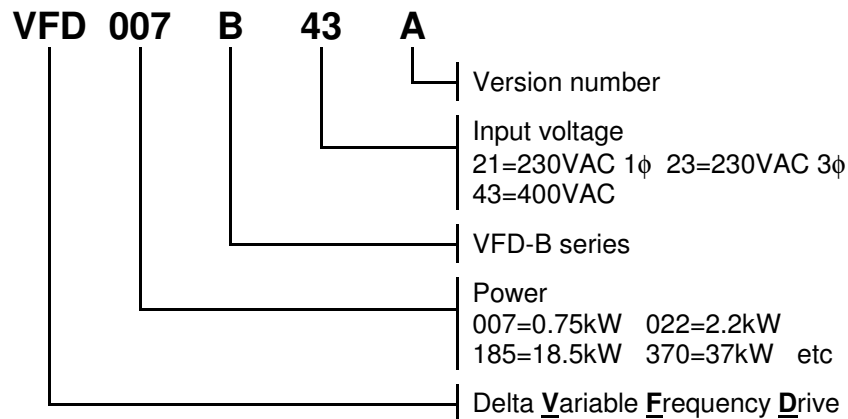


Type number key



230V single phase 0.75 ~ 2.2kW

Type number	VFD□□□□□□	007B21A	015B21A	022B21A
Rated power	kW	0.75	1.5	2.2
Rated output current	A RMS	5	7	11
Current limit	%	150% 60s		
Rated output capacity	kVA	1.9	2.5	4.2
Rated input current (1-phase/3-phase) *	A RMS	11.9/5.7	15.3/7.6	22/15.5
Mains fuse (for UL: Bussmann)		JJN-30	JJN-40	JJN-60
Dimensions HxWxD	mm	185x118x160		260x150x160.2
Size ****		B2		B3
Weight	kg	2.7	3.2	4.5
Power cable entry	Ømm	2x 28		2x 28
Signal cable entry	Ømm	1x 22		2x 22
Section of power cables (stranded/solid)	mm ²	1 ~ 3 / 1 ~ 5		
Cooling		Convection		Fan
Carrier frequency	kHz	1 ~ 15		
EMC-Filter		External option (footprint)		
DC-Choke		No **		
DC-Bus connection		No		Yes
Brake chopper		Yes		
Recommended brake resistor	Ω/W	200/80	100/300	70/300
Minimum brake resistor value	Ω	80	55	35

* Single-phase drives can also be connected to 230V 3-phase.

** Connection for external DC-Choke.

**** See dimensional drawing on Page 5~8.

400V 0.75 ~ 2.2kW

Type number	VFD□□□□□□	007B43A	015B43A	022B43B
Rated power	kW	0.75	1.5	2.2
Rated output current	A RMS	2.7	4.2	5.5
Current limit	%	150% 60s		
Rated output capacity	kVA	2.3	3.2	4.2
Rated input current	A RMS	3.2	4.3	5.9
Mains fuse (for UL: Bussmann)		JJS-10	JJS-15	JJS-20
Dimensions HxWxD	mm	185x118x145	185x118x160	185x118x145
Size ****		B1	B2	B1
Weight	kg	2.7	3.2	4.5
Power cable entry	Ømm	2x 28		
Signal cable entry	Ømm	1x 22		
Section of power cables (stranded/solid)	mm ²	1 ~ 3 / 1 ~ 5		
Cooling		Convection		Fan
Carrier frequency	kHz	1 ~ 15		
EMC-Filter		External option (footprint)		
DC-Choke		No **		
DC-Bus connection		No		
Brake chopper		Yes		
Recommended brake resistor	Ω/W	750/80	400/300	250/300
Minimum brake resistor value	Ω	260	190	145

** Connection for external DC-Choke.

**** See dimensional drawing on Page 5~8.

400V 3.7 ~ 11kW

Type number	VFD□□□□□□	037B43A	055B43A	075B43A	110B43A
Rated power	kW	3.7	5.5	7.5	11
Rated output current	A RMS	8.5	13	18	24
Current limit	%	150% 60s			
Rated output capacity	kVA	6.5	9.9	13.7	18.3
Rated input current	A RMS	11.2	14	19	25
Mains fuse (for UL: Bussmann)		JJS-30	JJS-50	JJS-70	JJS-90
Dimensions HxWxD	mm	260x150x160.2		323x200x183.2	
Size ****		B3		B4	
Weight	kg	3	8	10	13
Power cable entry	Ømm	2x 28		2x 42.6	
Signal cable entry	Ømm	2x 22		1x 28	
Section of power cables, stranded (with ring)	mm ²	1 ~ 5		3 ~ 8 (13)	
Cooling		Fan			
Carrier frequency	kHz	1 ~ 15			
EMC-Filter		External option (footprint)			
DC-Choke		No **			
DC-Bus connection		Yes			
Brake chopper		Yes			
Recommended brake resistor	Ω/W	150/400	100/500	75/1000	50/1000
Minimum brake resistor value	Ω	95	60	45	50

