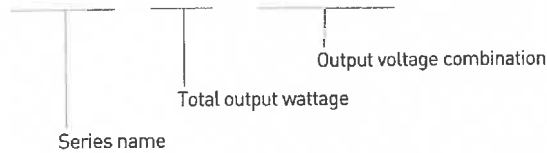
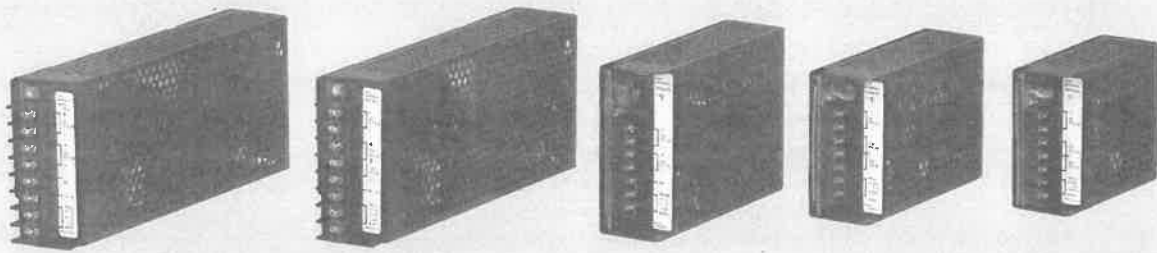


ORDERING INFORMATION

VSF15-BDB



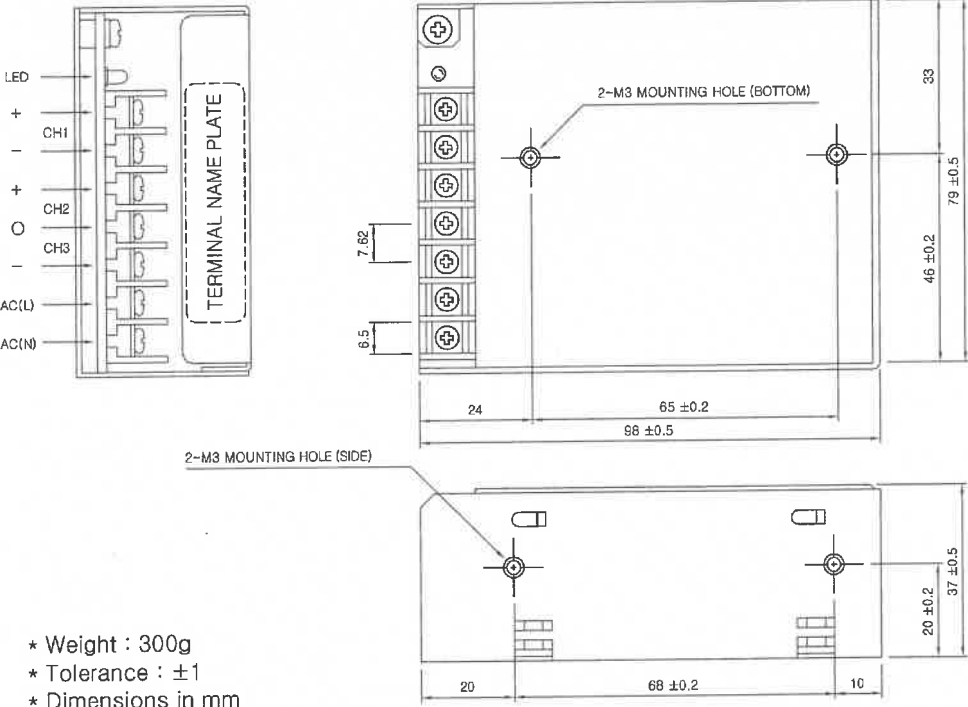
- Short Circuit protection
- Inrush current limit
- CH1 isolated from CH2 and CH3
- Over current protection
- 3 years warranty



