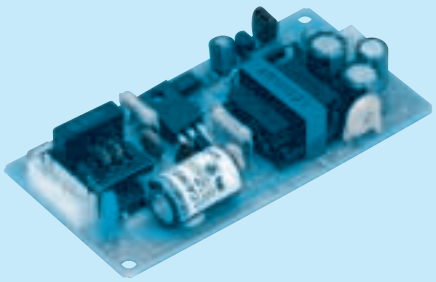
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LCA10S

Ordering information

LC	A	10	S	-5	-□
①	②	③	④	⑤	⑥

cULus CSA RoHS



Recommended EMI/EMC Filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series
*The EMI/EMC Filter is recommended to connect with several devices.

①Series name
②100/120V input
③Output wattage
④Single output
⑤Output voltage
⑥Optional *3
C :with Coating
G :Low leakage current
Y :with Potentiometer

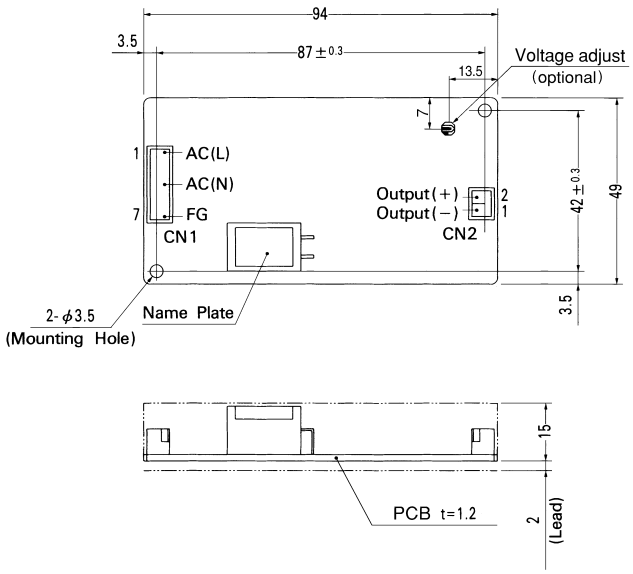
MODEL	LCA10S-5	LCA10S-5-H	LCA10S-12	LCA10S-15	LCA10S-24
MAX OUTPUT WATTAGE[W]	10	10	10.8	10.5	12
DC OUTPUT	5V 2A	5V 2A	12V 0.9A	15V 0.7A	24V 0.5A

SPECIFICATIONS

	MODEL		LCA10S-5	LCA10S-5-H	LCA10S-12	LCA10S-15	LCA10S-24
INPUT	VOLTAGE[V]		AC85 - 132 1φ or DC110 - 170				
	CURRENT[A]	ACIN 100V	0.3typ (Io=100%)				
	FREQUENCY[Hz]		47 - 440 or DC				
	EFFICIENCY[%]		71typ	71typ	75typ	75typ	78typ
	INRUSH CURRENT[A]	ACIN 100V	25typ (Io=100%)				
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)				
OUTPUT	VOLTAGE[V]		5	5	12	15	24
	CURRENT[A]		2	2 (Peak 3)	0.9	0.7	0.5
	LINE REGULATION[mV]		20max	20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max
	RIPPLE[mVp-p]	0 to +50℃ *1	80max	80max	120max	120max	120max
		-10 - 0℃ *1	140max	140max	160max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *1	120max	120max	150max	150max	150max
		-10 - 0℃ *1	160max	160max	180max	180max	180max
	TEMPERATURE REGULATION[mV]		50max	50max	120max	150max	240max
	DRIFT[mV]	*2	20max	20max	48max	60max	96max
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)				
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)				
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed ("Y"which can be adjusted the output is available as optional:5V -5 to +10% : 12, 15, 24V ±10%)				
	OUTPUT VOLTAGE SETTING[V]		4.9 - 5.3	4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically				
	OVERVOLTAGE PROTECTION		Works over 115% of rating, by zener diode clamping				
	OPERATING INDICATION		Not provided				
	REMOTE SENSING		Not provided				
	REMOTE ON/OFF		Not provided				
ISOLATION	INPUT-OUTPUT		AC2,000V 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)				
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 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, CSA C22.2 No.60950-1 Complies with DEN-AN				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B				
OTHERS	CASE SIZE/WEIGHT		49×17×94mm (W×H×D) / 65g max				
	COOLING METHOD		Convection				

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
*2 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.
*3 Please contact us about safety approvals for the model with option.
* Avoid prolonged use under over-load.

External view



I/O Connector		Mating Connector	Terminal
CN1	B3(7.5)B-XH-A	XHP-7	Chain: SXH-001T-P0.6 Loose: BXH-001T-P0.6
CN2	B2B-XH-A	XHP-2	Chain: SXH-001T-P0.6 Loose: BXH-001T-P0.6

(Mfr : J.S.T.)

<PIN CONNECTION>

	Pin No.	Input
CN1	1	AC(L)
	2	
	3	
	4	AC(N)
	5	
	6	
	7	FG

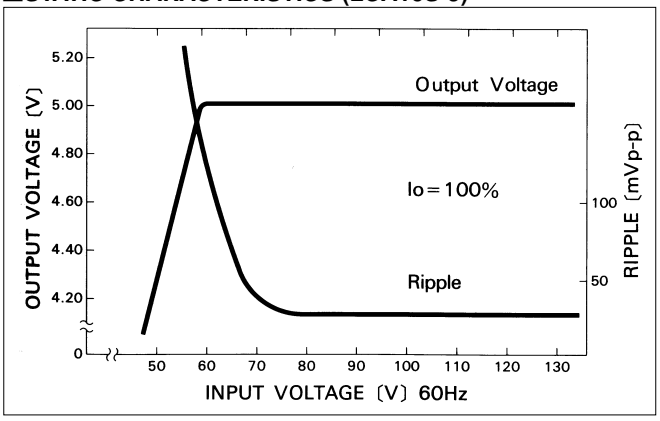
	Pin No.	Output
CN2	1	−V
	2	+V

※ Weight : 65g or less
※ Tolerance : ±1
※ Dimensions in mm.
※ PCB Material : Glass composite (CEM3)

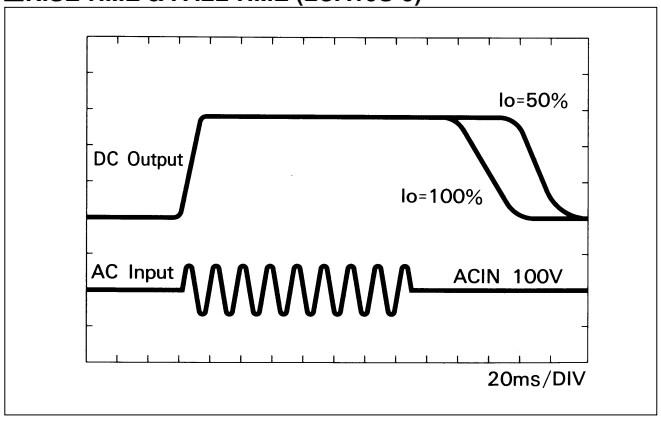
LCA

Performance data

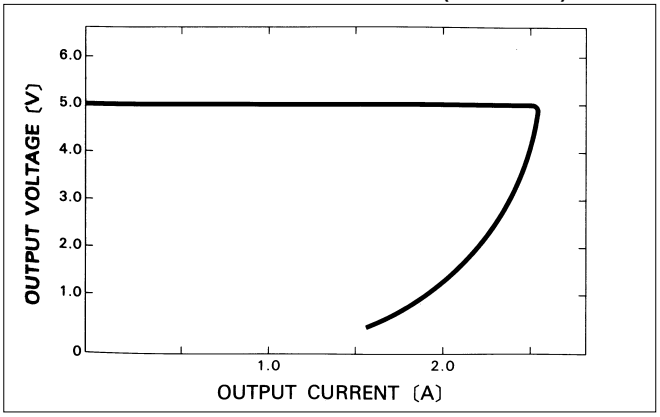
■STATIC CHARACTERISTICS (LCA10S-5)



