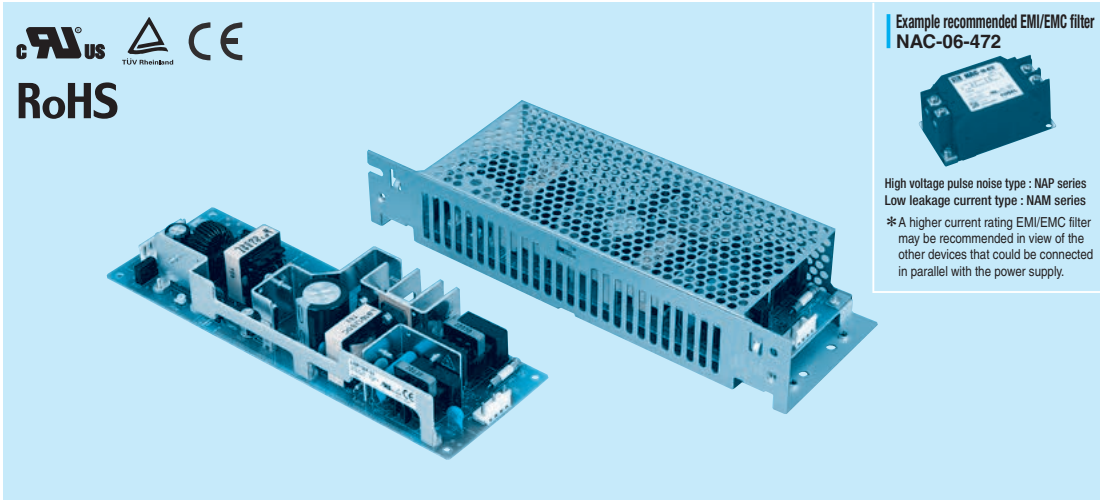
COSEL AC-DC Power Supplies Open Frame/ Enclosed Type

LEP100F

Ordering information

LEP ① 100 ② F ③ -24 ④ -□ ⑤



Example recommended EMI/EMC filter
NAC-06-472

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

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Output wattage
③Universal input
④Output voltage
⑤Optional ＊1 ＊6
G :Low leakage current
R :with Remote ON/OFF
S :with Chassis
SN:with Chassis & cover
T :Vertical terminal block
U :Operating stop voltage is set at a lower value
Z :with ZT

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

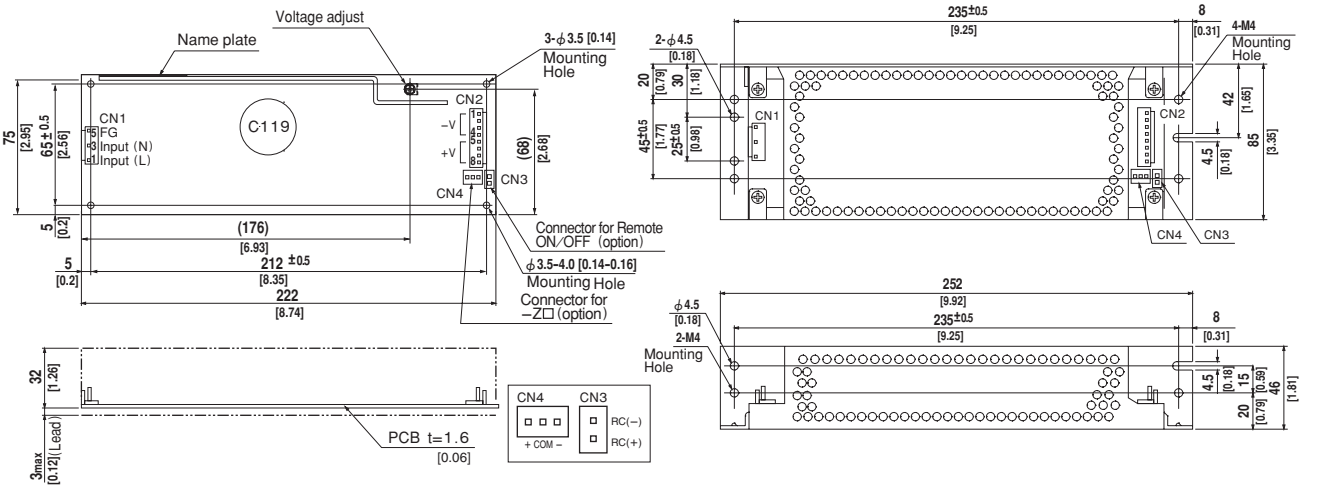
MODEL	LEP100F-24	LEP100F-36	LEP100F-48
DC OUTPUT	+24V 4.2(Peak 7)A	+36V 2.8(Peak 4.7)A	+48V 2.1(Peak 3.5)A