VSF15-TRIPLE SPECIFICATIONS

MODEL		VSF15-BDB			VSF15-DD			VSF15-EE			
INPUT	VOLTAGE, FREQUENCY	AC100-240V (AC85 ~ 264V or DC125 ~ 370V), 50/60Hz (47 ~ 440Hz) Universal Input									
	CURRENT [A]	110V	0.4 (I _o =100%)								
		220V	0.2 (I _o =100%)								
	EFFICIENCY [%]	110V	60 typ			60 typ			60 typ		
	220V										
	INRUSH CURRENT	20A typ(AC IN 110V, I _o =100%), 40A typ(AC IN 220V, I _o =100%) at cold start.									
OUTPUT	VOLTAGE [V]	5	12	-5	5	12	-12	5	15	-15	
	CURRENT [A]	0.1 ~ 2	0.3	0.3	0.1 ~ 2	0.3	0.2	0.1 ~ 2	0.3	0.2	
	REGULATION, LINE [mV]	25 Max	60 Max	25 Max	25 Max	60 Max	60 Max	25 Max	75 Max	75 Max	
	REGULATION, LOAD [mV]	50 Max	120 Max	50 Max	50 Max	120 Max	120 Max	50 Max	150 Max	150 Max	
	RIPPLE [mVp-p]	50 Max	120 Max	50 Max	50 Max	120 Max	120 Max	80 Max	120 Max	120 Max	
	RIPPLE, NOISE [mVp-p]	100 Max	170 Max	100 Max	100 Max	170 Max	170 Max	100 Max	200 Max	200 Max	
	TEMPERATURE DRIFT 0~+50°C [mV]	25 Max	180 Max	25 Max	15 Max	180 Max	180 Max	50 Max	150 Max	150 Max	
	RISE TIME [ms]	100 Max (AC IN 110V I _o =100%)									
HOLDING TIME [ms]	10 typ (AC IN 110V I _o =100%)										
PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically. (CH2,3 I _o =100%)									
	OVER VOLTAGE PROTECTION	-									
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC 1,500V 1 minute current 10mA, DC 500V 100MΩ (At room temperature & Humidity)									
	INPUT-CASE, FG	AC 1,500V 1 minute current 10mA, DC 500V 100MΩ (At room temperature & Humidity)									
	OUTPUT-CASE, FG	AC 500V 1 minute current 100mA, DC 500V 100MΩ (At room temperature & Humidity)									
ENVIRONMENT	OPERATING TEMP AND HUMID	-10 ~ +50°C, 20 ~ 90% RH(Non condensing)									
	STORAGE TEMP AND HUMID	-20 ~ +75°C, 20 ~ 90% RH(Non condensing)									
	VIBRATION	10 ~ 55Hz at 1G, 3 minutes period, 30 minutes along X, Y and Z axis									
	IMPACT	10G for 20ms once on each X, Y and Z axis									
SAFETY	SAFETY REGULATION	Built to meet UL60950-1, EN60950-1									
	LINE CONDUCTED RF VOLTAGE	Built to meet EN55022									

