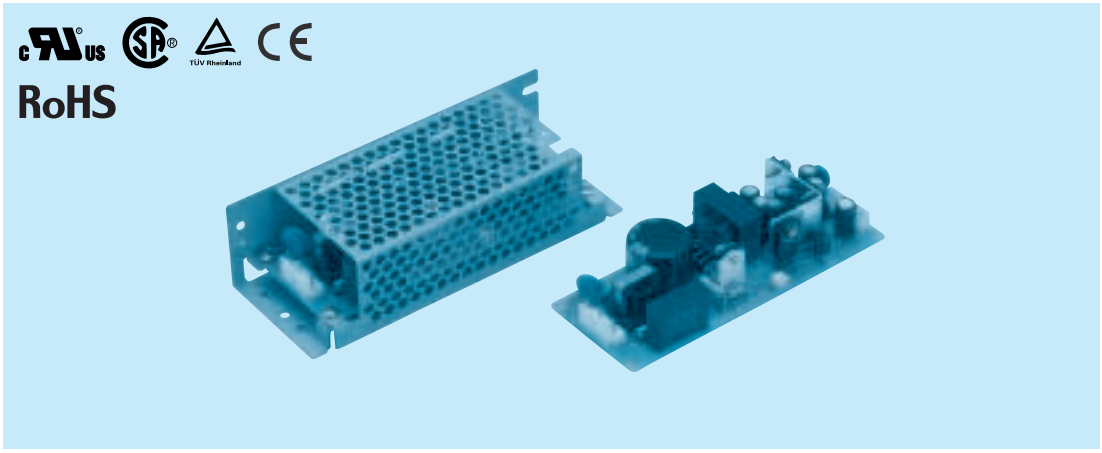
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LDC15F

Ordering information

LD ① C ② 15 ③ F ④ -1 ⑤ -□ ⑥



①Series name
②Multiple output
③Output wattage
④Universal input
⑤Output voltage combination
⑥Optional ＊4
C :with Coating
G :Low leakage current
S :with Chassis
SN:with Chassis & cover
Y :with Potentiometer

LDC

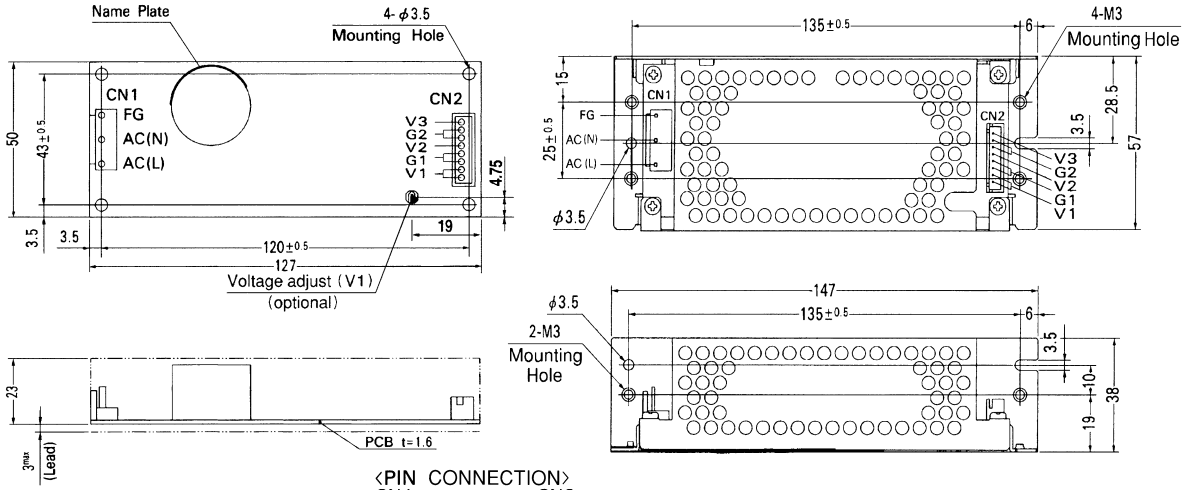
MODEL		LDC15F-1	LDC15F-2
DC OUTPUT	V1	+5V 2.0(Peak 3.0)A	+5V 2.0(Peak 3.0)A
	V2	+12V 0.3(Peak 0.6)A	+15V 0.3(Peak 0.6)A
	V3	-12V 0.2(Peak 0.3)A	-15V 0.2(Peak 0.3)A