SPECIFICATIONS

	MODEL		LEP100F-24	LEP100F-36	LEP100F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC 120 - 370		
	CURRENT[A]	ACIN 100V	1.4typ (Io=100%)		
		ACIN 200V	0.7typ (Io=100%)		
	FREQUENCY[Hz]		50/60 (47 - 63) or DC		
	EFFICIENCY[%]	ACIN 100V	81typ (Io=100%)	82typ (Io=100%)	83typ (Io=100%)
		ACIN 200V	84typ (Io=100%)	85typ (Io=100%)	85typ (Io=100%)
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)		
		ACIN 200V	0.93typ (Io=100%)		
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start) (Ta=25℃)		
		ACIN 200V	30typ (Io=100%) (At cold start) (Ta=25℃)		
	LEAKAGE CURRENT[mA]		0.75max (60Hz, According to IEC60950 and DEN-AN)		
OUTPUT	VOLTAGE[V]		+24	+36	+48
	CURRENT[A]	＊2	0 - 4.2 (Peak 7)	0 - 2.8 (Peak 4.7)	0 - 2.1 (Peak 3.5)
	WATTAGE[W]		100.8 (Peak 168)	100.8 (Peak 169.2)	100.8 (Peak 168)
	LINE REGULATION[mV]		48max	48max	48max
	LOAD REGULATION[mV]		76max	90max	150max
	RIPPLE[mVp-p]	0 to +50℃ ＊3	120max	120max	150max
		-10 - 0℃ ＊3	160max	160max	300max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊3	150max	150max	250max
		-10 - 0℃ ＊3	180max	180max	350max
	TEMPERATURE REGULATION[mV]	0 to +50℃	120max	150max	240max
		-10 to +50℃	145max	180max	300max
	DRIFT[mV]	＊4	48max	48max	48max
	START-UP TIME[ms]		500max (ACIN 100V, Io=100%)		
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		21.4 - 26.4	26.4 - 39.6	39.6 - 52.8
	OUTPUT VOLTAGE SETTING[V]		23.0 - 25.0	35.0 - 37.0	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 101% of peak current and recovers automatically		
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating		
	REMOTE ON/OFF		Option (Refer to Instruction Manual)		
ISOLATION	INPUT-OUTPUT · RC	＊5	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	OUTPUT · RC-FG	＊5	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)		
	OUTPUT-RC	＊5	AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +70℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) 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		UL60950-1, C-UL(CSA60950-1), EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input)		
	CONDUCTED NOISE		Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B		
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊7		
OTHERS	CASE SIZE/WEIGHT		75×35×222mm [2.95×1.38×8.74 inches] (W×H×D) /380g max (with chassis & cover : 650g max)		
	COOLING METHOD		Convection		

＊1 Specification is changed at option, refer to Instruction Manual 6.
＊2 Peak loading for 10sec. And Duty 35% max, refer to Instruction Manual 5. In detail.
＊3 This is the value that measured on measuring board with capacitor of 22μF within 150mm from output terminal.Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
＊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 Applicable when remote control (optional) is added.
＊6 Please contact us about safety approvals for the model with option.
＊7 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with chassis and cover.
＊ A sound may occur from power supply at peak loading.

External view



I / O Connector		Mating Connector	Terminal
CN1	B3P5-VH	VHR-5N	Chain: SVH-21T-P1.1
			Loose: BVH-21T-P1.1
CN2	B8P-VH	VHR-8N	Chain: SVH-21T-P1.1
			Loose: BVH-21T-P1.1
CN3 (Option)	B2B-XH-A	XHP-2	Chain: SXH-001T-P0.6
			Loose: BXH-001T-P0.6
CN4 (Option)	B3B-XH-A	XHP-3	Chain: SXH-001T-P0.6
			Loose: BXH-001T-P0.6

(Mfr: J.S.T.)

〈PIN CONNECTION〉

CN1

Pin No.	Input
1	AC(L)
2	
3	AC(N)
4	
5	FG

CN2

Pin No.	Output
1, 2, 3, 4	−V
5, 6, 7, 8	+V

CN3 (Option)

Pin No.	Remote ON/OFF
1	RC(+)
2	RC(−)

CN4 (Option)

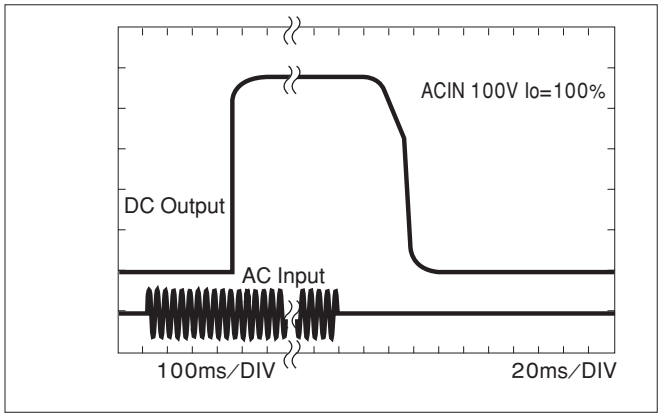
Pin No.	−Z□
1	+
2	COM
3	−

※Weight: 380g max
(with chassis & cover : 650g max)
※Tolerance: ±1 [±0.04]
※Dimensions in mm, [ ]=inches
※PCB Material : CEM3
※Chassis and cover is optional.
※Mounting torque: 1.5N·m(16kgf·cm)max