VSF15-TRIPLE EXTERNAL VIEW



- * Weight : 300g
- * Tolerance : ±1
- * Dimensions in mm

General Information

Switching Mode Power Supply

DC-DC Converter

Noise Filter

Solid State Relay

AC FAN Motor

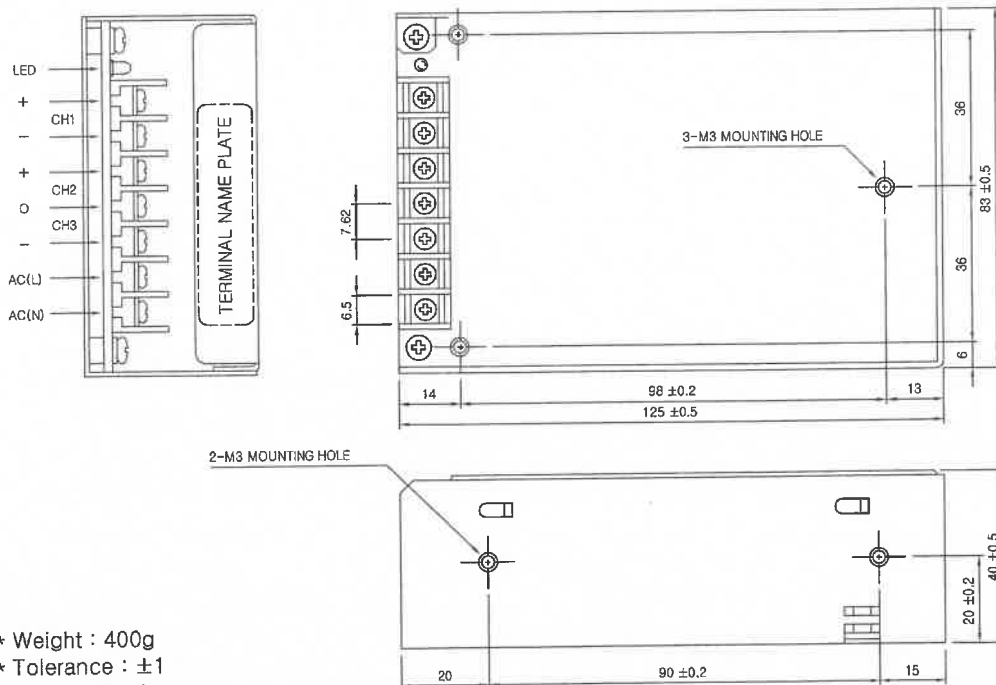
Power Module

Discrete Semiconductors

VSF30-TRIPLE SPECIFICATIONS

MODEL		VSF30-BDB	VSF30-DD			VSF30-EE					
INPUT	VOLTAGE, FREQUENCY	AC100-240V (AC85 ~ 264V or DC125 ~ 370V), 50/60Hz (47 ~ 440Hz) Universal Input									
	CURRENT	110V	0.65 (I _c =100%)								
		220V	0.35 (I _c =100%)								
	EFFICIENCY	110V	66 typ			66 typ			66 typ		
220V		20A typ (AC IN 110V, I _c =100%), 40A typ (AC IN 220V, I _c =100%) at cold start.									
OUTPUT	VOLTAGE [V]	5	12	-5	5	12	-12	5	15	-15	
	CURRENT [A]	0.3 ~ 3	1	0.3	0.3 ~ 3	1.2	0.3	0.3 ~ 3	0.8	0.2	
	REGULATION, LINE [mV]	25 Max	60 Max	25 Max	25 Max	60 Max	60 Max	25 Max	75 Max	75 Max	
	REGULATION, LOAD [mV]	50 Max	120 Max	50 Max	50 Max	120 Max	120 Max	50 Max	150 Max	150 Max	
	RIPPLE [mVp-p]	50 Max	120 Max	50 Max	50 Max	120 Max	120 Max	50 Max	150 Max	150 Max	
	RIPPLE, NOISE [mVp-p]	100 Max	170 Max	100 Max	100 Max	170 Max	170 Max	100 Max	200 Max	200 Max	
	TEMPERATURE DRIFT 0→+50°C [mV]	75 Max	180 Max	75 Max	75 Max	180 Max	180 Max	75 Max	225 Max	225 Max	
	RISE TIME [ms]	100 Max (AC IN 110V I _c =100%)									
	HOLDING TIME [ms]	10 typ (AC IN 110V I _c =100%)									
	PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically (CH2,3 I _c =100%)								
OVER VOLTAGE PROTECTION		Works at 115 ~ 140% of rating									
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC 1,500V 1 minute current 10mA, DC 500V 100MΩ (At room temperature & Humidity)									
	INPUT-CASE, FG	AC 1,500V 1 minute current 10mA, DC 500V 100MΩ (At room temperature & Humidity)									
	OUTPUT-CASE, FG	AC 500V 1 minute current 100mA, DC 500V 100MΩ (At room temperature & Humidity)									
ENVIRONMENT	OPERATING TEMP AND HUMID	-10 ~ +50°C, 20 ~ 90% RH (Non condensing)									
	STORAGE TEMP AND HUMID	-20 ~ +75°C, 20 ~ 90% RH (Non condensing)									
	VIBRATION	10 ~ 55Hz at 1G, 3 minutes period, 30 minutes along X, Y and Z axis									
	IMPACT	10G for 20ms once on each X, Y and Z axis									
SAFETY	SAFETY REGULATION	Built to meet UL60950-1, EN60950-1									
	LINE CONDUCTED RF VOLTAGE	Built to meet EN55022-A									

