Digitized Automation for a Changing World

Delta Basic Compact Drive ME300 Series

www.deltaww.com

DELTA

Smarter. Greener. Together.

Compact and Intelligent

The new standard for micro drives

The automation industry today is facing challenges such as increasing competition and rising costs. In addition to improving productivity and reducing direct labor, the driving force for automation is to achieve higher efficiency, optimal quality, and most importantly, flexibility and compatibility for a wide range of applications.

Delta's ME300 series is the new generation compact vector control drive that inherits Delta’s superior drive technology with 60% volume reduction. Various essential functions are built-in as standard, including: user-defined parameter groups, single and multi-pump functions, built-in brake chopper and EMC filter (C2 Class). It reduces the need for additional expense and provides more installation space in the control cabinet. The ME300 also supports both induction and interior/surface permanent motors, providing more efficiency and flexibility. The STO function ensures smooth operation while protecting facilities from damage, and the new screw-less wiring design of terminal blocks offers a simplified wiring process for quick installation.

User-friendly operation, ultra-compact size, quick installation, and flexible, durable design provide the user with a highly efficient and stable system. The ME300 is your key to increased market competitiveness that leads to your success.

Models Overview

Hardware Design

Compact design and user-friendly interface

Size reduction *

60%

User-friendly Control and Display

4 digit LED display, frequency setting potentiometer, direction function keys

Removable Fan

Easy to replace and maintain for a longer lifetime

Removable RFI Jumper

Applicable for different application needs

Screwless Front Case

Press on both side tabs to remove the case

*Up to 60% size reduction compared with corresponding ratings of Delta's VFD-EL Series

Side-by-Side Installation

Flexible and efficient installation supports side-by-side installation with operating temperature of -20˚C ~ 40˚C

*standalone installation: 50˚C without load dropping.
Max. ambient temperature is 60˚C.

Substantial space savings!

Standard Models

115V single-phase

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75
Applicable Motor Output (HP)	0.125	0.25	0.5	1
Frame Size	A			C

230V single-phase

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75	1.5	2.2
Applicable Motor Output (HP)	0.125	0.25	0.5	1	2	3
Frame Size	A			B	C	

230V single-phase (Built-in EMC filter)

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75	1.5	2.2
Applicable Motor Output (HP)	0.125	0.25	0.5	1	2	3
Frame Size	B				C	

230V 3-phase

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75	1.5	2.2	3.7/4	5.5
Applicable Motor Output (HP)	0.125	0.25	0.5	1	2	3	5	7.5
Frame Size	A				B	C		D

460V 3-phase

Applicable Motor Output (kW)	0.4	0.75	1.5	2.2	3	3.7/4	5.5	7.5
Applicable Motor Output (HP)	0.5	1	2	3	4	5	7.5	10
Frame Size	A		B	C			D	

460V 3-phase (Built-in EMC filter)

Applicable Motor Output (kW)	0.4	0.75	1.5	2.2	3	3.7/4	5.5	7.5
Applicable Motor Output (HP)	0.5	1	2	3	4	5	7.5	10
Frame Size	B			C			D	

Specifications

Product Specifications

Single-phase 115 V

Models without built-in EMC filter						
Frame			A			C
Model VFD□□□ME11			0A8	1A6	2A5	4A8
Applicable Motor Output (kW)			0.1	0.2	0.4	0.75
Applicable Motor Output (HP)			1/8	1/4	1/2	1
Inverter Output	Heavy Duty	Rated Output Current (A)	0.8	1.6	2.5	4.8
	Normal Duty	Rated Output Current (A)	1.0	1.8	2.7	5.5
Input Voltage / Frequency			Single-phase AC, 100V~120V (-15% ~ + 10%), 50 / 60Hz			
Carrier Frequency (kHz)			2 ~ 15 (Default 4)			
Brake Chopper			Built-in			
Cooling Method			Natural air cooling			Fan cooling
Size: W × H (mm)			68 × 128			87 × 157
Size: D (mm)			78		107	136
Net Weight (kg)			0.4		0.5	1

