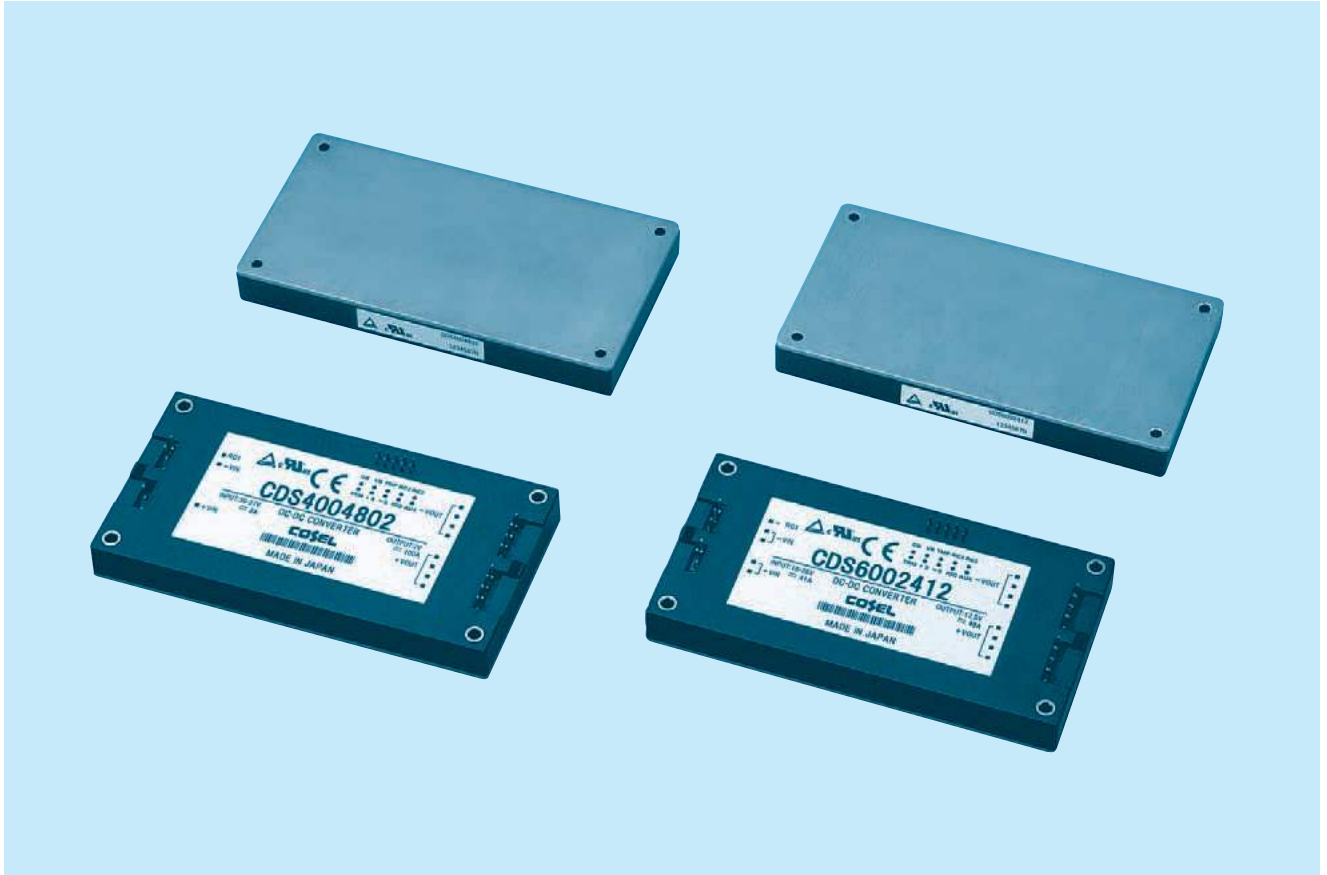




CDS-series



■ Feature

- Ideal for distributed power systems
- Thin and small size
- Built-in overcurrent, overvoltage and thermal protection circuits
- Built-in Remote ON/OFF (on both side of input and output)
- Inverter operating monitoring (IOG)
- Mounting hole (ϕ 3.4 thru)