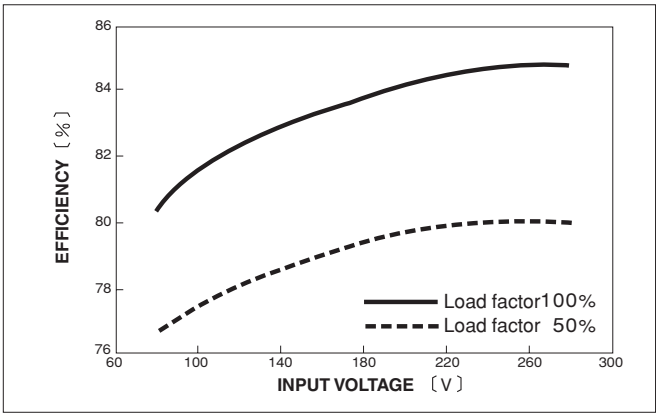
※Keep drawing current per pin below 5A(7A at peak load)for CN2

Performance data

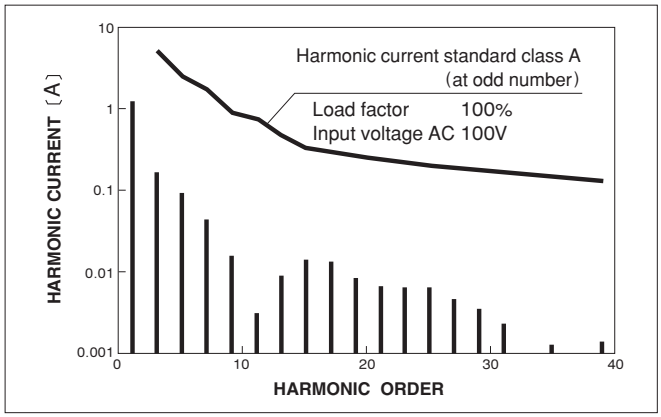
■RISE TIME & FALL TIME (LEP100F-24)



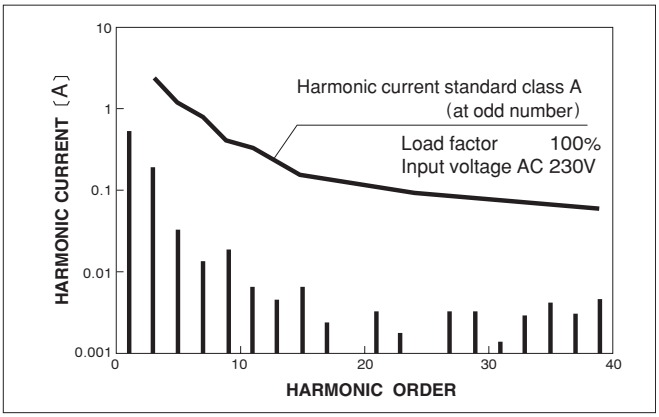
■EFFICIENCY (LEP100F-24)



■INPUT HARMONIC CURRENT (LEP100F-24)



■INPUT HARMONIC CURRENT (LEP100F-24)



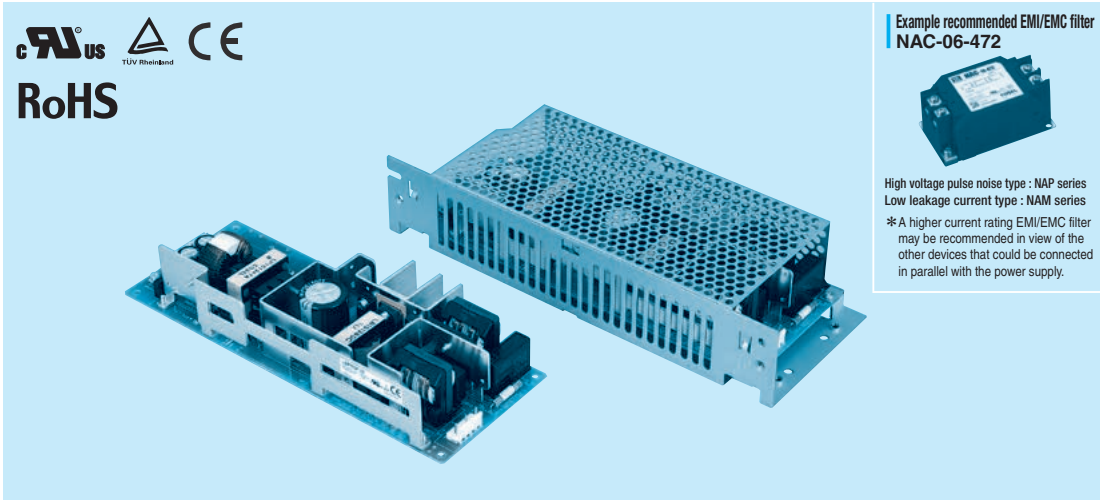
COSEL AC-DC Power Supplies Open Frame/ Enclosed Type

