COSEL **Unit type**

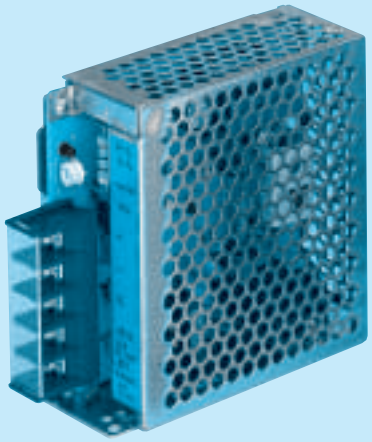
P15E

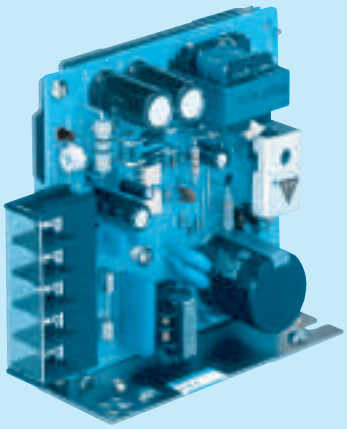
Ordering information

P	15	E	-5	-□
①	②	③	④	⑤

(LVD)

RoHS





①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating
G :Low leakage current
J :Connector type
N :with Cover

MODEL	P15E-5	P15E-9	P15E-12	P15E-15	P15E-18	P15E-24	P15E-30	P15E-48
MAX OUTPUT WATTAGE[W]	15	15.3	15.6	15	16.2	16.8	15	16.8
DC OUTPUT	5V 3A	9V 1.7A	12V 1.3A	15V 1A	18V 0.9A	24V 0.7A	30V 0.5A	48V 0.35A

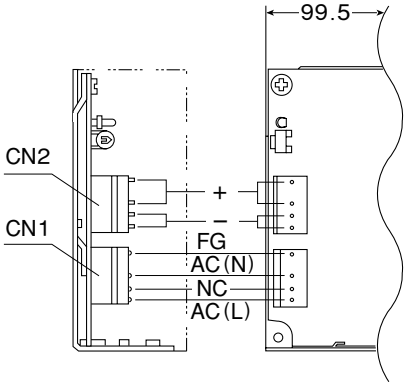
SPECIFICATIONS

	MODEL		P15E-5	P15E-9	P15E-12	P15E-15	P15E-18	P15E-24	P15E-30	P15E-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370							
	CURRENT[A]	ACIN 100V ※1	0.3typ (Io=100%)							
		ACIN 200V ※1	0.18typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440 or DC							
	EFFICIENCY[%]		73typ	75typ	79typ	81typ	81typ	81typ	81typ	81typ
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%) (At cold start)							
		ACIN 200V	40typ (Io=100%) (At cold start)							
OUTPUT	VOLTAGE[V]		5	9	12	15	18	24	30	48
	CURRENT[A]		3.0	1.7	1.3	1.0	0.9	0.7	0.5	0.35
	MAX OUTPUT WATTAGE[W]		15.0	15.3	15.6	15.0	16.2	16.8	15.0	16.8
	LINE REGULATION[mV]		20max	36max	48max	60max	72max	96max	120max	192max
	LOAD REGULATION[mV]		40max	70max	100max	120max	140max	150max	180max	380max
	RIPPLE[mVp-p]	※2	80max	120max	120max	120max	120max	120max	120max	150max
	RIPPLE NOISE[mVp-p]	※2	120max	150max	150max	150max	150max	150max	150max	250max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	90max	120max	150max	180max	240max	300max	480max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		±10%							
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically							
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating							
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +65℃, 30 - 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, 30minutes 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.234 Complies with DEN-AN and IEC60950-1							
	CONDUCTED NOISE		Complies with FCC-B							

※1 The input current of the agency approved unit is indicated as 0.4A.
※2 According to 15MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
※ Derating is required when operated with case cover.
※ Parallel operation with other model is not possible.

P

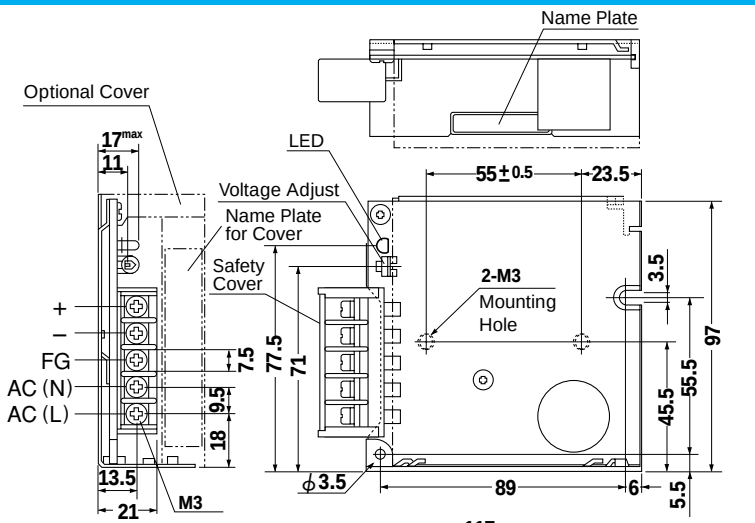
External view

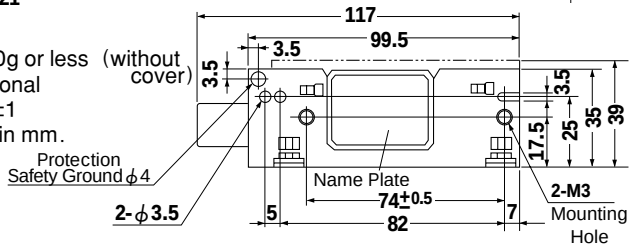


I/O Connector		Mating Connector	Terminal
CN1	5289-4A	5199-04	Chain: 5194PBT Loose: 5194PBTL
CN2	5277-4A	5196-04	Chain: 5194PBT Loose: 5194PBTL

(Mfr : Molex)

Connector type





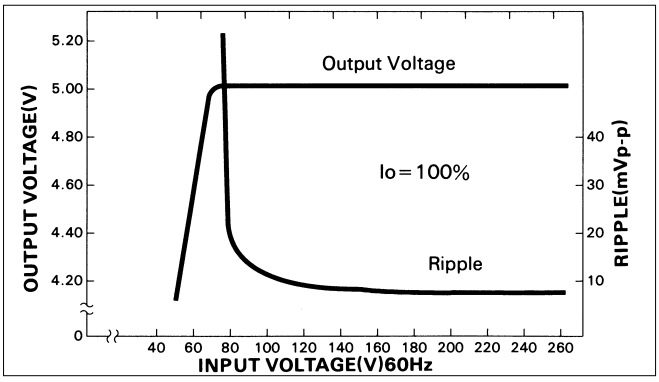
※Weight : 300g or less (without cover)
※Cover is optional
※Tolerance : ±1
※Dimensions in mm.

Barrier strip type

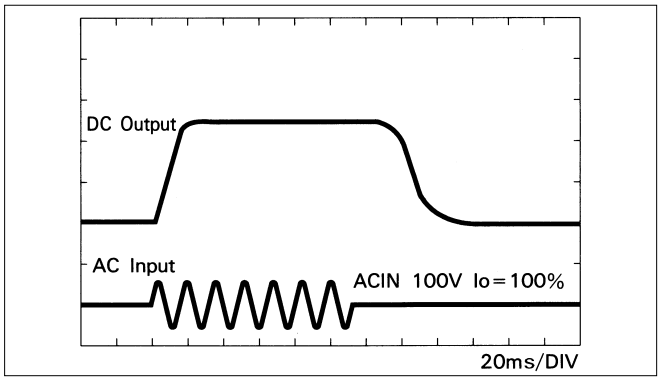
※Mounting torque:0.6N·m (6.3kgf·cm) max

Performance data

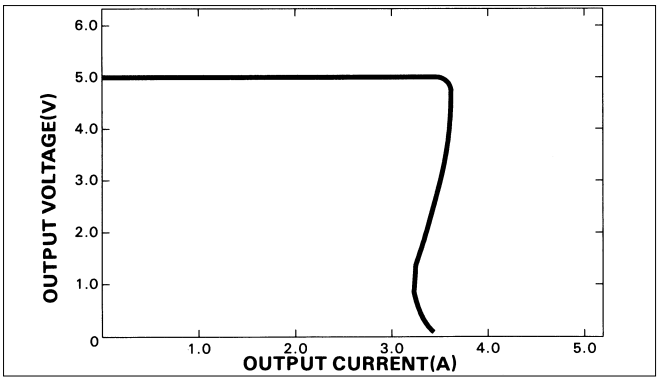
■STATIC CHARACTERISTICS (P15E-5)



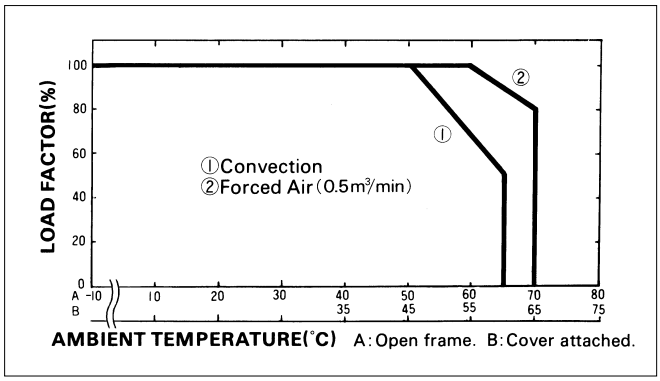
■RISE TIME & FALL TIME (P15E-5)



■OVERCURRENT CHARACTERISTICS (P15E-5)



