COSEL AC-DC Power Supplies DIN Rail Type

KLEA/KLNA120F

Ordering information

KL□ A 120 F -□□ -□

① ② ③ ④ ⑤ ⑥

Recommended EMI/EMC Filter
NAC-04-472-D

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

*Use of an EMI/EMC filter is recommended when a power supply is connected with several devices so that additional filtering is necessary.

①Series name
KLE : Euro Style I/O Terminals
KLN : Barrier Blocks Style I/O Terminals
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Option
C : with Coating
N2: Screw mounting

*Make sure that your final application will meet the required EMC standard by measuring the EMI level of the power supply used together with an EMI/EMC filter.

MODEL	KLEA/KLNA120F-24	KLEA/KLNA120F-48
MAX OUTPUT WATTAGE[W]	120	120
DC OUTPUT	24V 5A	48V 2.5A

SPECIFICATIONS

	MODEL		KLEA/KLNA120F-24	KLEA/KLNA120F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ (Output derating is required) *9	
	CURRENT[A]	ACIN 115V	1.2typ	
		ACIN 230V	0.6typ	
	FREQUENCY[Hz]		50 / 60 (45 - 66)	
	EFFICIENCY[%]	ACIN 115V	86.5typ	
		ACIN 230V	88.0typ	
	POWER FACTOR	ACIN 115V	0.98typ	
		ACIN 230V	0.90typ	
	INRUSH CURRENT[A]	ACIN 115V	20typ (Io=100%)(at cold start Ta=25℃)	
	*1	ACIN 230V	40typ (Io=100%)(at cold start Ta=25℃)	
	LEAKAGE CURRENT[mA]		0.45 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)	
OUTPUT	VOLTAGE[V]		24	48
	CURRENT[A]		5	2.5
	LINE REGULATION[mV] *2		96max (Io=30-100%) *8	192max (Io=30-100%) *8
	LOAD REGULATION[mV] *2		150max (Io=30-100%) *8	300max (Io=30-100%) *8
	RIPPLE[mVp-p] *3	0 to +70℃	150max	150max
		-20 - 0℃	240max	240max
		Io=0 - 30%	500max	650max
	RIPPLE NOISE[mVp-p] *3	0 to +70℃	180max	180max
		-20 - 0℃	300max	300max
		Io=0 - 30%	500max	650max
	TEMPERATURE REGULATION[mV]	0 to +70℃	240max	480max
		-20 to +70℃	290max	600max
	DRIFT[mV] *4		96max	192max
	START-UP TIME[ms]		500typ (ACIN 115V, Io=100%)	
	HOLD-UP TIME[ms]		20typ (ACIN 115V, Io=100%)	
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		21.60 to 26.40	43.20 to 52.80
	OUTPUT VOLTAGE SETTING[V]		24.00 to 24.96	48.00 to 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically	
	OVERVOLTAGE PROTECTION[V]		27.60 to 33.60	54.00 to 67.20
	DC_OK LAMP		LED (Green)	
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)	
	INPUT-PE		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)	
	OUTPUT-PE		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)	
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-20 to +70℃ (Required to Derating), 20 - 90%RH (Non condensing)	
	STORAGE TEMP.,HUMID.AND ALTITUDE		-30 to +85℃, 20 - 90%RH (Non condensing)	
	VIBRATION *7		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60 minutes along Z axis (Non operating, mounted on DIN Rail)	
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis (Packing state)	
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1, UL508, Complies with DEN-AN	
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B	
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) *5	
OTHERS	CASE SIZE *6		38×124×117mm (W×H×D) [1.5×4.88×4.61 inches]	
	WEIGHT		580g max	
	COOLING METHOD		Convection / Forced air	

*1 The value is primary surge. The current of input surge to a built-in EMI/EMC Filter(0.2ms or less)is excluded.
*2 Please contact us about dynamic load and input response.
*3 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: RM103).
Please refer to the instruction manual 2.5.
*4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
*5 Please contact us about another class.
*6 Case size contains neither the umbo.
*7 Only as standard mounting orientation (A). Refer to the instruction manual 4.1. If install other than standard mounting orientation (A), please fix the power supply for withstand the vibration and impact.
*8 Burst operation at 30% load or less.
*9 Please contact us about DC input voltage.
* To meet the specifications. Do not operate over-loaded condition.
* A sound may occur from power supply at light or peak loading.

