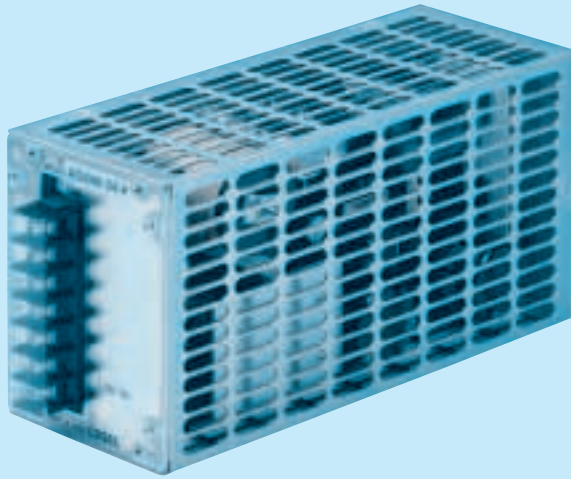


- ① Series name
- ② Output wattage
- ③ Output voltage
- ④ Optional
- C :with Coating
- G :Low leakage current
- P :Parallel operation
- R :with Remote ON/OFF

RoHS

AD



MODEL	AD240-24	AD240-30
MAX OUTPUT WATTAGE[W]	240	240
DC OUTPUT	24V 10A	30V 8A

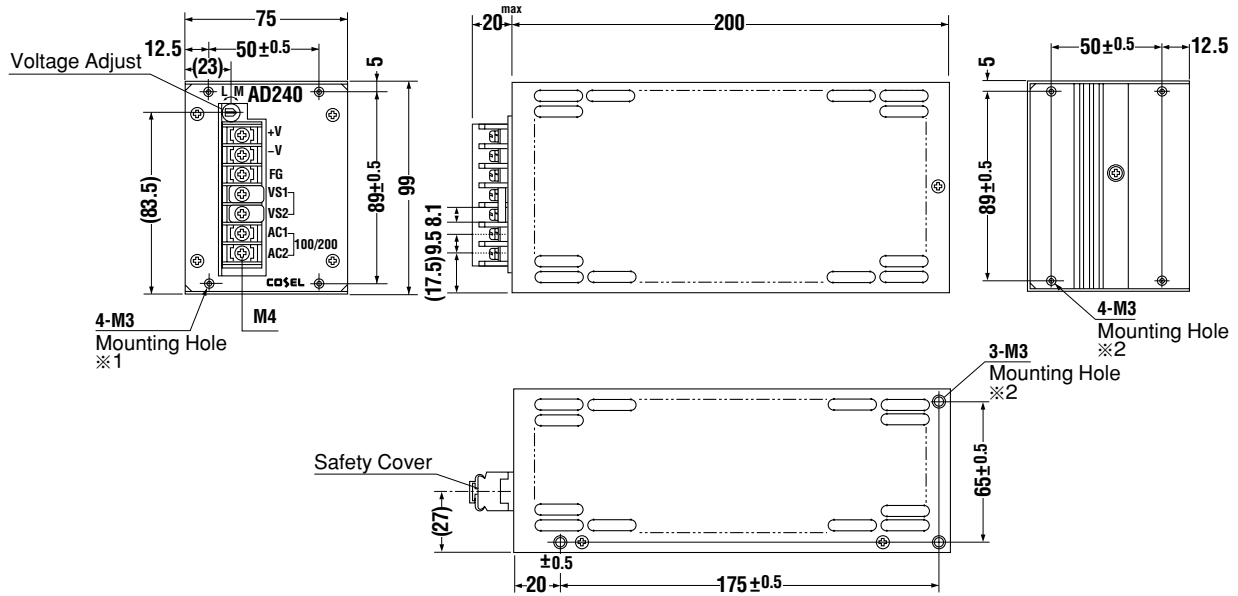
SPECIFICATIONS

	MODEL	AD240-24	AD240-30	
INPUT	VOLTAGE[V]	AC85 - 132 / 170 - 264 1 φ (User-selectable)		
	FREQUENCY[Hz]	47 - 440		
	EFFICIENCY[%]	85typ	85typ	
	INRUSH CURRENT[A]	ACIN 100V	15max (Io=100%)	
		ACIN 200V	30max (Io=100%)	
LEAKAGE CURRENT[ma]	1.0max (60Hz, According to DEN-AN)			
OUTPUT	VOLTAGE[V]	24	30	
	CURRENT[A]	10	8	
	LINE REGULATION[mV]	300max	260max	
	LOAD REGULATION[mV]	300max	420max	
	RIPPLE[mVp-p]	0 to +45°C *1	240max	240max
		0 to +45°C *1	480max	480max
	TEMPERATURE REGULATION[mV]	0 to +45°C	500max	600max
	DRIFT[mV]	*2	500max	120max
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	21.6 - 26.4	28.5 - 33.0	
	START-UP TIME[ms]	500max (ACIN 100/200V, Io=100%)		