Single-phase 230 V

Models with built-in EMC filter								
Frame			B				C	
Model VFD□□□ME21			0A8	1A6	2A8	4A8	7A5	11A
Applicable Motor Output (kW)			0.1	0.2	0.4	0.75	1.5	2.2
Applicable Motor Output (HP)			1/8	1/4	1/2	1	2	3
Inverter Output	Heavy Duty	Rated Output Current (A)	0.8	1.6	2.8	4.8	7.5	11
	Normal Duty	Rated Output Current (A)	1.0	1.8	3.2	5	8.5	12.5
Input Voltage / Frequency			Single-phase AC, 200V~240V (-15% ~ + 10%), 50 / 60Hz					
Carrier Frequency (kHz)			2 ~ 15 (Default 4)					
Brake Chopper			Built-in					
Cooling Method			Natural air cooling		Fan cooling			
Size: W x H (mm)			72 x 142				87 x 157	
Size: D (mm)			143				163	
Net Weight (kg)			0.4		0.5	0.8	1	

Models without built-in EMC filter						
Frame			A		B	C
Cooling Method			Natural air cooling			Fan cooling
Size: W × H (mm)			68 × 128		72 × 142	87 × 157
Size: D (mm)			78	107	127	136
Net Weight (kg)			0.9			1.5

Three-phase 230 V

Models without built-in EMC filter									
Frame			**A**				**B**	**C**		**D**
Model VFD□□□23			0A8	1A6	2A8	4A8	7A5	11A	17A	25A
Applicable Motor Output (kW)			0.1	0.2	0.4	0.75	1.5	2.2	3.7/4	5.5
Applicable Motor Output (HP)			1/8	1/4	1/2	1	2	3	5	7.5
Inverter Output	**Heavy Duty**	**Rated Output Current (A)**	0.8	1.6	2.8	4.8	7.5	11	17	25
	Normal Duty	**Rated Output Current (A)**	1.0	1.8	3.2	5.0	8.0	12.5	19.5	27
Input Voltage / Frequency			Three-phase AC, 200V~240V (-15% ~ + 10%), 50 / 60Hz							
Carrier Frequency (kHz)			2 ~ 15 (Default 4)							
Brake Chopper			Built-in							
Cooling Method			Natural air cooling				Fan cooling			
Size: W × H (mm)			68 × 128				72 × 142	87 × 157		
Size: D (mm)			78		92	125	127	136		138
Net Weight (kg)			0.4		0.5	0.6	0.8	1		2

Three-phase 460 V

Models with built-in EMC filter									
Frame			**B**			**C**			**D**	
Model VFD□□□ME43			1A5	2A7	4A2	5A5	7A3	9A0	13A	17A
Applicable Motor Output (kW)			0.4	0.75	1.5	2.2	3	3.7/4	5.5	7.5
Applicable Motor Output (HP)			1/2	1	2	3	4	5	7.5	10
Inverter Output	**Heavy Duty**	**Rated Output Current (A)**	1.5	2.7	4.2	5.5	7.3	9	13	17
	Normal Duty	**Rated Output Current (A)**	1.8	3	4.6	6.5	8	10.5	15.7	20.5
Input Voltage / Frequency			Three-phase AC, 380V~480V (-15% ~ + 10%), 50 / 60Hz							
Carrier Frequency (kHz)			2 ~ 15 (Default 4)							
Brake Chopper			Built-in							
Cooling Method			Fan cooling							
Size: W × H (mm)			72 × 142			87 × 157			109 × 207	
Size: D (mm)			143			163			171	
Net Weight (kg)			0.6	0.7	0.8	1			2	

Models without built-in EMC filter							
Frame			**A**		**B**	**C**	**D**
Cooling Method			Natural air cooling		Fan cooling		
Size: W×H (mm)			68 × 128		72 × 142	87 × 157	109 × 207
Size: D (mm)			113	127	127	136	138
Net Weight (kg)			0.9			1.5	2.7