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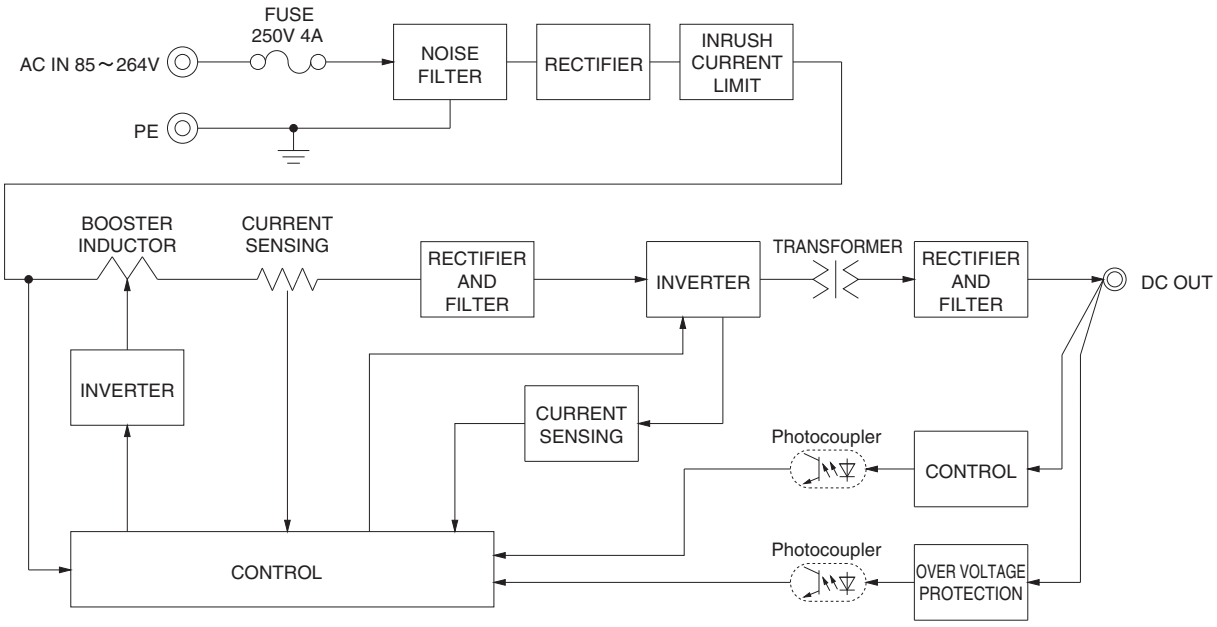
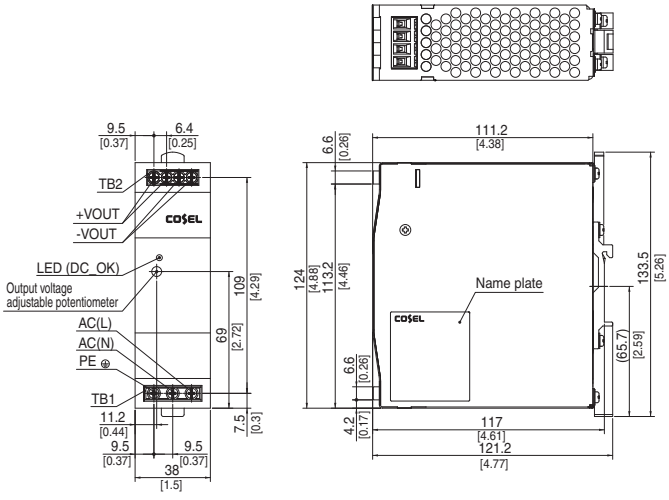
Block diagram



