SAGER
POWER SYSTEMS®

COSEL
CDS500/600 SERIES
600 Watt Wide 2:1 Input Range DC-DC Converter

Measures: 4.6 x 2.4 x 0.5"

COSEL DC-DC Converters Power Module type

CDS500/600

Ordering information

CD	S	600	48	12	☐	-☐
①	②	③	④	⑤	⑥	⑦

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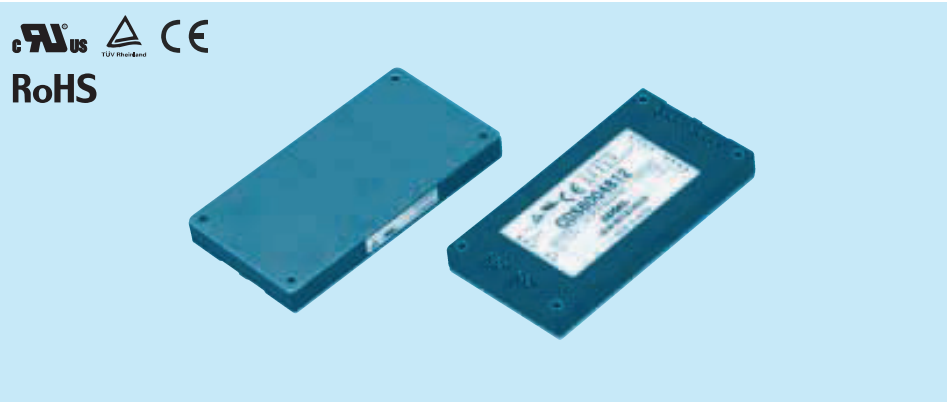
RoHS

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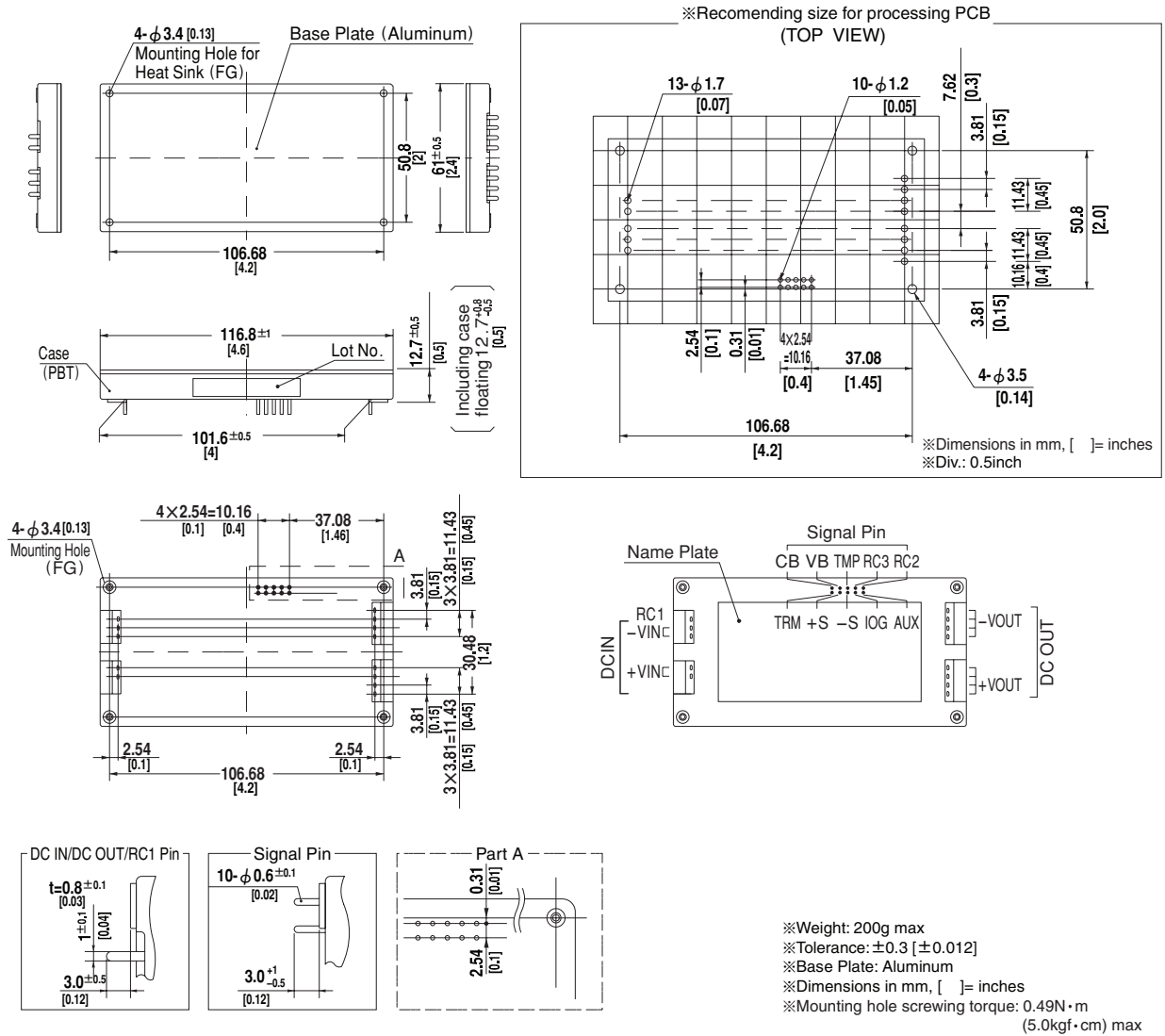 (24VIN Model only)
⑦ Optional
  M : with Mounting hole
  M3 tapped