■ CE marking

- Low Voltage Directive
- RoHS Directive

■ UKCA marking

- Electrical Equipments Safety Regulations
- RoHS Regulations

■ Safety agency approvals

- UL60950-1, C-UL, EN62368-1

■ 5-year warranty

CDS40048

CD S 400 48 12 - □

① ② ③ ④ ⑤ ⑥

RoHS



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Optional
M:with Mounting hole
M3 tapped

	200	330	400	405	500	510	504	504
	2V 100A	3.3V 100A	5V 80A	7.5V 54A	12.5V 40A	15V 34A	24V 21A	28V 18A

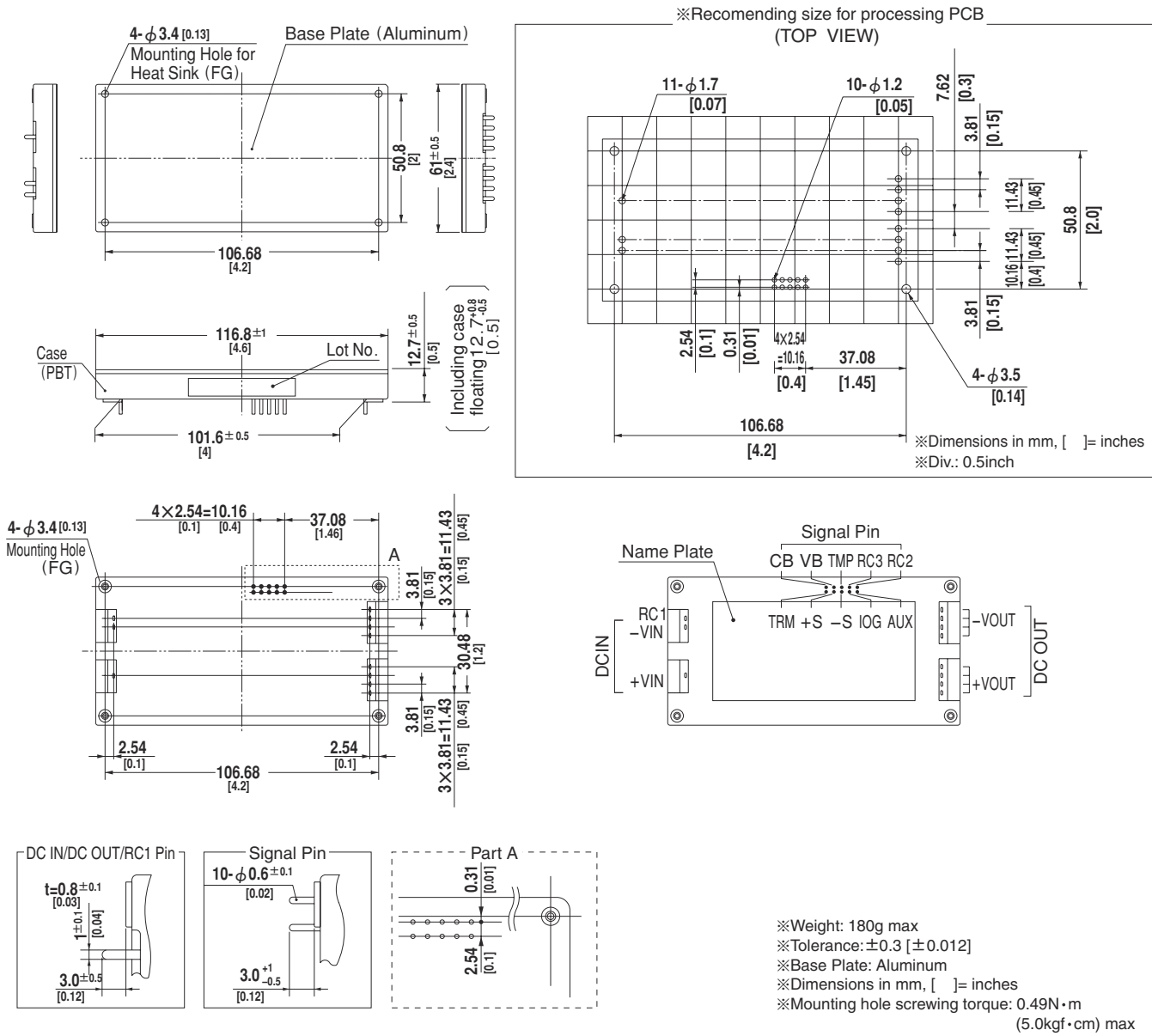
SPECIFICATIONS

	MODEL	CDS4004802	CDS4004803	CDS4004805	CDS4004807	CDS4004812	CDS4004815	CDS4004824	CDS4004828	
INPUT	VOLTAGE[V]	DC36 - 76								
	CURRENT[A]	*1 6typ	9typ	10typ	10typ	12typ	12typ	12typ	12typ	
	EFFICIENCY[%]	DCIN 48V, Io=100% DCIN 48V, Io=50%	73typ 75typ	80typ 82typ	84typ 86typ	87typ 88typ	89typ 91typ	89typ 90typ	89typ 90typ	89typ 90typ
OUTPUT	VOLTAGE[V]	2	3.3	5	7.5	12.5	15	24	28	
	CURRENT[A]	100	100	80	54	40	34	21	18	
	LINE REGULATION[mV]	10max	16max	20max	30max	40max	60max	95max	95max	
	LOAD REGULATION[mV]	20max	30max	40max	60max	100max	150max	190max	190max	
	RIPPLE[mVp-p]	0 to +85°C *2	80max	80max	80max	100max	120max	120max	120max	120max
		-20 - 0°C *2	140max	140max	140max	150max	160max	160max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +85°C *2	100max	100max	100max	140max	150max	150max	150max	150max
		-20 - 0°C *2	150max	150max	150max	160max	180max	180max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +65°C	25max	35max	50max	75max	120max	180max	280max	280max
		-20 to +85°C	40max	60max	85max	130max	200max	310max	480max	480max
DRIFT[mV]	*3	10max	16max	20max	30max	40max	60max	90max	90max	