** Connection for external DC-Choke.

**** See dimensional drawing on Page 5~8.

400V 15 ~ 22kW

Type number	VFD□□□□□□	150B43A	185B43A	220B43A
Rated power	kW	15	18.5	22
Rated output current	A RMS	32	38	45
Current limit	%	150% 60s		
Rated output capacity	kVA	24.4	28.9	34.3
Rated input current	A RMS	32	39	49
Mains fuse (for UL: Bussmann)		JJS-125	JJS-150	JJS-175
Dimensions HxWxD	mm	403.8x250x205.4		
Size ****		B5		
Weight	kg	13		
Power cable entry	Ømm	2x 42.6		
Signal cable entry	Ømm	1x 28		
Section of power cables, stranded (with ring)	mm ²	8 ~ 33 (42)		
Cooling		Fan		
Carrier frequency	kHz	1 ~ 15		1 ~ 9
EMC-Filter		External option		
DC-Choke		Yes		
DC-Bus connection		Yes		
Brake chopper		No		
Recommended brake resistor ***	Ω/W	40/1500	32/4800	27.2/4800
Minimum brake resistor value ***	Ω	40	32	27.2

** Connection for external DC-Choke.

*** With optional brake unit.

**** See dimensional drawing on Page 5~8.

400V 30 ~ 75kW

Type number	VFD□□□□□□□	300B43A	370B43A	450B43A	550B43A 550B43C	750B43A 550B43C
Rated power	kW	30	37	45	55	75
Rated output current	A RMS	60	73	91	110	150
Current limit	%	150% 60s				
Rated output capacity	kVA	45.7	55.6	69.3	84	114
Rated input current	A RMS	60	73	91	130	160
Mains fuse (for UL: Bussmann)		JJS-225	JJS-250	JJS-350	JJS-400	JJS-600
Dimensions HxWxD	mm	589x370x260			A: 660x425x280 C: 589x370x260	
Size ****		B6			A=B7, C=B6	
Weight	kg	36			A: 50 C: 52	A: 50 C: 67
Power cable entry	Ømm	3x 62			3x 74.8	
Signal cable entry	Ømm	1x 22			2x 22	
Section of power cables, stranded (with ring)	mm ²	21 ~ 42			67 ~ 85	
Cooling		Fan				
Carrier frequency	kHz	1 ~ 9			1 ~ 6	
EMC-Filter		External option				
DC-Choke		Yes				
DC-Bus connection		Yes				
Brake chopper		No				
Recommended brake resistor ***	Ω/W	20/6000	16/9600	13.6/9600	10/12000	6.8/19200
Minimum brake resistor value ***	Ω	20	16	13.6	10	6.8

** Connection for external DC-Choke.

*** With optional brake unit.

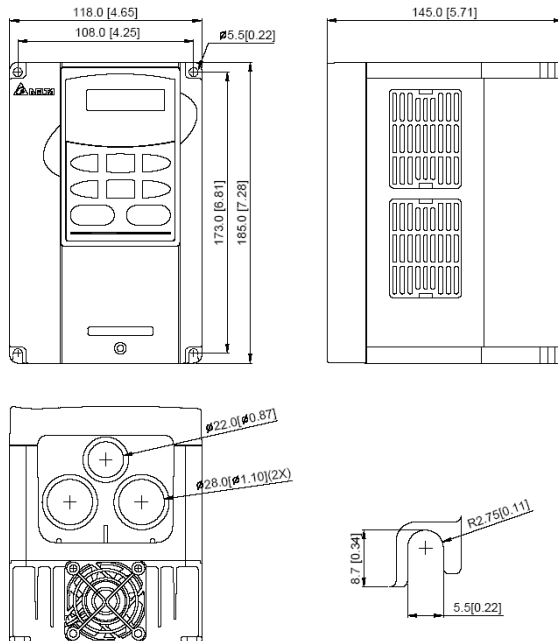
**** See dimensional drawing on Page 5~8.