Specifications

General Specifications and Accessories

Control Functions	Control Methods	V/F, SVC
	Applicant Motors	Induction motor (IM), interior permanent magnet (IPM) motor, surface permanent magnet (SPM) motor
	Max. Output Frequency	0.00 ~ 599.00 Hz (±0.1%)
	Starting Torque*	150% / 3 Hz (V/f, SVC control for IM, heavy duty) 100% / (1/20 of motor rated frequency) (SVC control for PM, heavy duty)
	Speed Control Range*	1 : 50 (V/f, SVC control for IM, heavy duty) 1 : 20 (SVC control for PM, heavy duty)
	Overload Tolerance	Normal Duty (ND): 120% of rated output current for 60 seconds; 150% of rated output current for 3 seconds Heavy Duty (HD): 150% of rated output current for 60 seconds; 200% of rated output current for 3 seconds
	Frequency Setting Signal	0 ~ 10V / 4(0) 20mA, 1pulse input (10kHz)
	Main Control Functions	Multiple motor switches (2 independent motor parameter settings), fast run, deceleration energy back (DEB) function, fast deceleration function, selectable master and auxiliary frequency source, momentary power loss ride through, speed search, over-torque detection, 16-step speed (max.), accel. / decel. time switch, S-curve accel/decel, 3-wire sequence, JOG frequency, upper/lower limits for frequency reference, DC injection braking at start and stop, PID control, simple positioning function, Modbus integrated as standard
Protection Functions	Motor Protection	Overcurrent protection, overvoltage protection, overload protection, over-temperature protection, phase failure protection
	Stall Prevention	During acceleration, deceleration and running independently
Certifications		UL, CE, RoHS, RCM, TUV, REACH, KC

***Control accuracy may vary depending on the environment, application conditions, or motor types. For details, please contact our company or your local distributor**