START-UP TIME[ms]	200max (DCIN 48V, Io=100%)									
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open), 60 - 110% adjustable by external VR or external voltage									
	1.0 - 2.2 *4	1.98 - 3.63	3.0 - 5.5	4.50 - 8.25	7.50 - 13.75	9.0 - 16.5	14.4 - 26.4	16.8 - 32.0 *5		
OUTPUT VOLTAGE SETTING[V]	1.95 - 2.10	3.25 - 3.45	4.90 - 5.20	7.25 - 7.85	12.00 - 13.00	14.40 - 15.60	23.04 - 24.96	26.88 - 29.12		
OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically									
OVERVOLTAGE PROTECTION[V]	2.80 - 4.50	4.00 - 5.50	5.75 - 7.00	8.60 - 10.50	14.35 - 17.50	17.25 - 21.00	27.60 - 33.60	33.00 - 39.20		
REMOTE SENSING	Provided									
REMOTE ON/OFF	Provided (On both side of input and output)									
ISOLATION	INPUT-OUTPUT	DC1500V 1minute, DC500V 50MΩ min (20±15°C)								
	INPUT-FG	DC1500V 1minute, DC500V 50MΩ min (20±15°C)								
	OUTPUT-FG	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)								
	OUTPUT-RC2,RC3	AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (20±15°C)								
ENVIRONMENT	OPERATING TEMP.HUMID.AND ALTITUDE *6	-20 to +85°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max								
	STORAGE TEMP.HUMID.AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION	10 - 55Hz, 49.0m/s ² (5G) 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	AGENCY APPROVALS	UL60950-1, C-UL, EN62368-1								
OTHERS	CASE SIZE/WEIGHT	61 × 12.7 × 116.8mm [2.4 × 0.5 × 4.6 inches] (W × H × D) / 180g max								
	COOLING METHOD	Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)								

*1 At rated input(DC48V) and rated load.
 *2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF.
 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.