Common data VFD-B

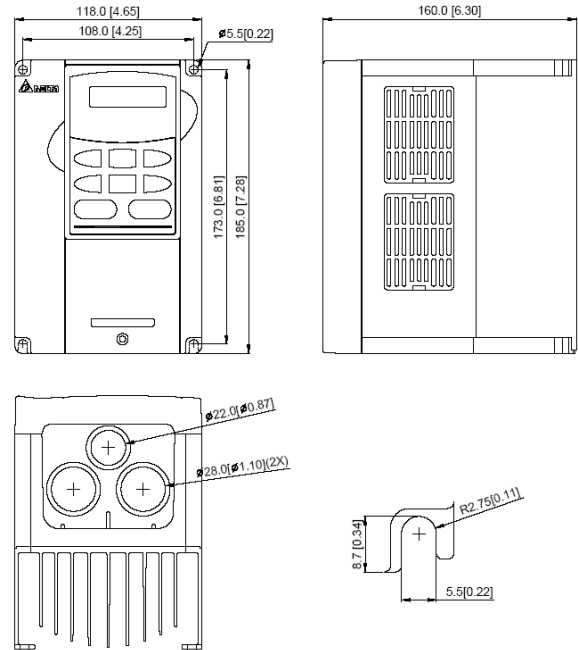
Mains voltage range	V	200V: 180 ~ 264 400V: 342 ~ 528
Mains frequency	Hz	47 ~ 63
Output frequency range	Hz	0 ~ 400
Output voltage range	V	0 ~ Mains
Operating temperature	°C	-10 ~ +40
Storage temperature	°C	-20 ~ +60
Atmospheric pressure	kPa	86 ~ 106
Relative humidity	%	≤90 (non condensing)
Vibration		<20Hz: 1g / 20~50Hz: 0.6g
Degree of protection		IP20
Pollution degree		2
Altitude	m	≤1000
Keypad		Detachable
Max. Signal cable section	mm ²	0.2 ~ 1
Digital inputs	11x Mlx	SINK or SOURCE Via jumper
		Range 24VDC
		Scan time 2~20ms
		Pull-up (internal) 10kΩ
Analogue inputs		Accuracy 10 bits
		Delay 0~10s
	1x AVI	Range 0~10VDC
		Impedance 47kΩ
	1x ACI	Range 4~20mA
		Impedance 250Ω
	1x AUI	Range -10 ~ +10VDC
		Impedance 47kΩ
Digital outputs	3x MOx	Optocoupler OC (emitters common) 48VDC/50mA
Frequency outputs	1x DFM	Duty-cycle 50%
		Range 1~20x Output frequency
Analogue outputs	1x AFM	Accuracy 8 bits
		Range 0~10VDC/2mA
		Impedance 470Ω
Relays	1x	<u>Change-over</u>
		NO: R _A ~R _C Resistive 5A/240VAC-24VDC
		Inductive 1.5A/240VAC-24VDC
		NC: R _B ~R _C Resistive 3A/240VAC-24VDC
Signal supply	1x	Inductive 0.5A/240VAC-24VDC
Potentiometer supply	1x	+24VDC/20mA
Trip memory		+10VDC/20mA
Acc/Dec Times	s	Last 4 errors
Serial communication	1x RJ11	0.01 ~ 3600s
		Modbus RS485
		Baudrate 4800 ~ 38400
		Address 1 ~ 254
		Mode ASCII 7,N,2 / 7,E,1 / 7,O,1
		Modbus RTU 8,N,2 / 8,E,1 / 8,O,1

Sizes and dimensions in mm [inches]

