ALL PSU electronic power solutions

AC-DC Power Supplies Enclosed Type

FDA50F

Ordering information

FD	A	50	F	-□	-□
①	②	③	④	⑤	⑥

①Series name
②Single output
③Output wattage
④Full range input
⑤Output voltage
⑥Optional *1
C: with Coating
N1 : with DIN rail
L: with operation LED

For option details, refer to Instruction Manual 5.1.

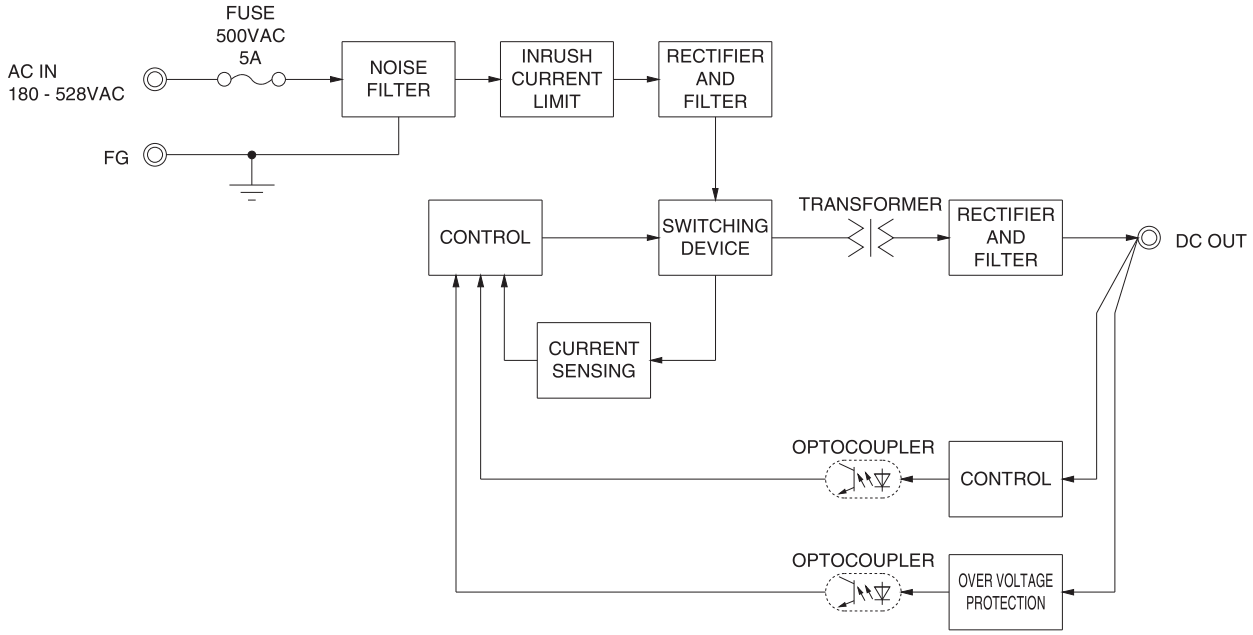
MODEL		FDA50F-24
MAX OUTPUT WATTAGE[W]	*2	50.4
DC OUTPUT	*2	24V 2.1A

