FEATURES

- CE Mark
- 100% Burn In
- Isolated and Regulated
- Wide Input Voltage Ranges
- Fixed Operating Switching Frequency
- Short Circuit and Over Voltage Protected
- Input and Output Filtering Integral to Supply
- UL1950, cUL950, TUV EN60950 File E155800
- 50, 66, 75, and 100 Watt Output Rating from Same Package



DESCRIPTION

The CMSP & CMSPW series consists of single output half brick DC/DC converters on a chassis mount that offer up to 100 watts of output power in an industry standard package and footprint. It is intended to provide power and isolation for pc board and chassis mount applications requiring high power density. Some features include wide input voltage ranges, positive or negative remote on/off, remote sense, output trim, short circuit protection, and over voltage protection. Being encapsulated, these supplies have improved thermal dissipation and protection for ruggedized environments. All models are 100% burned-in.

SPECIFICATIONS: *CMSP & CMSPW Series*

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Input Voltage Range
- CMSP ..... 24VDC nominal input ..... 18 - 36 VDC
  48VDC nominal input ..... 36 - 75 VDC
- CMSPW ..... 48VDC nominal input ..... 18 - 75 VDC

Input Filter ..... Pi filter

Input Voltage Lockout ..... <16 >38VDC, <34 > 78VDC *(See Note 1)*

Input Reflected Ripple 20mAp-p

Remote ON/OFF Control *(See Note 5)*
- Standard ..... Active High Enable (Positive Remote ON/OFF)
- "R" suffix ..... Active Low Enable (Negative Remote ON/OFF)

OUTPUT SPECIFICATIONS

Output Voltage ..... See table

External Output Trim (minimum) ..... ±10%

Voltage Tolerance ..... ±1% max.

Output Current ..... See table

Output Power ..... See table

Line Regulation ..... ±0.1%

Load Regulation ..... ±0.1%

Minimum load ..... none required

Ripple/Noise (20MHz BW) ..... 1.5% Vout

Remote Sense ..... Up to 0.5V power line drop

Transient Response ..... ±5.0% deviation, 100µ/sec recovery to within ±1.0%

PROTECTION SPECIFICATIONS

Short Circuit Protection ..... continuous

Over Voltage Protection ..... Approximately 120% Vout, self-resetting

Current Limiting Inception ..... Approximately 125%

Thermal Overload ..... +110°C baseplate, self-resetting

GENERAL SPECIFICATIONS

Efficiency ..... 85% typical

Switching Frequency (fixed) ..... 400kHz ±10%

Isolation Voltage
- Input to Output ..... 1500VDC min.
- Input to Case 750VDC
- Output to Case 750VDC

Isolation Resistance (Input to Output) ..... > 100MΩ

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature ..... -40°C to +100°C baseplate

Storage Temperature ..... -55°C to +125°C

Humidity (non-condensing) ..... 20% to 95% RH

Temperature Coefficient ..... 0.01%/°C max

PHYSICAL SPECIFICATIONS

Weight 7.52oz (213g)