■DERATING CURVE



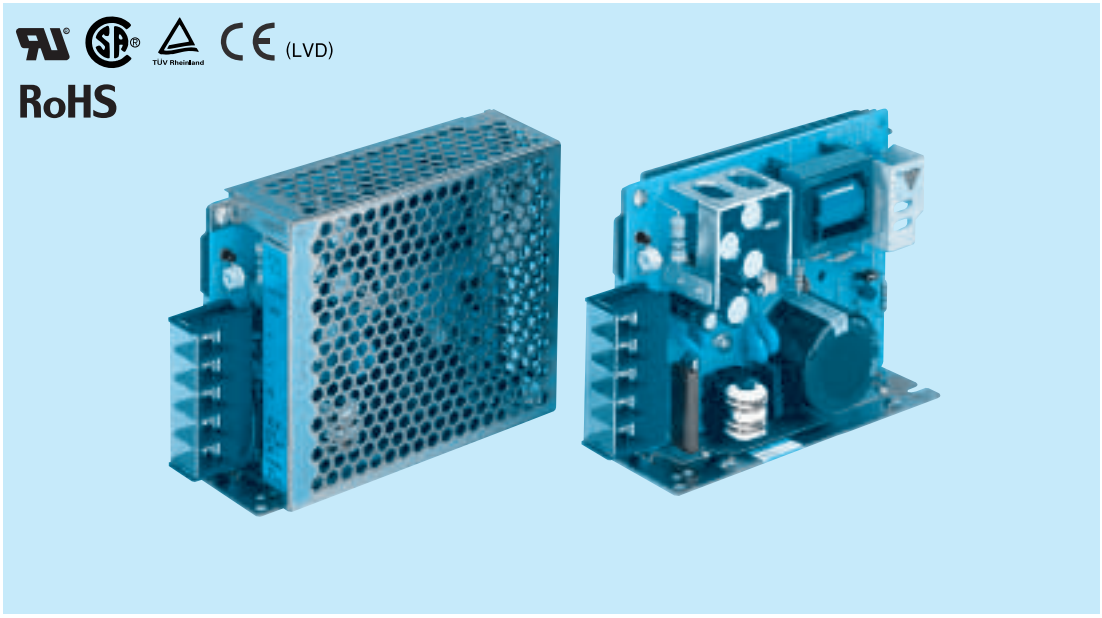
COSEL **Unit type**

P30E

P

Ordering information

P	30	E	-5	-□
①	②	③	④	⑤



①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating
G :Low leakage current
J :Connector type
N :with Cover

MODEL	P30E-5	P30E-9	P30E-12	P30E-15	P30E-18	P30E-24	P30E-30	P30E-48
MAX OUTPUT WATTAGE[W]	30	30.6	30	30	30.6	31.2	30	30.24
DC OUTPUT	5V 6A	9V 3.4A	12V 2.5A	15V 2A	18V 1.7A	24V 1.3A	30V 1.0A	48V 0.63A

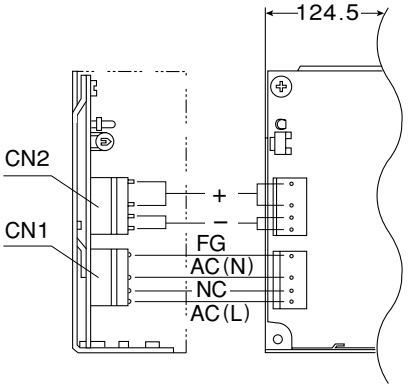
SPECIFICATIONS

	MODEL		P30E-5	P30E-9	P30E-12	P30E-15	P30E-18	P30E-24	P30E-30	P30E-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370							
	CURRENT[A]	ACIN 100V ※1	0.6typ (Io=100%)							
		ACIN 200V ※1	0.35typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440 or DC							
	EFFICIENCY[%]		74typ	74typ	78typ	79typ	79typ	82typ	82typ	82typ
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%) (At cold start)							
		ACIN 200V	40typ (Io=100%) (At cold start)							
OUTPUT	VOLTAGE[V]		5	9	12	15	18	24	30	48
	CURRENT[A]		6.0	3.4	2.5	2.0	1.7	1.3	1.0	0.63
	MAX OUTPUT WATTAGE[W]		30	30.6	30	30	30.6	31.2	30	30.24
	LINE REGULATION[mV]		20max	36max	48max	60max	72max	96max	120max	192max
	LOAD REGULATION[mV]		40max	70max	100max	120max	140max	150max	180max	300max
	RIPPLE[mVp-p]	※2	80max	120max	120max	120max	120max	120max	120max	150max
	RIPPLE NOISE[mVp-p]	※2	120max	150max	150max	150max	150max	150max	150max	250max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	90max	120max	150max	180max	240max	300max	480max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		±10%							
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically							
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating							
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +65℃, 30 - 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, 30minutes 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.234 Complies with DEN-AN and IEC60950-1							
	CONDUCTED NOISE		Complies with FCC-B							

※1 The input current of the agency approved unit is indicated as 0.7A.
※2 According to 15MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
※ Derating is required when operated with case cover.
※ Parallel operation with other model is not possible.

P

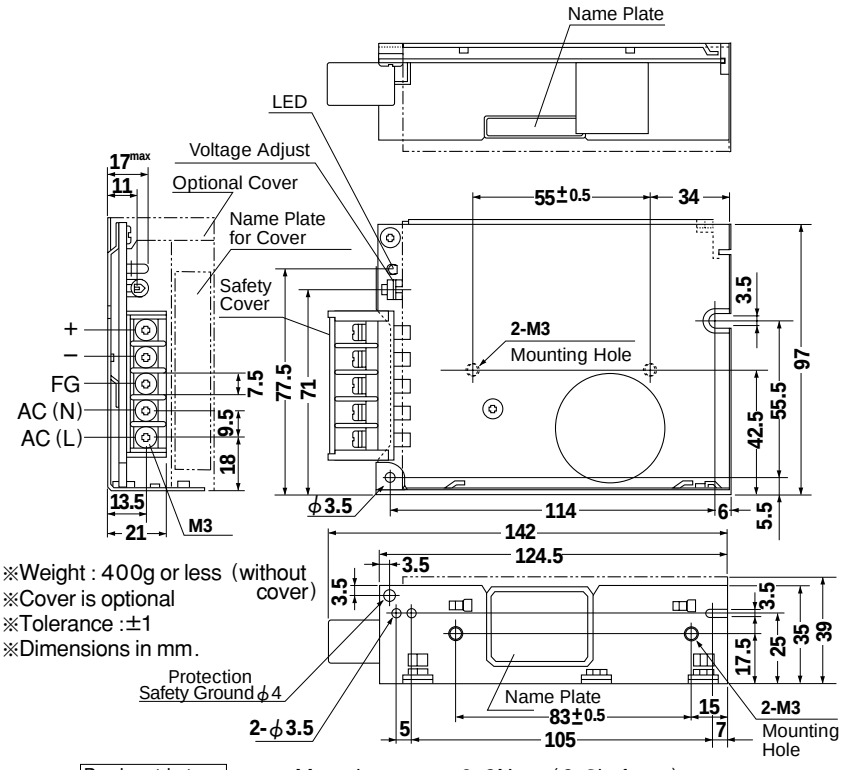
External view



I/O Connector		Mating Connector	Terminal
CN1	5289-4A	5199-04	Chain: 5194PBT Loose: 5194PBTL
CN2	5277-4A	5196-04	Chain: 5194PBT Loose: 5194PBTL

(Mfr : Molex)

Connector type



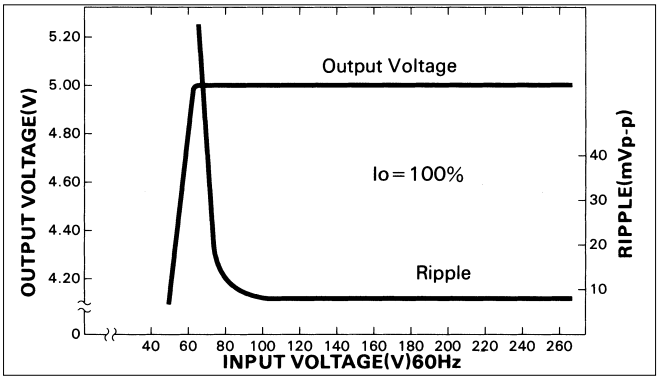
※Weight : 400g or less (without cover)
※Cover is optional
※Tolerance : ±1
※Dimensions in mm.

Barrier strip type

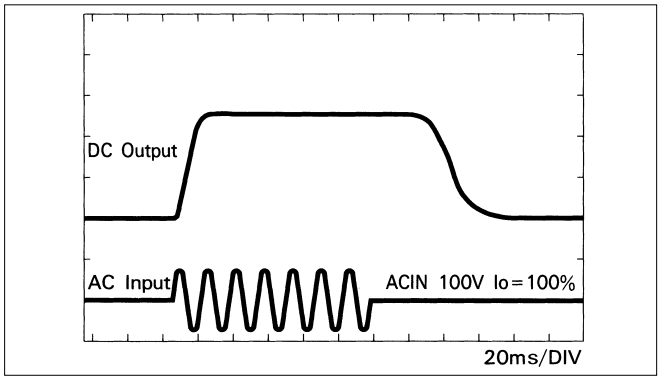
※Mounting torque:0.6N·m (6.3kgf·cm) max

Performance data

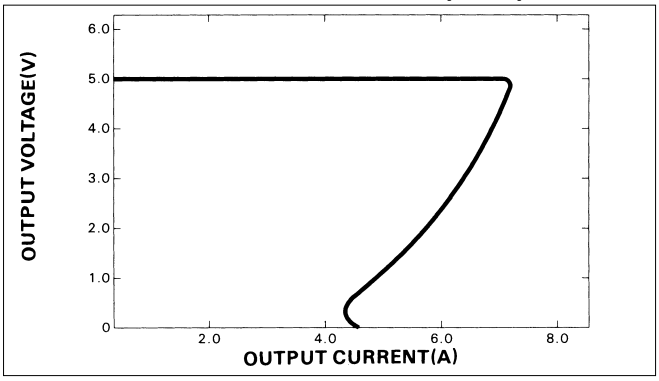
■STATIC CHARACTERISTICS (P30E-5)



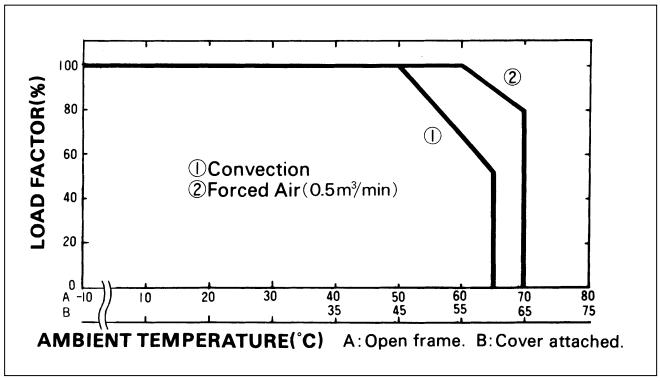
■RISE TIME & FALL TIME (P30E-5)



■OVERCURRENT CHARACTERISTICS (P30E-5)



