

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

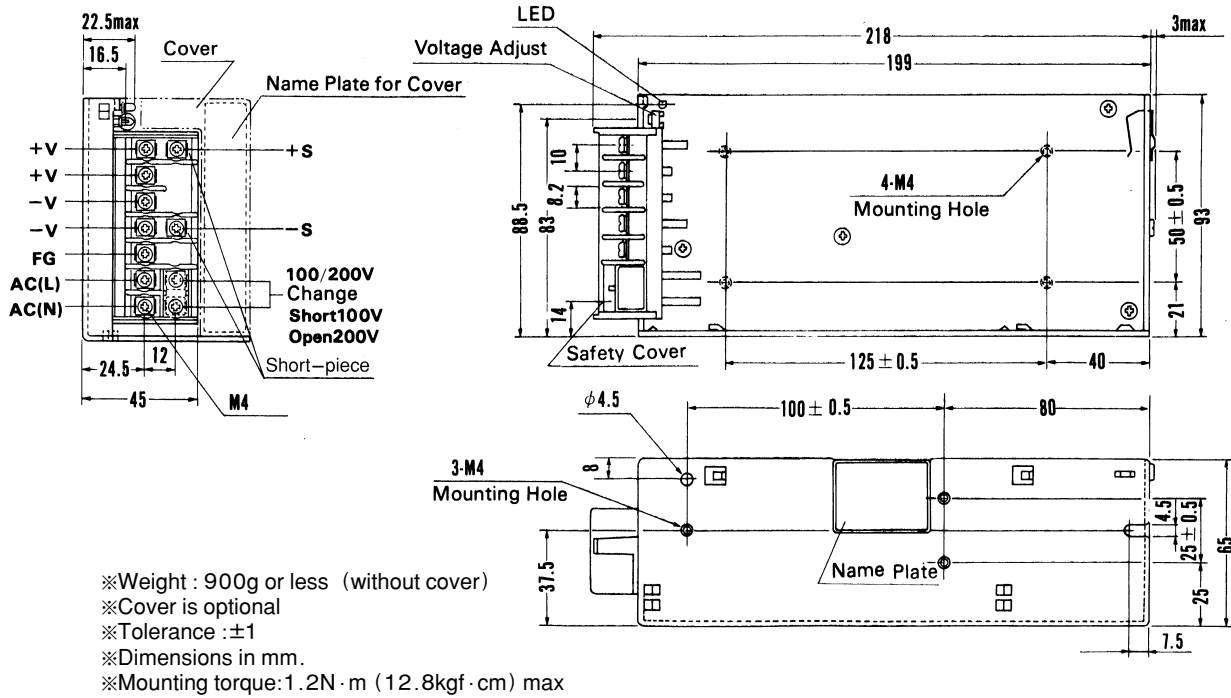
MODEL	P150E-5	P150E-9	P150E-12	P150E-15	P150E-18	P150E-24	P150E-30	P150E-48
MAX OUTPUT WATTAGE[W]	150	150.3	156	150	151.2	156	150	158.4
DC OUTPUT	5V 30A	9V 16.7A	12V 13A	15V 10A	18V 8.4A	24V 6.5A	30V 5.0A	48V 3.3A

**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 1 φ (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°C	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°C, 30 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max								
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 30minutes each along X, Y and Z axis								
	IMPACT	196.1m/s <sup>2</sup> (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								

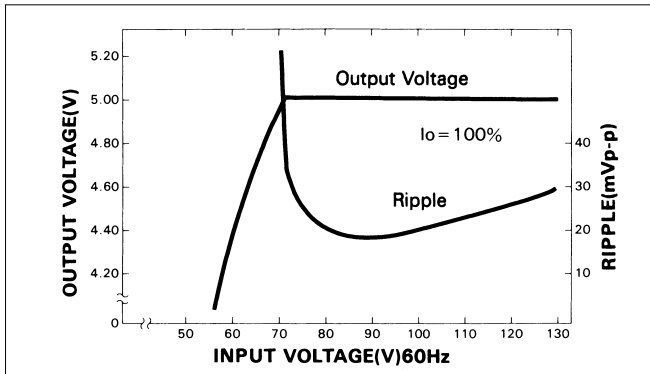
\*1 The input current of the agency approved unit is indicated as 3.5A (ACIN100V) or 1.7A (ACIN200V).  
 \*2 According to 15MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN : RM101).  
 \* Derating is required when operated with case cover.  
 \* Parallel operation with other model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

External view

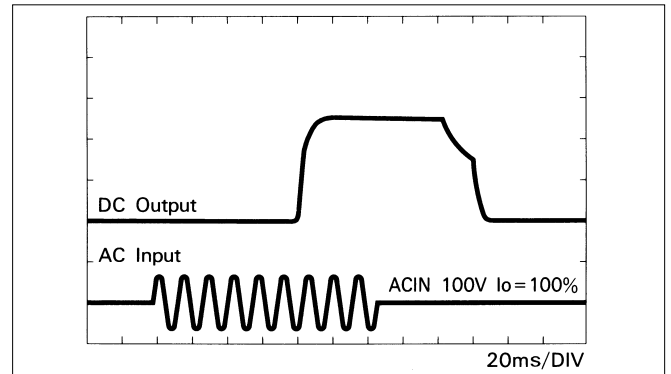


Performance data

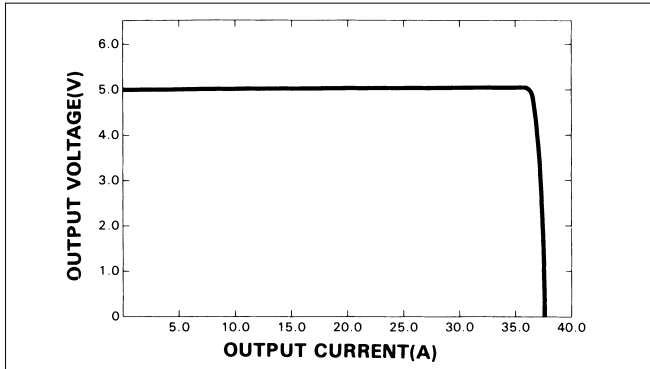
■ STATIC CHARACTERISTICS (P150E-5)



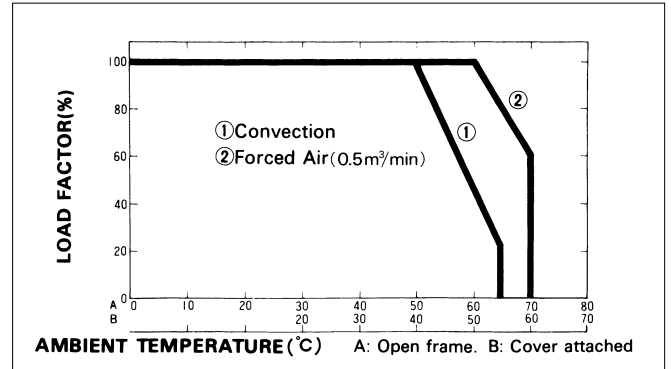
■ RISE TIME & FALL TIME (P150E-5)



■ 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).