Dimensions (L x W x H) ..... 5.70 x 3.40 x 1.34 inches
144.8 x 86.4 x 34 mm

Due to advances in technology, specifications subject to change without notice

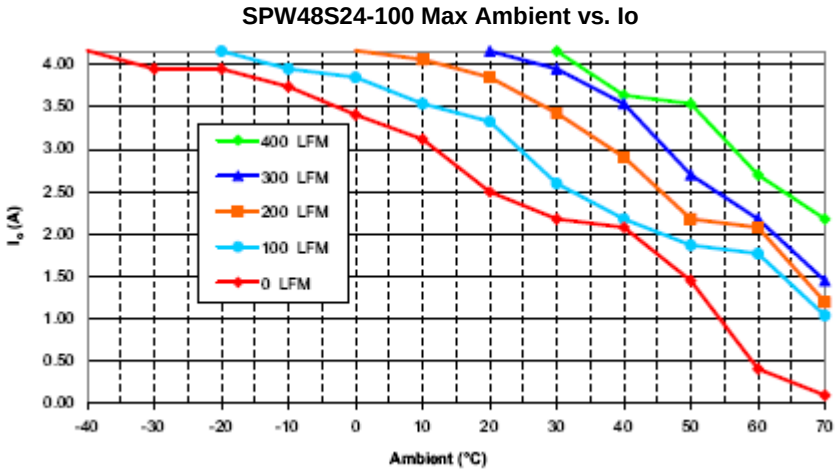
MODEL SELECTION TABLE

Model Number for Threaded Inserts	Model Number for Thru-Hole Inserts	Input Voltage Range	Output Voltage	Output Current	Output Power
CMSP24S3.3-66	CMSP24S3.3-66TH	24 VDC (18 – 36 VDC)	3.3 VDC	20A	66W
CMSP24S3.3-75	CMSP24S3.3-75TH		3.3 VDC	22.7A	75W
CMSP24S5-50	CMSP24S5-50TH		5 VDC	10A	50W
CMSP24S5-75	CMSP24S5-75TH		5 VDC	15A	75W
CMSP24S5-100	CMSP24S5-100TH		5 VDC	20A	100W
CMSP24S12-50	CMSP24S12-50TH		12 VDC	4.16A	50W
CMSP24S12-75	CMSP24S12-75TH		12 VDC	6.25A	75W
CMSP24S12-100	CMSP24S12-100TH		12 VDC	8.33A	100W
CMSP24S15-50	CMSP24S15-50TH		15 VDC	3.33A	50W
CMSP24S15-75	CMSP24S15-75TH		15 VDC	5A	75W
CMSP24S15-100	CMSP24S15-100TH		15 VDC	6.66A	100W
CMSP24S24-50	CMSP24S24-50TH		24 VDC	2.08A	50W
CMSP24S24-75	CMSP24S24-75TH		24 VDC	3.12A	75W
CMSP24S24-100	CMSP24S24-100TH		24 VDC	4.17A	100W
CMSP24S48-50	CMSP24S48-50TH		48 VDC	1.04A	50W
CMSP24S48-75	CMSP24S48-75TH		48 VDC	1.56A	75W
CMSP24S48-100	CMSP24S48-100TH		48 VDC	2.08A	100W
CMSP48S3.3-66	CMSP48S3.3-66TH	48 VDC (36 – 75 VDC)	3.3 VDC	20A	66W
CMSP48S3.3-75	CMSP48S3.3-75TH		3.3 VDC	22.7A	75W
CMSP48S5-50	CMSP48S5-50TH		5 VDC	10A	50W
CMSP48S5-75	CMSP48S5-75TH		5 VDC	15A	75W
CMSP48S5-100	CMSP48S5-100TH		5 VDC	20A	100W
CMSP48S6-50	CMSP48S6-50TH		6 VDC	8.33A	50W
CMSP48S6-75	CMSP48S6-75TH		6 VDC	12.5A	75W
CMSP48S6-100	CMSP48S6-100TH		6 VDC	16.67A	100W
CMSP48S12-50	CMSP48S12-50TH		12 VDC	4.16A	50W
CMSP48S12-75	CMSP48S12-75TH		12 VDC	6.25A	75W
CMSP48S12-100	CMSP48S12-100TH		12 VDC	8.33A	100W
CMSP48S15-50	CMSP48S15-50TH		15 VDC	3.33A	50W
CMSP48S15-75	CMSP48S15-75TH		15 VDC	5A	75W
CMSP48S15-100	CMSP48S15-100TH		15 VDC	6.66A	100W
CMSP48S24-50	CMSP48S24-50TH		24 VDC	2.08A	50W
CMSP48S24-75	CMSP48S24-75TH		24 VDC	3.12A	75W
CMSP48S24-100	CMSP48S24-100TH		24 VDC	4.17A	100W
CMSP48S28-100	CMSP48S28-100TH		28 VDC	3.57A	100W
CMSP48S48-50	CMSP48S48-50TH		48 VDC	1.04A	50W
CMSP48S48-75	CMSP48S48-75TH		48 VDC	1.56A	75W
CMSP48S48-100	CMSP48S48-100TH		48 VDC	2.08A	100W
CMSPW48S3.3-66	CMSPW48S3.3-66TH	48 VDC (18 – 75 VDC)	3.3 VDC	20A	66W
CMSPW48S3.3-75	CMSPW48S3.3-75TH		3.3 VDC	22.7A	75W
CMSPW48S5-50	CMSPW48S5-50TH		5 VDC	10A	50W
CMSPW48S5-75	CMSPW48S5-75TH		5 VDC	15A	75W
CMSPW48S5-100	CMSPW48S5-100TH		5 VDC	20A	100W
CMSPW48S9-50	CMSPW48S9-50TH		9 VDC	5.56A	50W
CMSPW48S12-50	CMSPW48S12-50TH		12 VDC	4.16A	50W
CMSPW48S12-75	CMSPW48S12-75TH		12 VDC	6.25A	75W
CMSPW48S12-100	CMSPW48S12-100TH		12 VDC	8.33A	100W
CMSPW48S15-50	CMSPW48S15-50TH		15 VDC	3.33A	50W
CMSPW48S15-75	CMSPW48S15-75TH		15 VDC	5A	75W
CMSPW48S15-100	CMSPW48S15-100TH		15 VDC	6.67A	100W
CMSPW48S24-50	CMSPW48S24-50TH		24 VDC	2.08A	50W
CMSPW48S24-75	CMSPW48S24-75TH		24 VDC	3.12A	75W
CMSPW48S24-100	CMSPW48S24-100TH		24 VDC	4.16A	100W
CMSPW48S28-100	CMSPW48S28-100TH		28 VDC	3.57A	100W
CMSPW48S48-50 (4)	CMSPW48S48-50TH (4)		48 VDC	1.04A	50W