HOLD-UP TIME[ms]	15typ (ACIN 100/200V, Io=100%)			
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically		
ISOLATION	INPUT-OUTPUT	AC1,500V 1minute, Cutoff current = 10mA, DC500V 100MΩ min (At Room Temperature)		
	INPUT-FG	AC1,500V 1minute, Cutoff current = 10mA, DC500V 100MΩ min (At Room Temperature)		
	OUTPUT-FG	AC500V 1minute, Cutoff current = 50mA, DC500V 100MΩ min (At Room Temperature)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	0 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE	-25 to +80°C, 10 - 95%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	98.0m/s ² (10G), 20ms, once each X, Y and Z axis		
OTHERS	CASE SIZE/WEIGHT	75×99×220mm (W×H×D) /1.8kg max		
	COOLING METHOD	Convection		

*1 Measured by 15MHz oscilloscope.

*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

External view

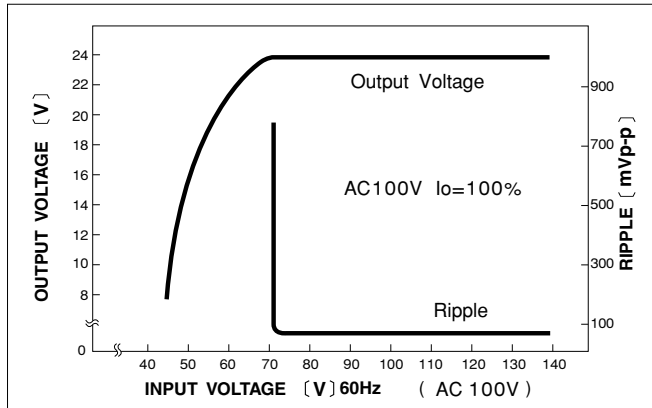


※Mounting torque
 ※1: 0.6N·m (6.3kgf·cm) max
 ※2: 0.4N·m (5.0kgf·cm) max

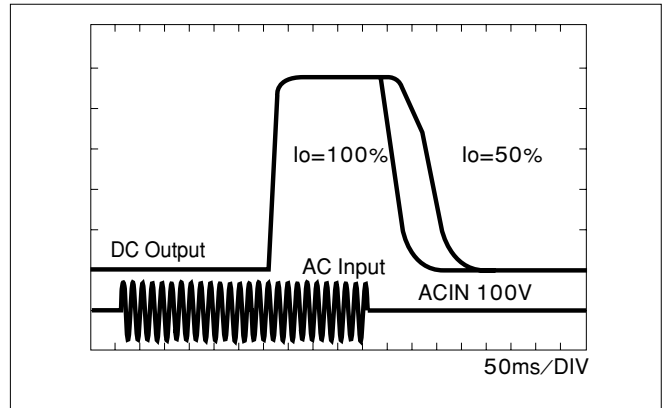
※Weight : 1.8kg or less
 ※Tolerance : ±1 ※Dimensions in mm.

