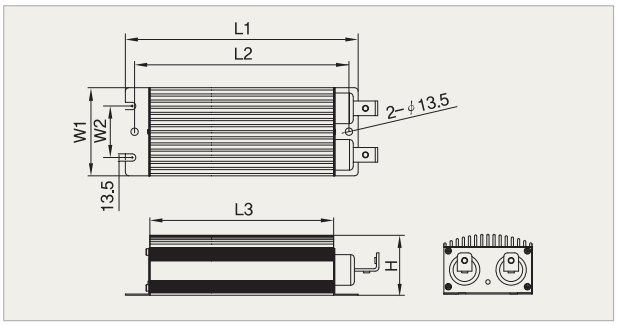


Braking Resistor

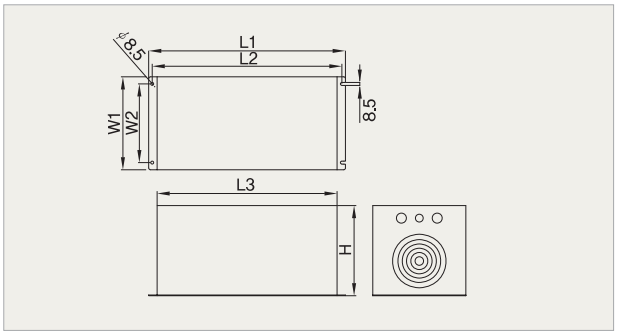
Voltage	Inverter Model	Low Duty			Heavy Duty			RBD Unit
		Resistor Model	Resistance(Ω)	Rated Capacity(kW)	Resistor Model	Resistance(Ω)	Rated Capacity(kW)	
200V Class	N700-055LF	RB-01P0-17	17.0	1.0	RB-01P2-17	17.0	1.2	Standard Built-in
	N700-075LF							
	N700-110LF							
	N700-150LF	RB-02P5-8.7	8.7	2.5	RB-04P5-8.7	8.7	4.5	
	N700-185LF	RB-03P0-6	6.0	3.0	RB-05P6-6	6.0	5.6	
	N700-220LF	RB-04P0-6		4.0	RB-06P6-6		6.6	
	N700-300LF	RB-05P0-3.5	3.5	5.0	RB-09P0-3.5	3.5	9.0	Option
	N700-370LF	RB-06P0-3.5		6.0	RB-11P2-3.5		11.2	
	N700-450LF	RB-07P0-2.4	2.4	7.0	RB-13P5-2.4	2.4	13.5	
	N700-550LF	RB-08P5-2.4		8.5	RB-16P5-2.4		16.5	
400V Class	N700-055HF	RB-01P2-70	70.0	1.2	RB-01P8-70	70.0	1.8	Standard Built-in
	N700-075HF	RB-01P2-50	50.0		RB-02P4-50	50.0	2.4	
	N700-110HF	RB-02P0-50		2.0	RB-03P3-50		3.3	
	N700-150HF	RB-02P5-30	30.0	2.5	RB-04P5-30	30.0	4.5	
	N700-185HF	RB-03P0-20	20.0	3.0	RB-05P6-20	20.0	5.6	
	N700-220HF	RB-04P0-20		4.0	RB-06P6-20		6.6	
	N700-300HF	RB-05P0-12	12.0	5.0	RB-09P0-12	12.0	9.0	Option
	N700-370HF	RB-06P0-12		6.0	RB-11P2-12		11.2	
	N700-450HF	RB-07P0-8	8.0	7.0	RB-13P5-8	8.0	13.5	
	N700-550HF	RB-08P5-8		8.5	RB-16P5-8		16.5	
	N700-750HF	RB-11P2-6	6.0	11.2	RB-22P5-6	6.0	22.5	
	N700-900HF	RB-11P2-6 (x2)	6.0 (x2)		RB-22P5-6 (x2)	6.0 (x2)		
	N700-1100HF							
	N700-1320HF							

Outline

■ A Type : RB-01P0~RB-02P0



■ B Type : RB-02P4~RB-22P5



Dimension

[Unit : mm]

A Type	L1±1	L2±1	L3±1	W1±1	W2±1	H±1
RB-01P0	340	325	302	70	39	45
RB-01P2	400	385	362			
RB-01P8~RB-02P0	510	495	472			

B Type	L1±2	L2±2	L3±2	W1±2	W2±2	H±2
RB-02P4~RB-02P5	550	530	503	180	140	126
RB-03P0				260	220	126
RB-04P0~RB-05P0				180	140	182
RB-05P6~RB-06P6						182
RB-08P0~RB-09P0				260	220	252
RB-11P2~RB-13P5						322
RB-16P5						392
RB-22P5				340	300	392