

CMW SERIES

3W-6W WIDE INPUT RANGE

DANUBE

FEATURES

- Safety Meets EN 60601-1 3rd EDITION FOR 2 X MOPP
- I/O ISOLATION 5000VAC RATED FOR 250VAC WORKING VOLTAGE
- CREEPAGE DISTANCE AND CLEARANCE > 8mm
- LOW LEAKAGE CURRENT
- 9-36V,18-75V WIDE INPUT RANGE
- RoHS COMPLIANT
- 3 YEARS WARRANTY



OUTPUT SPECIFICATIONS

Voltage Set-point Accuracy	+/-2% max.
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	150mVp-p max.
Line Regulation ²	+/-0.5% max.
Load Regulation ³	+/-0.5% max.
Minimum Load	CMWX-XXXXC3T 20% of Full Load
	CMWX-XXXXC6T 10% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Over Load Protection	150% typ.
Transient Response ⁵	500uS max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 °C to +71 °C
Case Temperature	+105 °C max.
Storage Temperature	-55 °C to +125 °C
Humidity	95% max.
Cooling	Free-Air Convection

INPUT SPECIFICATIONS

Input Voltage Range	4:1 Input Range
Input Filter	Pi Network
Protection	Fuse Recommended
Remote ON/OFF Control	Table 1

GENERAL SPECIFICATIONS

Efficiency	77% min.
Isolation Voltage ⁴	5000VAC typ.
Isolation Resistance	10 ⁹ ohms min.
Isolation Capacitance	20pF typ.
Reinforced Insulation	Creepage Distances 8mm min.
	Air Clearances 8mm min.
Leakage Current	5uA max.
Switching Frequency	400KHz typ.
MTBF ⁶	>180,000 Hours
Weight	17g typ.
Case Material	Non-Conductive Plastic
Case Size	31.8mm*20.3mm*12.2mm
Potting Material	Epoxy (UL94V-0)
Radiated Emissions	EN55032 Class A (with external filter)

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD, AND 25 °C UNLESS OTHERWISE NOTED.

¹ Measured with 1uF ceramic capacitor connect to the output pins.

² High Line to Low Line.

³ Load Regulation is for output load current change from 20% to 100%.

⁴ 6000VDC for 1 minute .

⁵ 25% Step Load Change.

⁶ MIL-HDBK-217F @25 °C, Ground Benign.

● **SELECTION GUIDE(1)**
4:1 3W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷ CURRENT(mA)		EFF ⁸ (%)	CAPACITOR LOAD (Max.)
				FULL LOAD	NO LOAD		
CMWS-1205C3T(R)	9-36	5	600	316	20	79	330uF
CMWS-1212C3T(R)	9-36	12	250	313	20	80	100uF
CMWS-1215C3T(R)	9-36	15	200	316	20	79	47uF
CMWD-1205C3T(R)	9-36	+/-5	+/-300	316	20	79	+/-220uF
CMWD-1212C3T(R)	9-36	+/-12	+/-125	316	20	79	+/-47uF
CMWD-1215C3T(R)	9-36	+/-15	+/-100	320	25	78	+/-22uF
CMWS-2405C3T(R)	18-75	5	600	160	15	78	330uF
CMWS-2412C3T(R)	18-75	12	250	158	15	79	100uF
CMWS-2415C3T(R)	18-75	15	200	158	15	79	47uF
CMWD-2405C3T(R)	18-75	+/-5	+/-300	158	15	79	+/-220uF
CMWD-2412C3T(R)	18-75	+/-12	+/-125	158	15	79	+/-47uF
CMWD-2415C3T(R)	18-75	+/-15	+/-100	162	15	77	+/-22uF

Note: Other input to output voltages maybe available. Please contact factory.