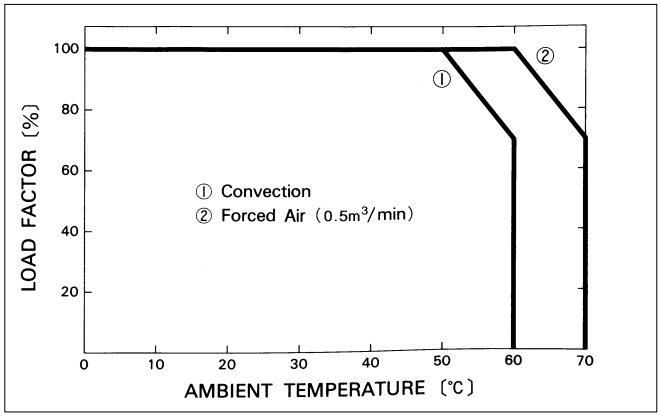
■RISE TIME & FALL TIME (LCA10S-5)



■OVERCURRENT CHARACTERISTICS (LCA10S-5)



■DERATING CURRENT



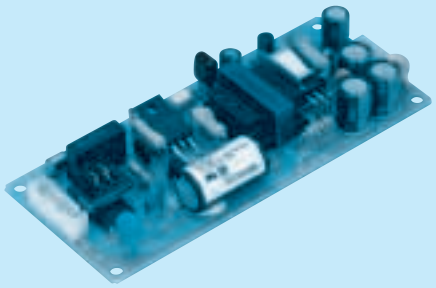
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LCA15S

Ordering information

LC	A	15	S	-5	-□
①	②	③	④	⑤	⑥

RoHS



Recommended EMI/EMC Filter
NAC-06-472

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

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

①Series name
②100/120V input
③Output wattage
④Single output
⑤Output voltage
⑥Optional *3
C :with Coating
G :Low leakage current
Y :with Potentiometer

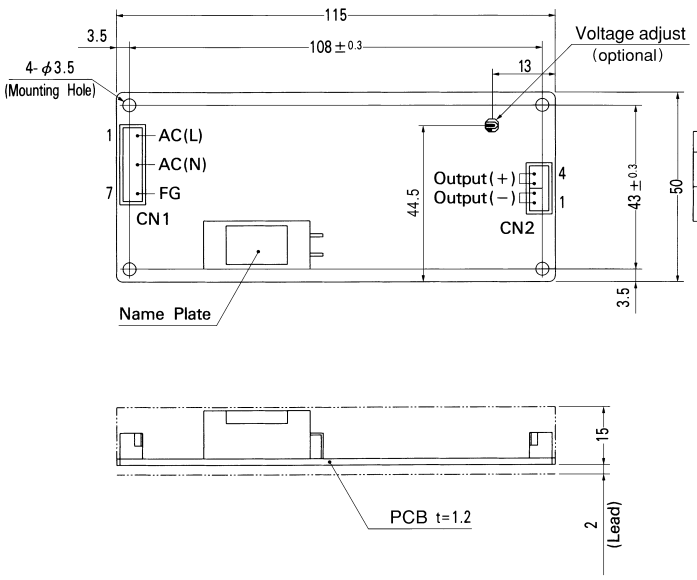
MODEL	LCA15S-5	LCA15S-12	LCA15S-15	LCA15S-24
MAX OUTPUT WATTAGE[W]	15	15.6	15	16.8
DC OUTPUT	5V 3A	12V 1.3A	15V 1A	24V 0.7A

SPECIFICATIONS

	MODEL		LCA15S-5	LCA15S-12	LCA15S-15	LCA15S-24
INPUT	VOLTAGE[V]		AC85 - 132 1φ or DC110 - 170			
	CURRENT[A]	ACIN 100V	0.4typ (Io=100%)			
	FREQUENCY[Hz]		47 - 440 or DC			
	EFFICIENCY[%]		72typ	75typ	75typ	78typ
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%) (At cold start)			
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)			
OUTPUT	VOLTAGE[V]		5	12	15	24
	CURRENT[A]		3	1.3	1	0.7
	LINE REGULATION[mV]		20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	100max	120max	150max
	RIPPLE[mVp-p]	0 to +50℃ *1	80max	120max	120max	120max
		-10 - 0℃ *1	140max	160max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *1	120max	150max	150max	150max
		-10 - 0℃ *1	160max	180max	180max	180max
	TEMPERATURE REGULATION[mV]		50max	120max	150max	240max
	DRIFT[mV]	*2	20max	48max	60max	96max
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)			
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed ("Y"which can be adjusted the output is available as optional:5V -5 to +10% : 12, 15, 24V ±10%)			
	OUTPUT VOLTAGE SETTING[V]		4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0
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			
	OPERATING INDICATION		Not provided			
	REMOTE SENSING		Not provided			
	REMOTE ON/OFF		Not provided			
ISOLATION	INPUT-OUTPUT		AC2,000V 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)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 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, CSA C22.2 No.60950-1 Complies with DEN-AN			
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B			
OTHERS	CASE SIZE/WEIGHT		50×17×115mm (W×H×D) / 80g max			
	COOLING METHOD		Convection			

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
*2 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.
*3 Please contact us about safety approvals for the model with option.
* Avoid prolonged use under over-load.

External view



I/O Connector		Mating Connector	Terminal
CN1	B3(7.5)B-XH-A	XHP-7	Chain: SXH-001T-P0.6 Loose: BXH-001T-P0.6
CN2	B4B-XH-A	XHP-4	Chain: SXH-001T-P0.6 Loose: BXH-001T-P0.6

(Mfr : J.S.T.)

〈PIN CONNECTION〉

	Pin No.	Input
CN1	1	AC(L)
	2	
	3	
	4	AC(N)
	5	
	6	
	7	FG

	Pin No.	Output
CN2	1, 2	−V
	3, 4	+V

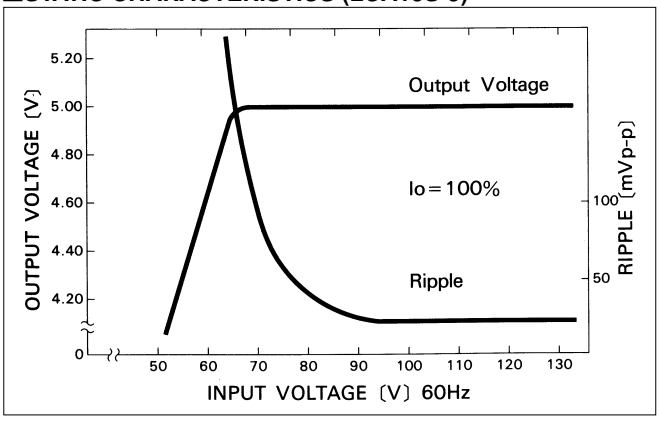
※Maximum 2A per pin of CN2 can be applied.