■DERATING CURVE



COSEL **Unit type**

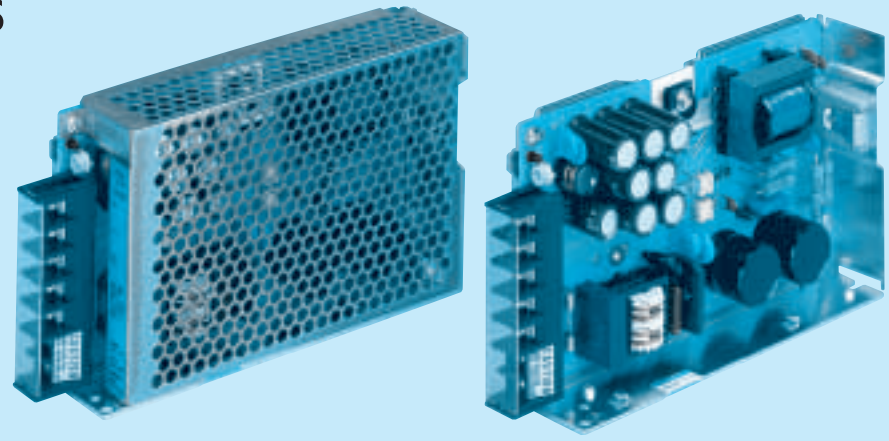
P50E

Ordering information

P	50	E	-5	-□
①	②	③	④	⑤

(LVD)

RoHS



①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating
G :Low leakage current
J :Connector type
N :with Cover

MODEL	P50E-5	P50E-9	P50E-12	P50E-15	P50E-18	P50E-24	P50E-30	P50E-48
MAX OUTPUT WATTAGE[W]	50	49.5	50.4	51	50.4	50.4	51	48
DC OUTPUT	5V 10A	9V 5.5A	12V 4.2A	15V 3.4A	18V 2.8A	24V 2.1A	30V 1.7A	48V 1.0A

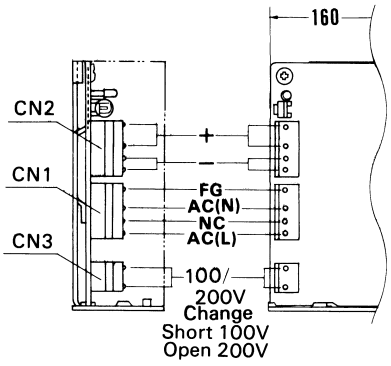
SPECIFICATIONS

	MODEL		P50E-5	P50E-9	P50E-12	P50E-15	P50E-18	P50E-24	P50E-30	P50E-48
INPUT	VOLTAGE[V]		AC85 - 132 / 170 - 264 1φ (User-selectable) or DC220 - 370							
	CURRENT[A]	ACIN 100V ※1	1.2typ (Io=100%)							
		ACIN 200V ※1	0.61typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440							
	EFFICIENCY[%]		72typ	77typ	77typ	78typ	78typ	80typ	82typ	80typ
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%) (At cold start)							
		ACIN 200V	40typ (Io=100%) (At cold start)							
OUTPUT	VOLTAGE[V]		5	9	12	15	18	24	30	48
	CURRENT[A]		10	5.5	4.2	3.4	2.8	2.1	1.7	1.0
	MAX OUTPUT WATTAGE[W]		50	49.5	50.4	51	50.4	50.4	51	48
	LINE REGULATION[mV]		20max	36max	48max	60max	72max	96max	120max	192max
	LOAD REGULATION[mV]		40max	70max	100max	120max	144max	150max	180max	240max
	RIPPLE[mVp-p]	※2	80max	120max	120max	120max	120max	120max	120max	150max
	RIPPLE NOISE[mVp-p]	※2	120max	150max	150max	150max	150max	150max	150max	250max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	120max	150max	180max	240max	350max	480max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		±10%							
	START-UP TIME[ms]		100max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically							
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating							
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +65℃, 30 - 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, 30minutes 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.234 Complies with DEN-AN and IEC60950-1							
	CONDUCTED NOISE		Complies with FCC-B							

※1 The input current of the agency approved unit is indicated as 1.1A (ACIN 100V) or 0.6A (ACIN 200V).
※2 According to 15MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
※ Derating is required when operated with case cover.
※ Parallel operation with other model is not possible.

P

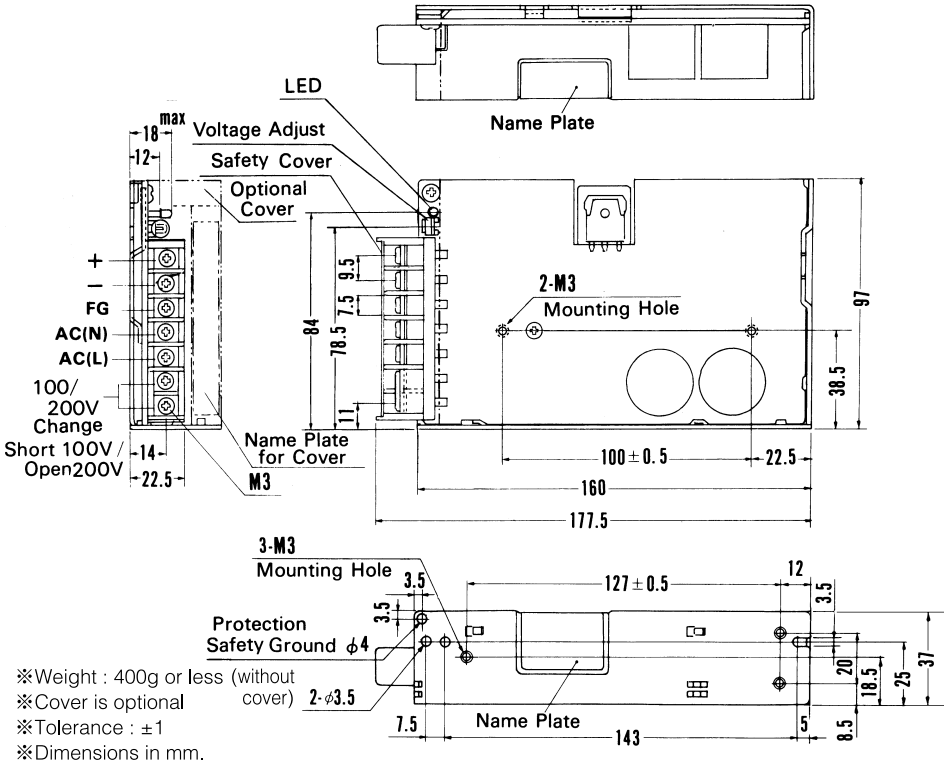
External view



I/O Connector	Mating Connector	Terminal
CN1	5289-4A	5199-04	Chain: 5194PBT
			Loose: 5194PBTL
CN2	5277-4A	5196-04	Chain: 5194PBT
			Loose: 5194PBTL
CN3	5289-2A	5199-02	Chain: 5194PBT
			Loose: 5194PBTL

※Maximum 5A per pin of CN2 can be applied. (Mfr : Molex)

Connector type



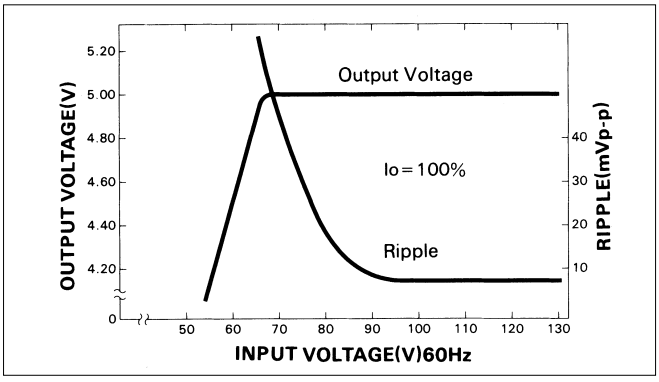
※Weight : 400g or less (without cover)
※Cover is optional
※Tolerance : ±1
※Dimensions in mm.

Barrier strip type

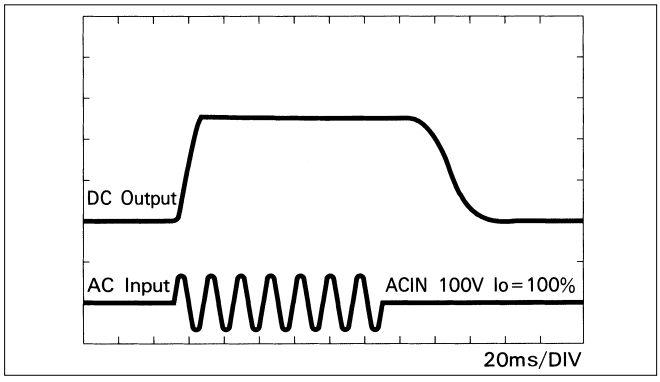
※Mounting torque:0.49N·m (5.0kgf·cm) max

Performance data

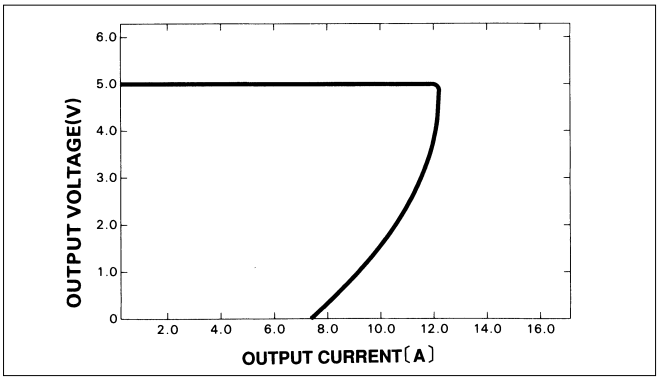
■STATIC CHARACTERISTICS (P50E-5)



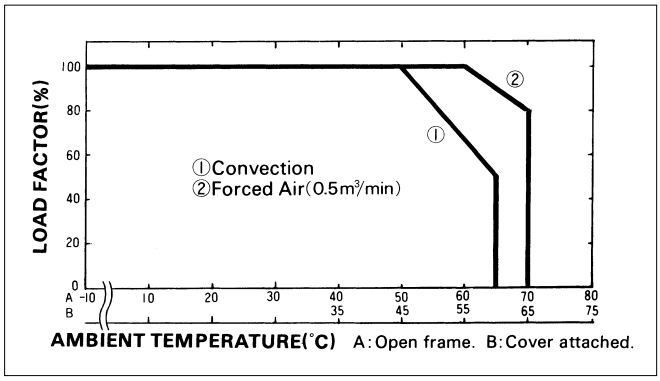
■RISE TIME & FALL TIME (P50E-5)



