

**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  
\*The EMI/EMC Filter is recommended to connect with several devices.

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

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

## SPECIFICATIONS

	MODEL	KLEA/KLNA120F-24	KLEA/KLNA120F-48	
<b>INPUT</b>	<b>VOLTAGE[V]</b>	AC85 - 264 1 φ (Output derating is required) *9		
	<b>CURRENT[A]</b>	ACIN 115V	1.2typ	
		ACIN 230V	0.6typ	
	<b>FREQUENCY[Hz]</b>	50 / 60 (47 - 63)		
	<b>EFFICIENCY[%]</b>	ACIN 115V	86.5typ	
		ACIN 230V	88.0typ	
	<b>POWER FACTOR</b>	ACIN 115V	0.98typ	
		ACIN 230V	0.90typ	
	<b>INRUSH CURRENT[A]</b>	ACIN 115V	20typ (Io=100%)(at cold start Ta=25°C)	
		*1 ACIN 230V	40typ (Io=100%)(at cold start Ta=25°C)	
<b>LEAKAGE CURRENT[mA]</b>	0.45 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)			
<b>OUTPUT</b>	<b>VOLTAGE[V]</b>	24	48	
	<b>CURRENT[A]</b>	5	2.5	
	<b>LINE REGULATION[mV]</b> *2	96max (Io=30-100%) *8	192max (Io=30-100%) *8	
	<b>LOAD REGULATION[mV]</b> *2	150max (Io=30-100%) *8	300max (Io=30-100%) *8	
	<b>RIPPLE[mVp-p]</b> *3	0 to +70°C	150max	150max
		-20 - 0°C	240max	240max
		Io=0 - 30%	500max	650max
	<b>RIPPLE NOISE[mVp-p]</b> *3	0 to +70°C	180max	180max
		-20 - 0°C	300max	300max
		Io=0 - 30%	500max	650max
	<b>TEMPERATURE REGULATION[mV]</b>	0 to +70°C	240max	480max
		-20 to +70°C	290max	600max
	<b>DRIFT[mV]</b> *4	96max	192max	
	<b>START-UP TIME[ms]</b>	500typ (ACIN 115V, Io=100%)		
	<b>HOLD-UP TIME[ms]</b>	20typ (ACIN 115V, Io=100%)		
<b>OUTPUT VOLTAGE ADJUSTMENT RANGE[V]</b>	21.60 to 26.40	43.20 to 52.80		
<b>OUTPUT VOLTAGE SETTING[V]</b>	24.00 to 24.96	48.00 to 49.92		
<b>PROTECTION CIRCUIT AND OTHERS</b>	<b>OVERCURRENT PROTECTION</b>	Works over 105% of rating and recovers automatically		
	<b>OVERVOLTAGE PROTECTION[V]</b>	27.60 to 33.60	54.00 to 67.20	
	<b>DC_OK LAMP</b>	LED (Green)		
<b>ISOLATION</b>	<b>INPUT-OUTPUT</b>	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	<b>INPUT-PE</b>	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	<b>OUTPUT-PE</b>	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)		
<b>ENVIRONMENT</b>	<b>OPERATING TEMP., HUMID. AND ALTITUDE</b>	-20 to +70°C (Required to Derating), 20 - 90%RH (Non condensing)		
	<b>STORAGE TEMP., HUMID. AND ALTITUDE</b>	-30 to +85°C, 20 - 90%RH (Non condensing)		
	<b>VIBRATION</b> *7	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60 minutes along Z axis (Non operating, mounted on DIN Rail)		
	<b>IMPACT</b>	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis (Packing state)		
<b>SAFETY AND NOISE REGULATIONS</b>	<b>AGENCY APPROVALS</b>	UL60950-1, C-UL (CSA60950-1), EN60950-1, UL508, Complies with DEN-AN		
	<b>CONDUCTED NOISE</b>	Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B		
	<b>HARMONIC ATTENUATOR</b>	Complies with IEC61000-3-2 (Class A) *5		
<b>OTHERS</b>	<b>CASE SIZE</b> *6	38 x 124 x 117mm (W x H x D) [1.5 x 4.88 x 4.61 inches]		
	<b>WEIGHT</b>	580g max		
	<b>COOLING METHOD</b>	Convection / Forced air		

