

## ESF850-S SPECIFICATIONS

	MODEL	ESF850-3R3	ESF850-05	ESF850-09	ESF850-12	ESF850-15	ESF850-24
INPUT	VOLTAGE, FREQUENCY	AC100-120V / 200~240V (AC90~132V / 180~264V or DC255~370V), 50/60Hz (47~440Hz or DC)					
	CURRENT	110V~14.0A 220V~7.0A	110V~18.0A, 220V~9.0A				
	EFFICIENCY (AC220V)	70% typ	78% typ	80% typ	81% typ	81% typ	83% typ
	INRUSH CURRENT	30A typ(ACIN 110V, I <sub>c</sub> =100%), 60A typ(ACIN 220V, I <sub>c</sub> =100%) at cold start.					
OUTPUT	VOLTAGE [V]	3.3	5	9	12	15	24
	CURRENT [A]	170	170	95	71	57	36
	REGULATION, LINE [mV]	25 Max	25 Max	45 Max	60 Max	75 Max	120 Max
	REGULATION, LOAD [mV]	50 Max	50 Max	90 Max	120 Max	150 Max	240 Max
	RIPPLE [mVp-p]	50 Max	50 Max	90 Max	120 Max	150 Max	240 Max
	RIPPLE, NOISE [mVp-p]	100 Max	100 Max	140 Max	170 Max	200 Max	290 Max
	TEMPERATURE DRIFT 0~+50°C [mV]	50 Max	75 Max	135 Max	180 Max	225 Max	360 Max
	RISE TIME [ms]	800 Max (ACIN 110V/220V I <sub>c</sub> =100%)					
HOLDING TIME [ms]	17 typ (ACIN 110V/220V I <sub>c</sub> =100%)						
PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically					
	OVER VOLTAGE PROTECTION	Works at 115~140% of rating (In the case of 3.3V, it is 115~160%)					
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	-					

## ESF850A-S SPECIFICATIONS

	MODEL	ESF850A-05	ESF850A-12	ESF850A-15	ESF850A-24	ESF850A-48
INPUT	VOLTAGE, FREQUENCY	AC100V/220V (AC90~132V / 180~264V)				
	CURRENT	110V~18.0A, 220V~9.0A				
	EFFICIENCY (AC220V)	78% typ	81% typ	81% typ	83% typ	% typ
	INRUSH CURRENT	30A typ(ACIN 110V, I <sub>c</sub> =100%), 60A typ(ACIN 220V, I <sub>c</sub> =100%) at cold start.				
OUTPUT	VOLTAGE [V]	5	12	15	24	48
	CURRENT [A]	170	71	57	36	18
	REGULATION, LINE [mV]	25 Max	60 Max	75 Max	120 Max	240 Max
	REGULATION, LOAD [mV]	100 Max	120 Max	150 Max	240 Max	480 Max
	RIPPLE [mVp-p]	100 Max	120 Max	150 Max	240 Max	480 Max
	RIPPLE, NOISE [mVp-p]	150 Max	170 Max	190 Max	290 Max	530 Max
	TEMPERATURE DRIFT 0~+50°C [mV]	50 Max	120 Max	150 Max	240 Max	430 Max
	RISE TIME [ms]	800 Max (ACIN 110V/220V I <sub>c</sub> =100%)				
HOLDING TIME [ms]	17 typ (ACIN 110V/220V I <sub>c</sub> =100%)					
PROTECTION CIRCUIT	OVER CURRENT PROTECTION	Works at over 110% of rating and recovers automatically Protection type: Constant current limiting unit will shut down o/p voltage after 10sec, Re-power on to recover				
	OVER VOLTAGE PROTECTION	Works at 115~ 140% of rating Protection type: Shut down o/p voltage, re-power on to recover				
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	-				