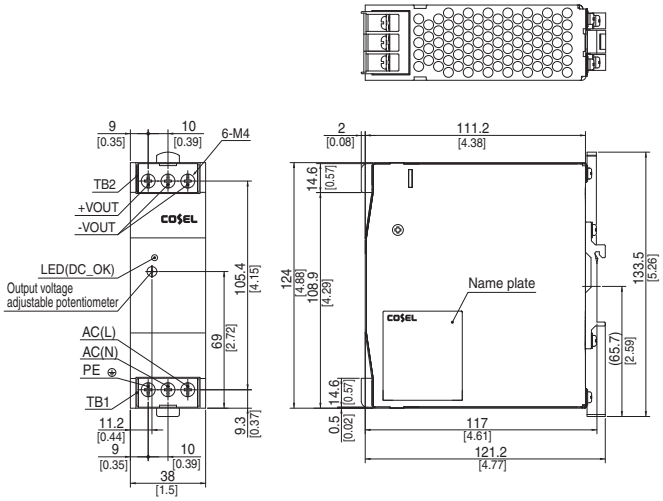
External view

<KLEA120F(Euro Style I/O Terminals)>



※ Tolerance : ±1.5 [±0.06]
※ Weight : 580g max
※ PCB Material/thickness : FR-4 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Case material : Stainless steel
※ Din rail attachment material : Aluminum, Nylon
※ Dimensions in mm, [ ] = inches
※ Screw tightening torque : 1N・m max

<KLNA120F(Barrier Blocks Style I/O Terminals)>



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※ Screw tightening torque : 1.6N・m max

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COSEL AC-DC Power Supplies DIN Rail Type

KLEA/KLNA240F

Ordering information

KL□ A 240 F -□□ -□

① ② ③ ④ ⑤ ⑧

Recommended EMI/EMC Filter
NAC-06-472-D

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

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②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Option
C : with Coating
N2: Screw mounting

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MODEL	KLEA/KLNA240F-24	KLEA/KLNA240F-48
MAX OUTPUT WATTAGE[W]	240	240
DC OUTPUT	24V 10A	48V 5A

SPECIFICATIONS

	MODEL		KLEA/KLNA240F-24	KLEA/KLNA240F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ (Output derating is required) *8	
	CURRENT[A]	ACIN 115V	2.4typ	
		ACIN 230V	1.3typ	
	FREQUENCY[Hz]		50 / 60 (45 - 66)	
	EFFICIENCY[%]	ACIN 115V	88typ	
		ACIN 230V	90typ	
	POWER FACTOR	ACIN 115V	0.98typ	
		ACIN 230V	0.90typ	
	INRUSH CURRENT[A] *1	ACIN 115V	20typ (Io=100%)(at cold start Ta=25℃)	
		ACIN 230V	40typ (Io=100%)(at cold start Ta=25℃)	
	LEAKAGE CURRENT[mA]		0.45 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)	
OUTPUT	VOLTAGE[V]		24	48
	CURRENT[A]		10	5
	LINE REGULATION[mV] *2		96max	192max
	LOAD REGULATION[mV] *2		150max	300max
	RIPPLE[mVp-p] *3	0 to +70℃	150max	150max
		-20 - 0℃	240max	240max
	RIPPLE NOISE[mVp-p] *3	0 to +70℃	180max	180max
		-20 - 0℃	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +70℃	240max	480max
		-20 to +70℃	290max	600max
	DRIFT[mV] *4		96max	192max
	START-UP TIME[ms]		500typ (ACIN 115V, Io=100%)	
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ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)	
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ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-20 to +70℃ (Required to Derating), 20 - 90%RH (Non condensing)	
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	WEIGHT		750g max	
	COOLING METHOD		Convection / Forced air	

