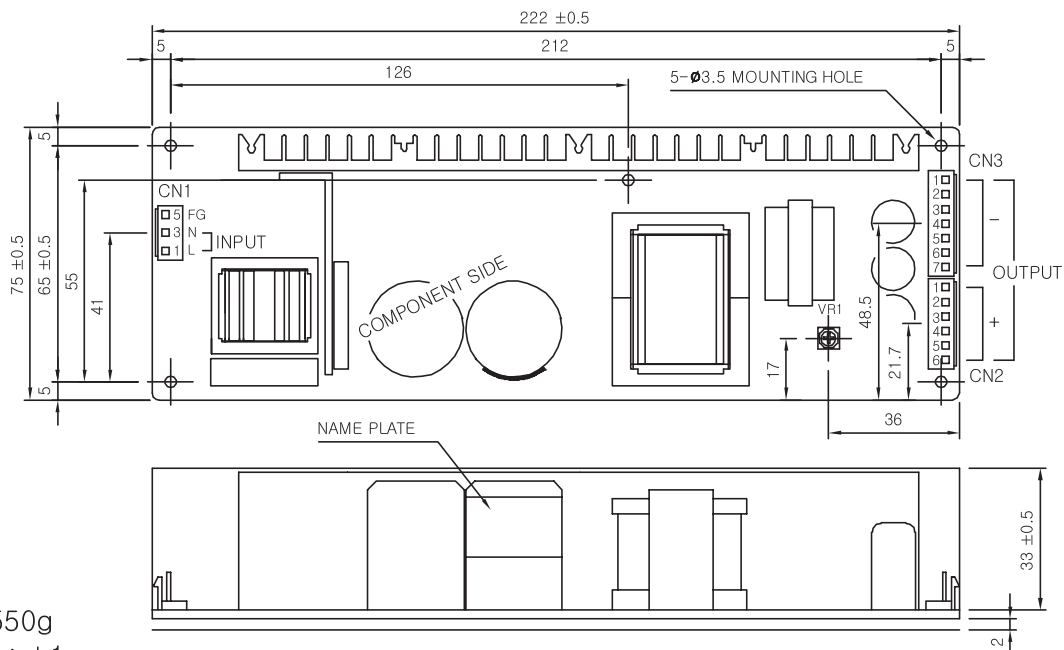


ESFL150-S SPECIFICATIONS

MODEL		ESFL150-3R3	ESFL150-05	ESFL150-12	ESFL150-15	ESFL150-24	ESFL150-36	ESFL150-48
INPUT	VOLTAGE, FREQUENCY	AC100-120V (AC85~132V or DC120~186V), 50/60Hz (44~440Hz or DC)						
	CURRENT	100V~3.2A						
	EFFICIENCY (AC110V)	78% typ	78% typ	79% typ	80% typ	80% typ	81% typ	81% typ
	INRUSH CURRENT	20A typ (ACIN 110V, I ₀ =100%)						
OUTPUT	VOLTAGE [V]	3.3	5	12	15	24	36	48
	CURRENT [A]	30	30	12.5	10	6.3	4.2	3.2
	REGULATION, LINE [mV]	25 Max	25 Max	60 Max	75 Max	120 Max	180 Max	240 Max
	REGULATION, LOAD [mV]	50 Max	50 Max	120 Max	150 Max	240 Max	360 Max	480 Max
	RIPPLE [mVp-p]	100 Max	100 Max	120 Max	150 Max	240 Max	360 Max	480 Max
	RIPPLE, NOISE [mVp-p]	120 Max	120 Max	170 Max	200 Max	290 Max	410 Max	530 Max
	TEMPERATURE DRIFT 0~+50°C [mV]	50 TYP	75 Max	180 Max	225 Max	360 Max	540 Max	720 Max
	RISE TIME [ms]	1,000 Max (ACIN 110V I ₀ =100%)						
HOLDING TIME [ms]	17 typ (ACIN 110V I ₀ =100%)							
PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically						
	OVER VOLTAGE PROTECTION	Works at over 115~140% of rating (by zener diode clamp). In the case of 3.3V, it is 115~160%						
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC3,000V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)						
	INPUT-CASE, FG	AC2,000V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)						
	OUTPUT-CASE, FG	AC500V 1 minute current 20mA, 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	-						
	LINE CONDUCTED RF VOLTAGE	-						