■OVERCURRENT CHARACTERISTICS (P50E-5)



■DERATING CURVE

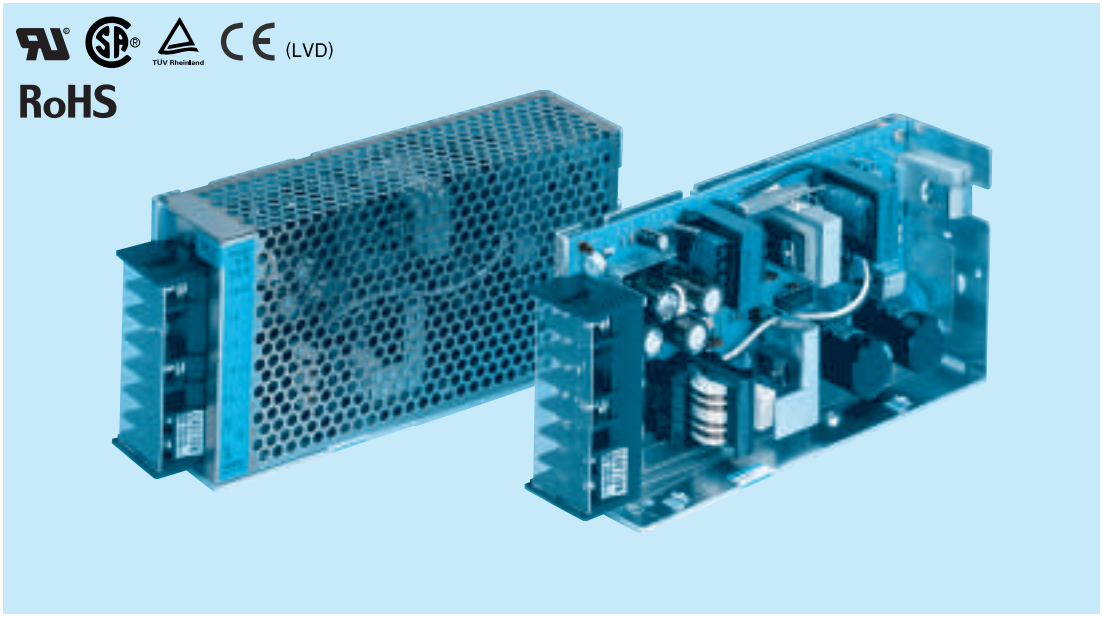


COSEL **Unit type**

P100E

Ordering information

P	100	E	-5	-□
①	②	③	④	⑤



①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating
G :Low leakage current
N :with Cover

MODEL	P100E-5	P100E-9	P100E-12	P100E-15	P100E-18	P100E-24	P100E-30	P100E-48
MAX OUTPUT WATTAGE[W]	100	100.8	102	105	100.8	108	99	100.8
DC OUTPUT	5V 20A	9V 11.2A	12V 8.5A	15V 7A	18V 5.6A	24V 4.5A	30V 3.3A	48V 2.1A

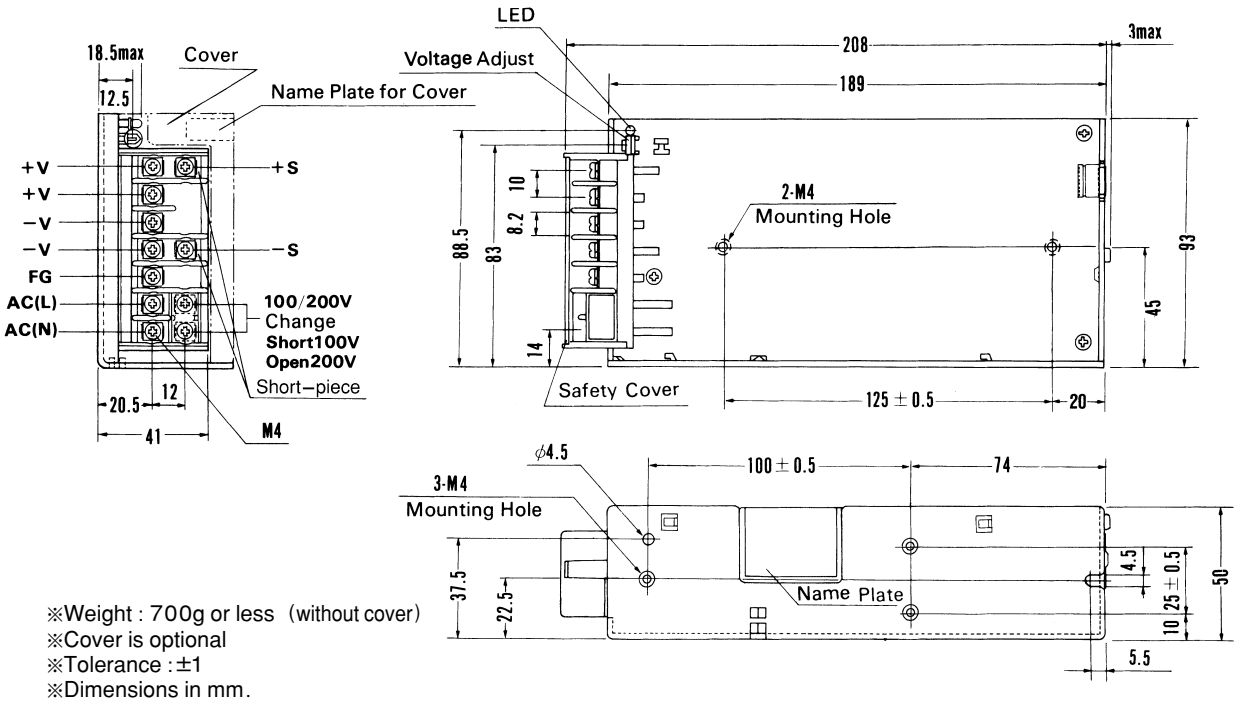
SPECIFICATIONS

	MODEL		P100E-5	P100E-9	P100E-12	P100E-15	P100E-18	P100E-24	P100E-30	P100E-48
INPUT	VOLTAGE[V]		AC85 - 132 / 170 - 264 1φ (User-selectable) or DC220 - 370							
	CURRENT[A]	ACIN 100V ※1	2.2typ (Io=100%)							
		ACIN 200V ※1	1.2typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440							
	EFFICIENCY[%]		78typ	78typ	80typ	82typ	82typ	84typ	78typ	84typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)							
		ACIN 200V	30typ (Io=100%)							
OUTPUT	VOLTAGE[V]		5	9	12	15	18	24	30	48
	CURRENT[A]		20	11.2	8.5	7	5.6	4.5	3.3	2.1
	MAX OUTPUT WATTAGE[W]		100	100.8	102	105	100.8	108	99	100.8
	LINE REGULATION[mV]		20max	36max	48max	60max	72max	96max	120max	192max
	LOAD REGULATION[mV]		40max	72max	100max	120max	150max	150max	180max	384max
	RIPPLE[mVp-p]	※2	80max	120max	120max	120max	120max	120max	120max	150max
	RIPPLE NOISE[mVp-p]	※2	120max	150max	150max	150max	250max	150max	150max	250max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	90max	120max	150max	180max	240max	300max	480max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		±10%							
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		15typ (ACIN 85V, Io=100%) 25typ (ACIN 100V, Io=100%)							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically							
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating							
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +65℃, 30 - 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, 30minutes 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.234 Complies with DEN-AN and IEC60950-1							
	CONDUCTED NOISE		Complies with FCC-A							

※1 The input current of the agency approved unit is indicated as 2.5A (ACIN100V) or 1.5A (ACIN200V).
※2 According to 15MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN : RM101).
※ Derating is required when operated with case cover.
※ Parallel operation with other model is not possible.

P

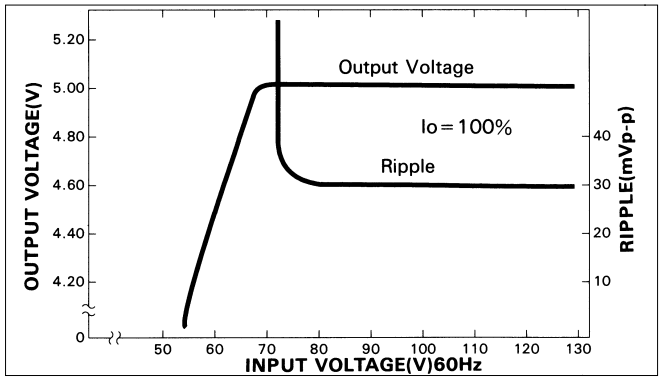
External view



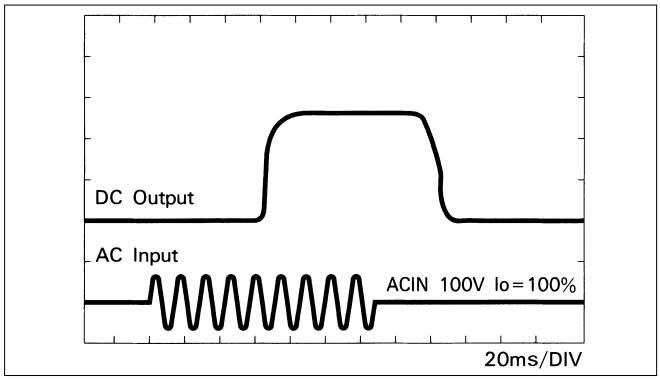
※Weight : 700g or less (without cover)
※Cover is optional
※Tolerance : ±1
※Dimensions in mm.
※Mounting torque:1.2N·m (12.8kgf·cm) max

Performance data

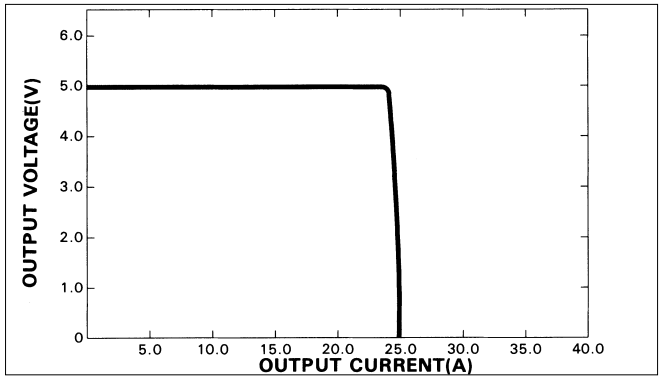
■STATIC CHARACTERISTICS (P100E-5)