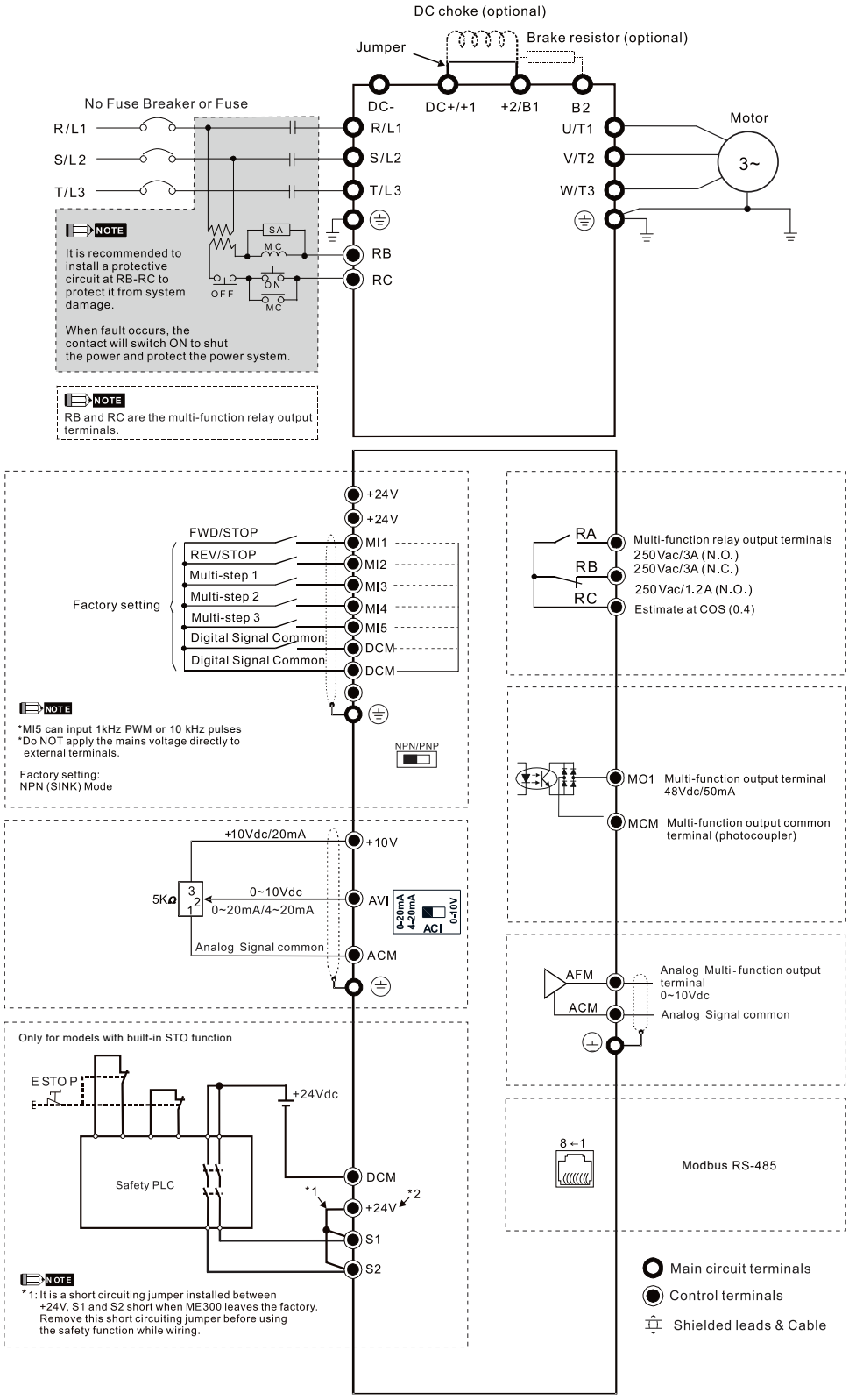
Operating Environment

Operating Environment	Installation Location		IEC60364-1 / IEC60664-1 Pollution degree 2, Indoor use only	
	Ambient Temperature	Operation	IP20 / UL Open Type	-20 ~ 50 °C -20 ~ 60 °C (derating required)
			NEMA 1 / UL Type 1	-20 ~ 40 °C -20 ~ 50 °C (derating required)
			Zero stacking installation	
		Storage		-40 ~ 85 °C
		Transportation		-20 ~ 70 °C
	Rated Humidity	Operation		Max. 90%
		Storage / Transportation		Max. 95%
	Air Pressure	Operation		86 ~ 106 kPa
		Storage / Transportation		70 ~ 106 kPa
	Pollution Level	Compliant to IEC60721-3-3, 3C2		
	Altitude	An altitude of 0 ~ 1000 m for normal operation (derating is required for installation at an altitude above 1000 m)		
Vibration		Compliant to IEC 60068-2-6		
Shock		Compliant to IEC/EN 60068-2-27		

*** Please refer to ME300 user manual for more details**

Wiring

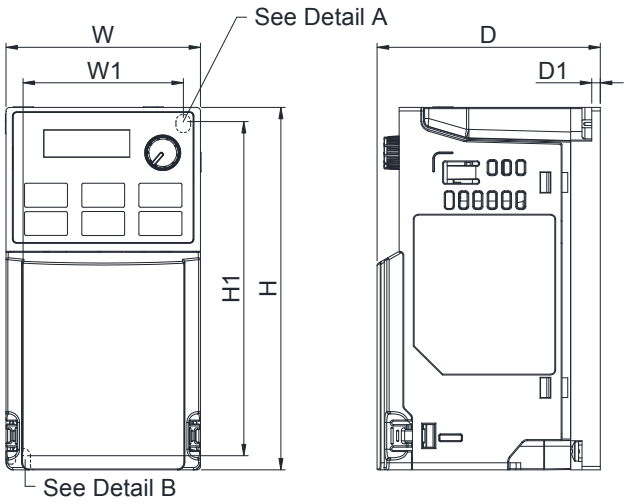
Input: Single-phase / 3-phase power



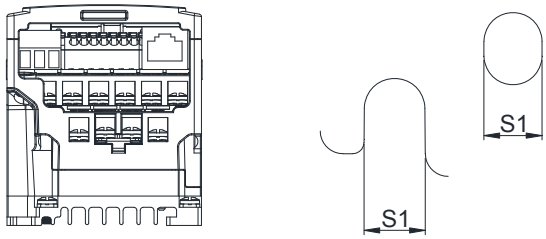
Specifications

Dimensions

Frame A



Detail A (Mounting Hole)