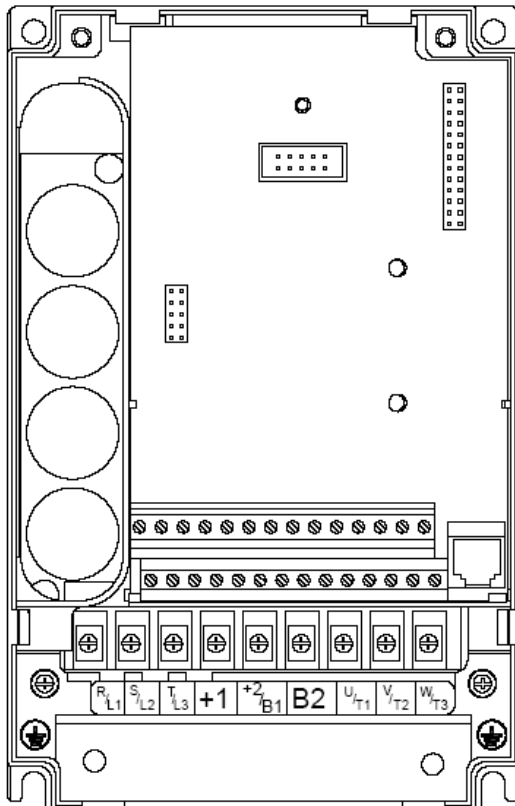
Size B1



Size B2



Main circuit wiring Size B1,B2

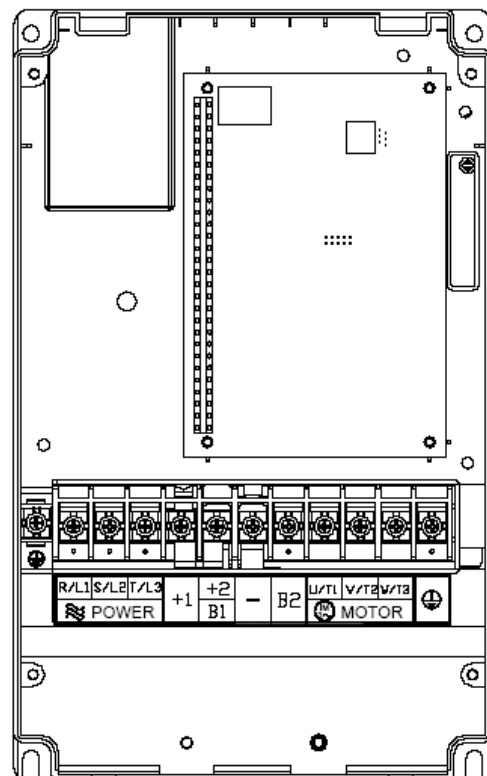


Power terminals (general)

Terminal symbol	Terminal function
R/L1, S/L2, T/L3	Mains input ****
U/T1, V/T2, W/T3	Motor output
+1 ~ +2(/B1)	Connection DC-choke (external option)
+2(/B1) ~ B2	Brake resistor (external option)
+2(/B1) ~ -	Brake unit (VFDB series) (external option)
	Ground

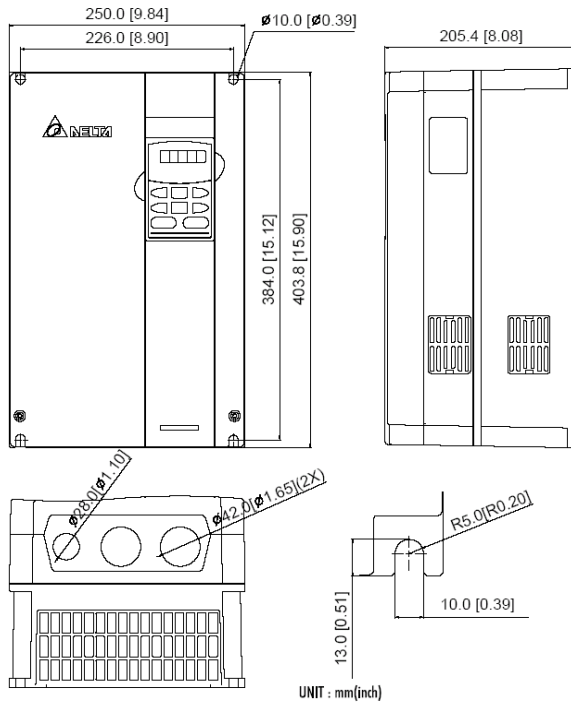
**** Use either 2 terminals for single phase