SPECIFICATIONS

	MODEL		LDC15F-1			LDC15F-2		
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370					
	CURRENT[A]	ACIN 100V	0.4typ (Io=100%)					
	FREQUENCY[Hz]		47 - 440 or DC					
	EFFICIENCY[%]	ACIN 100V	70typ (Io=100%)					
	INRUSH CURRENT[A]	ACIN 100V	25typ (Io=100%)					
		ACIN 200V	50typ (Io=100%)					
	LEAKAGE CURRENT[mA]		0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)					
OUTPUT	VOLTAGE[V]		+5	+12	-12	+5	+15	-15
	CURRENT[A]	＊1	0 - 2.0 (Peak 3.0)	0 - 0.3 (Peak 0.6)	0 - 0.2 (Peak 0.3)	0 - 2.0 (Peak 3.0)	0 - 0.3 (Peak 0.6)	0 - 0.2 (Peak 0.3)
	LINE REGULATION[mV]		20max	48max	48max	20max	60max	60max
	LOAD REGULATION[mV]		100max	120max	120max	100max	150max	150max
	RIPPLE[mVp-p]	0 to +50℃ ＊2	100max	120max	120max	100max	120max	120max
		-10 - 0℃ ＊2	140max	160max	160max	140max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊2	120max	150max	150max	120max	150max	150max
		-10 - 0℃ ＊2	160max	180max	180max	160max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	350max	350max	50max	350max	350max
		-10 to +50℃	60max	420max	420max	60max	420max	420max
	DRIFT[mV]	＊3	20max	——	——	20max	——	——
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)					
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%), 20typ (ACIN 100V, Io=100%), 100typ (ACIN 200V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
	OUTPUT VOLTAGE SETTING[V]		4.9 to 5.3	11.4 to 12.6	-11.4 to -12.6	4.9 to 5.3	14.25 to 15.75	-14.25 to -15.75
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION		Works over 115% of rating by zener diode clamping (+5V only)					
	OPERATING INDICATION		Not provided					
	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Not provided					
ISOLATION	INPUT-OUTPUT		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-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)					
	OUTPUT-OUTPUT(V1-V2,V3)		AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)					
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet)					
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet)					
	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, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1					
	CONDUCTED NOISE		Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B					
OTHERS	CASE SIZE/WEIGHT		50×26×127mm (W×H×D) /150g max (without chassis and cover)					
	COOLING METHOD		Convection					

＊1 Peak load for 10sec. or less is acceptable if the total wattage is less than the rated wattage(-1: 16W, -2: 17.5W).When the load of +5V is OA, other output can be drawn by 80% of rated current.
＊2 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN:RM101).
＊3 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.
＊4 Please contact us about safety approvals for the model with option.
＊ Avoid prolonged use under over-load.
＊ Derating is required when operated with chassis and cover.

External view



I/O Connector		Mating Connector	Terminal
CN1	B3P5-VH	VHR-5N	Chain: SVH-21T-P1.1
			Loose: BVH-21T-P1.1
CN2	B8B-XH-A	XHP-8	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

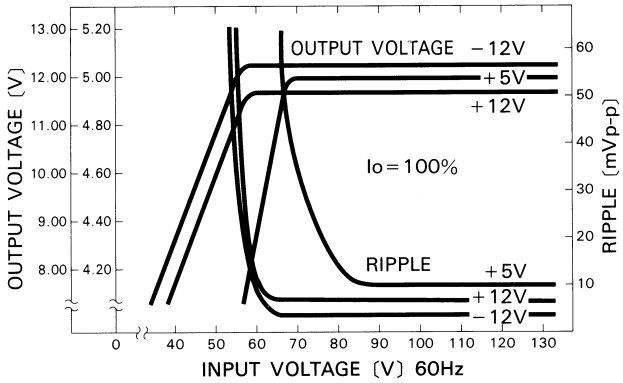
Pin No.	Output
1	V1
2	V1
3	G1
4	G1
5	V2
6	G2
7	G2
8	V3

