

Wide input range 1:2
Case style: DIP24

COMMERCIAL DC/DC Converters PWM - regulated

2,2 Watt
Series: CW2

Electrical specifications:

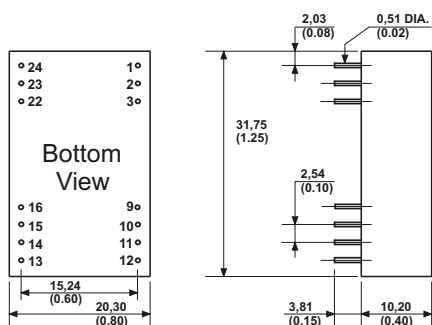
Input voltage: wide 1:2
Output voltage accuracy: +/- 1% max.
Line regulation: +/- 0,2%
Load regulation: +/- 0,5% (20% to 100% Load)
Efficiency: up to 84%
Output Ripple & Noise: 50mVp-p max.
Short circuit protection: continuous

Operating temperature: -40°C to +85°C
Isolation voltage: min. 1000V DC
Optional Part-No.: /H2 min. 2000V DC
Part-No.: /H3 min. 3000V DC
(/H2; /H3 only available with Pinning "A" and "C")
Case material: black plastic
Optional Part-No.: /M metal case
Part-No.: /SMD SMD-package
(/M; /SMD Isolation voltage max. 2kVDC)

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

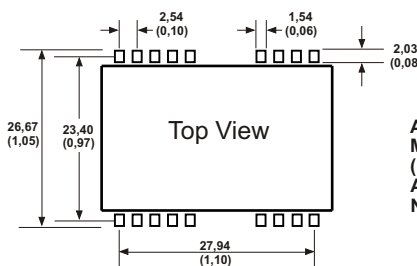
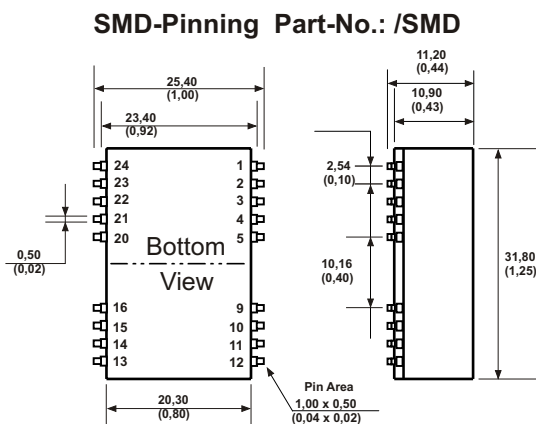
Part - No. Single Output	Input Voltage DC	Output Voltage DC	Output current	Part - No. Dual Output	Input Voltage DC	Output Voltage DC	Output current
CW2-xx03,3	5V (4,5-9V) 12V (9-18V) 24V (18-36V) 48V (36-72V)	3,3V	600mA	CW2-xx03,3D	5V (4,5-9V) 12V (9-18V) 24V (18-36V) 48V (36-72V)	±3,3V	±300mA
CW2-xx05		5V	440mA	CW2-xx05D		± 5V	±220mA
CW2-xx09		9V	244mA	CW2-xx09D		± 9V	±122mA
CW2-xx12		12V	183mA	CW2-xx12D		±12V	± 91mA
CW2-xx15		15V	146mA	CW2-xx15D		±15V	± 73mA

Any other output voltages available



PIN CONNECTION:						
PIN	SINGLE	DUAL	SINGLE A	DUAL A	SINGLE C	DUAL C
1	+Vin	+Vin			+Vin	+Vin
2	NP	-Vout	-Vin	-Vin	+Vin	+Vin
3	NP	COM	-Vin	-Vin		
9			NC	COM		
10	-Vout	COM			NC	COM
11	+Vout	+Vout	NC	-Vout	NC	COM
12	-Vin	-Vin			-Vout	NC
13	-Vin	-Vin			+Vout	-Vout
14	+Vout	+Vout	+Vout	+Vout		
15	-Vout	COM			NC	+Vout
16			-Vout	COM		
22	NP	COM	+Vin	+Vin		
23	NP	-Vout	+Vin	+Vin	-Vin	-Vin
24	+Vin	+Vin			-Vin	-Vin

Add "A" to the end of Partnumber.
For example CW2-2405A/H3 2,2Watt.