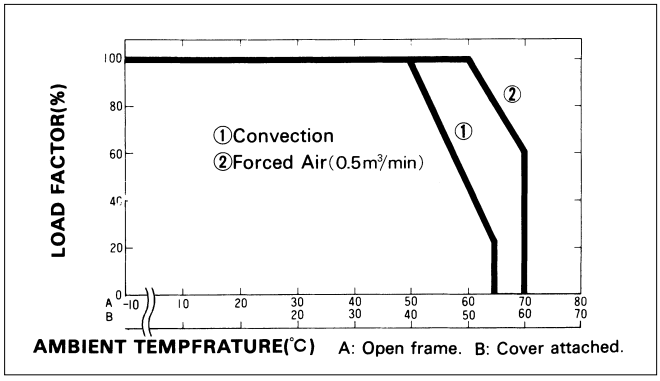
■RISE TIME & FALL TIME (P100E-5)



■OVERCURRENT CHARACTERISTICS (P100E-5)



■DERATING CURVE

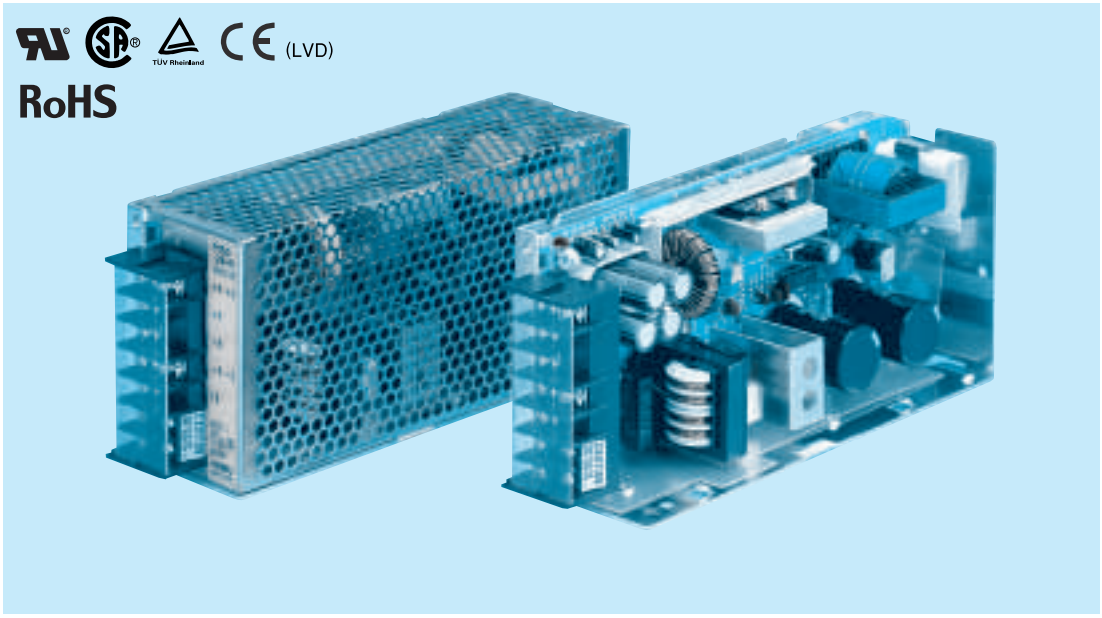


COSEL **Unit type**

P150E

Ordering information

P ① 150 ② E ③ -5 ④ -□ ⑤



①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating
G :Low leakage current
N :with Cover

MODEL	P150E-5	P150E-9	P150E-12	P150E-15	P150E-18	P150E-24	P150E-30	P150E-48
MAX OUTPUT WATTAGE[W]	150	150.3	156	150	151.2	156	150	158.4
DC OUTPUT	5V 30A	9V 16.7A	12V 13A	15V 10A	18V 8.4A	24V 6.5A	30V 5.0A	48V 3.3A

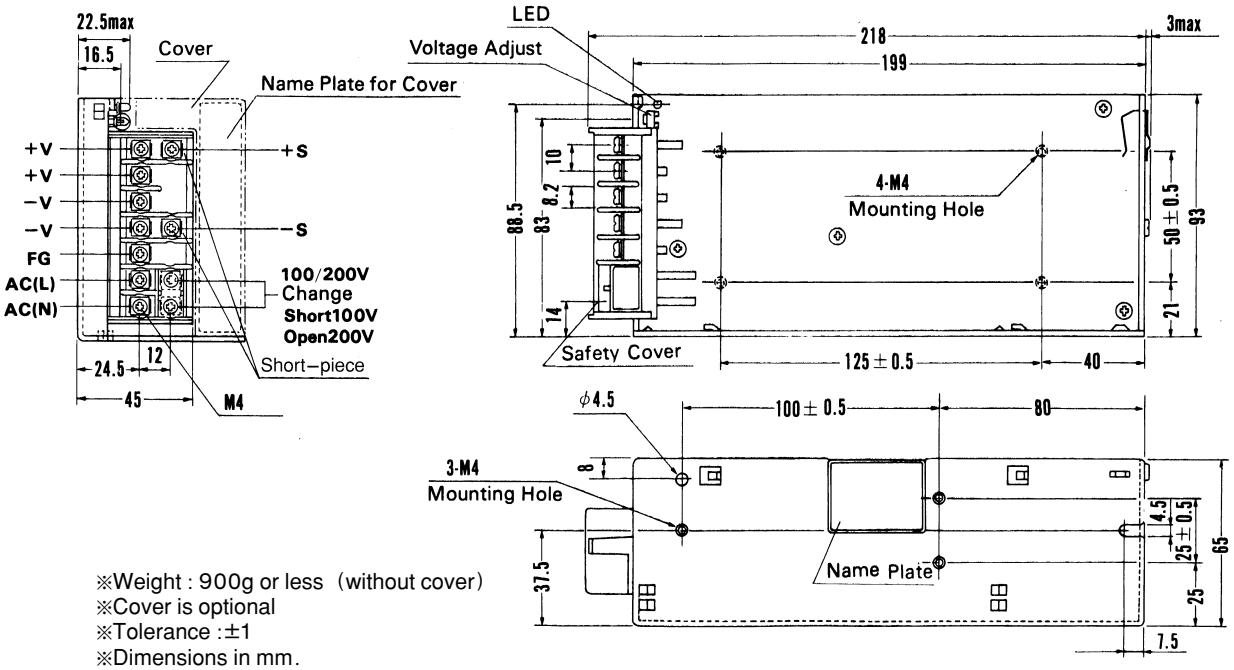
SPECIFICATIONS

	MODEL		P150E-5	P150E-9	P150E-12	P150E-15	P150E-18	P150E-24	P150E-30	P150E-48
INPUT	VOLTAGE[V]		AC85 - 132 / 170 - 264 1φ (User-selectable) or DC220 - 370							
	CURRENT[A]	ACIN 100V ※1	3.2typ (Io=100%)							
		ACIN 200V ※1	1.7typ (Io=100%)							
	FREQUENCY[Hz]		47 - 440							
	EFFICIENCY[%]		78typ	78typ	80typ	81typ	82typ	82typ	82typ	85typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)							
		ACIN 200V	30typ (Io=100%)							
OUTPUT	VOLTAGE[V]		5	9	12	15	18	24	30	48
	CURRENT[A]		30	16.7	13	10	8.4	6.5	5.0	3.3
	MAX OUTPUT WATTAGE[W]		150	150.3	156	150	151.2	156	150	158.4
	LINE REGULATION[mV]		20max	36max	48max	60max	72max	96max	120max	192max
	LOAD REGULATION[mV]		40max	72max	100max	120max	150max	150max	190max	240max
	RIPPLE[mVp-p]	※2	80max	120max	120max	120max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	※2	120max	150max	150max	150max	250max	150max	180max	200max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	90max	120max	150max	180max	240max	300max	480max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		±10%							
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms]		15typ (ACIN 85V, Io=100%) 25typ (ACIN 100V, Io=100%)							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically							
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating							
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +65℃, 30 - 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, 30minutes 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.234 Complies with DEN-AN and IEC60950-1							
	CONDUCTED NOISE		Complies with FCC-A							

※1 The input current of the agency approved unit is indicated as 3.5A (ACIN100V) or 1.7A (ACIN200V).
※2 According to 15MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
※ Derating is required when operated with case cover.
※ Parallel operation with other model is not possible.

P

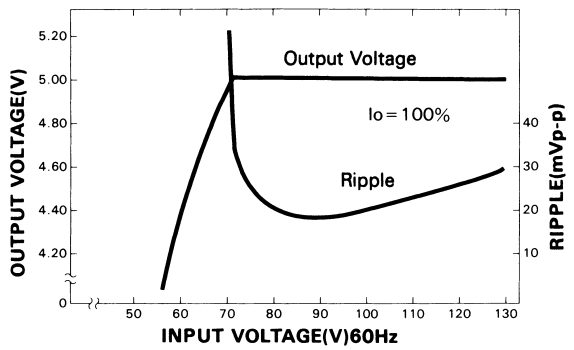
External view



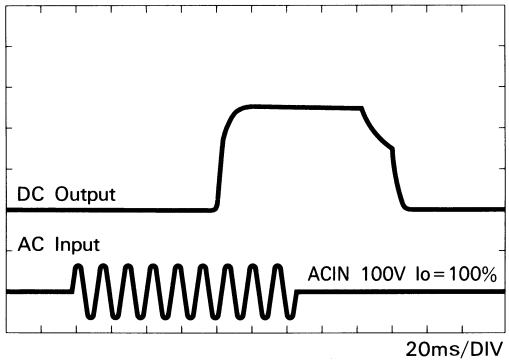
※Weight : 900g or less (without cover)
※Cover is optional
※Tolerance : ±1
※Dimensions in mm.
※Mounting torque:1.2N·m (12.8kgf·cm) max

Performance data

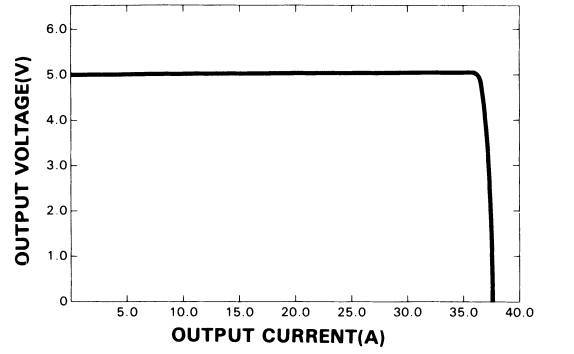
■STATIC CHARACTERISTICS (P150E-5)