LEP150F

Ordering information

LEP 150 F -24 -□

① ② ③ ④ ⑤



Example recommended EMI/EMC filter
NAC-06-472

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

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Output wattage
③Universal input
④Output voltage
⑤Optional ＊1 ＊6
G :Low leakage current
R :with Remote ON/OFF
S :with Chassis
SN:with Chassis & cover
T :Vertical terminal block
U :Operating stop voltage is set at a lower value
Z :with ZT

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

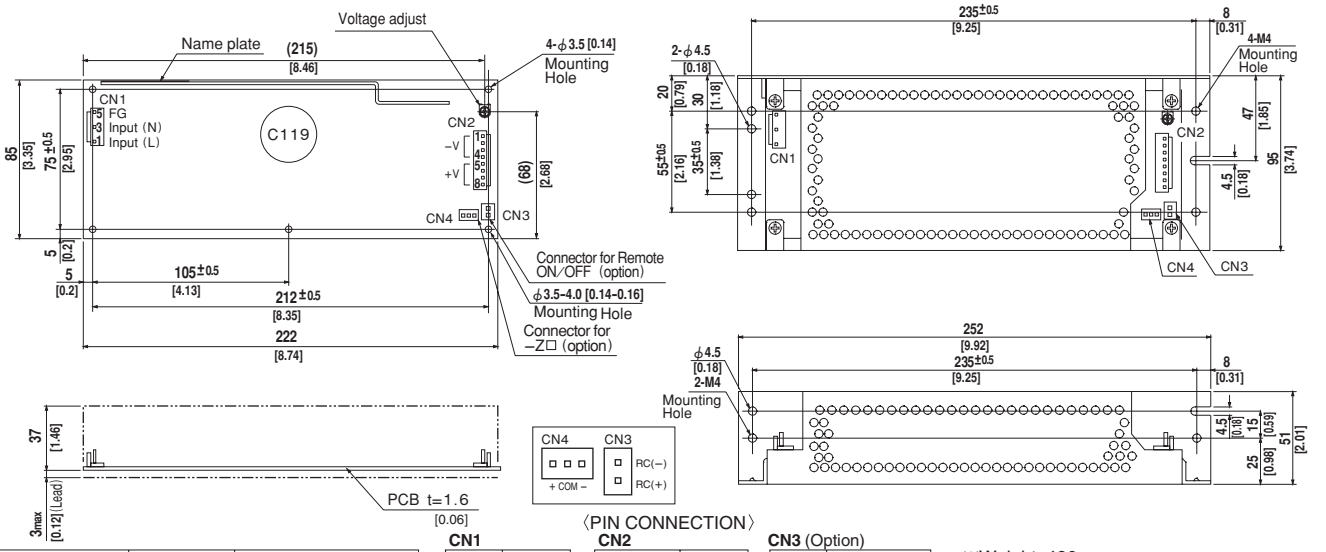
MODEL	LEP150F-24	LEP150F-36	LEP150F-48
DC OUTPUT	+24V 6.3(Peak 12)A	+36V 4.2(Peak 8)A	+48V 3.2(Peak 6)A