SPECIFICATIONS

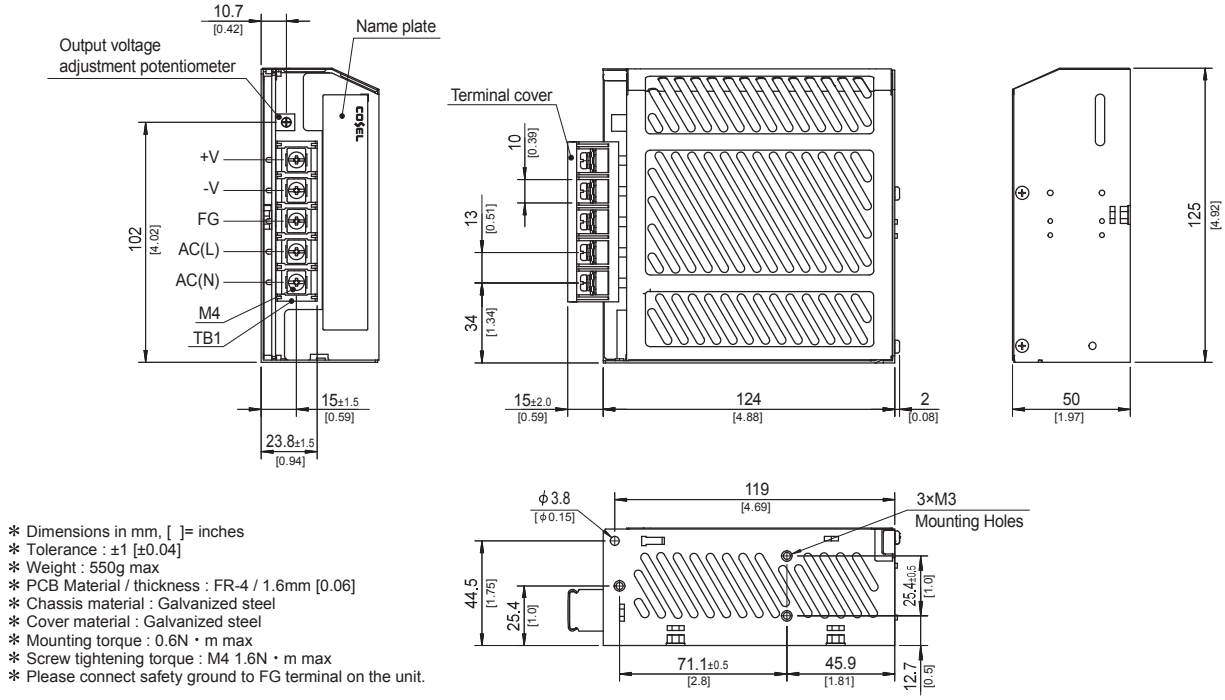
	MODEL		FDA50F-24
INPUT	VOLTAGE	[VAC] *2	180 - 528 1φ (Refer to "Derating" and Instruction Manual 1.1)
		[VDC] *3	255 - 746
	CURRENT[A]	ACIN 200V	0.50typ (47 - 63Hz)
		ACIN 400V	0.30typ (47 - 63Hz)
	FREQUENCY[Hz]		50 / 60 (47 - 440)
	EFFICIENCY[%]	ACIN 200V	87typ
		ACIN 400V	86typ
	INRUSH CURRENT[A]	ACIN 200V	25typ (Io=100%) at cold start
		ACIN 400V	50typ (Io=100%) at cold start
	LEAKAGE CURRENT[mA]		0.75max (ACIN 480V 60Hz, Io=100%, According to IEC62368-1)
OUTPUT	VOLTAGE[V]		24
	CURRENT[A]		2.1
	LINE REGULATION[mV]	*4	96max
	LOAD REGULATION[mV]	*4	150max
	RIPPLE[mVp-p] *5	0 to +50℃	240max
		-20 to 0℃	320max
	RIPPLE NOISE[mVp-p] *5	0 to +50℃	680max
		-20 to 0℃	720max
	TEMPERATURE REGULATION[mV]	-20 to +50℃	600max
	DRIFT[mV]	*6	100max
	START-UP TIME[ms]		800max
	HOLD-UP TIME[ms]		20typ (ACIN 200V, Io=100%) / 30typ (ACIN 240V, Io=100%) / 100typ (ACIN 400V, Io=100%)
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		21.60 to 26.40
	OUTPUT VOLTAGE SETTING[V]		24.00 to 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically
	OVERVOLTAGE PROTECTION		27.60 to 33.60
	REMOTE SENSING		Not provided
ISOLATION	INPUT-OUTPUT		4,243VAC 1minute, Cutoff current = 10mA, 500VDC 50MΩ min (At Room Temperature)
	INPUT-FG		2,829VAC 1minute, Cutoff current = 10mA, 500VDC 50MΩ min (At Room Temperature)
	OUTPUT-FG		500VAC 1minute, Cutoff current = 25mA, 500VDC 50MΩ min (At Room Temperature)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	*2	-20 to +70℃, 20 - 90%RH (Non condensing) 5,000m (16,500feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 5,000m (16,500feet) max
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL62368-1, C-UL (equivalent to CAN/CSA-C22.2No.62368-1), EN62368-1
	CONDUCTED NOISE		Complies with CISPR11-A, CISPR32-A, EN55011-A, EN55032-A, FCC Part15-A, FCC Part18-A, VCCI-A
	HARMONIC ATTENUATOR	*7	Complies with IEC61000-3-2 (Class A) (No built-in power factor correction)
OTHERS	CASE SIZE/WEIGHT		50×125×124mm [1.97×4.92×4.88 inches] (without terminal block) (W×H×D) / 550g max
	COOLING METHOD	*2	Convection (Refer to "Derating")

*1 The listed options may affect the published standard specifications. Please contact us for detailed product specifications.
*2 Derating is required.
*3 Safety agency approvals are not applicable for DC input.
*4 At low load conditions, the burst mode operation will start. To check load regulation, you will need to measure the characteristics at average mode with instruments.
*5 This is the value that measured on measuring board with capacitor of 22μF and 0.1μF at 150mm from output terminal.
Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:RM104). Ripple and ripple noise spec is change at Io=0 to 15% by burst operation.
*6 Drift is the change in DC output for an eight hours period after a half-hour warm-up at 25℃.
*7 Please contact us about another class. When two or more units are operating it may not comply with the IEC61000-3-2. Please contact us for details.
* Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be damaged.
* Parallel operation is not possible.
* Sound noise may be generated by power supply in case of pulse load.

Block diagram



External view



* Dimensions in mm, [ ]= inches
* Tolerance : ±1 [±0.04]
* Weight : 550g max
* PCB Material / thickness : FR-4 / 1.6mm [0.06]
* Chassis material : Galvanized steel
* Cover material : Galvanized steel
* Mounting torque : 0.6N・m max
* Screw tightening torque : M4 1.6N・m max
* Please connect safety ground to FG terminal on the unit.

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