Size B3

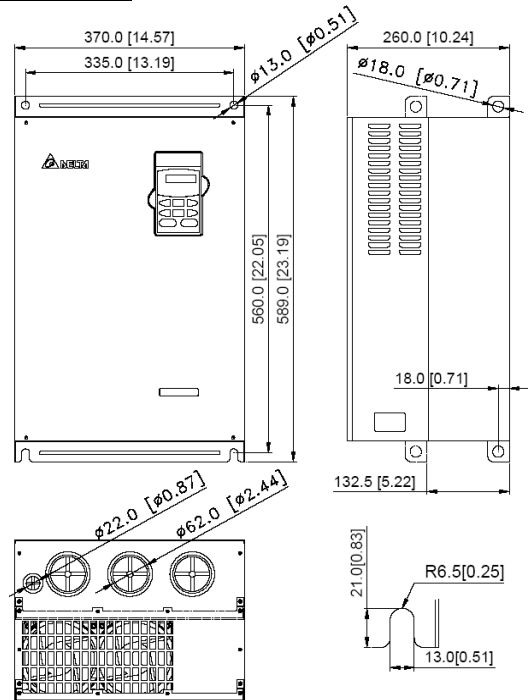


Sizes and dimensions in mm [inches]

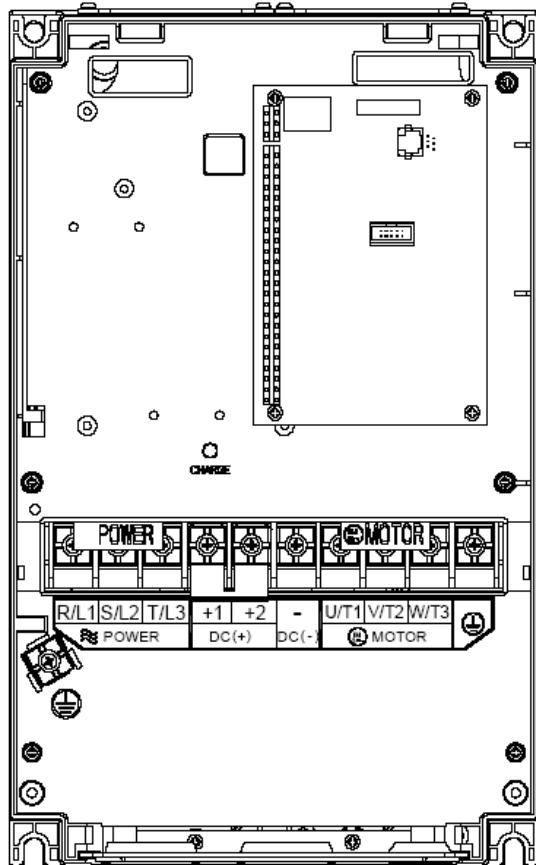
Size B5



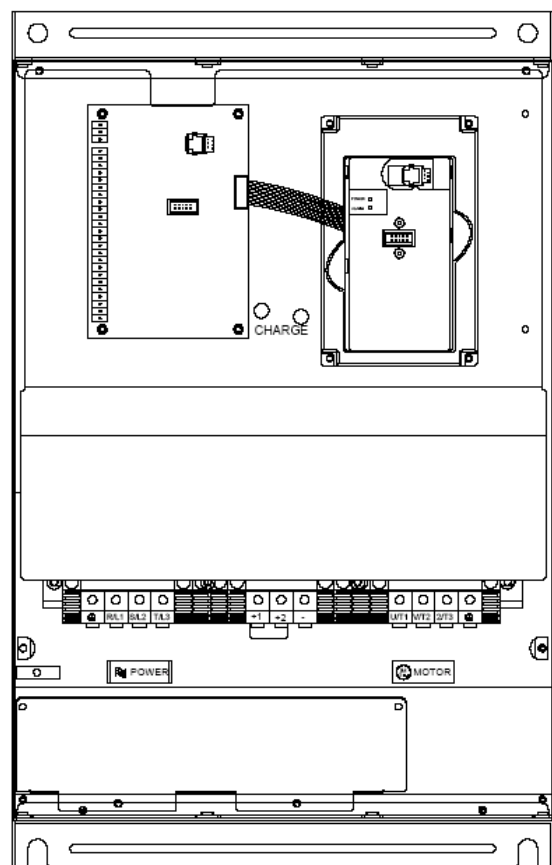