※2A per pin maximum for CN2

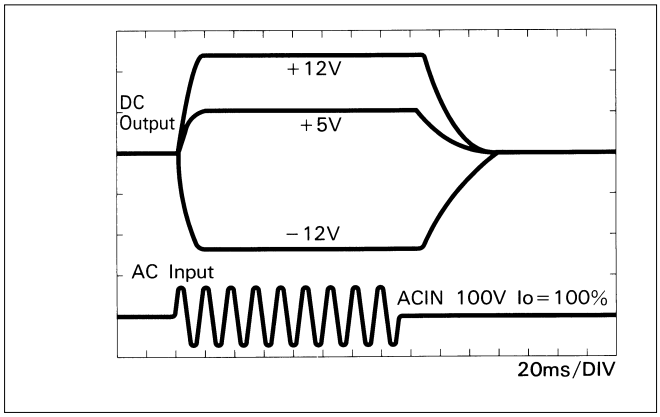
※ Weight: 150g or less (without chassis and cover)
※ Tolerance: ±1
※ Dimensions in mm.
※ PCB Material: Glass composite (CEM3)
※ Chassis and cover is optional.
※ Mounting torque: 0.6N·m (6.3kgf·cm) max

Performance data

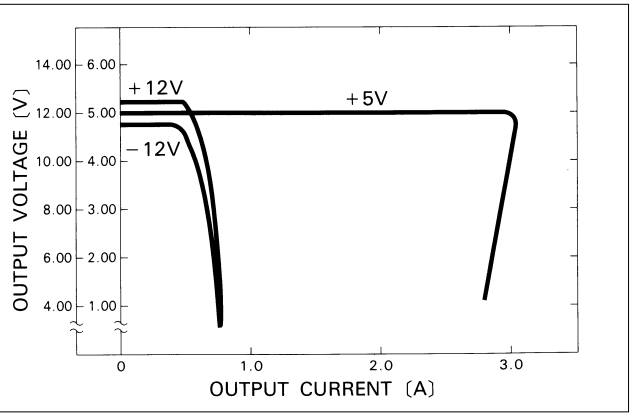
■STATIC CHARACTERISTICS (LDC15F-1)



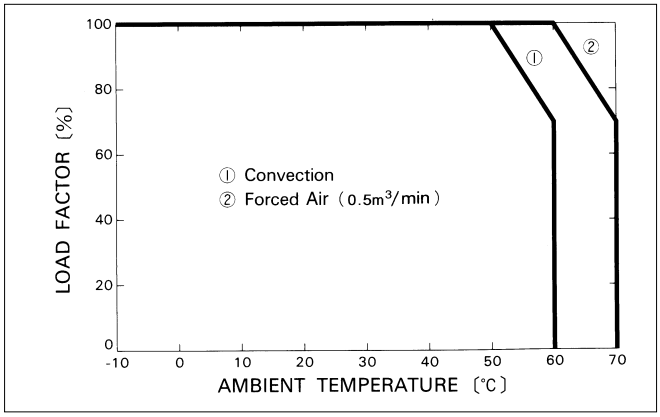
■RISE TIME & FALL TIME (LDC15F-1)



■OVERCURRENT CHARACTERISTICS (LDC15F-1)



■DERATING CURVE

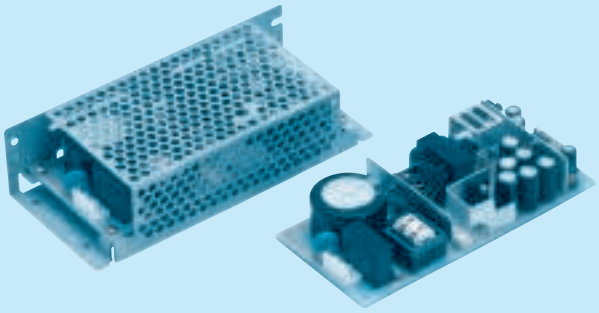


COSEL AC-DC Power Supplies Open Frame/Enclosed type

LDC30F

Ordering information

LD ① C ② 30 ③ F ④ -1 ⑤ -□ ⑥



①Series name
②Multiple output
③Output wattage
④Universal input
⑤Output voltage combination
⑥Optional ＊4
C :with Coating
G :Low leakage current
S :with Chassis
SN:with Chassis & cover
Y :with Potentiometer