VSF30-TRIPLE EXTERNAL VIEW



VSF50-TRIPLE SPECIFICATIONS



MODEL		VSF50-BDB			VSF50-DD			VSF50-EE			
INPUT	VOLTAGE, FREQUENCY	AC100-120V/200-240V (AC90 ~ 132V/180 ~ 264V), 50/60Hz (47 ~ 440Hz) User Selectable									
	CURRENT	110V	1.2 (I _o =100%)								
		220V	0.7 (I _o =100%)								
	EFFICIENCY (AC220V)	110V	77 typ			77 typ			77 typ		
220V		77 typ			77 typ			77 typ			
INRUSH CURRENT		20A typ(AC IN 110V, I _o =100%), 40A typ(AC IN 220V, I _o =100%) at cold start.									
OUTPUT	VOLTAGE [V]	5	12	-5	5	12	-12	5	15	-15	
	CURRENT [A]	0.5 ~ 5	0 ~ 1.8	0 ~ 0.3	0.5 ~ 5	0 ~ 1.8	0 ~ 0.3	0.5 ~ 5	0 ~ 1.4	0 ~ 0.3	
	REGULATION, LINE [mV]	50 Max	120 Max	50 Max	50 Max	120 Max	120 Max	50 Max	150 Max	150 Max	
	REGULATION, LOAD [mV]	100 Max	240 Max	100 Max	100 Max	240 Max	240 Max	100 Max	300 Max	300 Max	
	RIPPLE [mVp-p]	50 Max	120 Max	50 Max	50 Max	120 Max	120 Max	50 Max	150 Max	150 Max	
	RIPPLE, NOISE [mVp-p]	100 Max	170 Max	100 Max	100 Max	170 Max	170 Max	100 Max	200 Max	200 Max	
	TEMPERATURE DRIFT 0~+50°C [mV]	75 Max	180 Max	75 Max	75 Max	180 Max	180 Max	75 Max	225 Max	225 Max	
	RISE TIME [ms]	1000 Max (AC IN 85V / 170V I _o =100%)									
	HOLDING TIME [ms]	10 typ (AC IN 85V / 170V I _o =100%)									
	PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically(CH2,3 I _o =100%)								
OVER VOLTAGE PROTECTION		Works at 115 ~ 140% of rating									
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC 3,000V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)									
	INPUT-CASE, FG	AC 2,000V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)									
	OUTPUT-CASE, FG	AC 500V 1 minute current 100mA, DC 500V 100MΩ (At room temperature & Humidity)									
ENVIRONMENT	OPERATING TEMP AND HUMID	-10 ~ +50°C, 20 ~ 90% RH(Non condensing)									
	STORAGE TEMP AND HUMID	-20 ~ +75°C, 20 ~ 90% RH(Non condensing)									
	VIBRATION	10 ~ 55Hz at 1G, 3 minutes period, 30 minutes along X, Y and Z axis									
	IMPACT	10G for 20ms once on each X, Y and Z axis									
SAFETY	SAFETY REGULATION	CE			CE			CE			
	LINE CONDUCTED RF VOLTAGE	Complied with EN55022-A									