Performance data

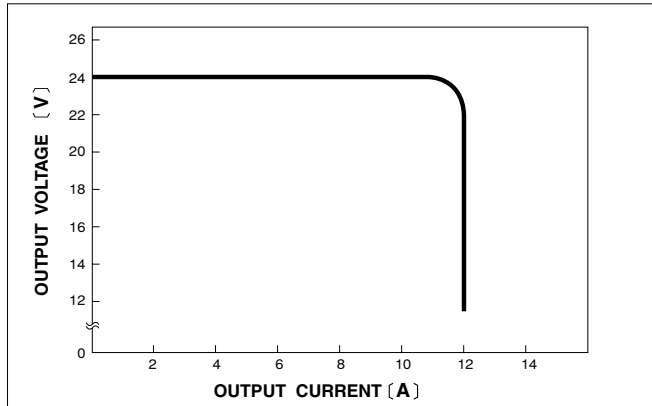
■STATIC CHARACTERISTICS



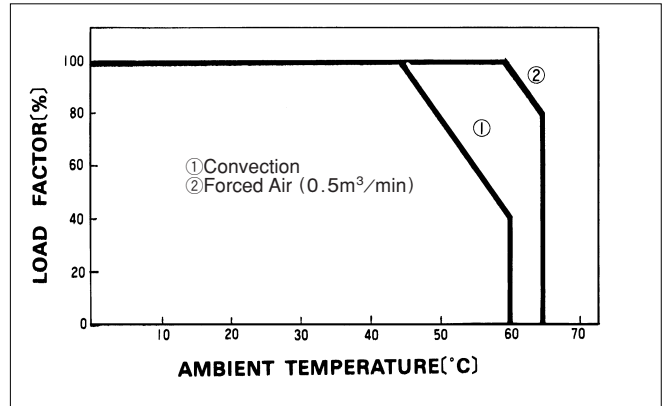
■RISE TIME & FALL TIME



■OVERCURRENT CHARACTERISTICS



■DERATING CURVE



RoHS

AD



Please refer to derating curve, because the rated load current depends on cooling method that is convention cooling or forced air.

MODEL	AD480-24	AD480-30
MAX OUTPUT WATTAGE[W]	480	300(Peak 720)
DC OUTPUT	24V 20A	30V 10(Peak 24)A Forced air

SPECIFICATIONS

	MODEL	AD480-24	AD480-30	
INPUT	VOLTAGE[V]	AC85 - 132 / 170 - 264 1φ (User-selectable)		
	FREQUENCY[Hz]	47 - 440		
	EFFICIENCY[%]	85typ	85typ	
	INRUSH CURRENT[A]	ACIN 100V	30max (Io=100%)	
		ACIN 200V	60max (Io=100%)	
LEAKAGE CURRENT[ma]	1.0max (60Hz, According to DEN-AN)			
OUTPUT	VOLTAGE[V]	24	30	
	CURRENT[A]	Forced air	20 (Peak 25)	10 (Peak 24)
		Convection	12 (Peak 25) Ta=45°C	10 (Peak 24) Ta=45°C
	LINE REGULATION[mV]	300max	260max	
	LOAD REGULATION[mV]	300max	420max	
	RIPPLE[mVp-p]	*1 240max (0 to +45°C)	240max (0 to +50°C)	
	RIPPLE NOISE[mVp-p]	*1 480max (0 to +45°C)	480max (0 to +50°C)	
	TEMPERATURE REGULATION[mV]	500max (0 to +45°C)	600max (0 to +50°C)	
	DRIFT[mV]	*2 100max	120max	
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	21.6 - 26.4	28.5 - 33.0	
	START-UP TIME[ms]	600max (ACIN 100/200V, Io=100%)		
HOLD-UP TIME[ms]	15typ (ACIN 100/200V, Io=100%)			
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically		
	REMOTE ON/OFF	Use terminal RC and G		
ISOLATION	INPUT-OUTPUT	AC1,500V 1minute, Cutoff current = 10mA, DC500V 100MΩ min (At Room Temperature)		
	INPUT-FG	AC1,500V 1minute, Cutoff current = 10mA, DC500V 100MΩ min (At Room Temperature)		
	OUTPUT-FG	AC500V 1minute, Cutoff current = 50mA, DC500V 100MΩ min (At Room Temperature)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	0 to +65°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE	-25 to +80°C, 10 - 95%RH (Non condensing), 9,000m (30,000feet) max		
	VIBRATION	10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis		
	IMPACT	196.1m/s ² (20G), 11ms, once each X, Y and Z axis		
OTHERS	CASE SIZE/WEIGHT	110 × 140 × 220mm (W × H × D) /3.0kg max		
	COOLING METHOD	Forced air/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°C, with the input voltage held constant at the rated input/output.

