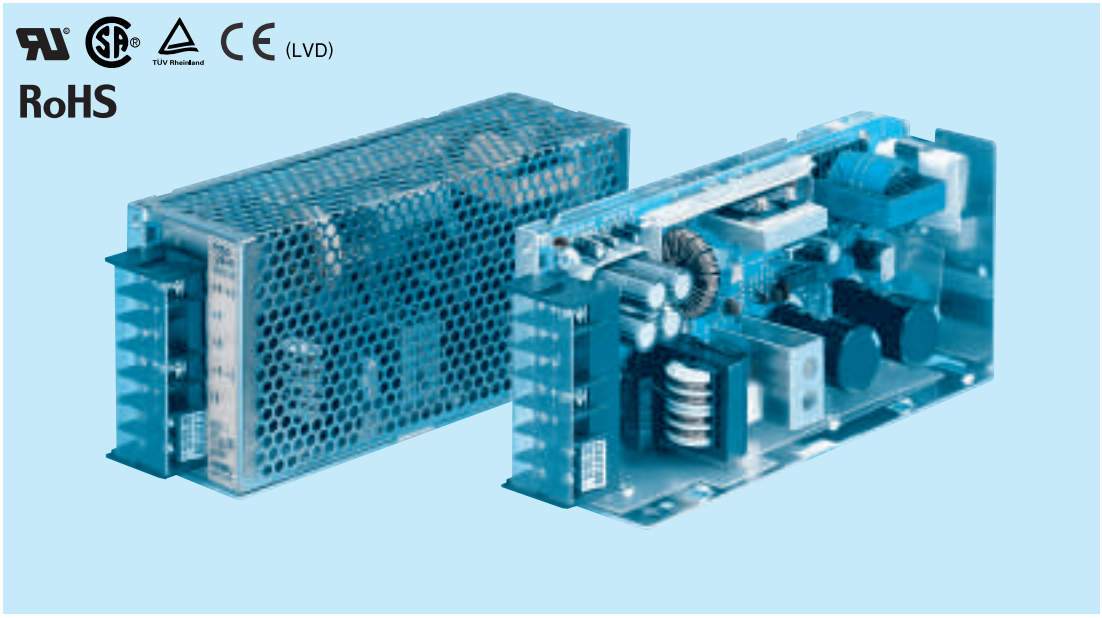
COSEL **Unit type**

P150E

Ordering information

P	150	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	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

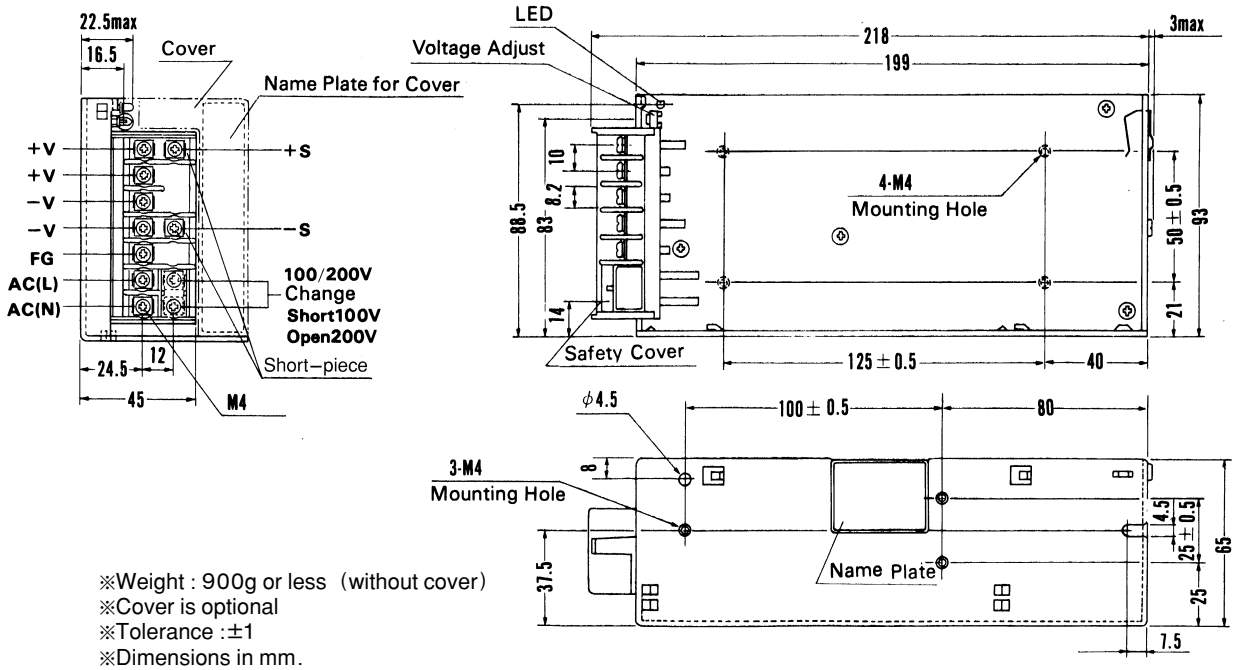
SPECIFICATIONS

	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/s^2 (2G), 3minutes period, 30minutes each along X, Y and Z axis							
	IMPACT		196.1m/s^2 (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