SPECIFICATIONS

	MODEL		LEP150F-24	LEP150F-36	LEP150F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC 120 - 370		
	CURRENT[A]	ACIN 100V	2.0typ (Io=100%)		
		ACIN 200V	1.0typ (Io=100%)		
	FREQUENCY[Hz]		50/60 (47 - 63) or DC		
	EFFICIENCY[%]	ACIN 100V	82typ (Io=100%)	83typ (Io=100%)	84typ (Io=100%)
		ACIN 200V	85typ (Io=100%)	86typ (Io=100%)	87typ (Io=100%)
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)		
		ACIN 200V	0.93typ (Io=100%)		
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start) (Ta=25℃)		
		ACIN 200V	30typ (Io=100%) (At cold start) (Ta=25℃)		
	LEAKAGE CURRENT[mA]		0.75max (60Hz, According to IEC60950 and DEN-AN)		
OUTPUT	VOLTAGE[V]		+24	+36	+48
	CURRENT[A]	＊2	0 - 6.3 (Peak 12)	0 - 4.2 (Peak 8)	0 - 3.2 (Peak 6)
	WATTAGE[W]		151.2 (Peak 288)	151.2 (Peak 288)	153.6 (Peak 288)
	LINE REGULATION[mV]		48max	48max	48max
	LOAD REGULATION[mV]		76max	90max	150max
	RIPPLE[mVp-p]	0 to +45℃ ＊3	120max	120max	150max
		-10 - 0℃ ＊3	160max	160max	300max
	RIPPLE NOISE[mVp-p]	0 to +45℃ ＊3	150max	150max	250max
		-10 - 0℃ ＊3	180max	180max	350max
	TEMPERATURE REGULATION[mV]	0 to +45℃	120max	150max	240max
		-10 to +45℃	145max	180max	300max
	DRIFT[mV]	＊4	48max	48max	48max
	START-UP TIME[ms]		500max (ACIN 100V, Io=100%)		
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		21.4 - 26.4	26.4 - 39.6	39.6 - 52.8
	OUTPUT VOLTAGE SETTING[V]		23.0 - 25.0	35.0 - 37.0	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 101% of peak current and recovers automatically		
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating		
	REMOTE ON/OFF		Option (Refer to Instruction Manual)		
ISOLATION	INPUT-OUTPUT · RC	＊5	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	OUTPUT · RC-FG	＊5	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)		
	OUTPUT-RC	＊5	AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +70℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) 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		UL60950-1, C-UL(CSA60950-1), EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input)		
	CONDUCTED NOISE		Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B		
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊7		
OTHERS	CASE SIZE/WEIGHT		85×40×222mm [3.35×1.57×8.74 inches] (W×H×D) /490g max (with chassis & cover : 830g max)		
	COOLING METHOD		Convection		

＊1 Specification is changed at option, refer to Instruction Manual 6.
＊2 Peak loading for 10sec. And Duty 35% max, refer to Instruction Manual 5. In detail.
＊3 This is the value that measured on measuring board with capacitor of 22μF within 150mm from output terminal.Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
＊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 Applicable when remote control (optional) is added.
＊6 Please contact us about safety approvals for the model with option.
＊7 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with chassis and cover.
＊ A sound may occur from power supply at peak loading.

External view



〈PIN CONNECTION〉

I / O Connector		Mating Connector	Terminal
CN1	B3P5-VH	VHR-5N	Chain : SVH-21T-P1.1 Loose: BVH-21T-P1.1
CN2	B8P-VH	VHR-8N	Chain : SVH-21T-P1.1 Loose: BVH-21T-P1.1
CN3 (Option)	B2B-XH-A	XHP-2	Chain : SXH-001T-P0.6 Loose: BXH-001T-P0.6
CN4 (Option)	B3B-XH-A	XHP-3	Chain : SXH-001T-P0.6 Loose: BXH-001T-P0.6

(Mfr: J.S.T.)

CN1

Pin No.	Input
1	AC(L)
2	
3	AC(N)
4	
5	FG

CN2

Pin No.	Output
1, 2, 3, 4	−V
5, 6, 7, 8	+V

CN3 (Option)

Pin No.	Remote ON/OFF
1	RC(+)
2	RC(−)

CN4 (Option)

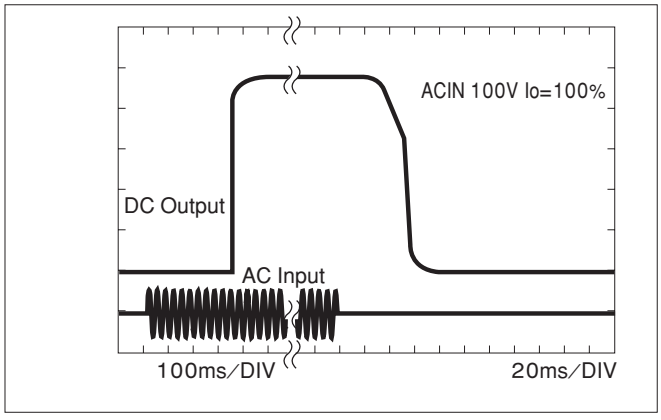
Pin No.	−Z□
1	+
2	COM
3	−

※Keep drawing current per pin below 5A(7A at peak load)for CN2

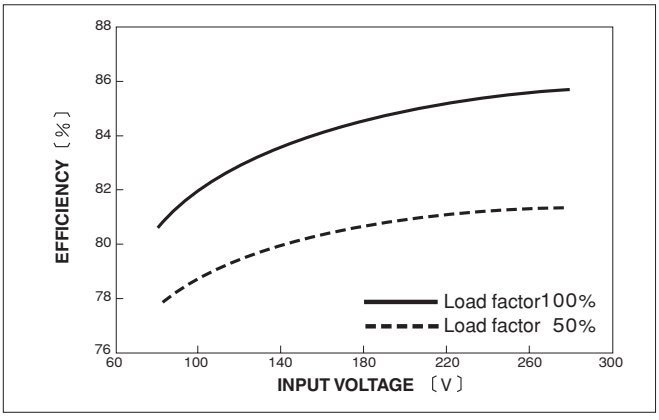
※Weight: 490g max
(with chassis & cover : 830g max)
※Tolerance: ±1 [±0.04]
※Dimensions in mm, [ ]=inches
※PCB Material : CEM3
※Chassis and cover is optional.
※Mounting torque: 1.5N·m(16kgf·cm)max