ESFL150-S EXTERNAL VIEW

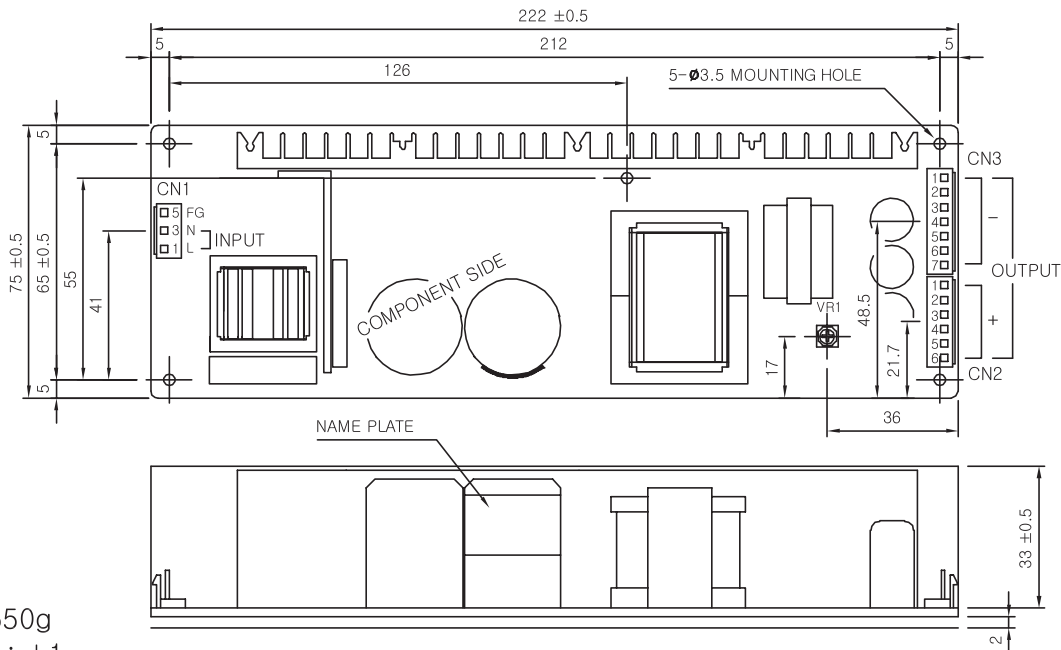


Weight : 550g
 Tolerance : ±1
 B t=1.6
 Dimensions in mm

ESFH150-S SPECIFICATIONS

MODEL		ESFH150-3R3	ESFH150-05	ESFH150-12	ESFH150-15	ESFH150-24	ESFH150-36	ESFH150-48
INPUT	VOLTAGE, FREQUENCY	AC200-240V (AC170~264V or DC240~370V), 50/60Hz (44~440Hz or DC)						
	CURRENT	200V~2.0A						
	EFFICIENCY (AC220V)	75% typ	78% typ	79% typ	80% typ	80% typ	81% typ	81% typ
	INRUSH CURRENT	40A typ (ACIN 220V, I ₀ =100%)						
OUTPUT	VOLTAGE [V]	3.3	5	12	15	24	36	48
	CURRENT [A]	30	30	12.5	10	6.3	4.2	3.2
	REGULATION, LINE [mV]	25 Max	25 Max	60 Max	75 Max	120 Max	180 Max	240 Max
	REGULATION, LOAD [mV]	50 Max	50 Max	120 Max	150 Max	240 Max	360 Max	480 Max
	RIPPLE [mVp-p]	100 Max	100 Max	120 Max	150 Max	240 Max	360 Max	480 Max
	RIPPLE, NOISE [mVp-p]	120 Max	120 Max	170 Max	200 Max	290 Max	410 Max	530 Max
	TEMPERATURE DRIFT 0~+50°C [mV]	50 TYP	75 Max	180 Max	225 Max	360 Max	540 Max	720 Max
	RISE TIME [ms]	1,000 Max (ACIN 220V I ₀ =100%)						
	HOLDING TIME [ms]	17 typ (ACIN 220V I ₀ =100%)						
PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically						
	OVER VOLTAGE PROTECTION	Works at over 115~140% of rating (by zener diode clamp). In the case of 3.3V, it is 115~160%						
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC3,000V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)						
	INPUT-CASE, FG	AC2,000V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)						
	OUTPUT-CASE, FG	AC500V 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 periods, 30 minutes along X, Y and Z axis						
	IMPACT	10G for 20ms once on each X, Y and Z axis						
SAFETY	SAFETY REGULATION	-						
	LINE CONDUCTED RF VOLTAGE	-						