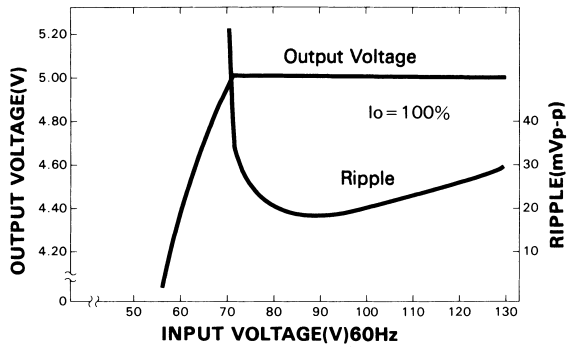
External view



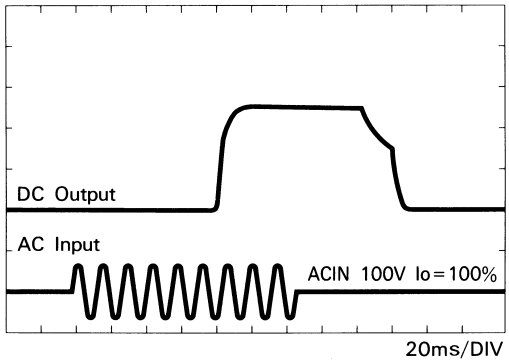
※Weight : 900g or less (without cover)
※Cover is optional
※Tolerance : ±1
※Dimensions in mm.
※Mounting torque: 1.2N·m (12.8kgf·cm) max

Performance data

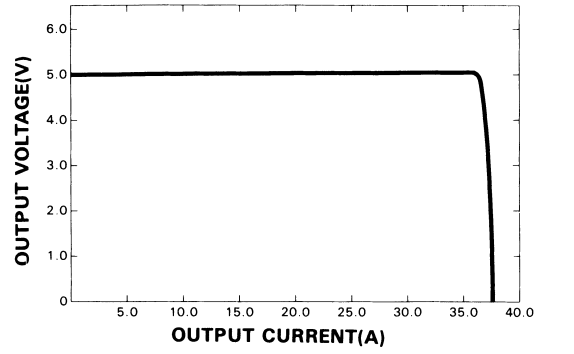
■STATIC CHARACTERISTICS (P150E-5)



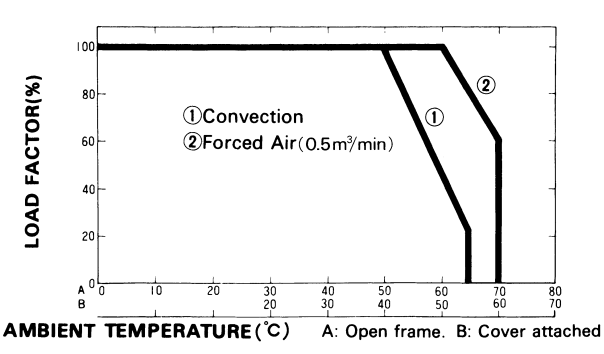
■RISE TIME & FALL TIME (P150E-5)



■OVERCURRENT CHARACTERISTICS (P150E-5)



■DERATING CURVE



Basic Characteristics Data

Model	Circuit method	Switching frequency [kHz]	Input current [A]	Rated input fuse	Inrush current protection	PCB/Pattern			Series/Parallel operation availability	
						Material	Single sided	Double sided	Series operation	Parallel operation
P15E	Flyback converter	45 - 340	0.3	250V 2A	Thermistor	CEM-1	Yes		Yes ✻1	✻1
P30E	Flyback converter	45 - 400	0.6	250V 3A	Thermistor	CEM-1	Yes		Yes ✻1	✻1
P50E	Flyback converter	65 - 350	1.2	250V 3A	Thermistor	CEM-1	Yes		Yes ✻1	✻1
P100E	Forward converter	200	2.2	250V 5A	Triac	CEM-1	Yes		Yes	✻1
P150E	Forward converter	200	3.2	250V 6.3A	Triac	FR-4		Yes	Yes	✻1
P300E	Forward converter	300	5.5	250V 15A	Triac	FR-4		Yes	Yes	Yes
P600E	Forward converter	210	11	250V 20A	Triac	FR-4		Yes	Yes	Yes
P1500E	Forward converter	150	29	250V 50A	SCR	FR-4		Yes	Yes	Yes
PT1500U	Forward converter	140	6	250V 20A	SCR	FR-4		Yes	Yes	Yes

✻1 Refer to Instruction Manual.
✻ Switching frequency of flyback converter depends on input voltage and load factor.
✻ The value of input current is at ACIN100V and rated load (As for PT1500U, ACIN200V and rated load).