Performance data

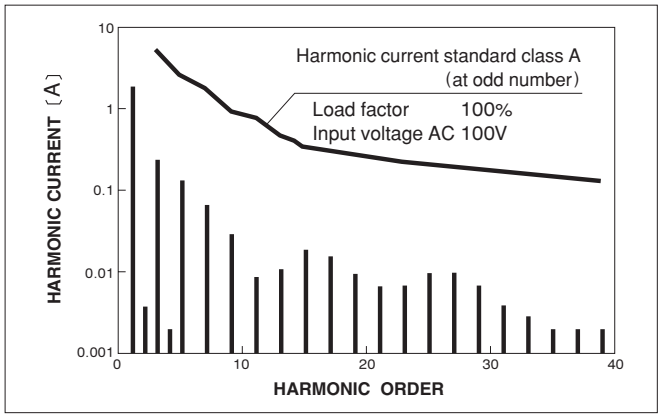
■RISE TIME & FALL TIME (LEP150F-24)



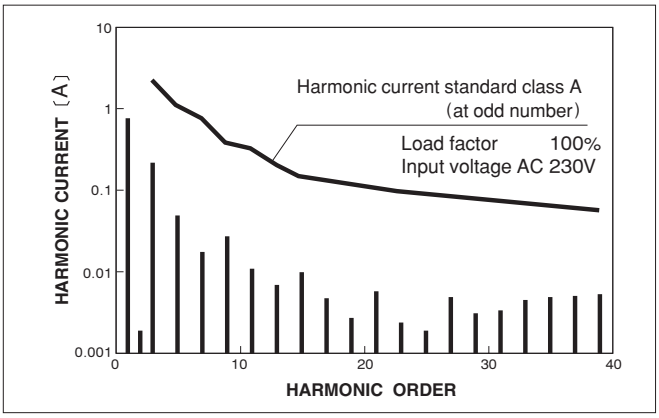
■EFFICIENCY (LEP150F-24)



■INPUT HARMONIC CURRENT (LEP150F-24)



■INPUT HARMONIC CURRENT (LEP150F-24)

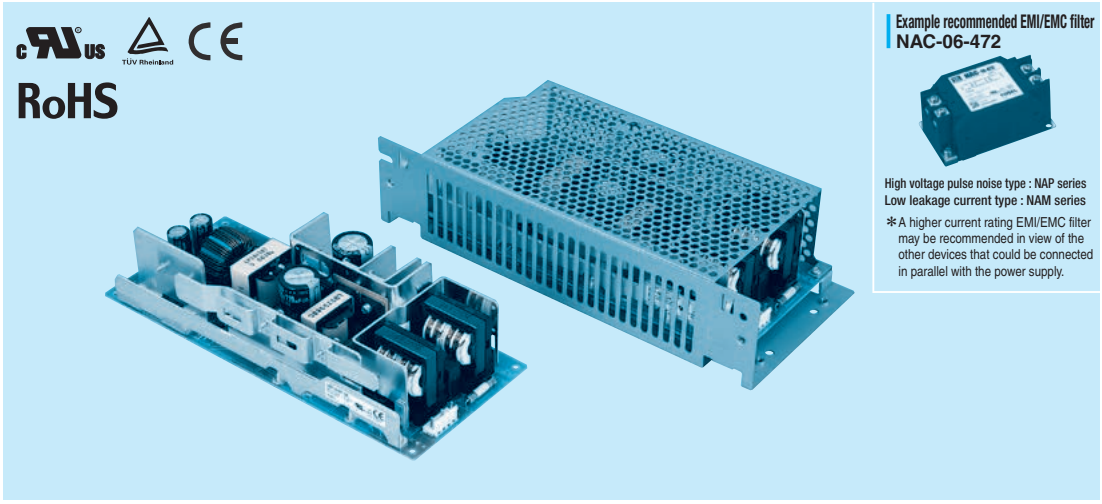


COSEL AC-DC Power Supplies Open Frame/ Enclosed Type

LEP240F

Ordering information

LEP	240	F	-24	-□	
①	②	③	④	⑤	



Example recommended EMI/EMC filter
NAC-06-472

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

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Output wattage
③Universal input
④Output voltage
⑤Optional ＊1 ＊6
G :Low leakage current
R :with Remote ON/OFF
S :with Chassis
SN:with Chassis & cover
T :Vertical terminal block
U :Operating stop voltage is set at a lower value
Z :with ZT