LDC

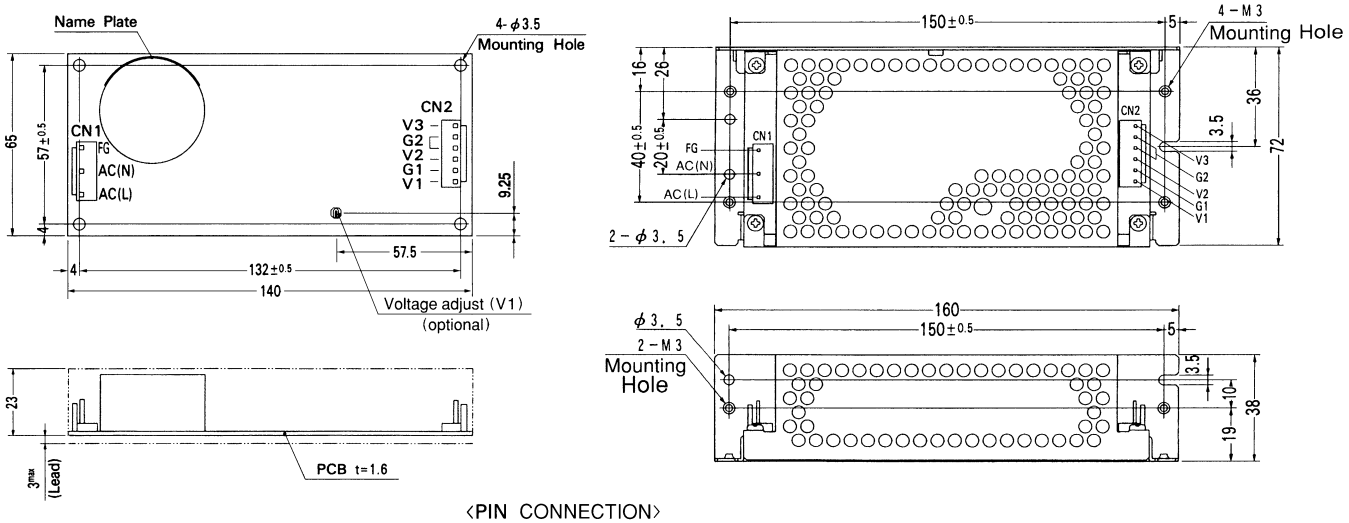
MODEL		LDC30F-1	LDC30F-2
DC OUTPUT	V1	+5V 3.0(Peak 4.5)A	+5V 3.0(Peak 4.5)A
	V2	+12V 1.2(Peak 2.0)A	+15V 1.0(Peak 2.0)A
	V3	-12V 0.3(Peak 0.45)A	-15V 0.3(Peak 0.45)A

SPECIFICATIONS

	MODEL		LDC30F-1			LDC30F-2		
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370					
	CURRENT[A]	ACIN 100V	0.8typ (Io=100%)					
	FREQUENCY[Hz]		47 - 440 or DC					
	EFFICIENCY[%]	ACIN 100V	72typ (Io=100%)					
	INRUSH CURRENT[A]	ACIN 100V	25typ (Io=100%) (At cold start)					
		ACIN 200V	50typ (Io=100%) (At cold start)					
	LEAKAGE CURRENT[mA]		0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)					
OUTPUT	VOLTAGE[V]		+5	+12	-12	+5	+15	-15
	CURRENT[A]	＊1	0 - 3.0 (Peak 4.5)	0 - 1.2 (Peak 2.0)	0 - 0.3 (Peak 0.45)	0 - 3.0 (Peak 4.5)	0 - 1.0 (Peak 2.0)	0 - 0.3 (Peak 0.45)
	LINE REGULATION[mV]		20max	48max	48max	20max	60max	60max
	LOAD REGULATION[mV]		100max	120max	150max	100max	120max	150max
	RIPPLE[mVp-p]	0 to +50℃ ＊2	100max	120max	120max	100max	120max	120max
		-10 - 0℃ ＊2	150max	160max	160max	150max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊2	120max	150max	150max	120max	150max	150max
		-10 - 0℃ ＊2	170max	180max	180max	170max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	350max	350max	50max	350max	350max
		-10 to +50℃	60max	420max	420max	60max	420max	420max
	DRIFT[mV]	＊3	20max	——	——	20max	——	——
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)					
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%), 20typ (ACIN 100V, Io=100%), 100typ (ACIN 200V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
	OUTPUT VOLTAGE SETTING[V]		4.9 to 5.3	11.4 to 12.6	-11.4 to -12.6	4.9 to 5.3	14.25 to 15.75	-14.25 to -15.75
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating (+5V only)					
	OPERATING INDICATION		Not provided					
	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Not provided					
ISOLATION	INPUT-OUTPUT		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-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)					
	OUTPUT-OUTPUT(V1-V2,V3)		AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)					
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet)					
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet)					
	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, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1					
	CONDUCTED NOISE		Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B					
OTHERS	CASE SIZE/WEIGHT		65×26×140mm (W×H×D) / 220g max (without chassis and cover)					
	COOLING METHOD		Convection					