⁷ NOMINAL INPUT VOLTAGE

⁸ NOMINAL INPUT VOLTAGE, FULL LOAD

● SELECTION GUIDE(2) 4:1 6W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁹ CURRENT(mA)		EFF ¹⁰ (%)	CAPACITOR LOAD (Max.)
				FULL LOAD	NO LOAD		
CMWS-1205C6T(R)	9-36	5	1200	625	20	80	330uF
CMWS-1212C6T(R)	9-36	12	500	602	20	83	120uF
CMWS-1215C6T(R)	9-36	15	400	602	20	83	100uF
CMWD-1205C6T(R)	9-36	+/-5	+/-600	617	20	81	+/-330uF
CMWD-1212C6T(R)	9-36	+/-12	+/-250	617	20	81	+/-47uF
CMWD-1215C6T(R)	9-36	+/-15	+/-200	617	30	81	+/-47uF
CMWS-2405C6T(R)	18-75	5	1200	308	15	81	330uF
CMWS-2412C6T(R)	18-75	12	500	301	15	83	120uF
CMWS-2415C6T(R)	18-75	15	400	301	15	83	100uF
CMWD-2405C6T(R)	18-75	+/-5	+/-600	308	15	81	+/-330uF
CMWD-2412C6T(R)	18-75	+/-12	+/-250	305	15	82	+/-47uF
CMWD-2415C6T(R)	18-75	+/-15	+/-200	305	15	82	+/-47uF

Note: Other input to output voltages maybe available. Please contact factory.

● PARTNUMBES STRUCTURE

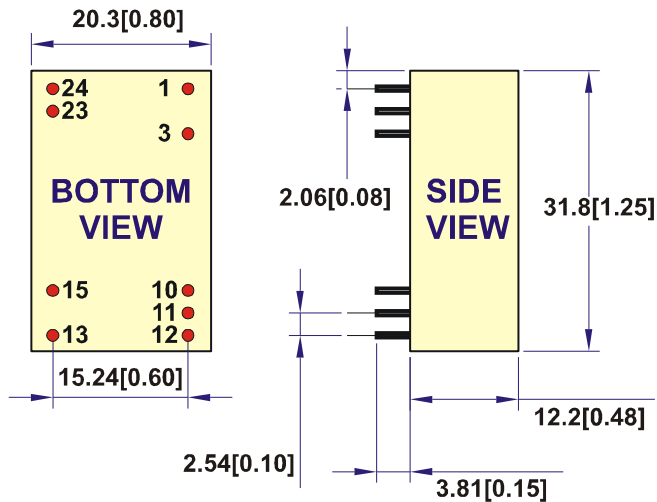
Series	Coding Scheme
CMW Series	CMWv-x1x2x3x4x5x6-zzz CMW = Series Name v=Type of output voltage (S=Single output , D=Dual output) x1=Input Voltage x2=Output Voltage x3=Package(C) x4=Power(3W-6W) x5=Input Voltage Range (T=4:1) x6= Remote ON/OFF Control (R) zzz= 0~9 , A~Z or blank for market purpose.

⁹ NOMINAL INPUT VOLTAGE

¹⁰ NOMINAL INPUT VOLTAGE, FULL LOAD

● **MECHANICAL DIMENSIONS
RECOMMENDED FOOTPRINT DETAILS**

PACKAGE "C"



All dimensions are in mm[inches]

PIN	SINGLE	DUAL
1	+Vin	+Vin
3	NP*/Remote	NP*/Remote
10	NP	NP
11	NP	Common
12	-Vout	NP
13	+Vout	-Vout
15	NP	+Vout
23	-Vin	-Vin
24	-Vin	-Vin

NOTE:

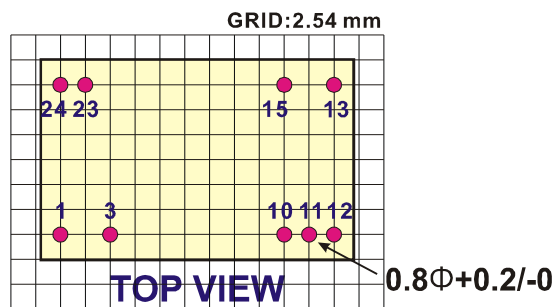
NP : NO PIN

*If Remote is not selected there is no pin on corresponding number.