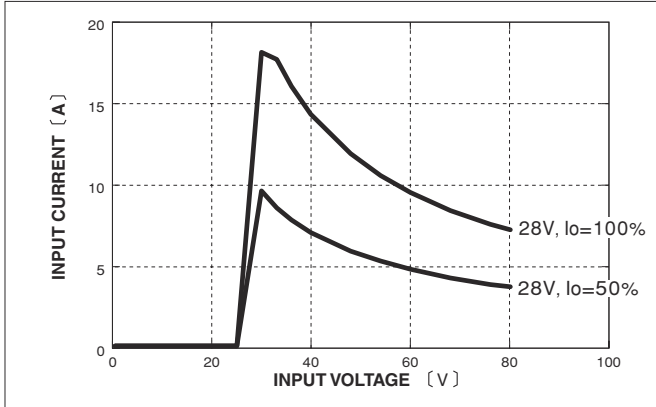
*4 When using with in the range of 1-1.2V, please consult with us.
 *5 CDS4004828 : Output voltage adjustment range is 60 - 114.3%.
 *6 Please consult us in regard to use from -40°C.

External view

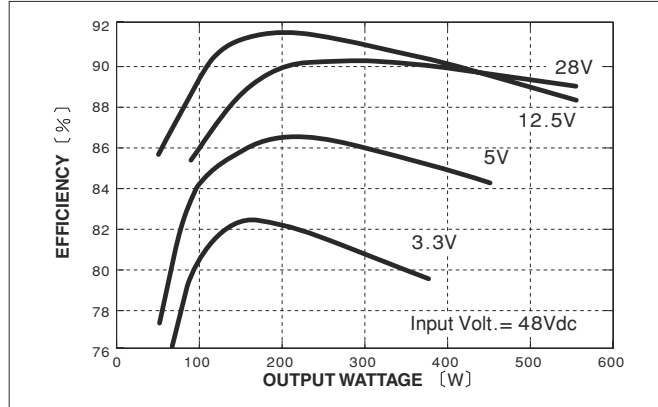


Performance data

INPUT CURRENT CHARACTERISTICS (CDS4004828)



EFFICIENCY CHARACTERISTICS (CDS40048)



CDS500/600

CD
S
600
48
12
□
-□

① ② ③ ④ ⑤ ⑥ ⑦



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
24: DC18 - 36V
48: DC36 - 76V
- ⑤ Output voltage
- ⑥ H: High Efficiency (24VIN Model only)
- ⑦ Optional
M: with Mounting hole
M3 tapped