Size B6



Main circuit wiring Size B5

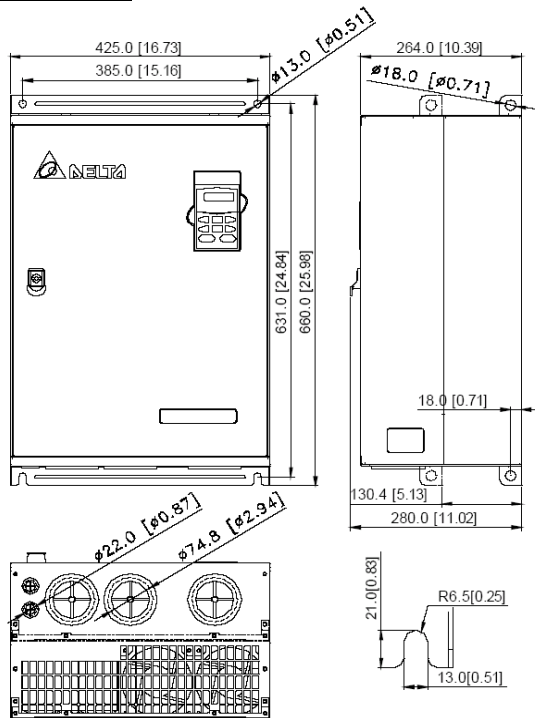


Main circuit wiring Size B6

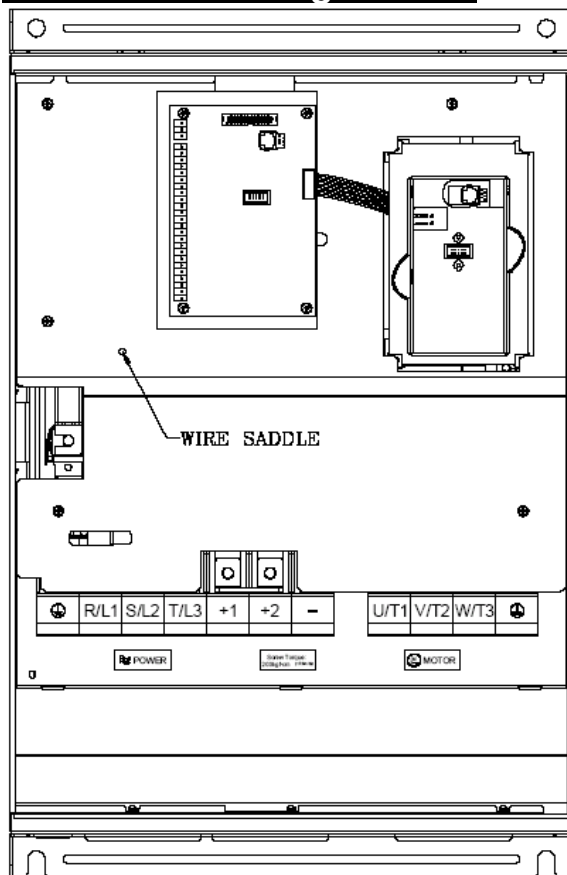


Sizes and dimensions in mm [inches]