＊1 Peak load for 10sec. or less is acceptable if the total wattage is less than the rated wattage(-1: 33W, -2: 34.5W).When the load of +5V is OA, other output can be drawn by 80% of rated current.
＊2 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN:RM101).
＊3 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.
＊4 Please contact us about safety approvals for the model with option.
＊ Avoid prolonged use under over-load.
＊ Derating is required when operated with chassis and cover.

External view



I/O Connector		Mating Connector	Terminal
CN1	B3P5-VH	VHR-5N	Chain:SVH-21T-P1.1
			Loose:BVH-21T-P1.1
CN2	B6P-VH	VHR-6N	Chain:SVH-21T-P1.1
			Loose:BVH-21T-P1.1

(Mfr : J.S.T.)

〈PIN CONNECTION〉

CN1

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

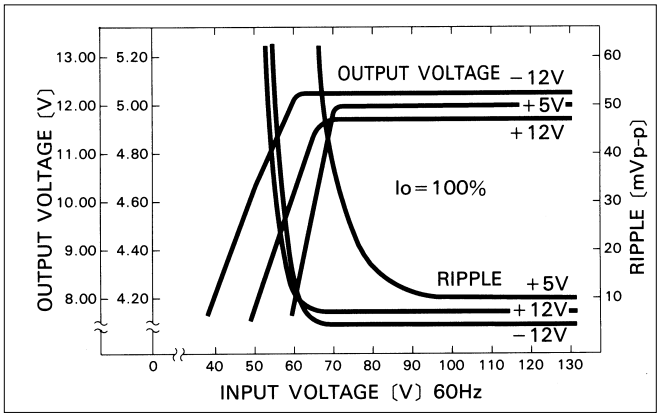
CN2

Pin No.	Output
1	V3
2	G2
3	G2
4	V2
5	G1
6	V1

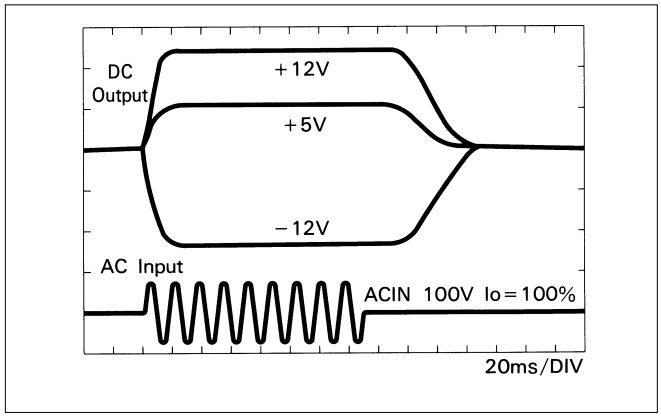
※ Weight: 220g or less (without chassis and cover)
※ Tolerance: ±1
※ Dimensions in mm.
※ PCB Material: Glass composite (CEM3)
※ Chassis and cover is optional.
※ Mounting torque: 0.6N·m (6.3kgf·cm) max