* When operated at pulse load, attach external capacitor at output line which is complying with the peak value of pulse current.



RoHS



Please refer to derating curve, because the rated load current depends on cooling method that is convention cooling or forced air.

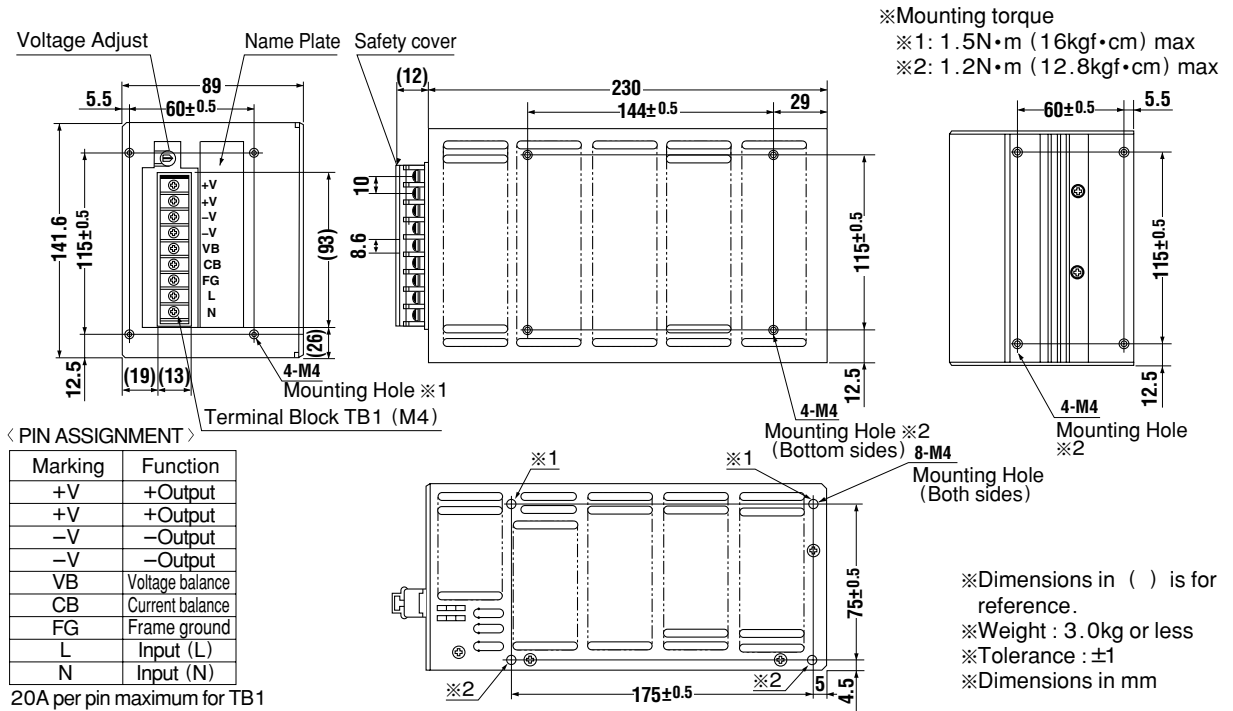
MODEL	AD960-24	AD960-30
MAX OUTPUT WATTAGE[W]	960	960
DC OUTPUT	Forced air	24V 40A
	Convection	24V 20(Peak 40)A
		30V 32A
		30V 16(Peak 32)A