※Weight : 80g or less
※Tolerance : ±1
※Dimensions in mm.
※PCB Material : Glass composite (CEM3)

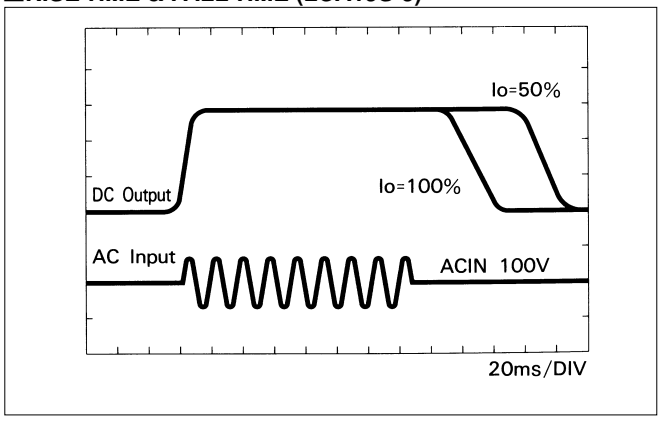
LCA

Performance data

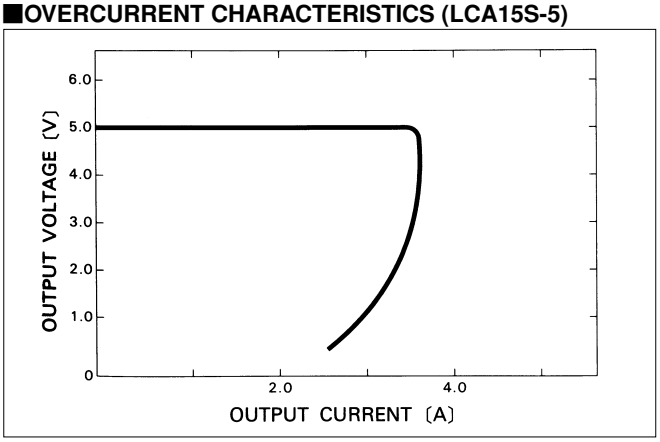
■STATIC CHARACTERISTICS (LCA15S-5)



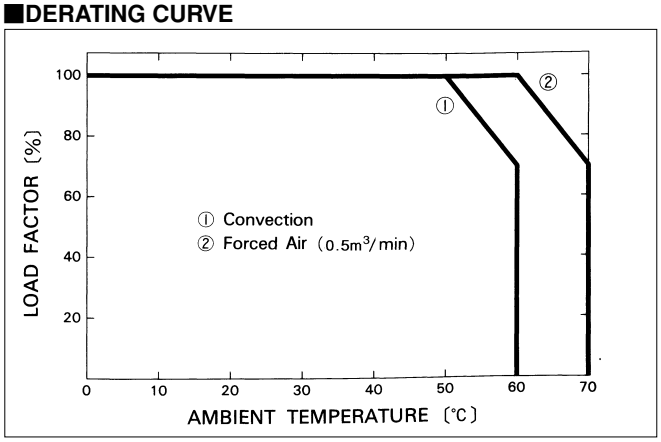
■RISE TIME & FALL TIME (LCA15S-5)



■OVERCURRENT CHARACTERISTICS (LCA15S-5)



■DERATING CURVE



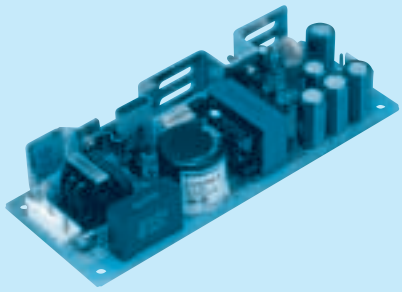
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LCA30S

Ordering information

LC	A	30	S	-5	-□
①	②	③	④	⑤	⑧

RoHS



Recommended EMI/EMC Filter
NAC-06-472

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

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

①Series name
②100/120V input
③Output wattage
④Single output
⑤Output voltage
⑥Optional *3
C :with Coating
G :Low leakage current
Y :with Potentiometer

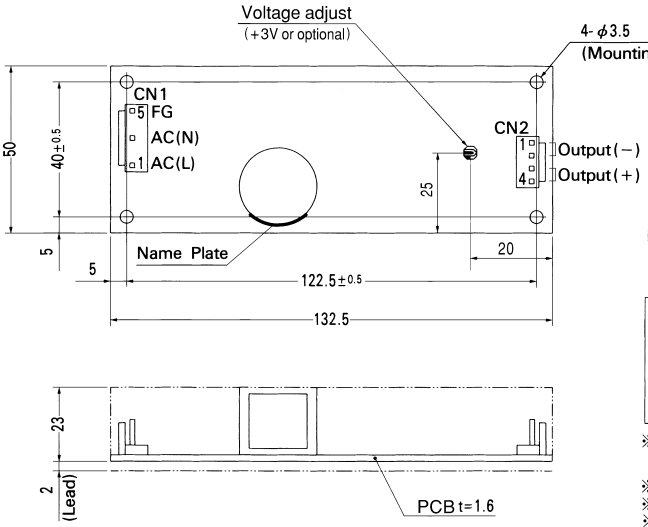
MODEL	LCA30S-3	LCA30S-5	LCA30S-12	LCA30S-15	LCA30S-24	LCA30S-36	LCA30S-48
MAX OUTPUT WATTAGE[W]	18	30	30	30	31.2	32.4	33.6
DC OUTPUT	3V 6A	5V 6A	12V 2.5A	15V 2A	24V 1.3A	36V 0.9A	48V 0.7A

SPECIFICATIONS

	MODEL		LCA30S-3	LCA30S-5	LCA30S-12	LCA30S-15	LCA30S-24	LCA30S-36	LCA30S-48
INPUT	VOLTAGE[V]		AC85 - 132 1φ or DC110 - 170						
	CURRENT[A]	ACIN 100V	0.7typ (Io=100%)						
	FREQUENCY[Hz]		47 - 440 or DC						
	EFFICIENCY[%]		69typ	75typ	80typ	81typ	82typ	80typ	80typ
	INRUSH CURRENT[A]	ACIN 100V	25typ (Io=100%) (At cold start)						
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)						
OUTPUT	VOLTAGE[V]		3	5	12	15	24	36	48
	CURRENT[A]		6	6	2.5	2	1.3	0.9	0.7
	LINE REGULATION[mV]		20max	20max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max	240max	300max
	RIPPLE[mVp-p]	0 to +50℃ *1	80max	80max	120max	120max	120max	150max	150max
		-10 - 0℃ *1	140max	140max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *1	120max	120max	150max	150max	150max	250max	350max
		-10 - 0℃ *1	160max	160max	180max	180max	180max	300max	400max
	TEMPERATURE REGULATION[mV]		50max	50max	120max	150max	240max	360max	480max
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)						
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6	Fixed ("Y"which can be adjusted the output is available as optional:5V -5 to +10% : 12, 15, 24, 36, 48V ±10%)					
	OUTPUT VOLTAGE SETTING[V]		——	4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically						
	OVERVOLTAGE PROTECTION		4.00V min	Works over 115% of rating, by zener diode clamping					
	OPERATING INDICATION		Not provided						
	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided						
ISOLATION	INPUT-OUTPUT		AC2,000V 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)						
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 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, CSA C22.2 No.60950-1 Complies with DEN-AN						
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B						
OTHERS	CASE SIZE/WEIGHT		50×25×132.5mm (W×H×D) / 150g max						
	COOLING METHOD		Convection						

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
*2 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.
*3 Please contact us about safety approvals for the model with option.
* Avoid prolonged use under over-load.

External view



I/O Connector		Mating Connector	Terminal
CN1	B3P5-VH	VHR-5N	Chain: SVH-21T-P1.1 Loose: BVH-21T-P1.1
CN2	B4P-VH	XHR-4N	Chain: SVH-21T-P1.1 Loose: BVH-21T-P1.1

(Mfr : J.S.T.)

〈PIN CONNECTION〉

	Pin No.	Input
CN1	1	AC(L)
	2	
	3	AC(N)
	4	
	5	FG

	Pin No.	Output
CN2	1	−V
	2	−V
	3	+V
	4	+V

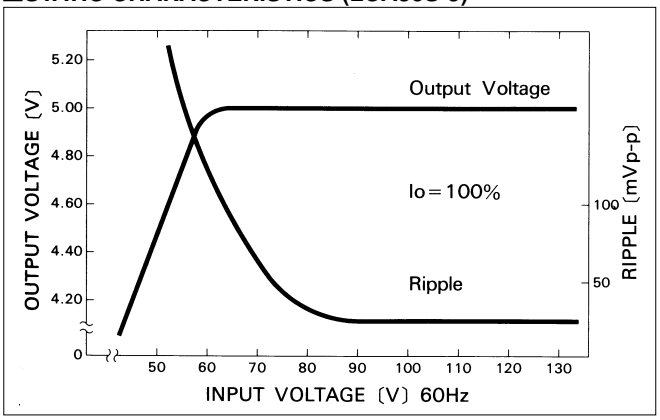
※Maximum 5A per pin of CN2 can be applied.