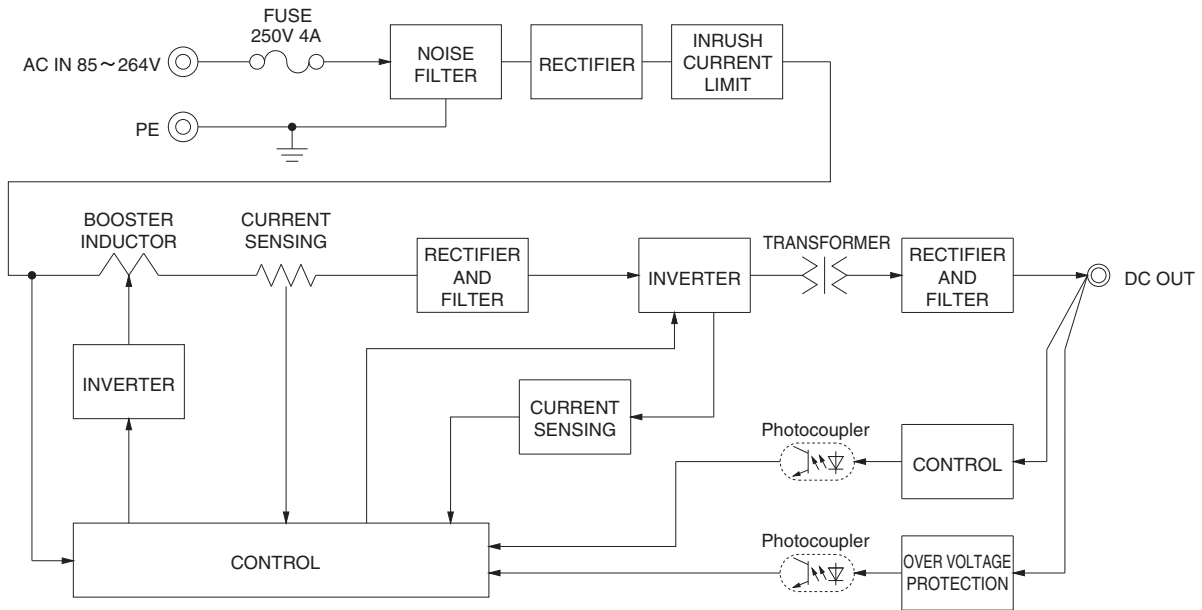
\*1 The value is primary surge. The current of input surge to a built-in EMI/EMC Filter(0.2ms or less)is excluded.  
 \*2 Please contact us about dynamic load and input response.  
 \*3 This is the value that measured on measuring board with capacitor of 22 μF and 0.1 μF at 150mm from output terminal.  
 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°C, with the input voltage held constant at the rated input/output.  
 \*5 Please contact us about another class.  
 \*6 Case size contains neither the umbro.  
 \*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.

Specifications are subject to change without notice. It is responsibility of each customer to thoroughly test each product and part number under their unique parameters and environments to ensure a product will work properly and reliably.

Click below for more details, to buy on-line or request volume pricing:  
<http://power.sager.com/cosel-KINA120F-power-supply.html>

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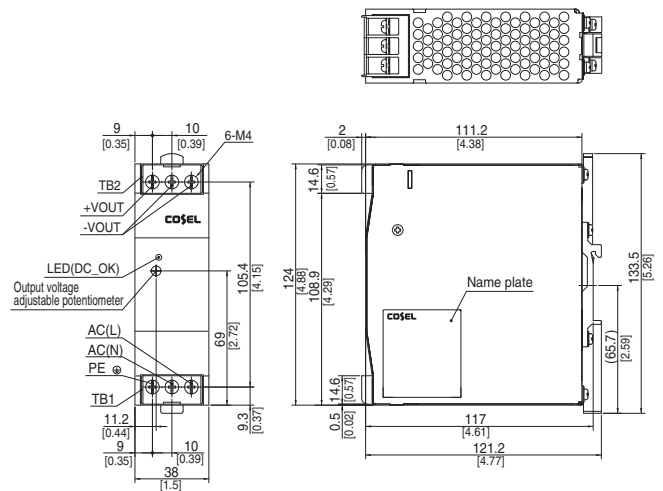
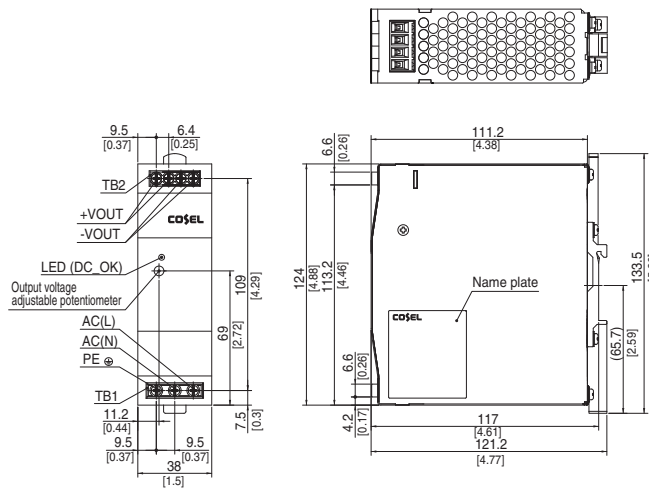
**Block diagram**



**External view**

<KLEA120F(Euro Style I/O Terminals)>

<KLNA120F(Barrier Blocks 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

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