NOTES

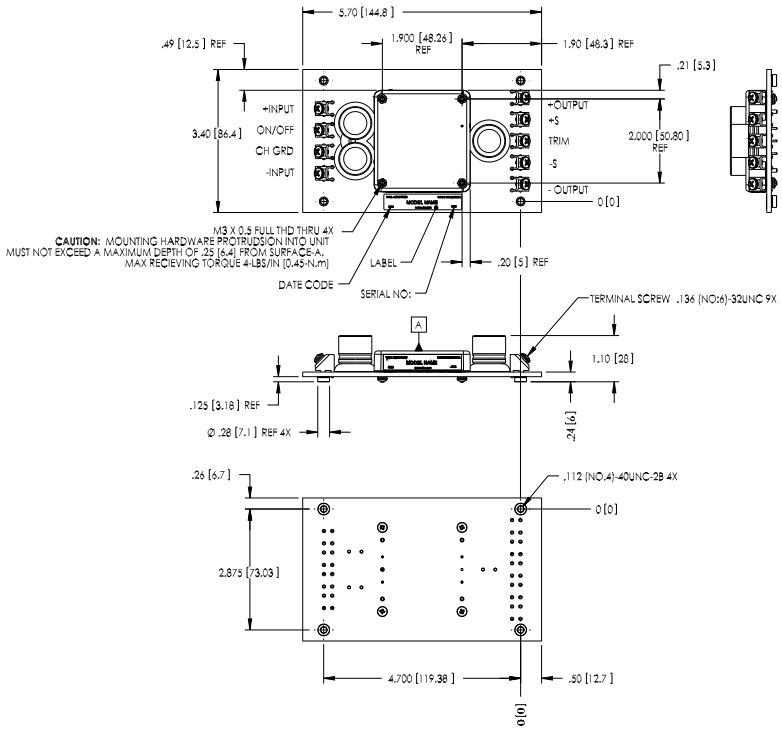
1. Auto off power train protection.
2. All case, pin to case, and pin to header dimensions reference only unless otherwise noted.
3. 48VDC input with 48VDC output not available in 75 and 100 watt models.
4. Through-hole instead of threaded inserts available (0.125" diameter), add suffix "TH"
5. Positive Remote ON/OFF control is standard. To order negative logic Remote ON/OFF control add the suffix "R" to the part number (Ex: CMSP48S48-100R).

DERATING CURVE



MECHANICAL DRAWING

Unit: inches [mm]



NOTES:

1. PIN TO PIN TOLERANCE ± 0.01 [±0.3], PIN DIAMETER TOLERANCE: ±0.005 [±0.13].
2. CASE MATERIAL OF THE CONVERTER: Ø.040 [1.02] THICK, ALUMINUM ALLOY 3003-0, PER: QQA 250/2.
3. UNLESS OTHERWISE SPECIFIED.

TO ORDER:

4. UNIT COMES WITH EITHER 3M x 0.5 THREADED THRU INSERTS OR FOR Ø.125 THRU-HOLE FOR THE CHASSIS MOUNT BOARD ADD: "TH" SUFFIX TO MODEL PART NUMBER. EXAMPLE: CMSPW48S12-100TH