※Weight : 150g or less
※Tolerance : ±1
※Dimensions in mm.
※PCB Material : Glass composite (CEM3)

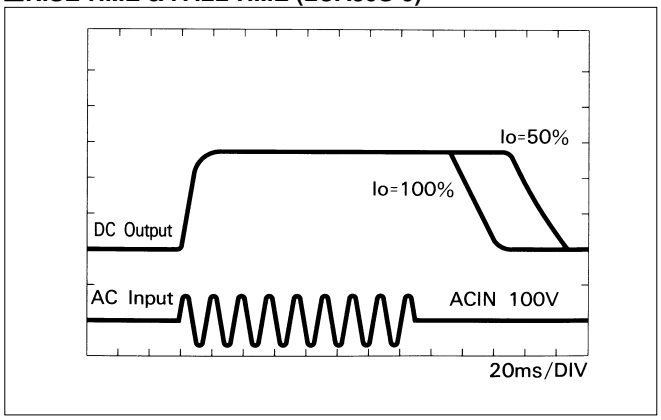
LCA

Performance data

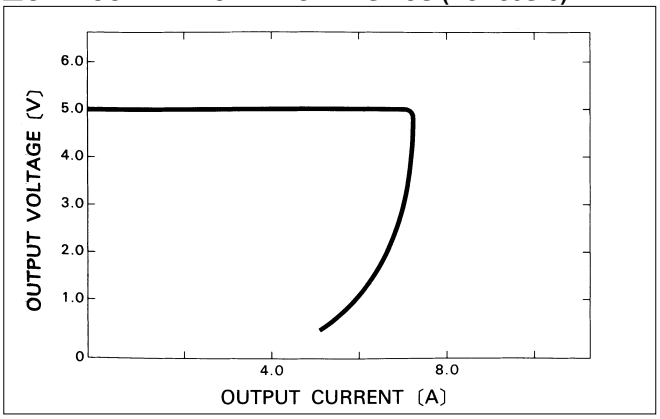
■STATIC CHARACTERISTICS (LCA30S-5)



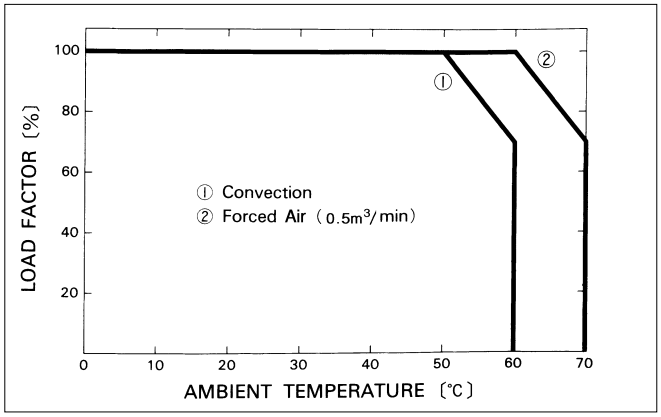
■RISE TIME & FALL TIME (LCA30S-5)



■OVERCURRENT CHARACTERISTICS (LCA30S-5)



■DERATING CURRENT



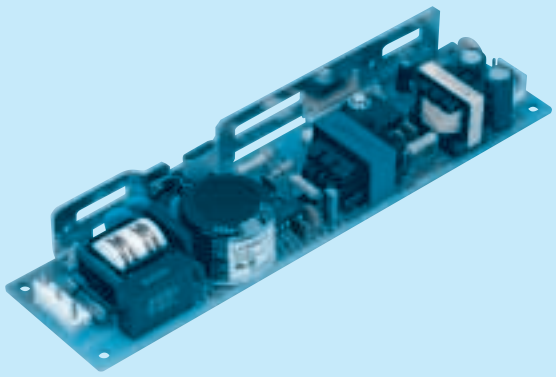
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LCA50S

Ordering information

LC	A	50	S	-5	-□
①	②	③	④	⑤	⑥

RoHS



Recommended EMI/EMC Filter
NAC-06-472

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

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

①Series name
②100/120V input
③Output wattage
④Single output
⑤Output voltage
⑥Optional *4
C :with Coating
G :Low leakage current
Y :with Potentiometer

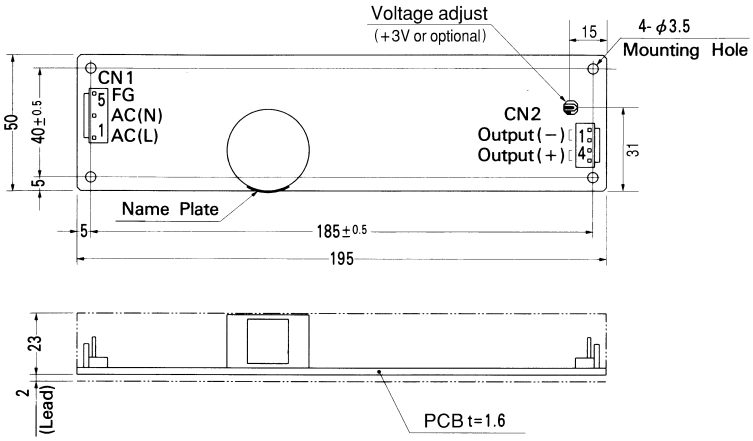
MODEL	LCA50S-3	LCA50S-5	LCA50S-12	LCA50S-15	LCA50S-24	LCA50S-24-H	LCA50S-36	LCA50S-48
MAX OUTPUT WATTAGE[W]	30	50	51.6	52.5	60	60	61.2	62.4
DC OUTPUT	3V 10A	5V 10A	12V 4.3A	15V 3.5A	24V 2.5A	24V 2.5A	36V 1.7A	48V 1.3A

SPECIFICATIONS

	MODEL		LCA50S-3	LCA50S-5	LCA50S-12	LCA50S-15	LCA50S-24	LCA50S-24-H	LCA50S-36	LCA50S-48
INPUT	VOLTAGE[V]		AC85 - 132 1φ or DC110 - 170							
	CURRENT[A]	ACIN 100V	1.3typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440 or DC							
	EFFICIENCY[%]		71typ	78typ	80typ	81typ	82typ	82typ	82typ	82typ
	INRUSH CURRENT[A]	ACIN 100V	30typ (Io=100%) (At cold start)							
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)							
OUTPUT	VOLTAGE[V]		3	5	12	15	24	24	36	48
	CURRENT[A]	*3	10	10	4.3	3.5	2.5	2.5 (Peak 3)	1.7	1.3
	LINE REGULATION[mV]		20max	20max	48max	60max	96max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max	150max	240max	300max
	RIPPLE[mVp-p]	0 to +50℃ *1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *1	120max	120max	150max	150max	150max	150max	250max	350max
		-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	400max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max
		-10 to +50℃	60max	60max	150max	180max	290max	290max	450max	600max
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	96max	144max	192max
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6	Fixed ("Y"which can be adjusted the output is available as optional: 5, 12, 15, 24, 36, 48V ±10%)						
	OUTPUT VOLTAGE SETTING[V]		——	4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically							
	OVERVOLTAGE PROTECTION		4.00 - 5.25V	Works at 115 - 140% of rating						
	OPERATING INDICATION		Not provided							
	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
ISOLATION	INPUT-OUTPUT		AC2,000V 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)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 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, CSA C22.2 No.60950-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B							
OTHERS	CASE SIZE/WEIGHT		50×25×195mm (W×H×D) / 200g max							
	COOLING METHOD		Convection							

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
*2 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.
*3 Peak load for 10 sec. or less is acceptable(The average current has to be less than the rated current).
*4 Please contact us about safety approvals for the model with option.