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

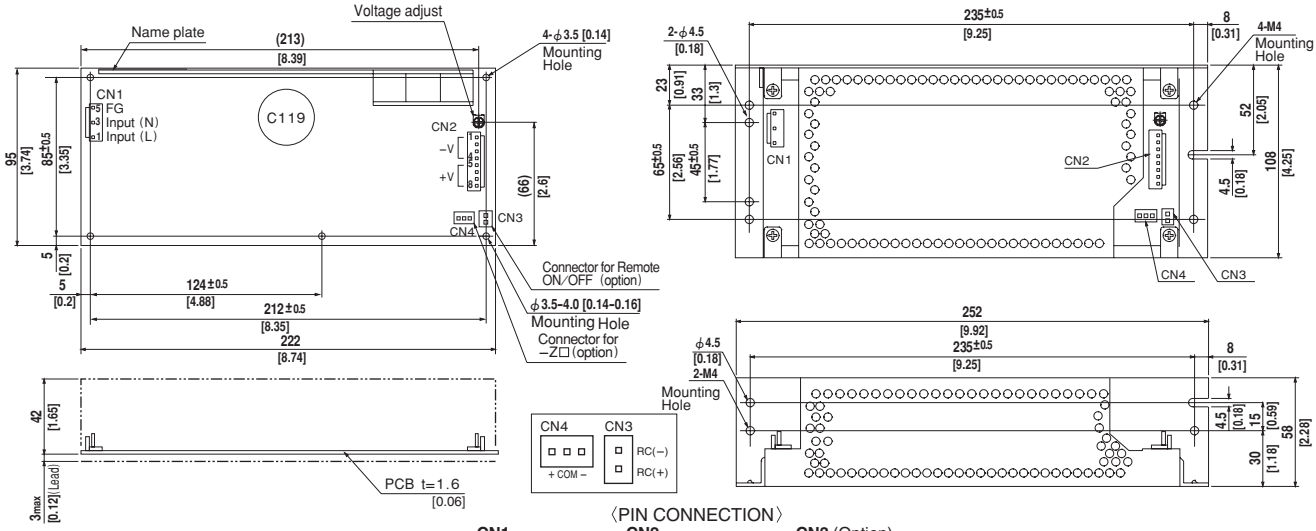
MODEL	LEP240F-24	LEP240F-36	LEP240F-48
DC OUTPUT	+24V 10(Peak 20)A	+36V 6.7(Peak 13.4)A	+48V 5(Peak 10)A

SPECIFICATIONS

	MODEL		LEP240F-24	LEP240F-36	LEP240F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC 120 - 370		
	CURRENT[A]	ACIN 100V	3.3typ (Io=100%)		
		ACIN 200V	1.7typ (Io=100%)		
	FREQUENCY[Hz]		50/60 (47 - 63) or DC		
	EFFICIENCY[%]	ACIN 100V	83typ (Io=100%)	84typ (Io=100%)	84typ (Io=100%)
		ACIN 200V	86typ (Io=100%)	87typ (Io=100%)	87typ (Io=100%)
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)		
		ACIN 200V	0.93typ (Io=100%)		
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (More than 3sec.to re-start)		
		ACIN 200V	30typ (Io=100%) (More than 3sec.to re-start)		
	LEAKAGE CURRENT[mA]		0.75max (60Hz, According to IEC60950 and DEN-AN)		
OUTPUT	VOLTAGE[V]		+24	+36	+48
	CURRENT[A]	＊2	0 - 10 (Peak 20)	0 - 6.7 (Peak 13.4)	0 - 5 (Peak 10)
	WATTAGE[W]		240.0 (Peak 480)	241.2 (Peak 482.4)	240.0 (Peak 480)
	LINE REGULATION[mV]		48max	48max	48max
	LOAD REGULATION[mV]		76max	90max	150max
	RIPPLE[mVp-p]	0 to +40℃ ＊3	120max	120max	150max
		-10 - 0℃ ＊3	160max	160max	300max
	RIPPLE NOISE[mVp-p]	0 to +40℃ ＊3	150max	150max	250max
		-10 - 0℃ ＊3	180max	180max	350max
	TEMPERATURE REGULATION[mV]	0 to +40℃	120max	150max	240max
		-10 to +40℃	145max	180max	300max
	DRIFT[mV]	＊4	48max	48max	48max
	START-UP TIME[ms]		500max (ACIN 100V, Io=100%)		
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		21.4 - 26.4	26.4 - 39.6	39.6 - 52.8
	OUTPUT VOLTAGE SETTING[V]		23.0 - 25.0	35.0 - 37.0	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 101% of peak current and recovers automatically		
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating		
	REMOTE ON/OFF		Option (Refer to Instruction Manual)		
ISOLATION	INPUT-OUTPUT · RC	＊5	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	OUTPUT · RC-FG	＊5	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)		
	OUTPUT-RC	＊5	AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +70℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) 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		UL60950-1, C-UL(CSA60950-1), EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input)		
	CONDUCTED NOISE		Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B		
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊7		
OTHERS	CASE SIZE/WEIGHT		95×45×222mm [3.74×1.77×8.74 inches] (W×H×D) /690g max (with chassis & cover : 1,070g max)		
	COOLING METHOD		Convection		

＊1 Specification is changed at option, refer to Instruction Manual 6.
＊2 Peak loading for 10sec. And Duty 35% max, refer to Instruction Manual 5. In detail.
＊3 This is the value that measured on measuring board with capacitor of 22μF within 150mm from output terminal.Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
＊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 Applicable when remote control (optional) is added.
＊6 Please contact us about safety approvals for the model with option.
＊7 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with chassis and cover.
＊ A sound may occur from power supply at peak loading.