Performance data

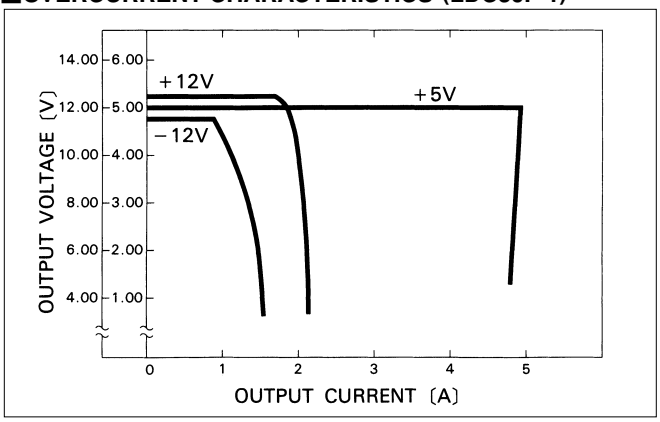
■STATIC CHARACTERISTICS (LDC30F-1)



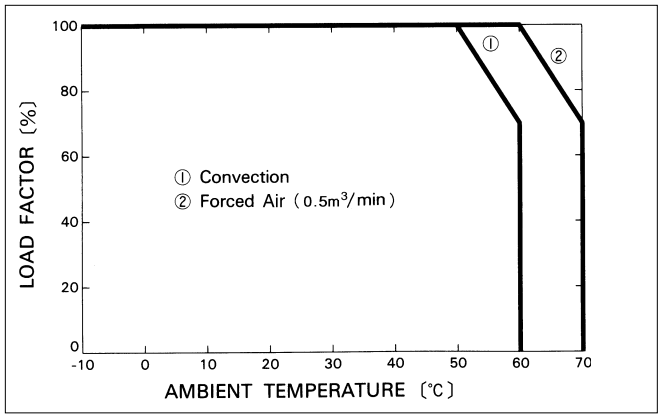
■RISE TIME & FALL TIME (LDC30F-1)



■OVERCURRENT CHARACTERISTICS (LDC30F-1)



■DERATING CURVE

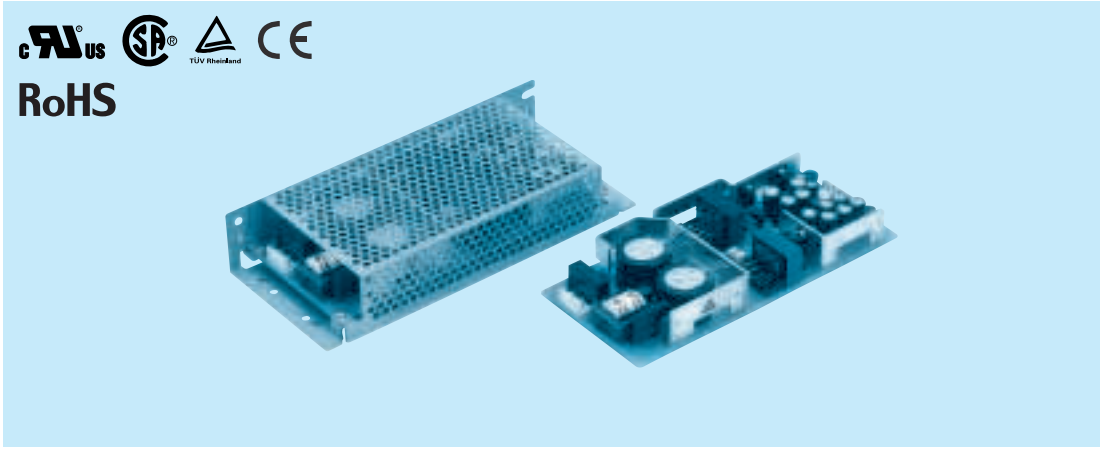


COSEL AC-DC Power Supplies Open Frame/Enclosed type

LDC60F

Ordering information

LD	C	60	F	-1	-□
①	②	③	④	⑤	⑥



①Series name
②Multiple output
③Output wattage
④Universal input
⑤Output voltage combination
⑥Optional ＊4
C :with Coating
G :Low leakage current
S :with Chassis
SN:with Chassis & cover
Y :with Potentiometer