Pin Size is Tolerance 0.60Φ ±0.05mm

All dimensions are in mm [inches]

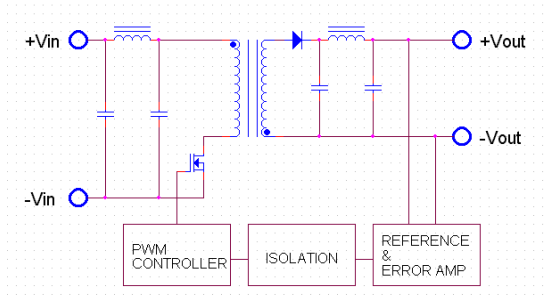
Tolerance . X or .XX= ±0.5mm



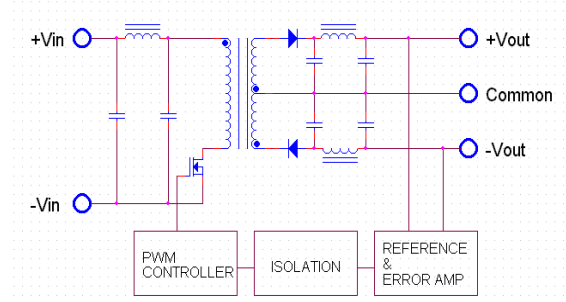
● **Table1 (Remote On/Off Control)**

Remote On/Off Control			
Control Input	PIN3	Control Common	PIN23&PIN24
Control Voltage		Converter Shutdown Idle Current	10mA
ON	>+2.5VDC or Open Circuit	Logic Compatibility	CMOS or Open
OFF	<+0.8VDC or Jumper to PIN23&PIN24		Collector TTL