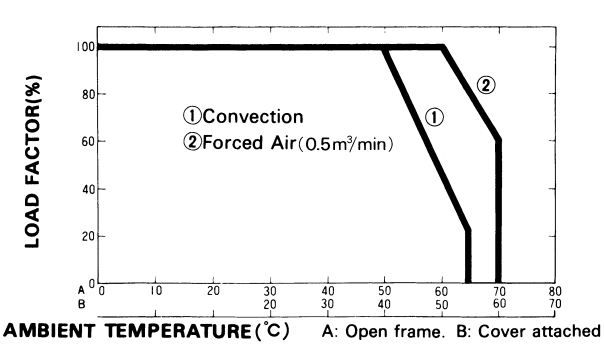
■RISE TIME & FALL TIME (P150E-5)



■OVERCURRENT CHARACTERISTICS (P150E-5)



■DERATING CURVE



COSEL **Unit type**

P300E

P

Ordering information

P	300	E	-5	-□	
①	②	③	④	⑤	

(LVD)

RoHS

RoHS : Please consult us for details

①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating
G :Low leakage current
R :Positive logic control

MODEL	P300E-5	P300E-12	P300E-15	P300E-18	P300E-24	P300E-30	P300E-48
MAX OUTPUT WATTAGE[W]	300	324	330	306	336	300	312
DC OUTPUT	5V 60A	12V 27A	15V 22A	18V 17A	24V 14A	30V 10A	48V 6.5A

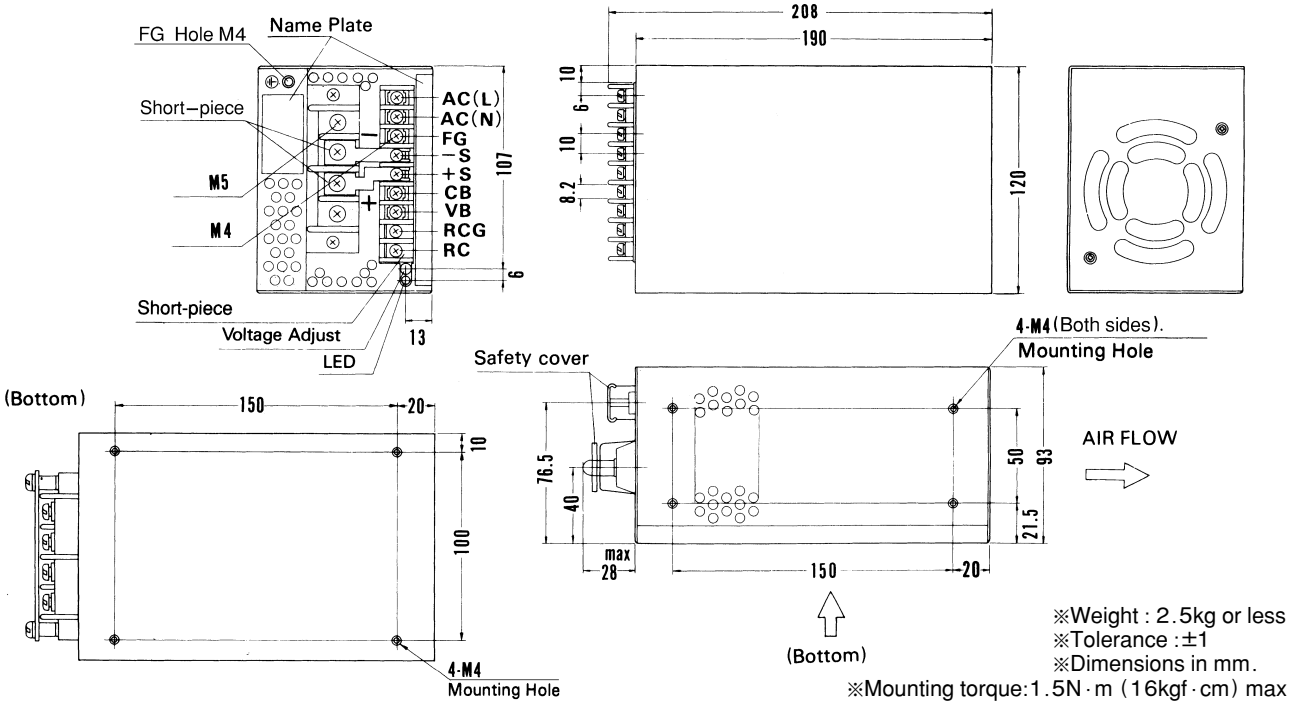
SPECIFICATIONS

	MODEL		P300E-5	P300E-12	P300E-15	P300E-18	P300E-24	P300E-30	P300E-48
INPUT	VOLTAGE[V]		AC85 - 132 / 170 - 264 1φ (Auto-selectable)						
	CURRENT[A]	ACIN 100V *1	5.5typ (Io=100%)						
		ACIN 200V *1	3.5typ (Io=100%)						
	FREQUENCY[Hz]		47 - 63						
	EFFICIENCY[%]		74typ	78typ	81typ	81typ	83typ	78typ	79typ
	INRUSH CURRENT[A]	ACIN 100V	25/40typ (Io=100%) (Primary inrush current /Secondary inrush current)						
		ACIN 200V	50/40typ (Io=100%) (Primary inrush current /Secondary inrush current)						
OUTPUT	VOLTAGE[V]		5	12	15	18	24	30	48
	CURRENT[A]		60	27	22	17	14	10	6.5
	MAX OUTPUT WATTAGE[W]		300	324	330	306	336	300	312
	LINE REGULATION[mV]		20max	48max	60max	72max	96max	120max	192max
	LOAD REGULATION[mV]		40max	100max	120max	144max	150max	180max	300max
	RIPPLE[mVp-p]	*2	80max	120max	120max	120max	120max	120max	150max
	RIPPLE NOISE[mVp-p]	*2	120max	150max	150max	150max	150max	200max	400max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max	180max	240max	300max	480max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		±10%						
	START-UP TIME[ms]		300max (ACIN 85/170V, Io=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 85/170V, Io=100%) 40typ (ACIN 100/200V, Io=100%)						
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically						
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating						
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	OUTPUT · RC-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)						
	OUTPUT-RC		AC100V 1minute, Cutoff current = 100mA, DC100V 50MΩmin (At Room Temperature)						
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max						
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max						
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 30minutes 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.234 Complies with DEN-AN and IEC60950-1						
	CONDUCTED NOISE		Complies with FCC-A						

*1 The input current of the agency approved unit is indicated as 6.5A (ACIN 100V) or 3.6A (ACIN 200V).
*2 According to 15MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).

P

External view



※Weight : 2.5kg or less
※Tolerance : ±1
※Dimensions in mm.
※Mounting torque:1.5N·m (16kgf·cm) max

Performance data

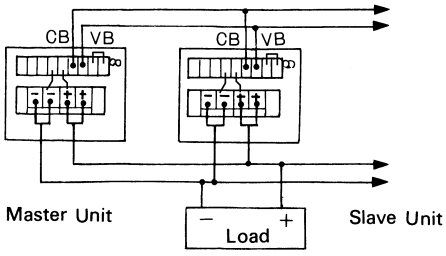
■Automatic Input Voltage Selector

Requires no manual adjusutment (wire or Short-pieces). P300 unit detects input voltage then select circuit to match applied input voltage.

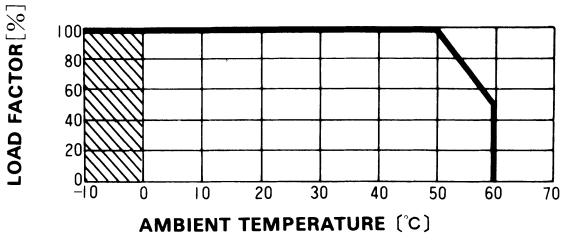
■Automatic Current sharing

- Output voltage is controlled by a potentiometer in master unit. Turn slave unit's potentiometer clock wise all the way to the end.
- Maximun output current can be determined by using the following formula: Total output current = 0.9 × (Rated current per unit) × Number of units paralleled
- Five units maximum for the parallel operation.

● Example



■DERATING CURVE



* The shadow indicates the region where different specifications for ripple noise should be used.

COSEL **Unit type**

P600E

P

Ordering information

P ① 600 ② E ③ -5 ④ -□ ⑤

RoHS : Please consult us for details

①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating
G :Low leakage current
R :Positive logic control

MODEL	P600E-5	P600E-12	P600E-15	P600E-18	P600E-24	P600E-30	P600E-48
MAX OUTPUT WATTAGE[W]	600	636	645	612	648	600	624
DC OUTPUT	5V 120A	12V 53A	15V 43A	18V 34A	24V 27A	30V 20A	48V 13A