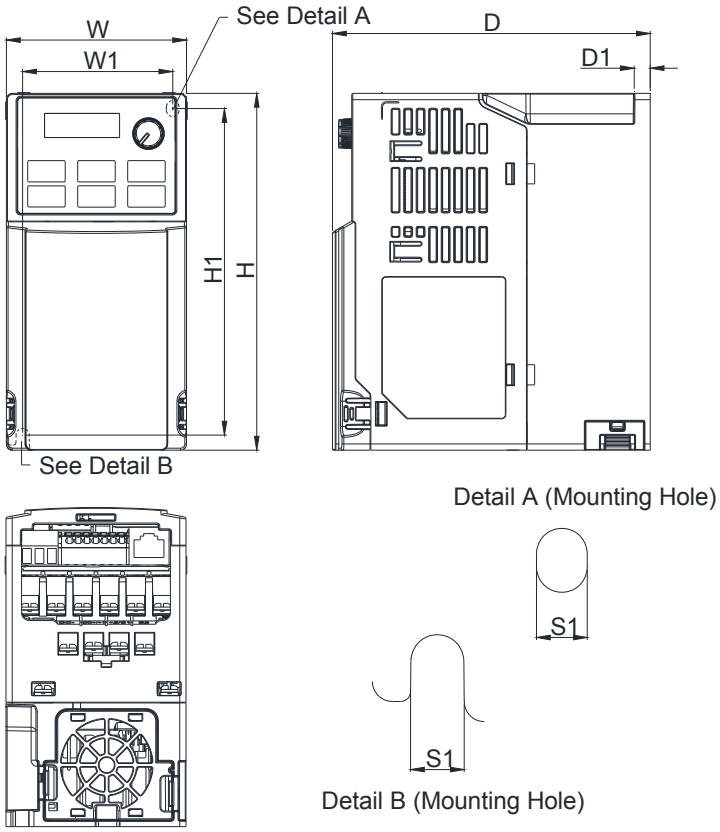
Detail B (Mounting Hole)

Model **Frame** A1	**Frame** A2	**Frame** A3	**Frame** A4	**Frame** A5	**Frame** A6
VFD0A8ME11ANNAA VFD0A8ME11ANSAA VFD0A8ME21ANNAA VFD0A8ME21ANSAA VFD0A8ME23ANNAA VFD0A8ME23ANSAA VFD1A6ME11ANNAA VFD1A6ME11ANSAA VFD1A6ME21ANNAA VFD1A6ME21ANSAA VFD1A6ME23ANNAA VFD1A6ME23ANSAA	VFD2A8ME23ANNAA VFD2A8ME23ANSAA	VFD2A5ME11ANNAA VFD2A5ME11ANSAA VFD2A8ME21ANNAA VFD2A8ME21ANSAA	VFD1A5ME43ANNAA VFD1A5ME43ANSAA	VFD4A8ME23ANNAA VFD4A8ME23ANSAA	VFD2A7ME43ANNAA VFD2A7ME43ANSAA

Frame		W	H	D	W1	H1	D1	S1
A1	mm	68.0	128.0	78.0	56.0	118.0	3.0	5.2
	inch	2.68	5.04	3.07	2.20	4.65	0.12	0.20
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
A2	mm	68.0	128.0	92.0	56.0	118.0	3.0	5.2
	inch	2.68	5.04	3.62	2.20	4.65	0.12	0.20
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
A3	mm	68.0	128.0	107.0	56.0	118.0	3.0	5.2
	inch	2.68	5.04	4.21	2.20	4.65	0.12	0.20

Frame		W	H	D	W1	H1	D1	S1
A4	mm	68.0	128.0	113.0	56.0	118.0	3.0	5.2
	inch	2.68	5.04	4.45	2.20	4.65	0.12	0.20
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
A5	mm	68.0	128.0	125.0	56.0	118.0	3.0	5.2
	inch	2.68	5.04	4.92	2.20	4.65	0.12	0.20
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
A6	mm	68.0	128.0	127.0	56.0	118.0	3.0	5.2
	inch	2.68	5.04	5.00	2.20	4.65	0.12	0.20