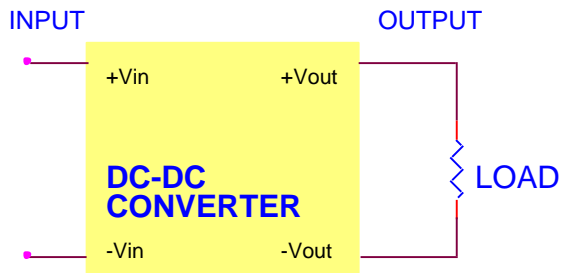
● SIMPLIFIED SCHEMATIC SINGLE OUTPUT



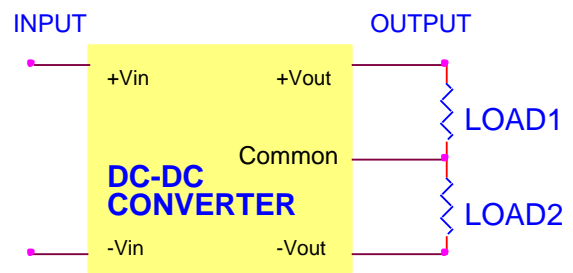
DUAL OUTPUT



● TYPICAL APPLICATIONS SINGLE OUTPUT



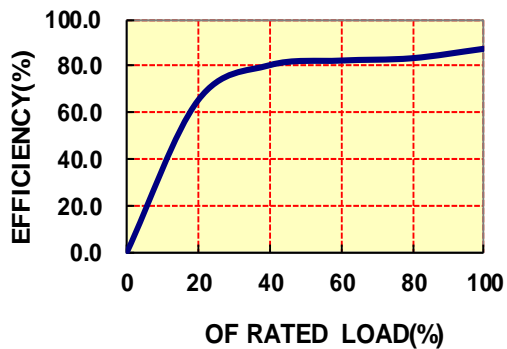
DUAL OUTPUT



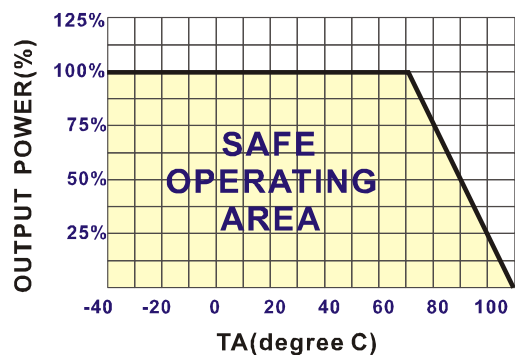
● TYPICAL PERFORMANCE CURVES

Specifications typical at $T_a=25^\circ\text{C}$, nominal input voltage, rated output current unless otherwise specified.

OUTPUT LOAD VS EFFICIENCY

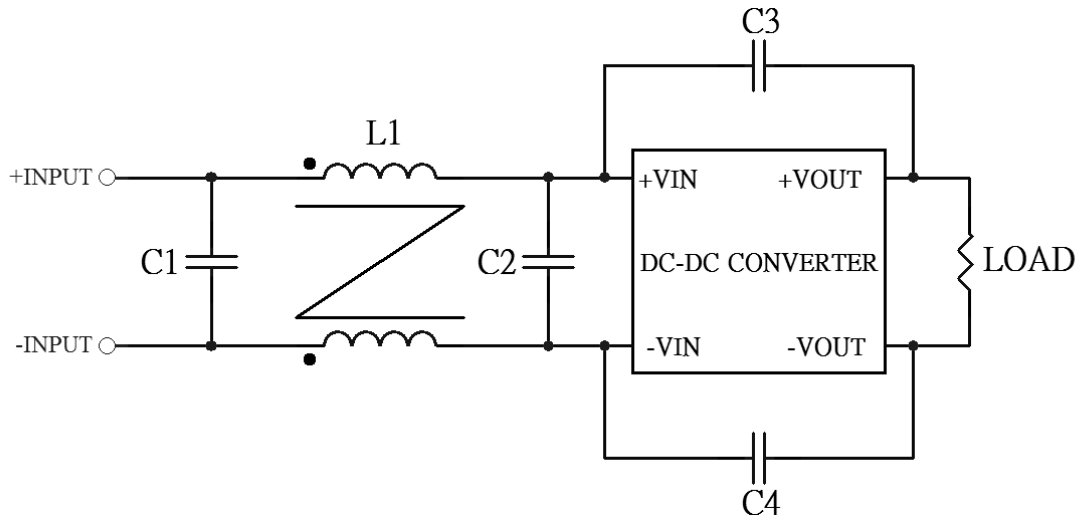


TEMPERATURE DERATING



● RECOMMENDED FILTER FOR EN55032

The components used in the under figure, together with the manufacture's part numbers for these components, are as follows :



	C1	C2	C3	C4	L1
CMWX-12XXCXT	10uF/50V	10uF/50V	X	X	450uH Common Choke
CMWS-1205C6T	10uF/50V	10uF/50V	X	470pF/10KV	450uH Common Choke
CMWS-1212C6T	10uF/50V	10uF/50V	X	470pF/10KV	450uH Common Choke
CMWX-24XXCXT	4.7uF/100V	4.7uF/100V	X	X	450uH Common Choke
CMWS-2405C6T	4.7uF/100V	4.7uF/100V	X	470pF/10KV	450uH Common Choke

● INPUT FUSE SELECTION GUIDE

9-36V INPUT VOLTAGE(VDC)	18-75V INPUT VOLTAGE(VDC)
2000mA Slow-Blow Type	1000mA Slow-Blow Type

Note: Certain applications may require the installation of external fuse in front of the input.

CMW SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the CMW SERIES.

External output capacitance is not required for operation; however it is recommended that 10uF tantalum and 0.1uF ceramic capacitance be selected for reduced system noise.

FOR MORE INFORMATION CALL:

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Home Page

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