General Information

Switching Mode Power Supply

DC-DC Converter

Noise Filter

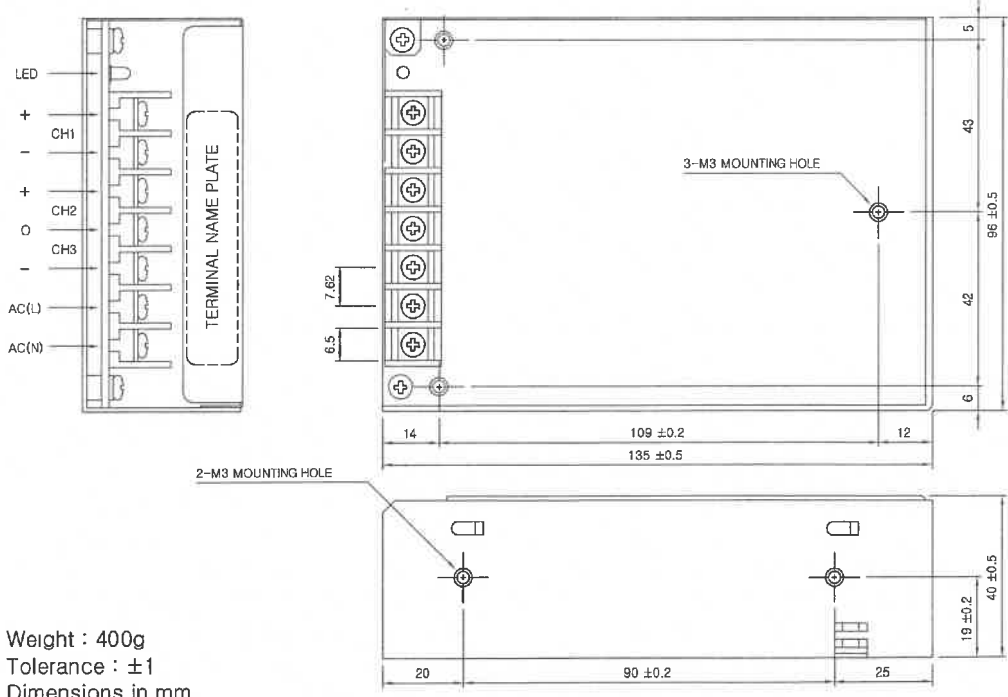
Solid State Relay

AC FAN Motor

Power Module

Discrete Semiconductors

VSF50-TRIPLE EXTERNAL VIEW



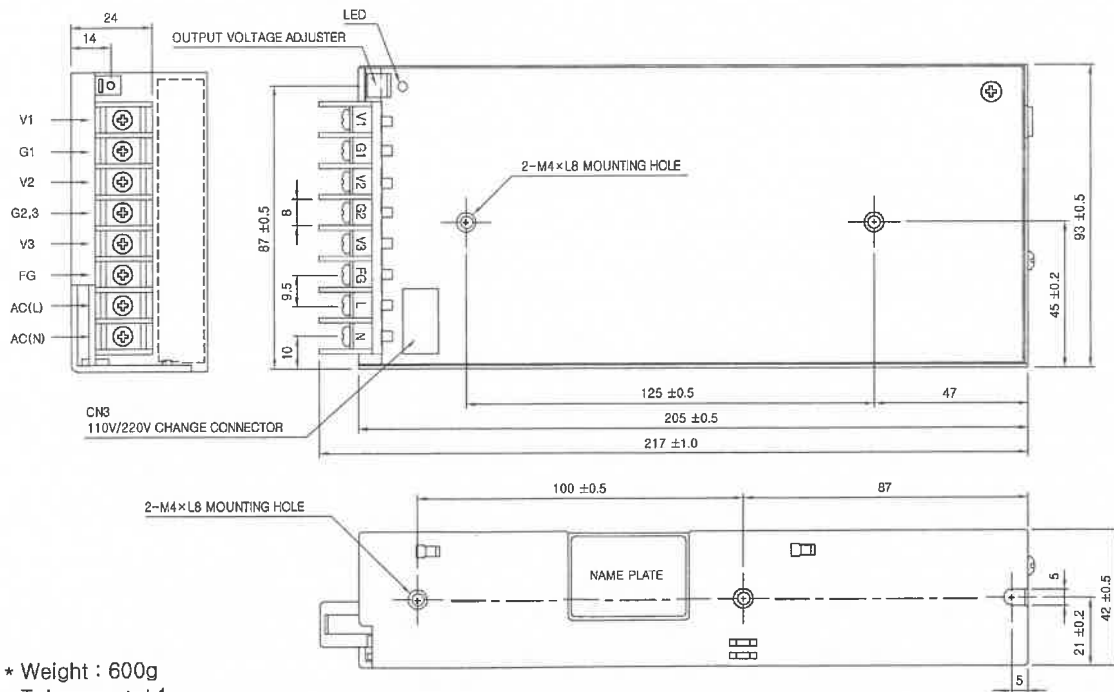
* Weight : 400g
* Tolerance : ±1
* Dimensions in mm