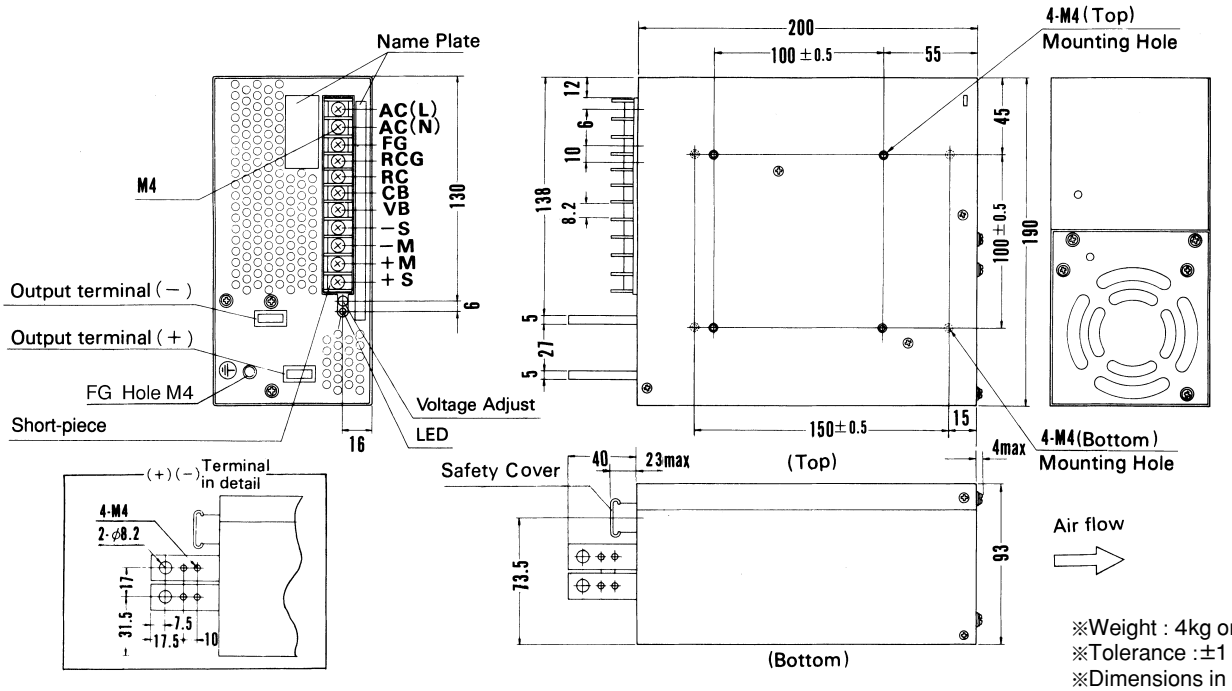
SPECIFICATIONS

	MODEL		P600E-5	P600E-12	P600E-15	P600E-18	P600E-24	P600E-30	P600E-48
INPUT	VOLTAGE[V]		AC85 - 132 / 170 - 264 1φ (Auto-selectable)						
	CURRENT[A]	ACIN 100V ※1	11typ (Io=100%)						
		ACIN 200V ※1	6typ (Io=100%)						
	FREQUENCY[Hz]		47 - 63						
	EFFICIENCY[%]		77typ	80typ	81typ	80typ	84typ	81typ	80typ
	INRUSH CURRENT[A]	ACIN 100V	30/50typ (Io=100%) (Primary inrush current /Secondary inrush current)						
		ACIN 200V	60/50typ (Io=100%) (Primary inrush current /Secondary inrush current)						
OUTPUT	VOLTAGE[V]		5	12	15	18	24	30	48
	CURRENT[A]		120	53	43	34	27	20	13
	MAX OUTPUT WATTAGE[W]		600	636	645	612	648	600	624
	LINE REGULATION[mV]		20max	48max	60max	72max	96max	120max	192max
	LOAD REGULATION[mV]		40max	100max	120max	144max	150max	180max	300max
	RIPPLE[mVp-p]	※2	80max	120max	120max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	※2	120max	150max	150max	150max	150max	200max	400max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max	180max	240max	300max	480max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		±10%						
	START-UP TIME[ms]		300max (ACIN 85/170V, Io=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 85/170V, Io=100%)						
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically						
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating						
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	OUTPUT · RC-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)						
	OUTPUT-RC		AC100V 1minute, Cutoff current = 100mA, DC100V 50MΩmin (At Room Temperature)						
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		0 to +60℃, 30 - 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, 30minutes 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.234 Complies with DEN-AN and IEC60950-1						
	CONDUCTED NOISE		Complies with FCC-A						

※1 The input current of the agency approved unit is indicated as 11.6A (ACIN 100V) or 6.2A (ACIN 200V).
※2 According to 15MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).

P

External view



※Weight : 4kg or less
※Tolerance : ±1
※Dimensions in mm.
※Mounting torque:1.5N·m (16kgf·cm) max

Performance data

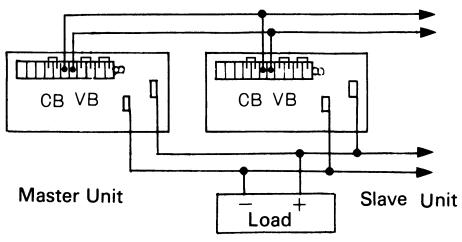
■Automatic Input Voltage Selector

Requires no manual adjusutment (wire or Short-pieces). P600 unit detects input voltage then select circuit to match applied input voltage.

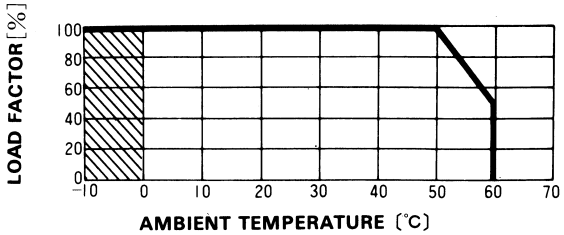
■Automatic Current sharing

- Output voltage is controlled by a potentiometer in master unit. Turn slave unit's potentiometer clock wise all the way to the end.
- Maximun output current can be determined by using the following formula: Total output current = 0.9 × (Rated current per unit) × Number of units paralleled
- Five units maximum for the parallel operation.

● Example



■DERATING CURVE



* The shadow indicates the region where different specifications for ripple noise should be used.

COSEL **Unit type**

P1500E

P

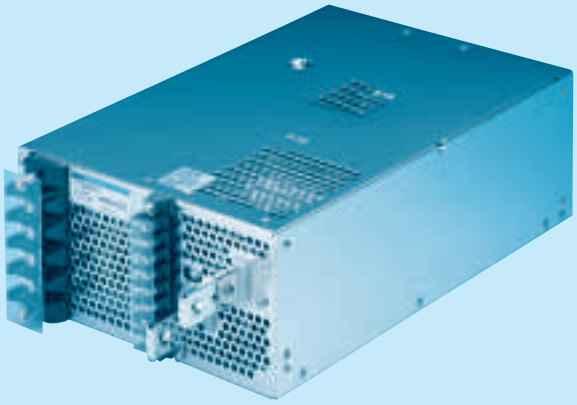
Ordering information

P 1500 E -5 -□

① ② ③ ④ ⑤

(LVD)

RoHS



RoHS : Please consult us for details

①Series name
②Output wattage
③UL recognized,TÜV approved,
CSA certified:E
④Output voltage
⑤Optional
C :with Coating

MODEL	P1500E-5	P1500E-12	P1500E-15	P1500E-18	P1500E-24
MAX OUTPUT WATTAGE[W]	1500	1500	1500	1512	1560
DC OUTPUT	5V 300A	12V 125A	15V 100A	18V 84A	24V 65A

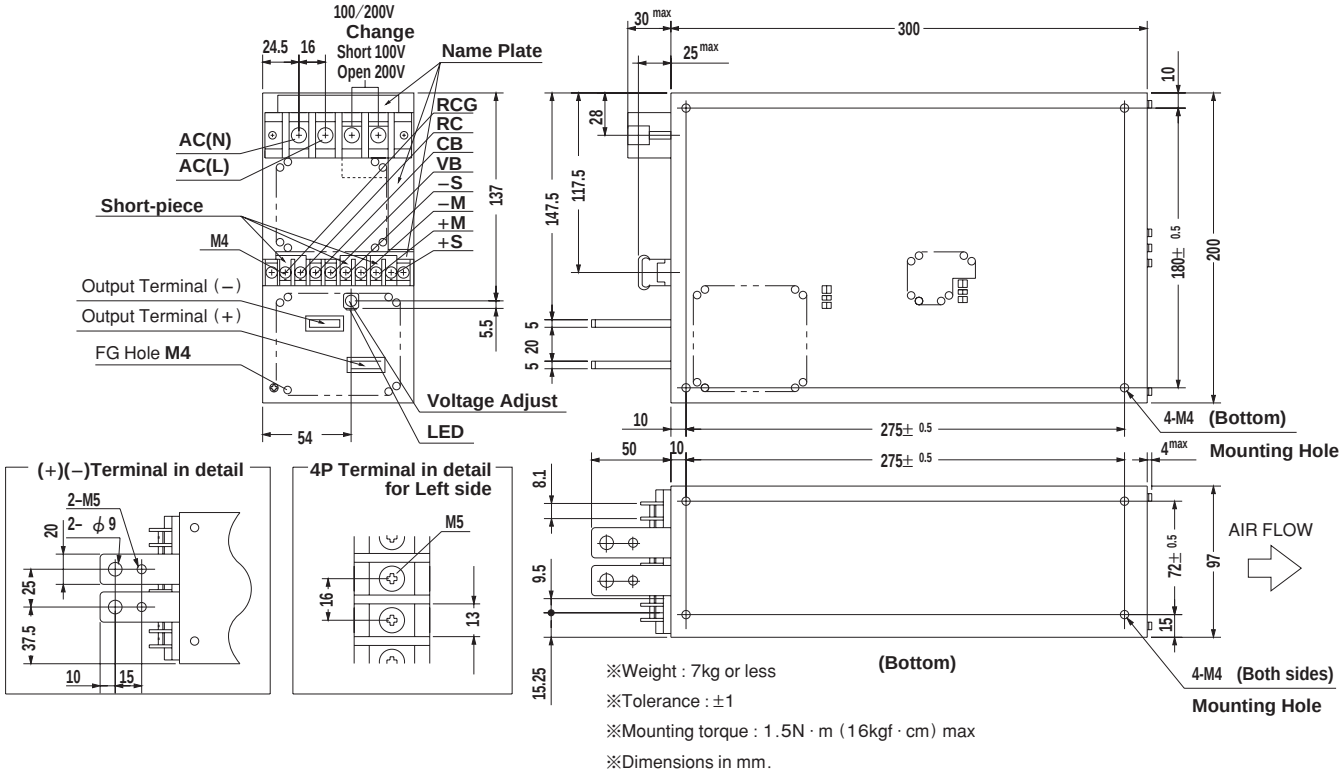
SPECIFICATIONS

	MODEL		P1500E-5	P1500E-12	P1500E-15	P1500E-18	P1500E-24
INPUT	VOLTAGE[V]		AC85 - 132 / 170 - 264 1φ (User-selectable) or DC220 - 370				
	CURRENT[A]	ACIN 100V ※1	29typ (Io=100%)				
		ACIN 200V ※1	18typ (Io=100%)				
	FREQUENCY[Hz]		47 - 440				
	EFFICIENCY[%]		78typ	81typ	81typ	81typ	83typ
	INRUSH CURRENT[A]	ACIN 100V	25/150typ (Io=100%) (Primary inrush current /Secondary inrush current)				
		ACIN 200V	50/150typ (Io=100%) (Primary inrush current /Secondary inrush current)				
OUTPUT	VOLTAGE[V]		5	12	15	18	24
	CURRENT[A]		300	125	100	84	65
	MAX OUTPUT WATTAGE[W]		1500	1500	1500	1512	1560
	LINE REGULATION[mV]		20max	48max	60max	72max	96max
	LOAD REGULATION[mV]		40max	100max	120max	150max	150max
	RIPPLE[mVp-p]	※2	80max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p]	※2	120max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max	180max	240max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		-20 to +10%				
	START-UP TIME[ms]		800max (ACIN 85/170V, Io=100%)				
	HOLD-UP TIME[ms]		10typ (ACIN 85/170V, Io=100%) 20typ (ACIN 100/200V, Io=100%)				
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating				
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating				
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)				
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)				
	OUTPUT · RC-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)				
	OUTPUT-RC		AC100V 1minute, Cutoff current = 100mA, DC100V 50MΩmin (At Room Temperature)				
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +60℃, 30 - 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, 30minutes 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.234 Complies with DEN-AN and IEC60950-1				
	CONDUCTED NOISE		Complies with FCC-A				

※1 The input current of the agency approved unit is indicated as 27A (ACIN 100V) or 17A (ACIN 200V).
※2 According to 15MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).