External view



I/O Connector		Mating Connector	Terminal
CN1	B3P5-VH	VHR-5N	Chain: SVH-21T-P1.1
			Loose: BVH-21T-P1.1
CN2	B4P-VH	VHR-4N	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・2	−V
	3・4	+V

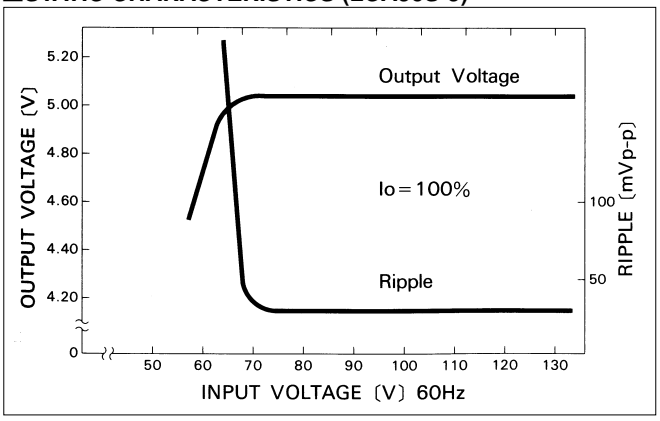
※Maximum 5A per pin of CN2 can be applied.

※Weight : 200g or less
※Tolerance : ±1
※Dimensions in mm.
※PCB Material : Glass composite (CEM3)

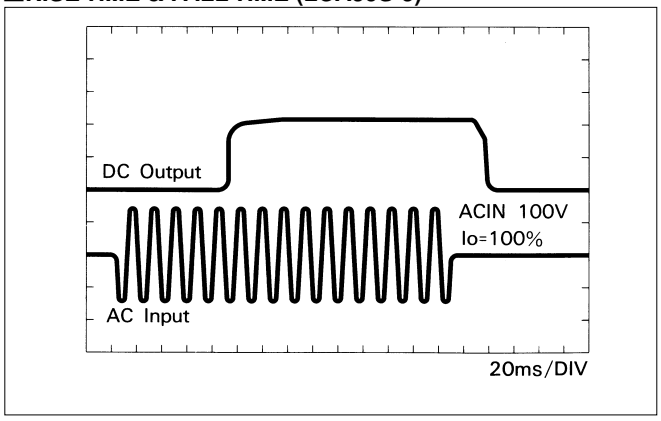
LCA

Performance data

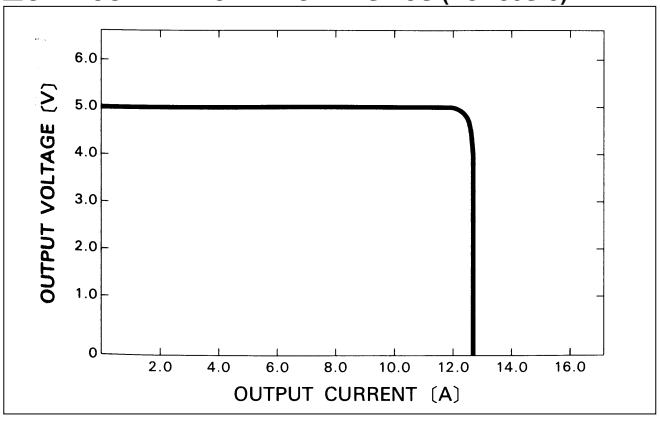
■STATIC CHARACTERISTICS (LCA50S-5)



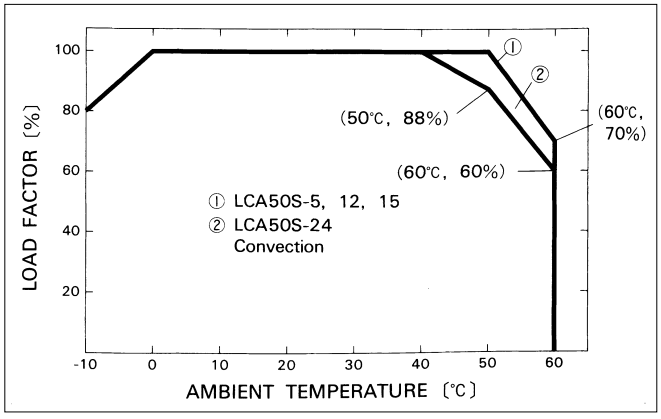
■RISE TIME & FALL TIME (LCA50S-5)



■OVERCURRENT CHARACTERISTICS (LCA50S-5)



■DERATING CURVE



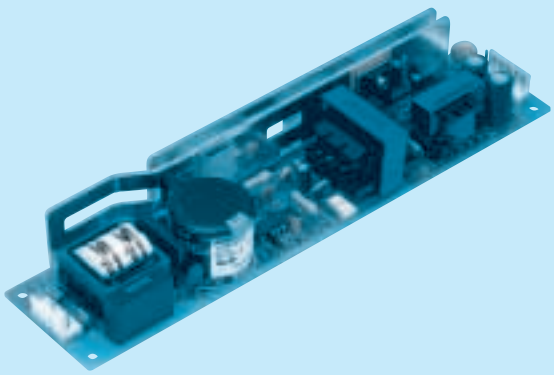
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LCA75S

Ordering information

LC	A	75	S	-5	-□
①	②	③	④	⑤	⑥

RoHS



Recommended EMI/EMC Filter
NAC-06-472

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

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

①Series name
②100/120V input
③Output wattage
④Single output
⑤Output voltage
⑥Optional *4
C :with Coating
G :Low leakage current
Y :with Potentiometer

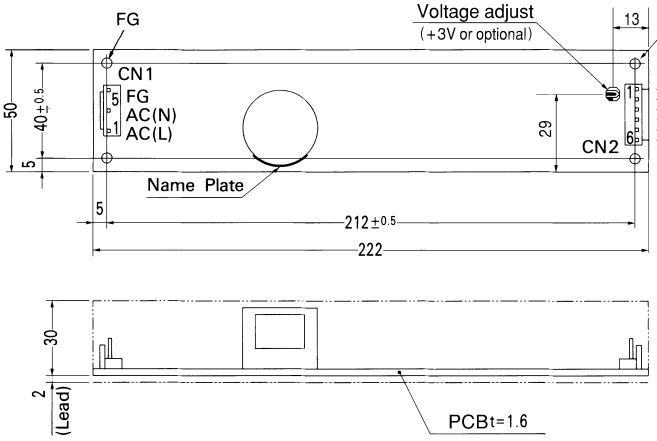
MODEL	LCA75S-3	LCA75S-5	LCA75S-12	LCA75S-15	LCA75S-24	LCA75S-24-H	LCA75S-36	LCA75S-48
MAX OUTPUT WATTAGE[W]	45	75	75.6	75	76.8	76.8	75.6	76.8
DC OUTPUT	3V 15A	5V 15A	12V 6.3A	15V 5A	24V 3.2A	24V 3.2A	36V 2.1A	48V 1.6A

SPECIFICATIONS

	MODEL		LCA75S-3	LCA75S-5	LCA75S-12	LCA75S-15	LCA75S-24	LCA75S-24-H	LCA75S-36	LCA75S-48
INPUT	VOLTAGE[V]		AC85 - 132 1φ or DC110 - 170							
	CURRENT[A]	ACIN 100V	1.9typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440 or DC							
	EFFICIENCY[%]		72typ	79typ	81typ	83typ	84typ	84typ	84typ	84typ
	INRUSH CURRENT[A]	ACIN 100V	30typ (Io=100%) (At cold start)							
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)							
OUTPUT	VOLTAGE[V]		3	5	12	15	24	24	36	48
	CURRENT[A]	*3	15	15	6.3	5	3.2	3.2 (Peak 4.2)	2.1	1.6
	LINE REGULATION[mV]		20max	20max	48max	60max	96max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max	150max	240max	300max
	RIPPLE[mVp-p]	0 to +50℃ *1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *1	120max	120max	150max	150max	150max	150max	250max	350max
		-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	400max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max
		-10 to +50℃	60max	60max	150max	180max	290max	290max	450max	600max
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	96max	144max	192max
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6	Fixed ("Y"which can be adjusted the output is available as optional: 5, 12, 15, 24, 36, 48V ±10%)						
	OUTPUT VOLTAGE SETTING[V]		——	4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically							
	OVERVOLTAGE PROTECTION		4.00 - 5.25V	Works at 115 - 140% of rating						
	OPERATING INDICATION		Not provided							
	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
ISOLATION	INPUT-OUTPUT		AC2,000V 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)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 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, CSA C22.2 No.60950-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B							
OTHERS	CASE SIZE/WEIGHT		50×32×222mm (W×H×D) / 300g max							
	COOLING METHOD		Convection							

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
*2 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.
*3 Peak load for 10 sec. or less is acceptable(The average current has to be less than the rated current).
*4 Please contact us about safety approvals for the model with option.