SPECIFICATIONS

	MODEL	AD960-24	AD960-30	
INPUT	VOLTAGE[V]	AC170 - 264 1 φ or DC240 - 370		
	FREQUENCY[Hz]	47 - 440 or DC		
	EFFICIENCY[%]	85typ	85typ	
	INRUSH CURRENT[A] ACIN 200V	60typ (I _o =100%)		
	LEAKAGE CURRENT[mA]	1.0max (60Hz, According to UL, CSA, VDE and DEN-AN)		
OUTPUT	VOLTAGE[V]	24	30	
	CURRENT[A]	Forced air	40	32
		Convection *1	20 (Peak 40)	16 (Peak 32)
	LINE REGULATION[mV]	200max	260max	
	LOAD REGULATION[mV]	340max	420max	
	RIPPLE[mVp-p] -10 to +45°C *2	240max	240max	
	RIPPLE NOISE[mVp-p] -10 to +45°C *2	480max	480max	
	TEMPERATURE REGULATION[mV] -10 to +45°C	420max	520max	
	DRIFT[mV] *3	100max	120max	
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	22.8 - 26.4	28.5 - 33.0	
START-UP TIME[ms]	600max (ACIN 200V, I _o =100%)			
HOLD-UP TIME[ms]	15typ (ACIN 200V, I _o =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 = 25mA, DC500V 50MΩ min (At Room Temperature)		
	INPUT-FG	AC2,000V 1minute, Cutoff current = 25mA, 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 +65°C, 10 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max		
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 10 - 90%RH (Non condensing), 9,000m (30,000feet) max		
	VIBRATION	10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes 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, CSA C22.2 No.60950-1, EN60950-1, VDE0160 Complies with IEC950		
	CONDUCTED NOISE	Complies with FCC-A		
OTHERS	CASE SIZE/WEIGHT	89 × 141.6 × 230mm (without terminal block) (W × H × D) /3.0kg max		
	COOLING METHOD	Forced air/Convection		

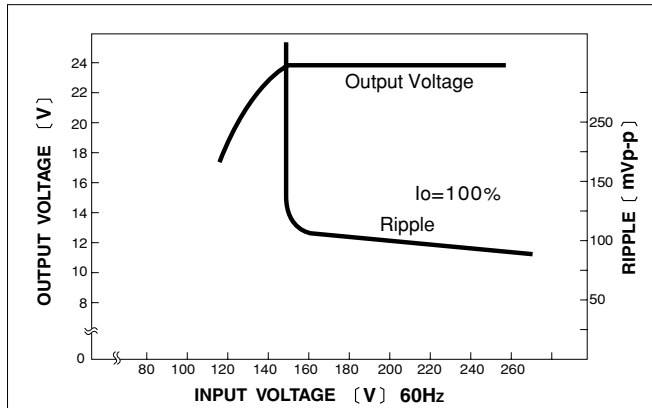
*1 For convection cooling, peak current for 10 seconds or less is acceptable, and output current must be less than 20A on average.
 *2 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN: RM101).
 *3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
 * When operated at pulse load, attach external capacitor at output line which is complying with the peak value of pulse current.

External view

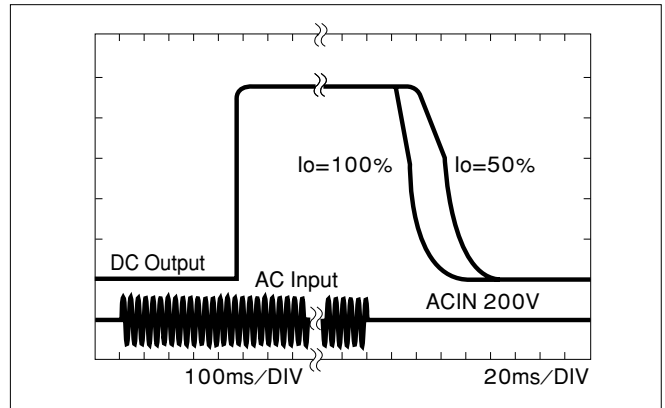


Performance data

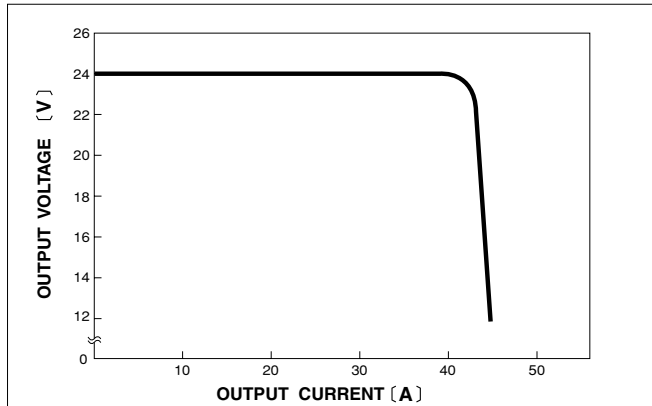
■STATIC CHARACTERISTICS



■RISE TIME & FALL TIME



■OVERCURRENT CHARACTERISTICS



■DERATING CURVE