ALL DIMENSIONS IN MM (INCHES)
MILLIMETERS +/- 0,25mm
(INCHES +/- 0,01")
All pins on a 2,54mm pitch
Note: NP = No pin; NC = No connection;
Dot denotes pin 1

Specification may be changed without notice
please contact office for verification

We can offer EMC - Filter
according to EN55011/22 Class B.

Stand: 12/07

Wide input range 1:2
 Case style: DIP24

COMMERCIAL DC/DC Converters PWM - regulated

3 Watt
 Series: CW2

Electrical specifications:

Input voltage: wide 1:2
 Output voltage accuracy: +/- 1% max.
 Line regulation: +/- 0,2%
 Load regulation: +/- 0,5% (20% to 100% Load)
 Efficiency: up to 84%
 Output Ripple & Noise: 50mVp-p max.
 Short circuit protection: continuous
 Operating temperature Uin = 5V: -40°C to +80°C
 Uin = 12V; 24V; 48V: -40°C to +85°C

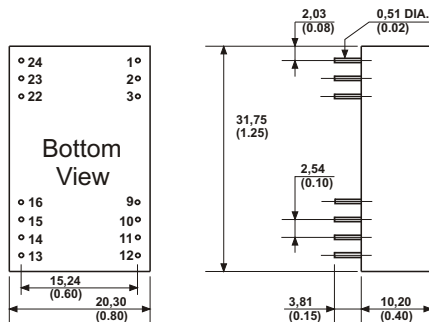
Isolation voltage: min. 1000V DC
 Optional Part-No.: /H2 min. 2000V DC
 Part-No.: /H3 min. 3000V DC
 Part-No.: /H4 min. 4000V DC
 Part-No.: /H5 min. 5000V DC
 Part-No.: /H6 min. 6000V DC
 (/H2 - /H6 only available with Pinning "A" and "C")

Case material: black plastic
 Optional Part-No.: /M metal case
 Part-No.: /SMD SMD-package
 (/M; /SMD Isolation voltage max. 2kVDC)

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

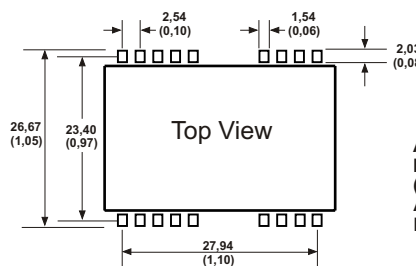
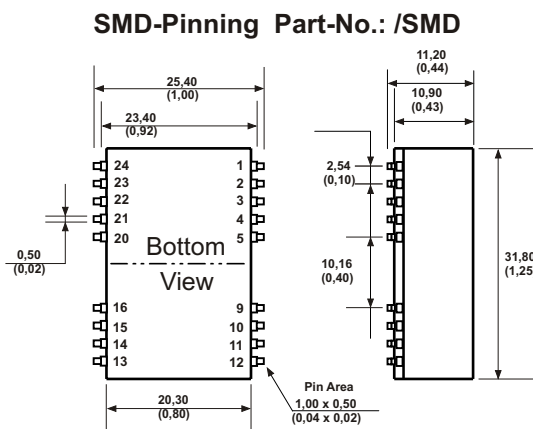
Part - No. Single Output	Input Voltage DC	Output Voltage DC	Output current	Part - No. Dual Output	Input Voltage DC	Output Voltage DC	Output current
CW2-xx03,3	5V (4,5-9V)	3,3V	900mA	CW2-xx05D	5V (4,5-9V)	± 5V	±300mA
CW2-xx05	12V (9-18V)	5V	600mA	CW2-xx09D	12V (9-18V)	± 9V	±165mA
CW2-xx09	24V (18-36V)	9V	330mA	CW2-xx12D	24V (18-36V)	±12V	±125mA
CW2-xx12	48V (36-72V)	12V	250mA	CW2-xx15D	48V (36-72V)	±15V	±100mA
CW2-xx15		15V	200mA				