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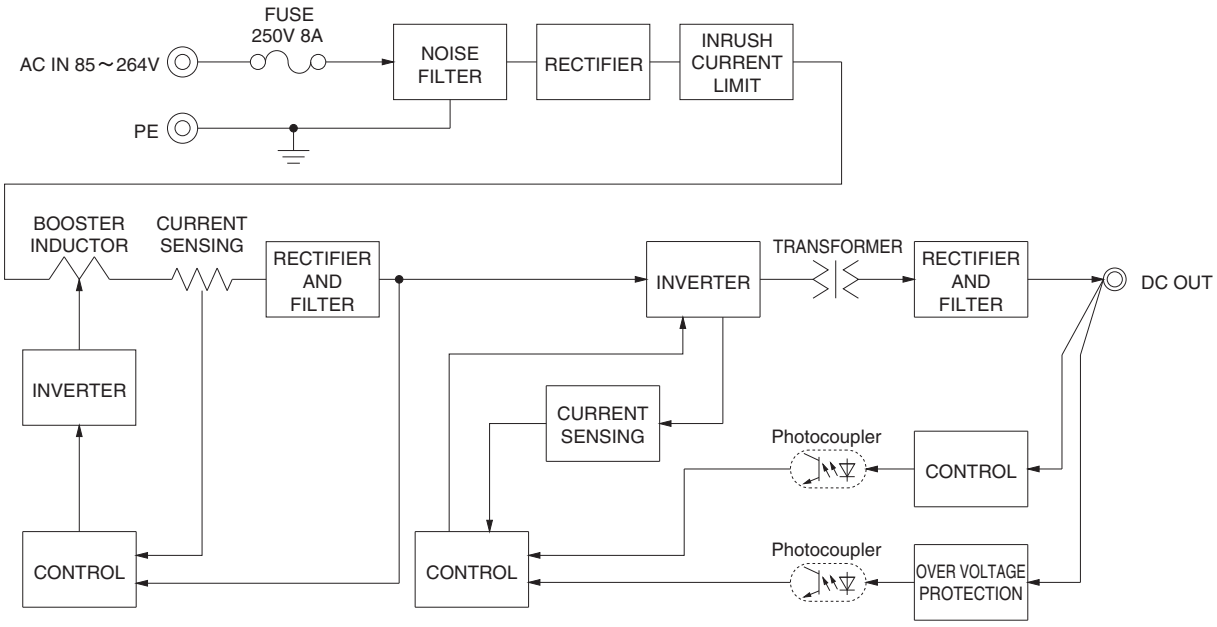

External view

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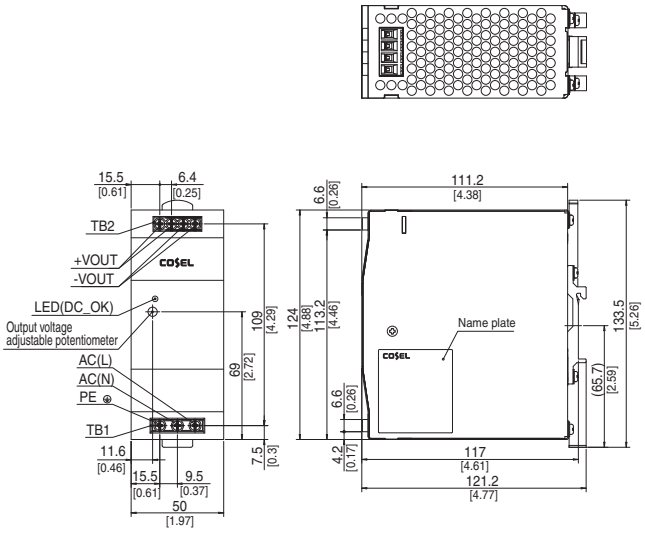

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※ Dimensions in mm, [ ] = inches
※ Screw tightening torque : 1N・m max

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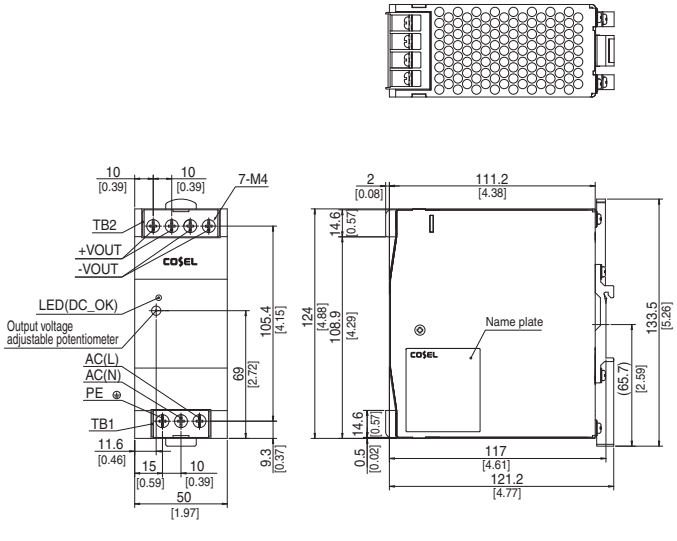

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