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〉

	Pin No.	Input
CN1	1	AC(L)
	2	
	3	AC(N)
	4	
	5	FG

	Pin No.	Output
CN2	1~3	−V
	4~6	+V

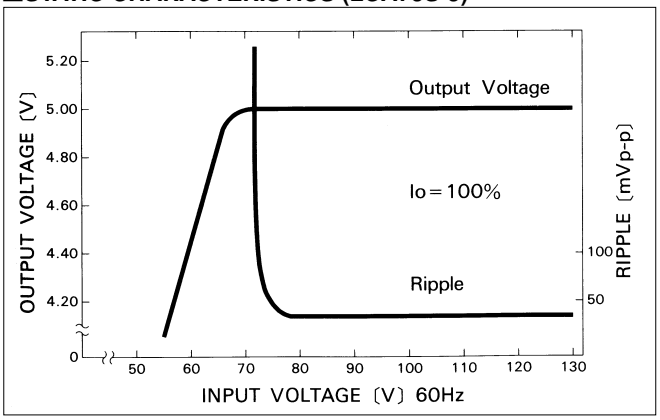
※Maximum 5A per pin of CN2 can be applied.

※Weight : 300g or less
※Tolerance : ±1
※Dimensions in mm.
※PCB Material : Glass composite (CEM3)

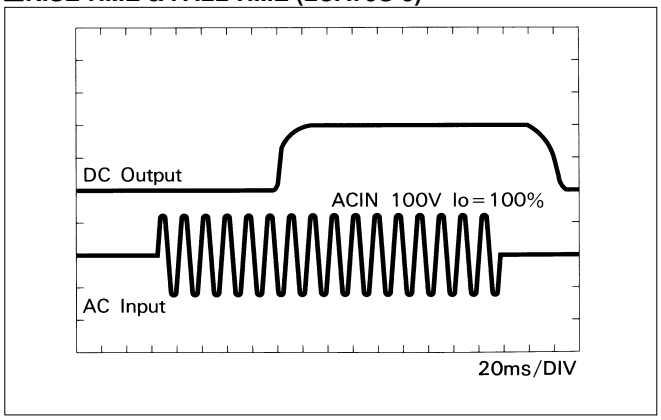
LCA

Performance data

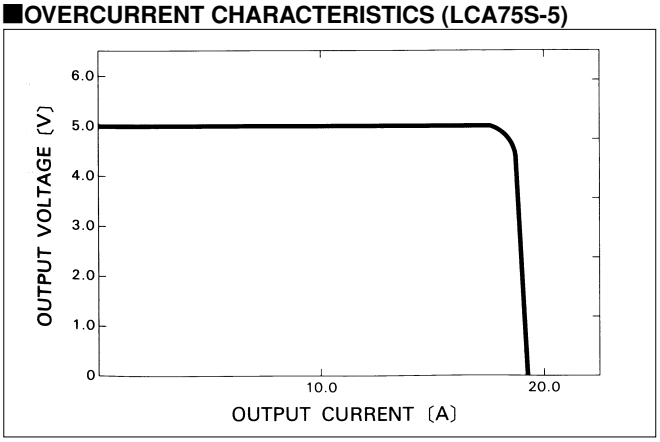
■STATIC CHARACTERISTICS (LCA75S-5)



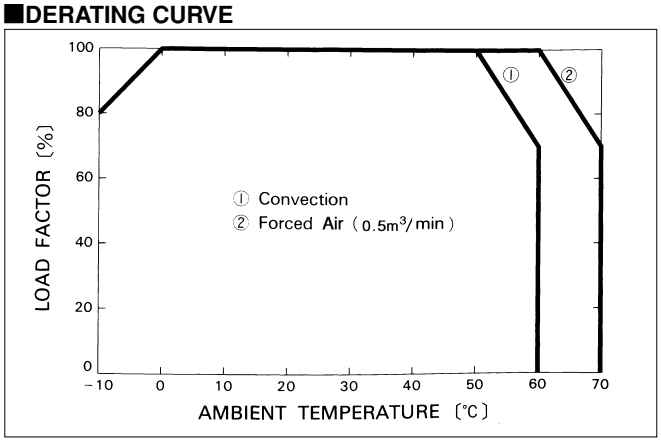
■RISE TIME & FALL TIME (LCA75S-5)



■OVERCURRENT CHARACTERISTICS (LCA75S-5)



■DERATING CURVE



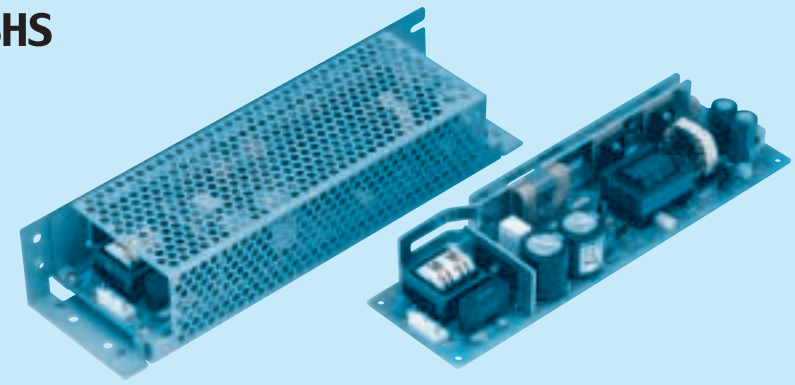
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LCA100S

Ordering information

LC	A	100	S	-5	-□
①	②	③	④	⑤	⑥

RoHS



Recommended EMI/EMC Filter
NAC-06-472

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

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

①Series name
②100/120V input
③Output wattage
④Single output
⑤Output voltage
⑥Optional *4
C :with Coating
G :Low leakage current
S :with Chassis
SN:with Chassis & cover
Y :with Potentiometer

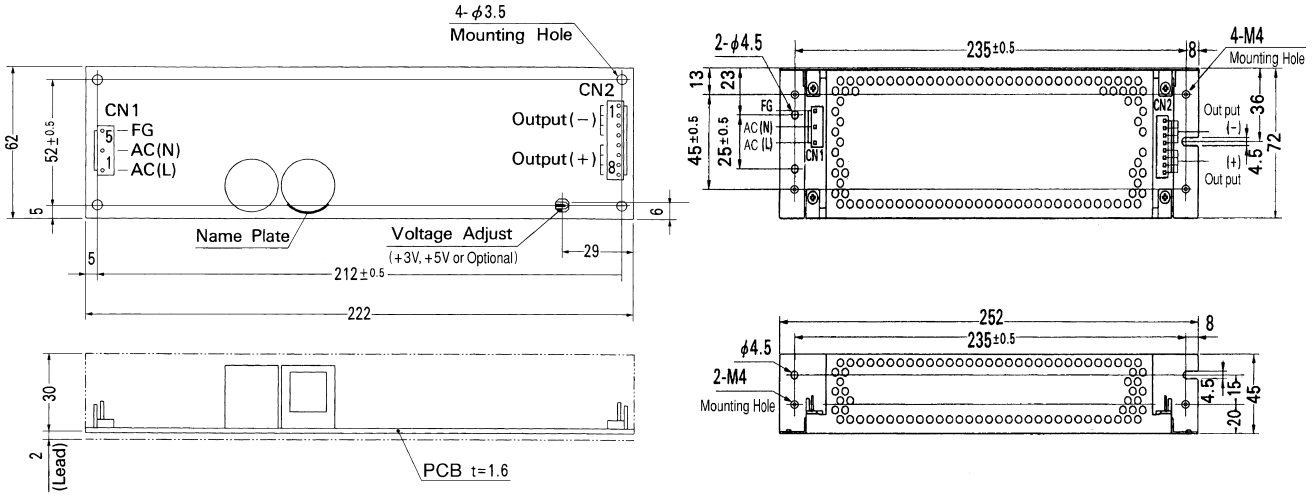
MODEL	LCA100S-3	LCA100S-5	LCA100S-12	LCA100S-15	LCA100S-24	LCA100S-24-H	LCA100S-36	LCA100S-48
MAX OUTPUT WATTAGE[W]	60	100	102	105	103.2	103.2	108	105.6
DC OUTPUT	3V 20A	5V 20A	12V 8.5A	15V 7A	24V 4.3A	24V 4.3A	36V 3A	48V 2.2A