Any other output voltages available



PIN CONNECTION:						
PIN	SINGLE	DUAL	SINGLE A	DUAL A	SINGLE C	DUAL C
1	+Vin	+Vin			+Vin	+Vin
2	NP	-Vout	-Vin	-Vin	+Vin	+Vin
3	NP	COM	-Vin	-Vin		
9			NC	COM		
10	-Vout	COM			NC	COM
11	+Vout	+Vout	NC	-Vout	NC	COM
12	-Vin	-Vin			-Vout	NC
13	-Vin	-Vin			+Vout	-Vout
14	+Vout	+Vout	+Vout	+Vout		
15	-Vout	COM			NC	+Vout
16			-Vout	COM		
22	NP	COM	+Vin	+Vin		
23	NP	-Vout	+Vin	+Vin	-Vin	-Vin
24	+Vin	+Vin			-Vin	-Vin

Add "A" to the end of Partnumber.
 For example CW2-2405A/H3 3Watt.



ALL DIMENSIONS IN MM (INCHES)
 MILLIMETERS +/- 0,25mm
 (INCHES +/- 0,01")
 All pins on a 2,54mm pitch
 Note: NP = No pin; NC = No connection;
 Dot denotes pin 1

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We can offer EMC - Filter
 according to EN55011/22 Class B.

Stand: 17/09

Wide input range 1:2
 Case style: DIP24

COMMERCIAL DC/DC Converters PWM - regulated

5 Watt
 Series: CW2

Electrical specifications:

Input voltage: wide 1:2
 Output voltage accuracy: +/- 1% max.
 Line regulation: +/- 0,2%
 Load regulation: +/- 0,5% (20% to 100% Load)
 Efficiency: up to 84%
 Output Ripple & Noise: 50mVp-p max.
 Short circuit protection: continuous
 Operating temperature: -40°C to +75°C

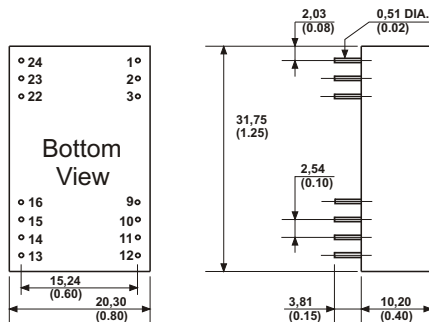
Isolation voltage: min. 1000V DC
 Optional Part-No.: /H2 min. 2000V DC
 Part-No.: /H3 min. 3000V DC
 Part-No.: /H4 min. 4000V DC
 Part-No.: /H5 min. 5000V DC
 Part-No.: /H6 min. 6000V DC
 (/H2 - /H6 only available with Pinning "A" and "C")

Case material: black plastic
 Optional Part-No.: /M metal case
 Part-No.: /SMD SMD-package
 (/M; /SMD Isolation voltage max. 2kVDC)