MODEL	CDS5002428H	CDS6002412	CDS6002412H	CDS6002428	CDS6002428H	CDS6004812	CDS6004828
MAX OUTPUT WATTAGE[W]	504	600	600	616	616	700	700
DC OUTPUT	28V 18A	12.5V 48A	12.5V 48A	28V 22A	28V 22A	12.5V 56A	28V 25A

SPECIFICATIONS

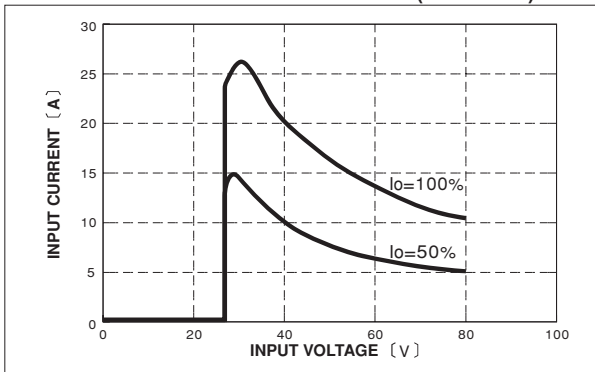|	MODEL		CDS5002428H	CDS6002412	CDS6002412H	CDS6002428	CDS6002428H	CDS6004812	CDS6004828
INPUT	VOLTAGE[V]		DC18 - 36		DC20.5 - 36	DC18 - 36	DC19 - 36	DC36 - 76	
	CURRENT[A]	*1	24typ	30typ	29typ	30typ	29typ	17typ	17typ
	EFFICIENCY[%]	Io=100%	89typ(DCIN 24V)	83typ(DCIN 24V)	87typ(DCIN 24V)	86typ(DCIN 24V)	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℃ *2	120max	120max	120max	120max	120max	120max	120max
		-20 - 0℃ *2	160max	160max	160max	160max	160max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +85℃ *2	150max	150max	150max	150max	150max	150max	150max
		-20 - 0℃ *2	180max	180max	180max	180max	180max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +65℃	280max	120max	120max	280max	280max	120max	280max
		-20 to +85℃	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						
			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
	OUTPUT VOLTAGE SETTING[V]		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℃)						
	INPUT-FG		AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)						
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)						
	OUTPUT-RC2,RC3		AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (20±15℃)						
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE *7		-20 to +85℃ (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℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max						
	VIBRATION		10 - 55Hz, 49.0m/s² (5G) 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis						
SAFETY	AGENCY APPROVALS		UL60950-1, C-UL, EN60950-1						
OTHERS	CASE SIZE/WEIGHT		61×12.7×116.8mm [2.4×0.5×4.6 inches] (W×H×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 0.1μF.
  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℃, 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℃
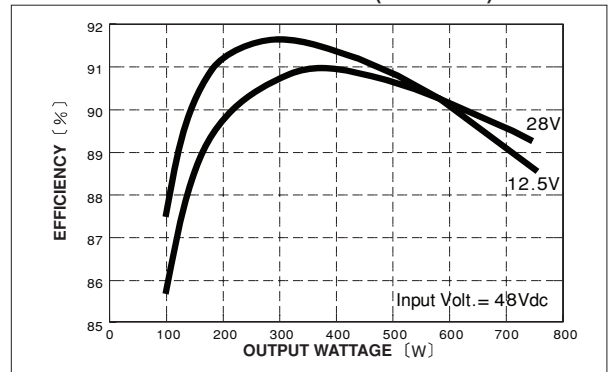*7 Please consult us in regard to use from -40℃.

External view

※Recomending size for processing PCB
(TOP VIEW)

※Dimensions in mm, [ ]= inches
※Div.: 0.5inch

※Weight: 200g max
※Tolerance:±0.3 [±0.012]
※Base Plate: Aluminum
※Dimensions in mm, [   ]= inches
※Mounting hole screwing torque: 0.49N・m
(5.0kgf・cm) max

Performance data

■INPUT CURRENT CHARACTERISTICS (CDS60048)

Io=100%
Io=50%

■EFFICIENCY CHARACTERISTICS (CDS60048)

28V
12.5V
Input Volt.= 48Vdc