Frame B



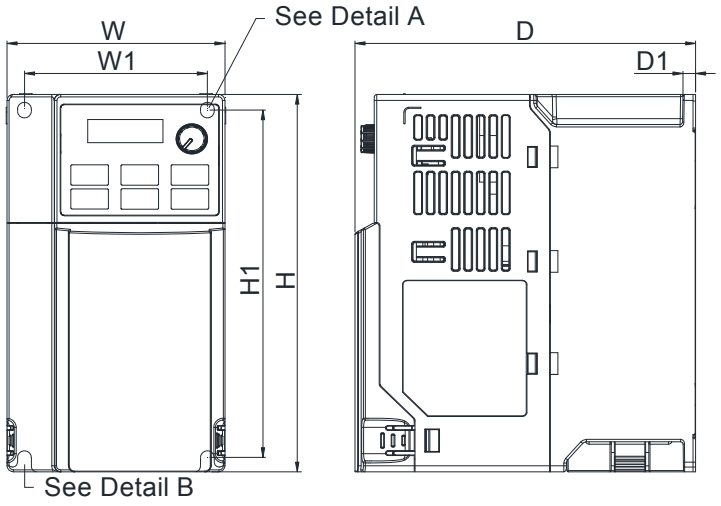
Model **Frame** B1	**Frame** B2	**Frame** B3	
VFD7A5ME23ANNAA	VFD4A8ME21ANNAA	VFD0A8ME21AFNAA	VFD4A2ME43AFNAA
VFD7A5ME23ANSAA	VFD4A8ME21ANSAA	VFD0A8ME21AFSAA	VFD4A2ME43AFSAA
VFD4A2ME43ANNAA		VFD1A6ME21AFNAA	
VFD4A2ME43ANSAA		VFD1A6ME21AFSAA	
		VFD2A8ME21AFNAA	
		VFD2A8ME21AFSAA	
		VFD4A8ME21AFNAA	
		VFD4A8ME21AFSAA	
		VFD1A5ME43AFNAA	
		VFD1A5ME43AFSAA	
		VFD2A7ME43AFNAA	
		VFD2A7ME43AFSAA	

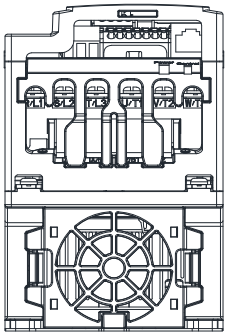
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
B1	**mm**	72.0	142.0	127.0	60.0	130.0	6.4	5.2
	inch	2.83	5.59	5.00	2.36	5.12	0.25	0.20
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
B2	**mm**	72.0	142.0	127.0	60.0	130.0	3.0	5.2
	inch	2.83	5.59	5.00	2.36	5.12	0.12	0.20
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
B3	**mm**	72.0	142.0	143.0	60.0	130.0	4.3	5.2
	inch	2.83	5.59	5.63	2.36	5.12	0.17	0.20

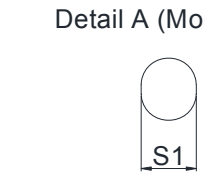
Specifications

Dimensions

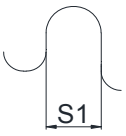
Frame C







Detail A (Mounting Hole)

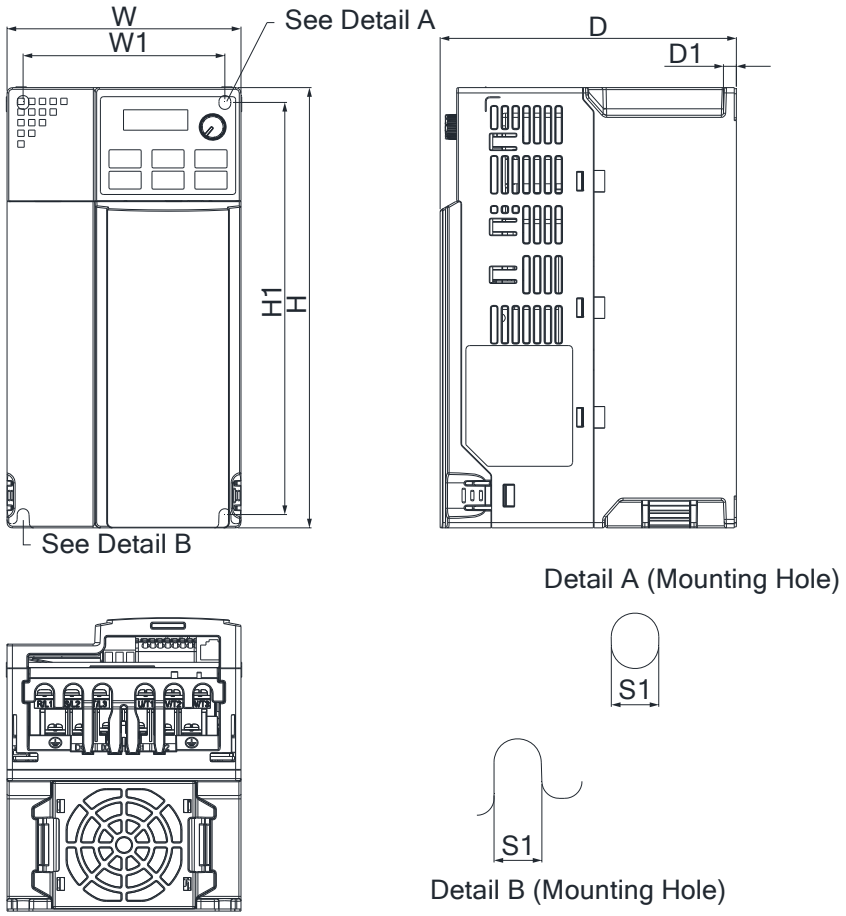


Detail B (Mounting Hole)