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

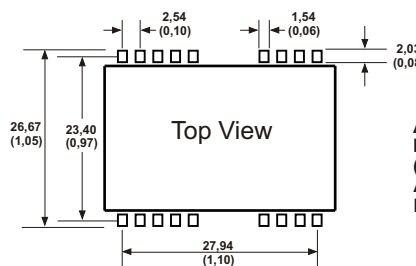
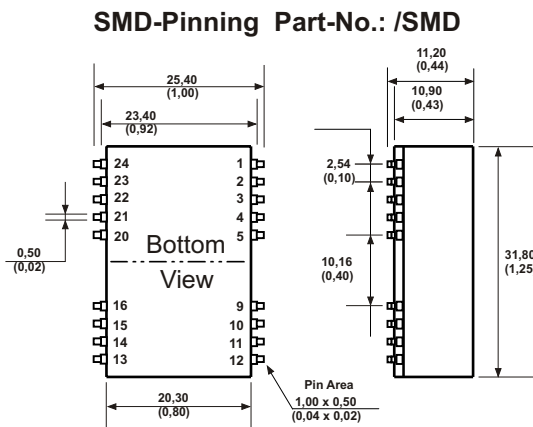
Part - No. Single Output	Input Voltage DC	Output Voltage DC	Output current	Part - No. Dual Output	Input Voltage DC	Output Voltage DC	Output current
CW2-xx03,3	5V (4,5-9V)	3,3V	1200mA	CW2-xx05D	5V (4,5-9V)	± 5V	±500mA
CW2-xx05	12V (9-18V)	5V	1000mA	CW2-xx09D	12V (9-18V)	± 9V	±278mA
CW2-xx09	24V (18-36V)	9V	556mA	CW2-xx12D	24V (18-36V)	±12V	±210mA
CW2-xx12	48V (36-72V)	12V	420mA	CW2-xx15D	48V (36-72V)	±15V	±170mA
CW2-xx15		15V	340mA				

Any other output voltages available



PIN CONNECTION:						
PIN	SINGLE	DUAL	SINGLE A	DUAL A	SINGLE C	DUAL C
1	+Vin	+Vin			+Vin	+Vin
2	NP	-Vout	-Vin	-Vin	+Vin	+Vin
3	NP	COM	-Vin	-Vin		
9			NC	COM		
10	-Vout	COM			NC	COM
11	+Vout	+Vout	NC	-Vout	NC	COM
12	-Vin	-Vin			-Vout	NC
13	-Vin	-Vin			+Vout	-Vout
14	+Vout	+Vout	+Vout	+Vout		
15	-Vout	COM			NC	+Vout
16			-Vout	COM		
22	NP	COM	+Vin	+Vin		
23	NP	-Vout	+Vin	+Vin	-Vin	-Vin
24	+Vin	+Vin			-Vin	-Vin

Add "A" to the end of Partnumber.
 For example CW2-2405A/H3 5Watt.



ALL DIMENSIONS IN MM (INCHES)
 MILLIMETERS +/- 0,25mm
 (INCHES +/- 0,01")
 All pins on a 2,54mm pitch
 Note: NP = No pin; NC = No connection;
 Dot denotes pin 1

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We can offer EMC - Filter
 according to EN55011/22 Class B.

Wide input range 2:1
Case style: DIP24

COMMERCIAL DC/DC Converters

PWM - regulated
ISOLATED OUTPUT

3 Watt / 5 Watt
Series: CW2

Electrical specifications:

Input voltage: wide 2:1
Output voltage accuracy: max. +/- 2%
Line regulation: max. +/- 0,4%
Load regulation: max. +/- 0,6% (20% to 100% Load)
Operating temperature Uin = 5V: -40°C to +80°C
Uin = 12V; 24V; 48V: -40°C to +85°C

Efficiency: up to 82%
Output Ripple & Noise: typ. 50mVp-p
Short circuit protection: continuous / Auto Restart
Isolation voltage I/O: min. 2000V DC
(tested for 1 second min.) O/O: min. 500V DC
Case material: black plastic
Part-No. /M: metal case
Part-No. /SMD: SMD-package

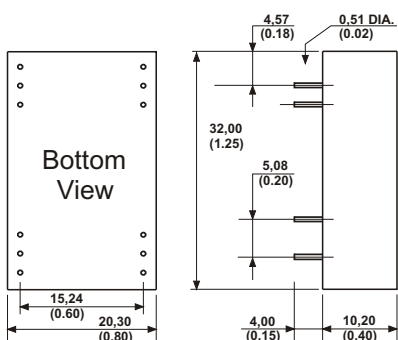
CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

* OUT1: (Uout = 5V) min. Load 100mA to supply OUT2 well
(Uout = 9V; 12V; 15V) min. Load 20% to supply OUT2 well