VSF75-TRIPLE SPECIFICATIONS



MODEL		VSF75-BDB			VSF75-DD			VSF75-EE			
INPUT	VOLTAGE, FREQUENCY	AC100-120V / 200-240V (AC90 ~ 132V / 180 ~ 264V or DC240 ~ 370V), 50/60Hz (47 ~ 440Hz) User Selectable									
	CURRENT	110V	1.8 (I _o =100%)								
		220V	1.0 (I _o =100%)								
	EFFICIENCY	110V	75 typ			75 typ			75 typ		
220V		75 typ			75 typ			75 typ			
INRUSH CURRENT		20A typ(AC IN 110V, I _o =100%), 40A typ(AC IN 220V, I _o =100%) at cold start.									
OUTPUT	VOLTAGE [V]	5	12	-5	5	12	-12	5	15	-15	
	CURRENT [A]	1.5 ~ 8	2.5	0.5	1.5 ~ 8	2.5	0.5	1.5 ~ 8	1.8	0.5	
	REGULATION, LINE [mV]	20 Max	48 Max	20 Max	50 Max	120 Max	120 Max	20 Max	60 Max	60 Max	
	REGULATION, LOAD [mV]	40 Max	100 Max	40 Max	100 Max	240 Max	240 Max	40 Max	120 Max	150 Max	
	RIPPLE [mVp-p]	80 Max	120 Max	80 Max	80 Max	120 Max	120 Max	80 Max	150 Max	150 Max	
	RIPPLE, NOISE [mVp-p]	120 Max	170 Max	120 Max	120 Max	170 Max	170 Max	120 Max	200 Max	200 Max	
	TEMPERATURE DRIFT 0~+50°C [mV]	75 Max	180 Max	75 Max	75 Max	180 Max	180 Max	75 Max	225 Max	225 Max	
	RISE TIME [ms]	1,500 Max (AC IN 110V, I _o =100%)									
	HOLDING TIME [ms]	10 typ (AC IN 110V, I _o =100%)									
PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically									
	OVER VOLTAGE PROTECTION	Works at 115 ~ 140% of rating (+5V)									
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC 3,000V 1 minute current 20mA, DC 500V 50MΩ									
	INPUT-CASE, FG	AC 2,000V 1 minute current 20mA, DC 500V 50MΩ									
	OUTPUT-CASE, FG	AC 500V 1 minute current 100mA, DC 500V 50MΩ									
ENVIRONMENT	OPERATING TEMP AND HUMID	-10 ~ +50°C, 20 ~ 90% RH(Non condensing)									
	STORAGE TEMP AND HUMID	-20 ~ +75°C, 20 ~ 90% RH(Non condensing)									
	VIBRATION	10 ~ 55Hz at 1G, 3 minutes period, 30 minutes along X, Y and Z axis									
	IMPACT	10G for 20ms once on each X, Y and Z axis									
SAFETY	SAFETY REGULATION	-			CE			CE			
	LINE CONDUCTED RF VOLTAGE	Built to meet EN55022-B									

VSF75-TRIPLE EXTERNAL VIEW



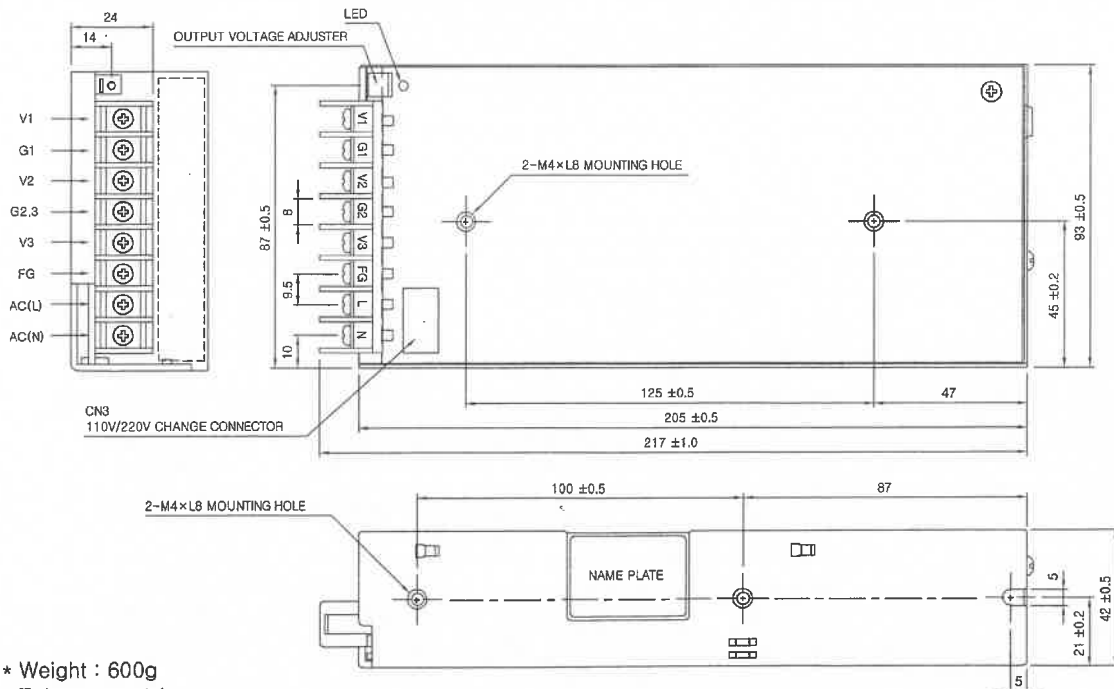
- * Weight : 600g
- * Tolerance : ±1
- * Dimensions in mm