Model **Frame** C1		**Frame** C2
VFD4A8ME11ANNAA	VFD9A0ME43ANNAA	VFD7A5ME21AFNAA
VFD4A8ME11ANSAA	VFD9A0ME43ANSAA	VFD7A5ME21AFSAA
VFD7A5ME21ANNAA		VFD11AME21AFNAA
VFD7A5ME21ANSAA		VFD11AME21AFSAA
VFD11AME21ANNAA		VFD5A5ME43AFNAA
VFD11AME21ANSAA		VFD5A5ME43AFSAA
VFD11AME23ANNAA		VFD7A3ME43AFNAA
VFD11AME23ANSAA		VFD7A3ME43AFSAA
VFD17AME23ANNAA		VFD9A0ME43AFNAA
VFD17AME23ANSAA		VFD9A0ME43AFSAA
VFD5A5ME43ANNAA		
VFD5A5ME43ANSAA		
VFD7A3ME43ANNAA		
VFD7A3ME43ANSAA		

Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
C1	**mm**	87.0	157.0	136.0	73.0	144.5	5.0	5.5
	inch	3.43	6.18	5.35	2.87	5.69	0.20	0.22
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
C2	**mm**	87.0	157.0	163.0	73.0	144.5	5.0	5.5
	inch	3.43	6.18	6.42	2.87	5.69	0.20	0.22

Frame D



Model **Frame** D1	**Frame** D2
VFD25AME23ANNAA	VFD13AME43AFNAA
VFD25AME23ANSAA	VFD13AME43AFSAA
VFD13AME43ANNAA	VFD17AME43AFNAA
VFD13AME43ANSAA	VFD17AME43AFSAA
VFD17AME43ANNAA	
VFD17AME43ANSAA	

Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
D1	**mm**	109.0	207.0	138.0	94.0	193.8	6.0	5.5
	inch	4.29	8.15	5.43	3.70	7.63	0.24	0.22
Frame		**W**	**H**	**D**	**W1**	**H1**	**D1**	**S1**
D2	**mm**	109.0	207.0	171.0	94.0	193.8	6.0	5.5
	inch	4.29	8.15	6.73	3.70	7.63	0.24	0.22

Specifications

Accessories

▪ RJ45 Extension Cable for Digital Keypad

Title	Part No.	L	
		mm	inch
1	UC-CMC003-01A	300	11.8
2	UC-CMC005-01A	500	19.6
3	UC-CMC010-01A	1000	39
4	UC-CMC015-01A	1500	59
5	UC-CMC020-01A	2000	78.7
6	UC-CMC030-01A	3000	118.1
7	UC-CMC050-01A	5000	196.8
8	UC-CMC100-01A	10000	393.7
9	UC-CMC200-01A	20000	787.4

▪ Accessory for Multi-pump Applications

MKCB-HUB01

- RJ45 sockets x3

▪ Digital Keypads

KPC-CC01

- Highly illuminated LCD display
- Displays multiple information simultaneously

KPC-CE01

- RJ45 Port
- 5-digit LED display
- Large key press for easy on-site setup

PU-08

- RJ45 Port
- 4-digit LED display
- Compact design for easy installation

Model Name

VFD 1A5 ME 43 A N N A A

Variable Frequency Drive

Rated Output Current

Under Heavy Duty Mode (150% 60 seconds)

Series Name

ME : Basic Compact Drive ME300

Input Voltage

11 : 115 V single-phase　23 : 230 V three-phase

21 : 230 V single-phase　43 : 460 V three-phase

IP Level

A : IP20

Safe Torque Off (STO)

N : None

S : STO Model

EMC Filter

N : None

F : Built-in EMC Filter

Model Type

A : Standard model

Version