LDC

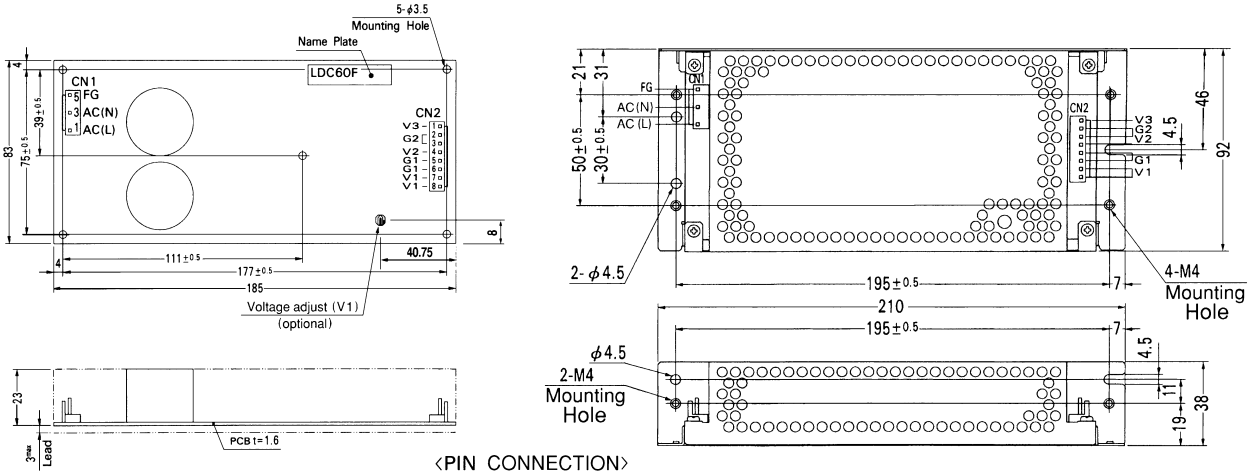
MODEL		LDC60F-1	LDC60F-2
DC OUTPUT	V1	+5V 5.0(Peak 7.0)A	+5V 5.0(Peak 7.0)A
	V2	+12V 2.5(Peak 3.5)A	+15V 2.0(Peak 3.5)A
	V3	-12V 0.5(Peak 0.7)A	-15V 0.5(Peak 0.7)A

SPECIFICATIONS

	MODEL		LDC60F-1			LDC60F-2		
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370					
	CURRENT[A]	ACIN 100V	1.4typ (Io=100%)					
	FREQUENCY[Hz]		47 - 440 or DC					
	EFFICIENCY[%]	ACIN 100V	72typ (Io=100%)					
	INRUSH CURRENT[A]	ACIN 100V	30typ (Io=100%) (At cold start)					
		ACIN 200V	60typ (Io=100%) (At cold start)					
	LEAKAGE CURRENT[mA]		0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)					
OUTPUT	VOLTAGE[V]		+5	+12	-12	+5	+15	-15
	CURRENT[A]	＊1	0 - 5.0 (Peak 7.0)	0 - 2.5 (Peak 3.5)	0 - 0.5 (Peak 0.7)	0 - 5.0 (Peak 7.0)	0 - 2.0 (Peak 3.5)	0 - 0.5 (Peak 0.7)
	LINE REGULATION[mV]		20max	48max	48max	20max	60max	60max
	LOAD REGULATION[mV]		100max	150max	150max	100max	150max	150max
	RIPPLE[mVp-p]	0 to +50℃ ＊2	100max	120max	120max	100max	120max	120max
		-10 - 0℃ ＊2	150max	160max	160max	150max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊2	120max	150max	150max	120max	150max	150max
		-10 - 0℃ ＊2	170max	180max	180max	170max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	350max	350max	50max	350max	350max
		-10 to +50℃	60max	420max	420max	60max	420max	420max
	DRIFT[mV]	＊3	20max	——	——	20max	——	——
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)					
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%), 20typ (ACIN 100V, Io=100%), 100typ (ACIN 200V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
	OUTPUT VOLTAGE SETTING[V]		4.9 to 5.3	11.4 to 12.6	-11.4 to -12.6	4.9 to 5.3	14.25 to 15.75	-14.25 to -15.75
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION		Works over 115% of rating by zener diode clamping (only available with V1, V2)					
	OPERATING INDICATION		Not provided					
	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Not provided					
ISOLATION	INPUT-OUTPUT		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-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)					
	OUTPUT-OUTPUT(V1-V2,V3)		AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)					
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet)					
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet)					
	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, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1					
	CONDUCTED NOISE		Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B					
OTHERS	CASE SIZE/WEIGHT		83×26×185mm (W×H×D) / 300g max (without chassis and cover)					
	COOLING METHOD		Convection					