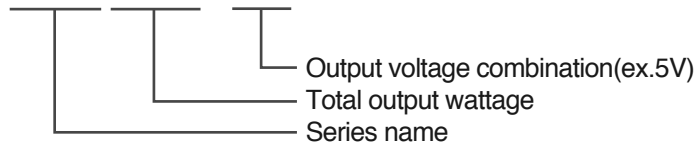
ESFH150-S EXTERNAL VIEW



Weight : 550g
 Tolerance : ±1
 B t=1.6
 Dimensions in mm

ORDERING INFORMATION

ESF100-05



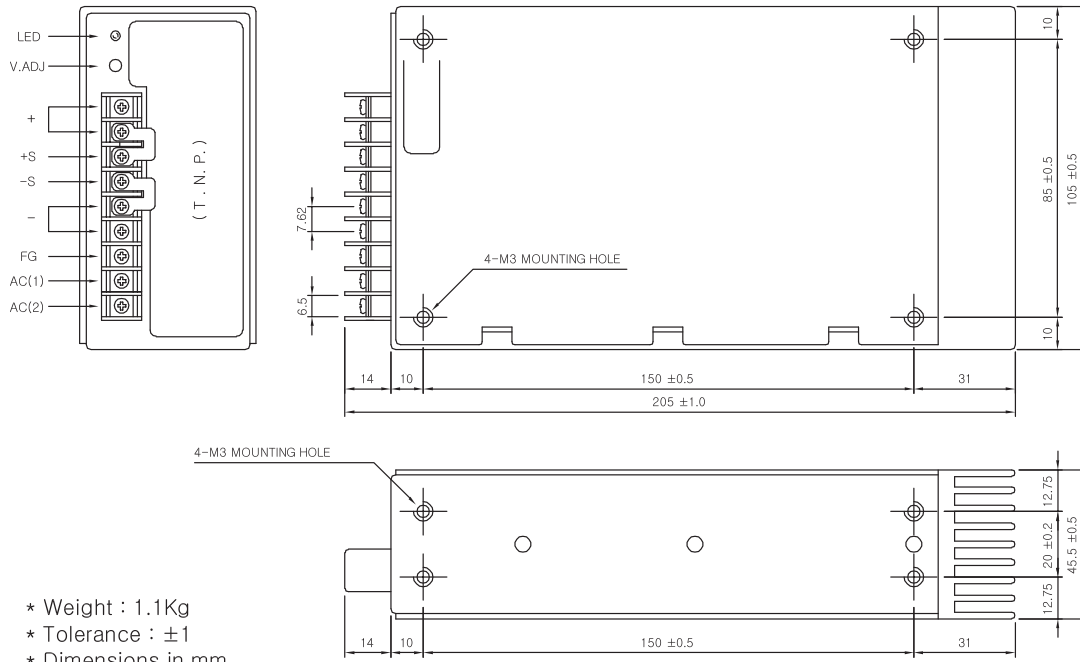
- Built-in inrush current protection
- Over voltage protection
- Over current protection
- 2 years warranty
- Remote sensing



ESF100, 150-S SPECIFICATIONS

	MODEL	ESF100-05	ESF150-09	ESF150-12	ESF150-15	ESF150-24	ESF150-36	ESF150-48	
INPUT	VOLTAGE, FREQUENCY	AC100-120V / 200~240V (AC90~132V / 180~264V or DC255~370V), 50/60Hz (44~440Hz or DC)							
	CURRENT	100V~2.2A 200V~1.2A	100V~3.2A, 200V~1.7A						
	EFFICIENCY (AC220V)	70% typ	75% typ	75% typ	75% typ	78% typ	80% typ	80% typ	
	INRUSH CURRENT	20A typ(ACIN 110V, I _o =100%), 40A typ(ACIN 220V, I _o =100%) at cold start.							
OUTPUT	VOLTAGE [V]	5	9	12	15	24	36	48	
	CURRENT [A]	20	16.5	12	10	6	4.1	2	
	REGULATION, LINE [mV]	25 Max	45 Max	60 Max	75 Max	120 Max	180 Max	240 Max	
	REGULATION, LOAD [mV]	50 Max	90 Max	120 Max	150 Max	240 Max	360 Max	480 Max	
	RIPPLE [mVp-p]	50 Max	90 Max	120 Max	150 Max	240 Max	360 Max	480 Max	
	RIPPLE, NOISE [mVp-p]	100 Max	140 Max	170 Max	170 Max	290 Max	410 Max	530 Max	
	TEMPERATURE DRIFT 0~+50°C [mV]	75 Max	135 Max	180 Max	225 Max	360 Max	540 Max	720 Max	
	RISE TIME [ms]	600 Max (ACIN 110V/220V I _o =100%)							
	HOLDING TIME [ms]	17 typ (ACIN 110V/220V 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							
ELECTRICALLY ISOLATED	INPUT-OUTPUT	AC1,500V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)							
	INPUT-CASE, FG	AC1,500V 1 minute current 20mA, DC 500V 100MΩ (At room temperature & Humidity)							
	OUTPUT-CASE, FG	AC500V 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	-							
	LINE CONDUCTED RF VOLTAGE	-							

ESF100, 150-S EXTERNAL VIEW



- * Weight : 1.1Kg
- * Tolerance : ±1
- * Dimensions in mm