SPECIFICATIONS

	MODEL		LCA100S-3	LCA100S-5	LCA100S-12	LCA100S-15	LCA100S-24	LCA100S-24-H	LCA100S-36	LCA100S-48
INPUT	VOLTAGE[V]		AC85 - 132 1φ or DC110 - 170							
	CURRENT[A]	ACIN 100V	2.5typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440 or DC							
	EFFICIENCY[%]		74typ	79typ	83typ	84typ	85typ	85typ	85typ	85typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)							
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)							
OUTPUT	VOLTAGE[V]		3	5	12	15	24	24	36	48
	CURRENT[A]	*3	20	20	8.5	7	4.3	4.3 (Peak 7)	3	2.2
	LINE REGULATION[mV]		20max	20max	48max	60max	96max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max	150max	240max	300max
	RIPPLE[mVp-p]	0 to +50℃ *1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *1	120max	120max	150max	150max	150max	250max	250max	350max
		-10 - 0℃ *1	160max	160max	180max	180max	180max	280max	300max	400max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max
		-10 to +50℃	60max	60max	150max	180max	290max	290max	450max	600max
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	96max	144max	192max
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6	4.5 - 5.5	Fixed ("Y"which can be adjusted the output is available as optional: 12, 15, 24, 36, 48V ±10%)					
	OUTPUT VOLTAGE SETTING[V]		——	——	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically							
	OVERVOLTAGE PROTECTION		4.00 - 5.25V	Works at 115 - 140% of rating						
	OPERATING INDICATION		Not provided							
	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
ISOLATION	INPUT-OUTPUT		AC2,000V 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)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 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, CSA C22.2 No.60950-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B							
OTHERS	CASE SIZE/WEIGHT		62×32×222mm (W×H×D) / 370g max (without chassis and cover)							
	COOLING METHOD		Convection							

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
*2 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.
*3 Peak load for 20 sec. or less is acceptable(The average current has to be less than the rated current).
*4 Please contact us about safety approvals for the model with option.
* 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
1~4	−V
5~8	+V

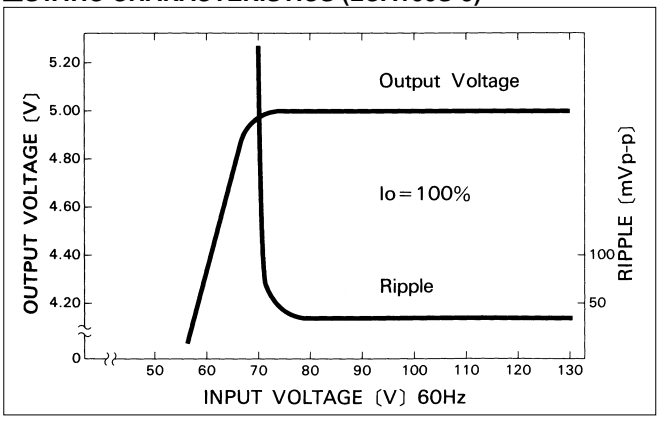
※Maximum 5A per pin of CN2 can be applied.

※Weight : 370g or less (without chassis and cover)
※Tolerance : ±1
※Dimensions in mm.
※PCB Material : Glass composite (CEM-3)
※Chassis and cover is optional
※Mounting torque : 1.5N·m(16kgf-cm) max

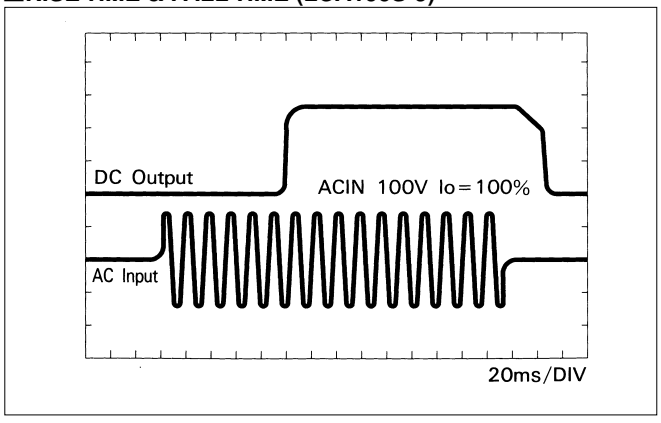
LCA

Performance data

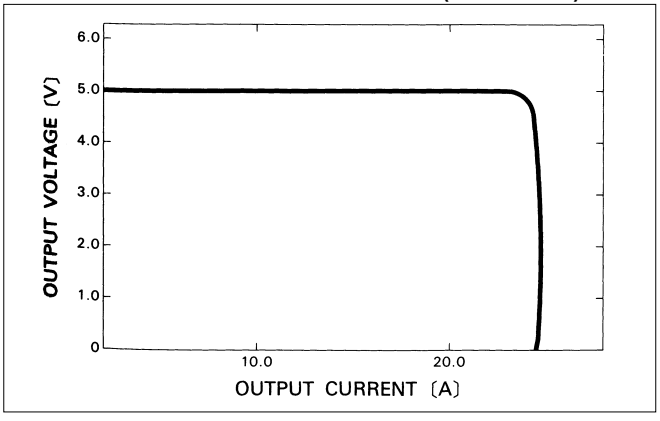
■STATIC CHARACTERISTICS (LCA100S-5)



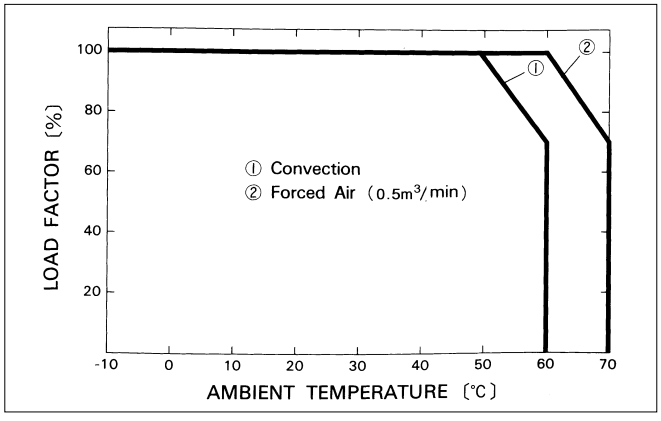
■RISE TIME & FALL TIME (LCA100S-5)



■OVERCURRENT CHARACTERISTICS (LCA100S-5)



■DERATING CURVE



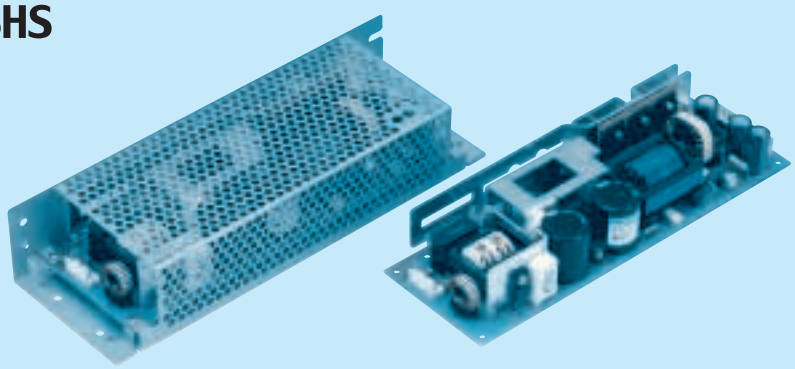
COSEL AC-DC Power Supplies Open Frame/Enclosed type