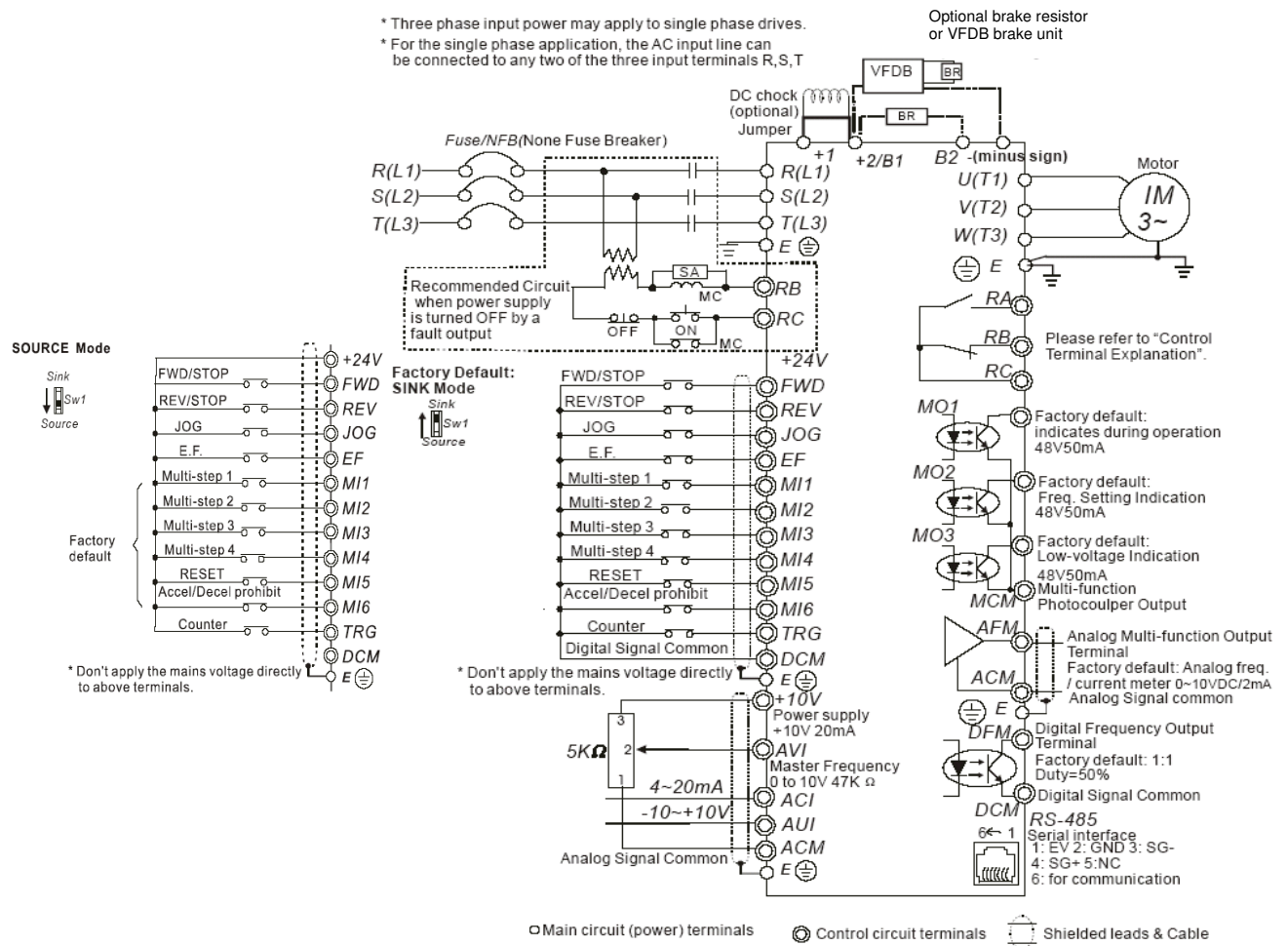
Size B7



Main circuit wiring Size B7



Basic wiring diagram



Options

EMC Filters

Delta has EMC Filters (1st Environment, restricted distribution) for all VFD-B drives. Up to 11kW as footprint.

Braking

Brake resistors and brake units.

Keypad&Cables

PU06 Copy Keypad, Bracket and Extension cables for cabinet door mounting.

Encoder cards

PG02, PG03.

Communication

Communication converters, Splitters, Cables.

Fieldbus

External options: Devicenet, Profibus.

Software

To read, save, copy, change parameters. Download VFD-PC from www.deltaww.com [Products] [Industrial Automation] [AC Motor Drive] [Download] [Software].

Programming

Group 00-xx**User Parameters**

Drive ID, Software version, Password, Control Mode, User-defined display, etc.

Group 01-xx**Basic Parameters**

V/f-curve, Acc/Dec times, Jogging, S-curve, etc.

Group 02-xx**Operation Method Parameters**

Source of frequency/operation, Carrier frequency, 2-3 Wire operation, Motor direction inhibit, Stop method, etc.

Group 03-xx**Output Function Parameters**

Function and setting of analogue and digital outputs and relay, Count values, Fan control, etc.

Group 04-xx**Input function Parameters**

Function and setting of analogue and digital inputs, Index function, Debounce time, etc.

Group 05-xx**Multi-step Speed and PLC-Parameters**

15 Speed steps with time duration for PLC function, Frequency cycling.

Group 06-xx**Protection Parameters**

Protection settings, Fault memory, etc.

Group 07-xx**Motor Parameters**

Setting of motor parameters, Auto-tuning.

Group 08-xx**Special Parameters**

DC-Braking, 3 Skip frequencies, Speed search, AVR, Auto energy saving, Auto reset, etc.

Group 09-xx**Communication Parameters**

Protocol, Address, Transmission speed, etc.

Group 10-xx**PID Control Parameters**

PID settings, PG (Encoder) feedback settings, etc.

Group 11-xx**Fan & Pump Control Parameters**

Aux motor control, Sleep/Wake up, etc.

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