	504	600	600	616	616	700	700
	28V 18A	12.5V 48A	12.5V 48A	28V 22A	28V 22A	12.5V 56A	28V 25A

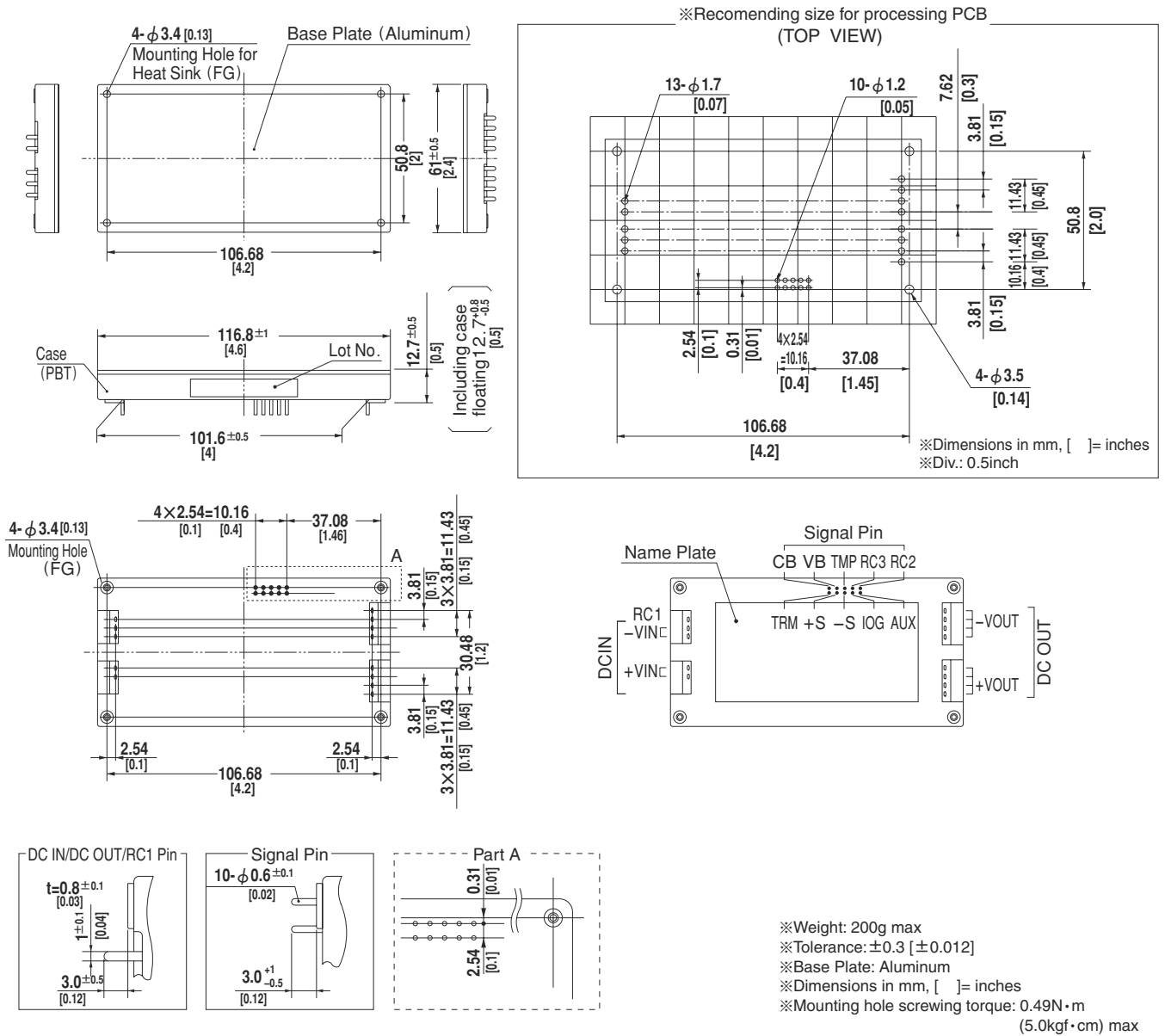
SPECIFICATIONS

	MODEL	CDS5002428H	CDS6002412	CDS6002412H	CDS6002428	CDS6002428H	CDS6004812	CDS6004828	
INPUT	VOLTAGE[V]	DC18 - 36		DC20.5 - 36	DC18 - 36	DC19 - 36	DC36 - 76		
	CURRENT[A]	24typ		30typ	29typ	30typ	29typ	17typ	
	EFFICIENCY[%]	*1							17typ
		io=100%	89typ(DCIN 24V)	83typ(DCIN 24V)	87typ(DCIN 24V)	86typ(DCIN 24V)	89typ(DCIN 24V)	89typ(DCIN 48V)	89typ(DCIN 48V)
	io=50%	90typ(DCIN 24V)	87typ(DCIN 24V)	90typ(DCIN 24V)	87typ(DCIN 24V)	90typ(DCIN 24V)	91typ(DCIN 48V)	90typ(DCIN 48V)	
OUTPUT	VOLTAGE[V]	28	12.5	12.5	28	28	12.5	28	
	CURRENT[A]	18	48	48	22	22	56	25	
	LINE REGULATION[mV]	95max	40max	40max	95max	95max	40max	95max	
	LOAD REGULATION[mV]	190max	100max	100max	190max	190max	100max	190max	
	RIPPLE[mVp-p]	0 to +85°C *2	120max	120max	120max	120max	120max	120max	120max
		-20 - 0°C *2	160max	160max	160max	160max	160max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +85°C *2	150max	150max	150max	150max	150max	150max	150max
		-20 - 0°C *2	180max	180max	180max	180max	180max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +65°C	280max	120max	120max	280max	280max	120max	280max
		-20 to +85°C	480max	200max	200max	480max	480max	200max	480max
	DRIFT[mV]	*3	90max	40max	40max	90max	90max	40max	90max
START-UP TIME[ms]		200max (DCIN 24V, io=100%)					200max (DCIN 48V, io=100%)		
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed (TRM pin open), 80 - 110% adjustable by external VR or external voltage							
OUTPUT VOLTAGE SETTING[V]		22.40 - 32.00 *4 *5	10.00 - 13.75	10.00 - 13.75 *5	22.40 - 30.80	22.40 - 32.00 *4 *5	10.00 - 13.75	22.40 - 32.00 *4	
		27.72 - 28.28 *6	12.00 - 13.00	12.00 - 13.00	26.88 - 29.12	26.88 - 29.12	12.00 - 13.00	26.88 - 29.12	