P

External view



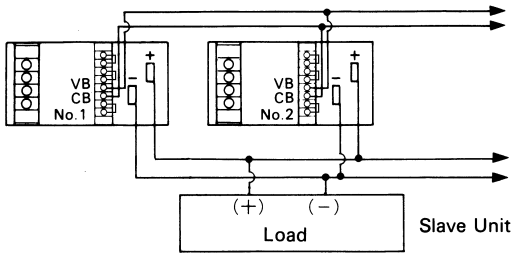
※Weight : 7kg or less
※Tolerance : ±1
※Mounting torque : 1.5N · m (16kgf · cm) max
※Dimensions in mm.

Performance data

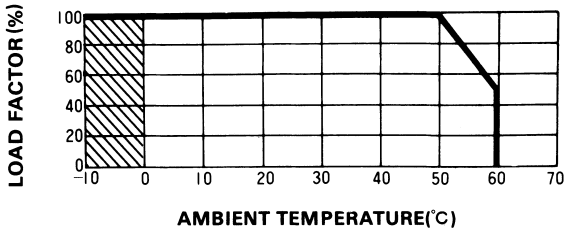
■Automatic Current sharing

- Output voltage is controlled by a potentiometer in master unit. Turn slave unit's potentiometer clock wise all the way to the end.
- Maximun output current can be determined by using the following formula: Total output current = 0.9 × (Rated current per unit) × Number of units paralleled
- Five units maximum for the parallel operation.

●EXAMPLE



■DERATING CURVE



* The shadow indicates the region where different specifications for ripple noise should be used.

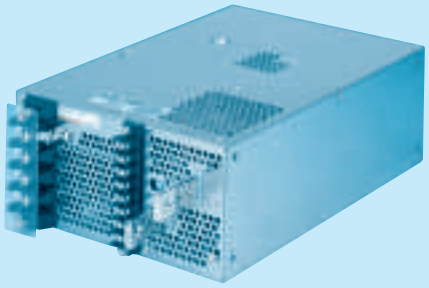
COSEL **Unit type**

PT1500U

Ordering information

P	T	1500	U	-5	-□
①	②	③	④	⑤	⑧

RoHS



RoHS : Please consult us for details

①Series name
②Triple input phase
③Output wattage
④UL recognized,CSA certified:U
⑤Output voltage
⑥Optional
C :with Coating

MODEL	PT1500U-5	PT1500U-24
OUTPUT VOLTAGE[V]	5	24
OUTPUT CURRENT[A]	300	65

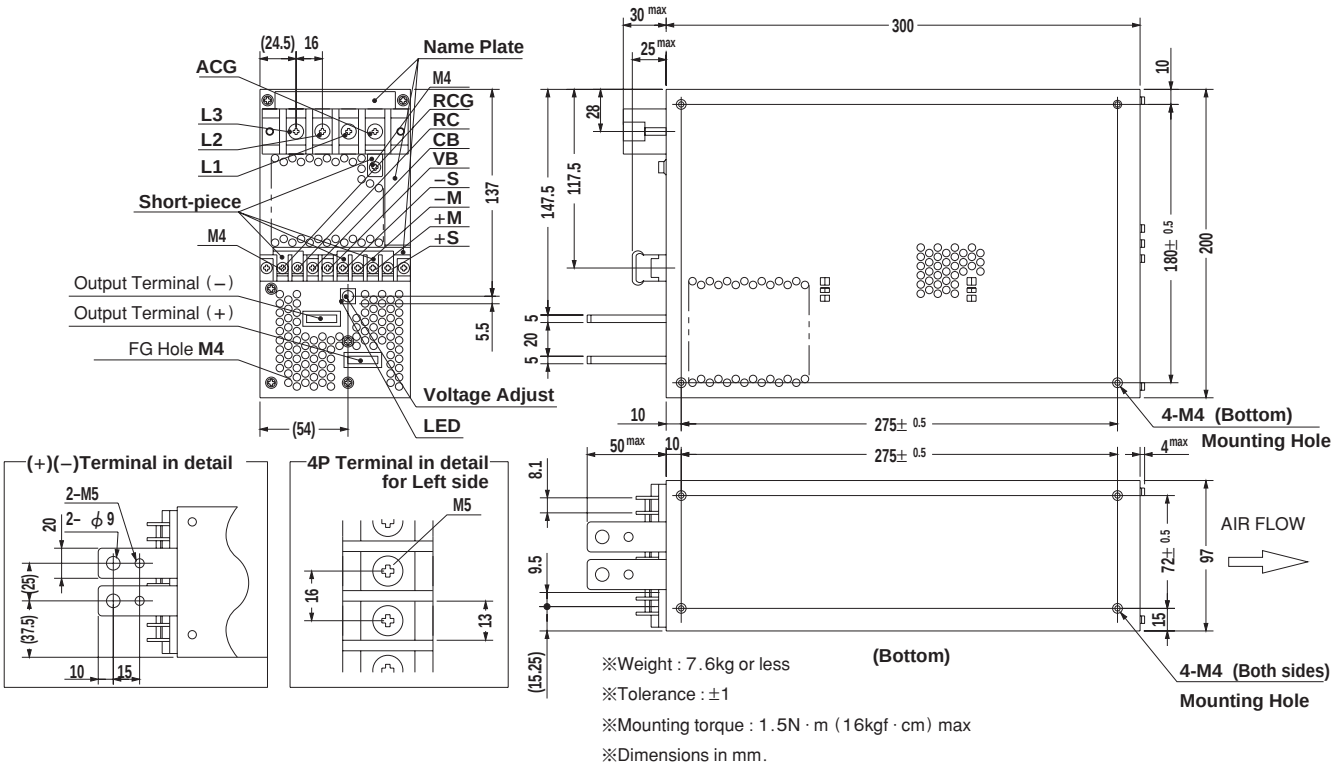
SPECIFICATIONS

	MODEL		PT1500U-5	PT1500U-24
INPUT	VOLTAGE[V]		AC170 - 264 3φ	
	CURRENT[A]	ACIN 200V	6typ (Io=100%)	
	FREQUENCY[Hz]		47 - 63	
	EFFICIENCY[%]		80typ	83typ
	POWER FACTOR	ACIN 200V	0.95typ (Io=100%)	
	INRUSH CURRENT[A]	ACIN 200V	40typ	
	LEAKAGE CURRENT[mA]		0.75max (60Hz by UL, CSA standards) / 1.0max (60Hz by DEN-AN)	
OUTPUT	VOLTAGE[V]		5	24
	CURRENT[A]		300	65
	MAX OUTPUT WATTAGE[W]		1500	1560
	LINE REGULATION[mV]		20max	96max
	LOAD REGULATION[mV]		40max	150max
	RIPPLE[mVp-p]	0 to +50℃ *2	80max	120max
		-10 - 0℃ *2	140max	160max
	RIPPLE NOISE[mVp-p]	0 to +50℃ *2	120max	150max
		-10 - 0℃ *2	160max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	240max
	DRIFT[mV]	*1	20max	96max
	START-UP TIME[ms]		800max (ACIN 170V, Io=100%)	
	HOLD-UP TIME[ms]		20typ (ACIN 200V, Io=100%, 0 to +50℃) 10typ (ACIN 170V, Io=100%, 0 to +50℃)	
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		4.00 - 5.50	19.20 - 26.40
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 105% of rating	
	OVERVOLTAGE PROTECTION		Works at 115 - 140% of rating	
	OPERATING INDICATION		LED (Green)	
	REMOTE SENSING		Provided	
	REMOTE ON/OFF		Provided (isolated from output)	
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)	
	INPUT-FG		AC1,500V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)	
	OUTPUT-FG, COVER		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)	
	OUTPUT-RC		AC100V 1minute, Cutoff current = 100mA, DC100V 50MΩmin (At Room Temperature)	
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +50℃ (Refer to DERATING CURVE), 3,000m (10,000feet) max	
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 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.234 Complies with DEN-AN	
	CONDUCTED NOISE		Complies with FCC-A	

*1 Drift is 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.
*2 According to 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).

P

External view



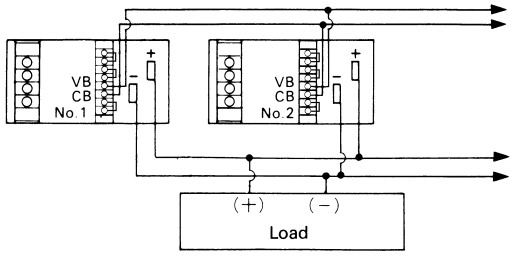
※Weight : 7.6kg or less
※Tolerance : ±1
※Mounting torque : 1.5N · m (16kgf · cm) max
※Dimensions in mm.

Performance data

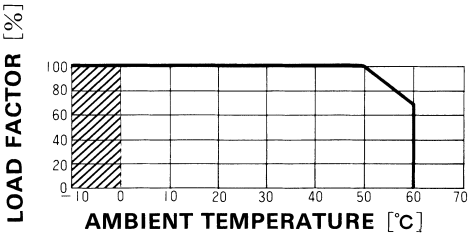
■Automatic Current sharing

- Output voltage is controlled by the Output Voltage Adjuster in Master unit. Turn Slave unit's Output Voltage Potentiometer clockwise all the end.
- Maximun output current can be determined by using the following formula: Total output current = 0.9 × (Rated current per unit) × Number of units paralleled
- Five units maximum for the parallel operation.

●EXAMPLE



■DERATING CURVE



* The shadow indicates the region where different specifications on ripple and ripple noise should be used.