＊1 Peak load for 10sec. or less is acceptable if the total wattage is less than the rated wattage(-1: 61W, -2: 62.5W).When the load of +5V is OA, other output can be drawn by 80% of rated current.
＊2 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN:RM101).
＊3 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.
＊4 Please contact us about safety approvals for the model with option.
＊ Avoid prolonged use under over-load.
＊ Derating is required when operated with chassis and cover.

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

(Mfr : J.S.T.)

〈PIN CONNECTION〉

CN1

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

CN2

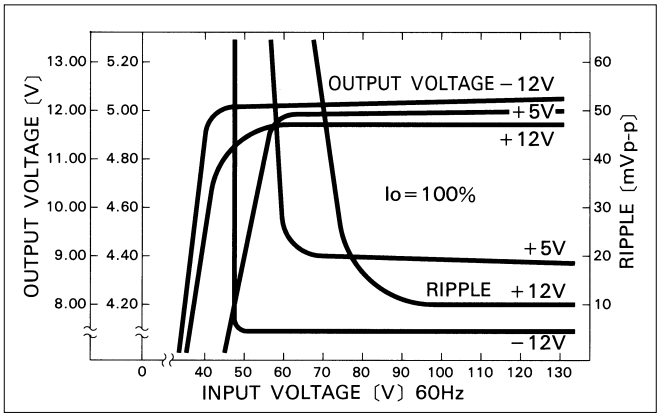
Pin No.	Output
1	V3
2	G2
3	G2
4	V2
5	G1
6	G1
7	V1
8	V1

※ Keep drawing current per pin below 5A for CN2.

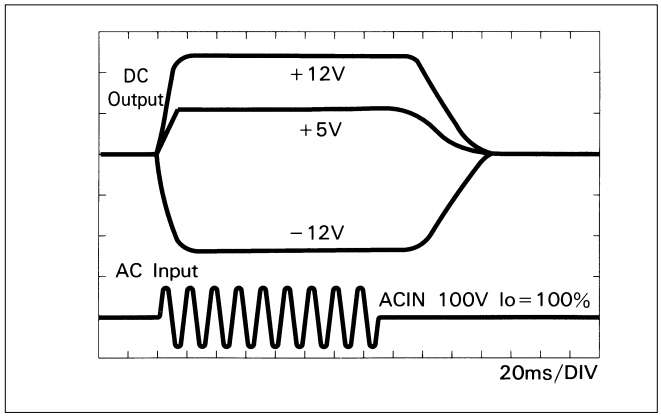
※ Weight: 300g or less (without chassis and cover)
※ Tolerance: ±1
※ Dimensions in mm.
※ PCB Material: Glass composite (CEM3)
※ Chassis and cover is optional.
※ Mounting torque: 1.5N·m (16kgf·cm) max

Performance data

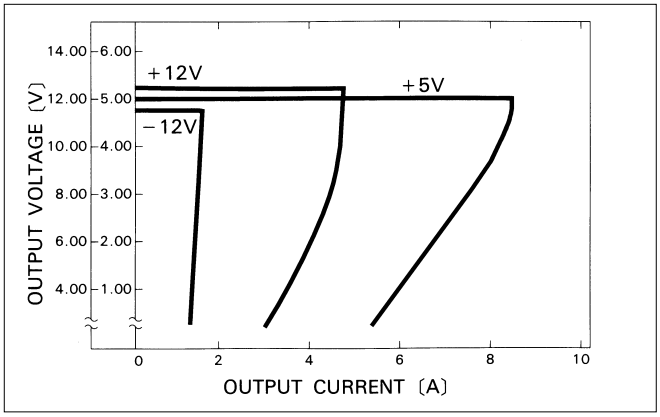
■STATIC CHARACTERISTICS (LDC60F-1)



■RISE TIME & FALL TIME (LDC60F-1)



■OVERCURRENT CHARACTERISTICS (LDC60F-1)



■DERATING CURVE