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
	OVERVOLTAGE PROTECTION[V]	33.00 - 39.20	14.35 - 17.50		33.00 - 39.20		14.35 - 17.50	33.00 - 39.20	
	REMOTE SENSING	Provided							
	REMOTE ON/OFF	Provided (On both side of input and output)							
ISOLATION	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)							
	INPUT-FG	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)							
	OUTPUT-FG	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)							
	OUTPUT-RC2,RC3	AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (20±15°C)							
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE *7	-20 to +85°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max							
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max							
	VIBRATION	10 - 55Hz, 49.0m/s ² (5G) 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	AGENCY APPROVALS	UL60950-1, C-UL, EN62368-1							
OTHERS	CASE SIZE/WEIGHT	61 x 12.7 x 116.8mm [2.4 x 0.5 x 4.6 inches] (W x H x D) / 200g max							
	COOLING METHOD	Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)							

*1 At rated input(DC24,DC48V) and rated load.
 *2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF.
 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.

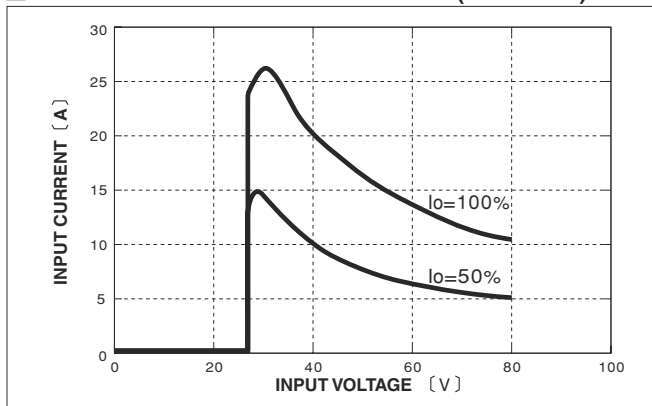
*4 CDS5002428H,CDS6002428H,CDS6004828:Output voltage adjustment range is 80 - 114.3%.
 *5 CDS5002428H,CDS6002412H,CDS6002428H:When the output voltage adjustment range is 101% or more,the input voltage range is limited(Refer to Instruction Manual).
 *6 Aluminum baseplate temperature Tc=25°C
 *7 Please consult us in regard to use from -40°C.

External view



Performance data

INPUT CURRENT CHARACTERISTICS (CDS60048)



EFFICIENCY CHARACTERISTICS (CDS60048)