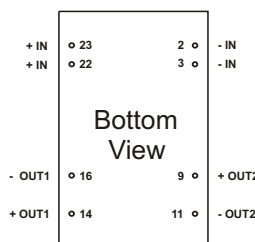
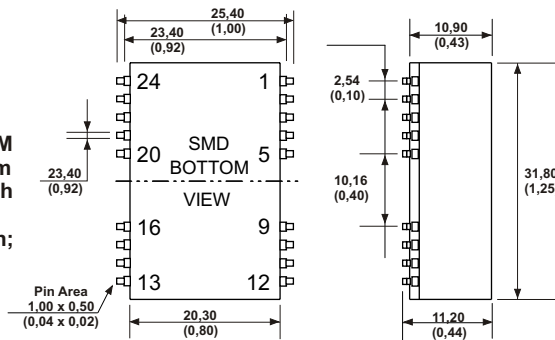
Part - No. Dual Output	Input Voltage DC	Output 3 Watt				Output 5 Watt			
		Output 1 *		Output 2		Output 1 *		Output 2	
		Output Voltage DC	Output Current	Output Voltage DC	Output Current	Output Voltage DC	Output Current	Output Voltage DC	Output Current
CW2-xx0505A CW2-xx0509A CW2-xx0512A CW2-xx0515A	05V (4,5-9V)	5V	300mA	5V	300mA	5V	500mA	5V	500mA
		9V	167mA	9V	167mA	9V	277mA	9V	277mA
		12V	125mA	12V	125mA	12V	208mA	12V	208mA
		15V	100mA	15V	100mA	15V	167mA	15V	167mA
CW2-xx0905A CW2-xx0909A CW2-xx0912A CW2-xx0915A	12V (9-18V)	9V	167mA	5V	300mA	9V	277mA	5V	500mA
		12V	125mA	9V	167mA	9V	277mA	9V	277mA
		15V	100mA	12V	125mA	12V	208mA	12V	208mA
		15V	100mA	15V	100mA	15V	167mA	15V	167mA
CW2-xx1205A CW2-xx1209A CW2-xx1212A CW2-xx1215A	24V (18-36V)	12V	125mA	5V	300mA	12V	208mA	5V	500mA
		9V	167mA	9V	167mA	9V	277mA	9V	277mA
		12V	125mA	12V	125mA	12V	208mA	12V	208mA
		15V	100mA	15V	100mA	15V	167mA	15V	167mA
CW2-xx1505A CW2-xx1509A CW2-xx1512A CW2-xx1515A	48V (36-72V)	15V	100mA	5V	300mA	15V	167mA	5V	500mA
		9V	167mA	9V	167mA	9V	277mA	9V	277mA
		12V	125mA	12V	125mA	12V	208mA	12V	208mA
		15V	100mA	15V	100mA	15V	167mA	15V	167mA
		For example: CW2-240512A 3W CW2-051512A/SMD 3W							

Input voltage range 4:1 (9-36V & 18-72V) also available

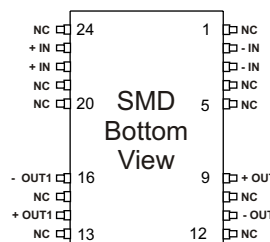
Any other output voltages available



ALL DIMENSIONS IN MM
MILLIMETERS +/- 0,25mm
All pins on a 2,54mm pitch
Note: NP = No pin;
NC = No connection;
Dot denotes pin 1



PIN CONNECTION:
Dual Separate
Any other
Pin-Connection
on request



Part-No.: /SMD
Example:
CW2-241515A/SMD 3W

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according to EN55011/22 Class B.