External view



〈PIN CONNECTION〉

I / O Connector		Mating Connector	Terminal
CN1	B3P5-VH	VHR-5N	Chain: SVH-21T-P1.1
			Loose: BVH-21T-P1.1
CN2	B8P-VH	VHR-8N	Chain: SVH-21T-P1.1
			Loose: BVH-21T-P1.1
CN3 (Option)	B2B-XH-A	XHP-2	Chain: SXH-001T-P0.6
			Loose: BXH-001T-P0.6
CN4 (Option)	B3B-XH-A	XHP-3	Chain: SXH-001T-P0.6
			Loose: BXH-001T-P0.6

(Mfr: J.S.T.)

CN1

Pin No.	Input
1	AC(L)
2	
3	AC(N)
4	
5	FG

CN2

Pin No.	Output
1, 2, 3, 4	−V
5, 6, 7, 8	+V

CN3 (Option)

Pin No.	Remote ON/OFF
1	RC(+)
2	RC(−)

CN4 (Option)

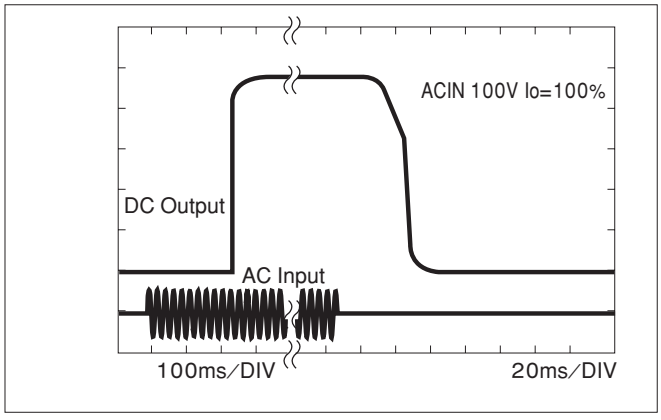
Pin No.	−Z□
1	+
2	COM
3	−

※Weight: 690g max
(with chassis & cover : 1,070g max)
※Tolerance: ±1 [±0.04]
※Dimensions in mm, [ ]=inches
※PCB Material : CEM3
※Chassis and cover is optional.
※Mounting torque: 1.5N·m(16kgf·cm)max

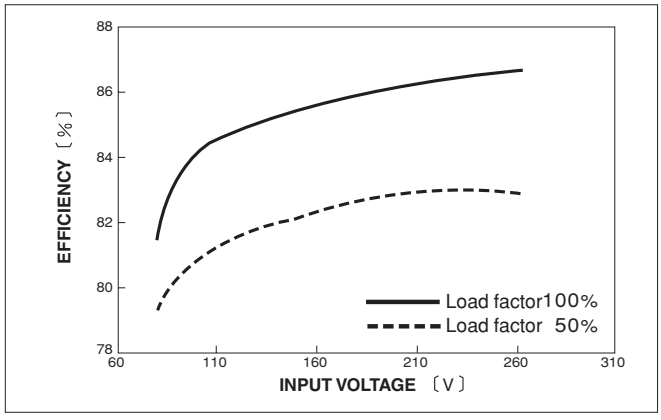
※Keep drawing current per pin below 5A(7A at peak load)for CN2

Performance data

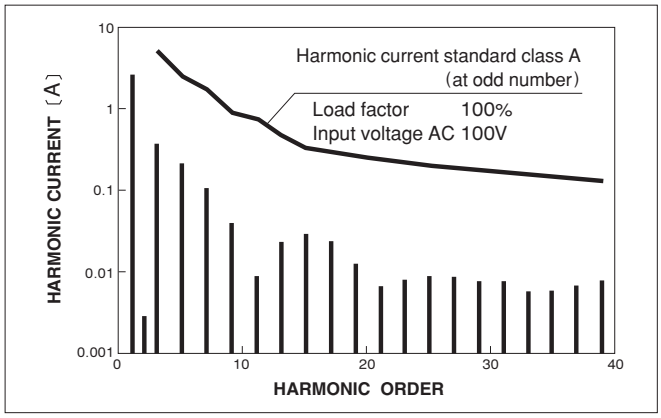
■RISE TIME & FALL TIME (LEP240F-24)



■EFFICIENCY (LEP240F-24)



■INPUT HARMONIC CURRENT (LEP240F-24)



■INPUT HARMONIC CURRENT (LEP240F-24)