VSF100-TRIPLE SPECIFICATIONS

MODEL		VSF100-BDB			VSF100-DD			VSF100-EE			
INPUT	VOLTAGE, FREQUENCY	AC100-120V / 200-240V (AC90 ~ 132V / 180 ~ 264V or DC240 ~ 370V), 50/60Hz (47 ~ 440Hz). User Selectable									
	CURRENT	110V	2.4 (I _o =100%)								
		220V	1.4 (I _o =100%)								
	EFFICIENCY	110V	75 typ			75 typ			75 typ		
220V		75 typ									
INRUSH CURRENT		20A typ (AC IN 110V, I _o =100%), 40A typ (AC IN 220V, I _o =100%) at cold start.									
OUTPUT	VOLTAGE [V]	5	12	-5	5	12	-12	5	15	-15	
	CURRENT [A]	1.5 ~ 13	2	1	1.5 ~ 13	2	1	1.5 ~ 13	1.5	1	
	REGULATION, LINE [mV]	20 Max	48 Max	20 Max	20 Max	48 Max	48 Max	20 Max	60 Max	60 Max	
	REGULATION, LOAD [mV]	40 Max	100 Max	40 Max	40 Max	100 Max	150 Max	40 Max	120 Max	150 Max	
	RIPPLE [mVp-p]	80 Max	120 Max	80 Max	80 Max	120 Max	120 Max	80 Max	150 Max	150 Max	
	RIPPLE, NOISE [mVp-p]	120 Max	170 Max	120 Max	120 Max	170 Max	170 Max	120 Max	200 Max	200 Max	
	TEMPERATURE DRIFT 0~+50°C [mV]	75 Max	180 Max	75 Max	75 Max	180 Max	180 Max	75 Max	225 Max	225 Max	
	RISE TIME [ms]	1000 Max (AC IN 110V, I _o =100%)									
	HOLDING TIME [ms]	10 typ (AC IN 110V, I _o =100%)									
	PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically								
OVER VOLTAGE PROTECTION		Works at 115 ~ 140% of rating (CH1)									
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC 3,000V 1 minute current 20mA, DC 500V 50MΩ									
	INPUT-CASE, FG	AC 2,000V 1 minute current 20mA, DC 500V 50MΩ									
	OUTPUT-CASE, FG	AC 500V 1 minute current 100mA, DC 500V 50MΩ									
ENVIRONMENT	OPERATING TEMP AND HUMID	-10 ~ +50°C, 20 ~ 90% RH (Non condensing)									
	STORAGE TEMP AND HUMID	-20 ~ +75°C, 20 ~ 90% RH (Non condensing)									
	VIBRATION	10 ~ 55Hz at 1G, 3 minutes period, 30 minutes along X, Y and Z axis									
	IMPACT	10G for 20ms once on each X, Y and Z axis									
SAFETY	SAFETY REGULATION	-			CE			CE			
	LINE CONDUCTED RF VOLTAGE	Built to meet EN55022-B									

VSF100-TRIPLE EXTERNAL VIEW



- * Weight : 600g
- * Tolerance : ±1
- * Dimensions in mm