Wide input range 1:2
Case style: DIP24

COMMERCIAL DC/DC Converters PWM - regulated

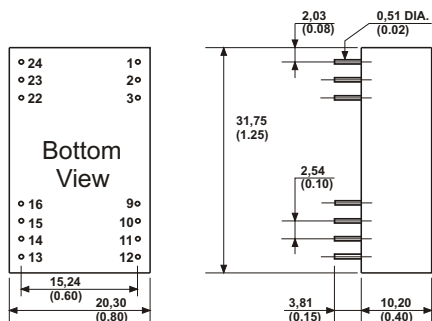
8 Watt
Series: CW2

Electrical specifications:

Input voltage:	wide 1:2	Output Ripple & Noise:	max. 50mVp-p
Output voltage accuracy:	max. +/- 1,2%	Short circuit protection:	continuous, automatic recovery
Minimum Load:	10% of Full Load	Isolation voltage:	min. 2000V DC
Line regulation:	max. +/- 1,0%	Optional Part-No.: /H3	min. 3000V DC
Load regulation:	max. +/- 2,0% (25% to 100% Load)	Remote ON / OFF Control:	
Efficiency:	up to 87%	On - Control:	3,5V < Vr < 12V or open
Operating temperature Uin = 5V:	-40°C to +75°C	Off - Control:	0V < Vr < 1,2V or short
Uin = 12V; 24V; 48V:	-40°C to +85°C	Case material:	Nickel-coated copper
Over Load Protection		Optional Part-No.: /M	metal case
% of FL at nominal input:	150% typ	Part-No.: /SMD	SMD-package
Isolation Capacitance:	1200pF max.		

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

Part - No. Single Output	Input Voltage DC	Output Voltage DC	Output current	Part - No. Dual Output	Input Voltage DC	Output Voltage DC	Output current
CW2-xx03,3A	5V (4,5-9V)	3,3V	1600mA	CW2-xx05DA	5V (4,5-9V)	± 5V	±800mA
CW2-xx05A	12V (9-18V)	5V	1600mA	CW2-xx12DA	12V (9-18V)	±12V	±333mA
CW2-xx12A	24V (18-36V)	12V	666mA	CW2-xx15DA	24V (18-36V)	±15V	±267mA
CW2-xx15A	48V (36-72V)	15V	533mA		48V (36-72V)		

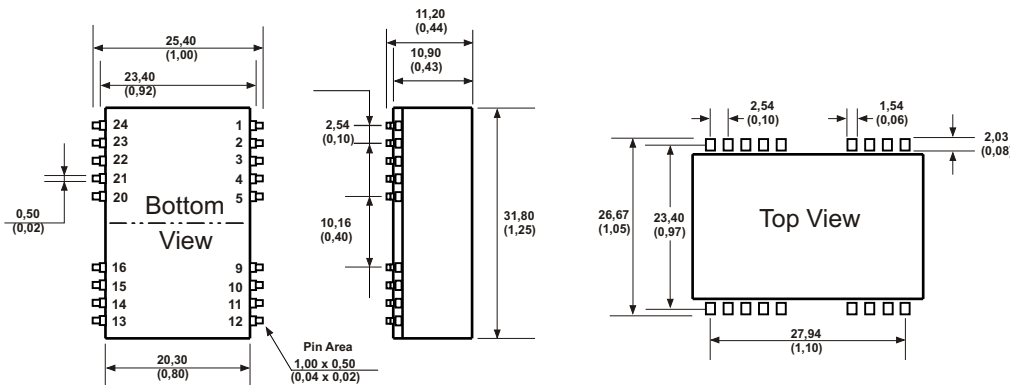


Any other output voltages available

ALL DIMENSIONS IN MM (INCHES)
MILLIMETERS +/- 0,25mm
(INCHES +/- 0,01")
All pins on a 2,54mm pitch
Note: NP = No pin; NC = No connection;
Dot denotes pin 1

PIN CONNECTION:		
PIN	SINGLE A	DUAL A
1	Remote On/Off	
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	COM
10		
11	NC	-Vout
12		
13		
14	+Vout	+Vout
15		
16	-Vout	COM
22	+Vin	+Vin
23	+Vin	+Vin
24		

SMD-Pinning Part-No.: /SMD



Part-No.: /H3
Example CW2-2405A/H3 8W

Part-No.: /SMD
Example:
CW2-2415A/SMD 8W

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