LCA150S

Ordering information

LC	A	150	S	-5	-□
①	②	③	④	⑤	⑥

RoHS



Recommended EMI/EMC Filter
NAC-06-472

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

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

①Series name
②100/120V input
③Output wattage
④Single output
⑤Output voltage
⑥Optional *4
C :with Coating
G :Low leakage current
S :with Chassis
SN:with Chassis & cover
Y :with Potentiometer

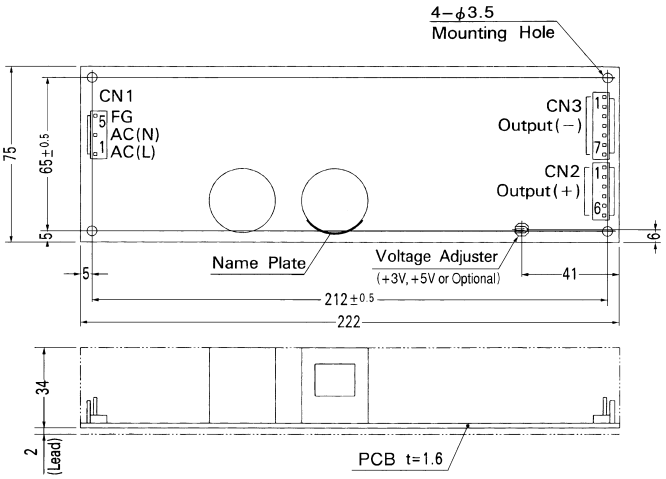
MODEL	LCA150S-3	LCA150S-5	LCA150S-12	LCA150S-15	LCA150S-24	LCA150S-24-H	LCA150S-36	LCA150S-48
MAX OUTPUT WATTAGE[W]	90	150	150	150	151.2	151.2	151.2	153.6
DC OUTPUT	3V 30A	5V 30A	12V 12.5A	15V 10A	24V 6.3A	24V 6.3A	36V 4.2A	48V 3.2A

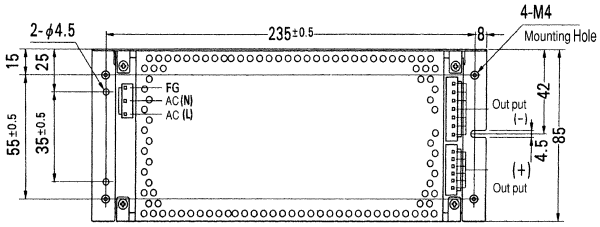
SPECIFICATIONS

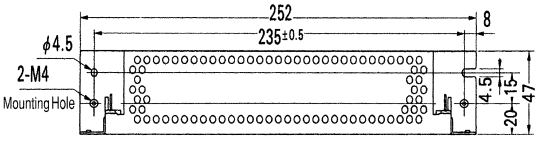
	MODEL		LCA150S-3	LCA150S-5	LCA150S-12	LCA150S-15	LCA150S-24	LCA150S-24-H	LCA150S-36	LCA150S-48
INPUT	VOLTAGE[V]		AC85 - 132 1φ or DC110 - 170							
	CURRENT[A]	ACIN 100V	3.6typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440 or DC							
	EFFICIENCY[%]		72typ	79typ	82typ	83typ	85typ	85typ	85typ	85typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)							
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)							
OUTPUT	VOLTAGE[V]		3	5	12	15	24	24	36	48
	CURRENT[A]	*3	30	30	12.5	10	6.3	6.3 (Peak 10)	4.2	3.2
	LINE REGULATION[mV]		20max	20max	48max	60max	96max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max	150max	240max	300max
	RIPPLE[mVp-p]	0 to +50℃ *1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *1	120max	120max	150max	150max	150max	150max	250max	350max
		-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	400max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max
		-10 to +50℃	60max	60max	150max	180max	290max	290max	450max	600max
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	96max	144max	192max
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6	4.5 - 5.5	Fixed ("Y"which can be adjusted the output is available as optional: 12, 15, 24, 36, 48V ±10%)					
	OUTPUT VOLTAGE SETTING[V]		——	——	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically							
	OVERVOLTAGE PROTECTION		4.00 - 5.25V	Works at 115 - 140% of rating						
	OPERATING INDICATION		Not provided							
	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
ISOLATION	INPUT-OUTPUT		AC2,000V 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)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 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, CSA C22.2 No.60950-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B							
OTHERS	CASE SIZE/WEIGHT		75×36×222mm (W×H×D) / 550g max (without chassis and cover)							
	COOLING METHOD		Convection							

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
*2 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.
*3 Peak load for 15 sec. or less is acceptable(The average current has to be less than the rated current).
*4 Please contact us about safety approvals for the model with option.
* 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	XHR-6N	Chain: SVH-21T-P1.1 Loose: BVH-21T-P1.1
CN3	B7P-VH	VHR-7N	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
1~6	+V

CN3 Pin No.	Output
1~7	−V

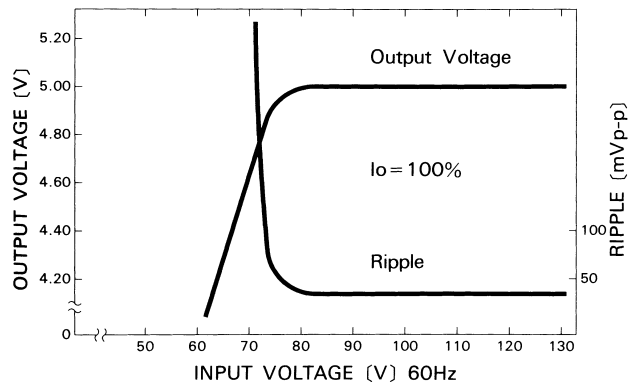
※Maximum 5A per pin of CN2 and CN3 can be applied.

※Weight : 550g 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

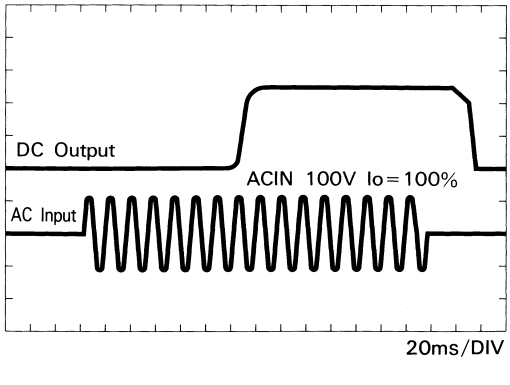
LCA

Performance data

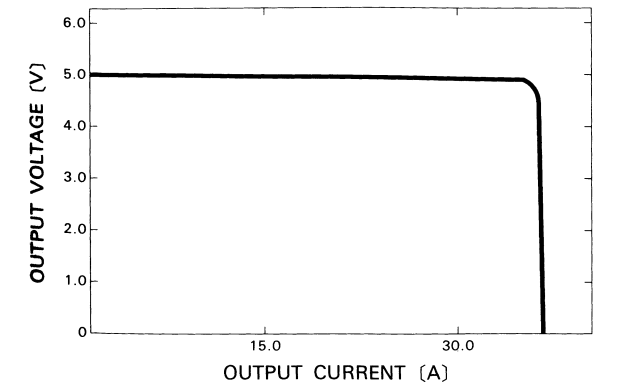
■STATIC CHARACTERISTICS (LCA150S-5)



■RISE TIME & FALL TIME (LCA150S-5)



■OVERCURRENT CHARACTERISTICS (LCA150S-5)



■DERATING CURVE