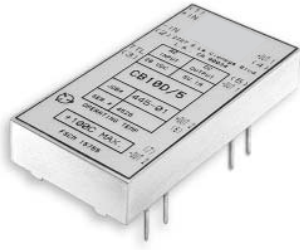


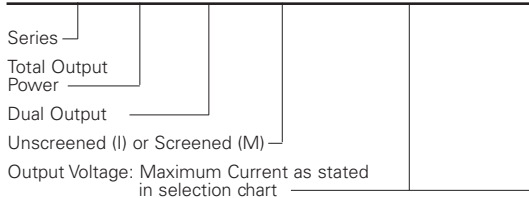
CB10D dual-output DC/DC converters

14 – 40Vin, 2 – 15Vout, 10 watts



How to Order:

CB 10 D M / 5 / 12



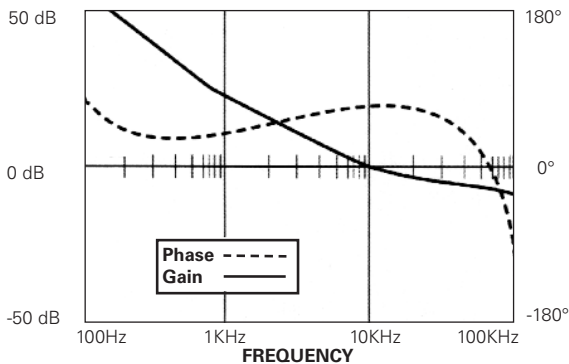
Model Numbering Example:

An environmentally screened, 10 watts, dual output, 5 Vdc and 15 Vdc, the model number would be CB10DM/5/15. A non-environmentally screened dual output, 12 Vdc and 15 Vdc, would be model number CB10DI/12/15. The first output voltage in the model number is located on channel 1, and the second output voltage in the model number is located on channel 2 (see case drawing).

INPUT CHARACTERISTICS

	PER CHANNEL			Units
	Min.	Typ.	Max.	
Input Voltage	14	28	40	Vdc
Brown Out (@75% Load)		12.2	12.6	Vdc
No Load Power Dissipation		1200	1400	mw
Inrush Charge			200	µc
Reflective Ripple Current		8		%
Logic Disable Current (Sink)		150	175	µA
Logic Disable Voltage (TTL)	0		0.8	Vdc
Logic Disable Power In		175	200	mw
Efficiency up to: See Page 27		78		%
EMI: Units conform to MIL-STD-461D (on the input leads) with companion filter				
Input Transient: Units can withstand 50V transients for up to 0.1 second				

STABILITY



FEATURES

- .38 Inch Profile
- Remote Turn On / Output Status (TTL)
- Output Overvoltage Protection
- Output Overcurrent Protection
- Outputs Isolated Allowing Any Combination of Output Voltages and Polarity
- Fixed Frequency (500kHz) Conversion
- High Temperature Burn-In
- 100% Environmental Screening (M Models)

SELECTION CHART

Nominal Output Voltage (Volts)	Dual Output; Per Channel Output Current (Amps)
2	1.0
3.3	1.0
5	1.0
5.2	0.96
12	0.42
15	0.33

OUTPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Set Point Accuracy		25	50 ¹	mV
Load Regulation		0.05	0.2 ⁴	% V _{out}
Line Regulation		0.05	0.2 ⁴	% V _{out}
Ripple P-P (10 MHz)		40	100 ²	mV
Overvoltage Protection		125		% V _{out}
Transient Response (V _{out} 1%) Time/Overshoot				
20-80% Load		150/125	500/250 ³	µS/mV
Low Line - High Line		100/200	500/250 ³	µS/mV
50-100% Load		100/80	500/250 ³	µS/mV
Temperature Drift		0.01	0.05	%/°C
Long Term Drift		0.01	0.02	%/1KHrs
Current Limit	105	130	160	% I _{out}
Short Circuit Current		80	120	% I _{out}
Turn On Time		2.5	10	mS
Logic Turn On Time		1	5	mS
Remote Turn On	4.5			V
Remote Turn Off			0.8	V

¹ 1% or 50mV, whichever is greater

² 1% or 100mV, whichever is greater

³ 5% or 250mV, whichever is greater

⁴ 0.2% or 10mV, whichever is greater



Powering Business Worldwide

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or e-mail: Orders-EP@eaton.com

www.eaton.com/powerconversion

Industrial & military grade high density DC to DC converters

TEMPERATURE CHARACTERISTICS

	Min.	Typ.	Max.	Units
Operating (Case)	-55		+100	°C
Operating (Max.still ambient FL)		+70		°C
Storage (Ambient)	-55		+125	°C
Thermal Resistance Case- Ambient		22.6		°C/W

ENVIRONMENTAL SCREENING - M MODEL

Stabilization Bake:	+125°C for 24 hours similar to MIL-STD-883, M1008.2, Condition B
Temperature Cycling:	10 cycles at -55°C to +125°C (transition 5°C/minute) similar to MIL-STD-883, M1010, Condition B
Burn in:	160 hours @ 85°C min. with $V_{in}=28V_{dc}$ and output at full load
Final Testing	

See "Guide to Operation" for full details

ENVIRONMENTAL SCREENING - I MODEL

Burn in:	16 hours @ 85°C min. with $V_{in}=28V_{dc}$ and output at full load
Final Testing	

See "Guide to Operation" for full details

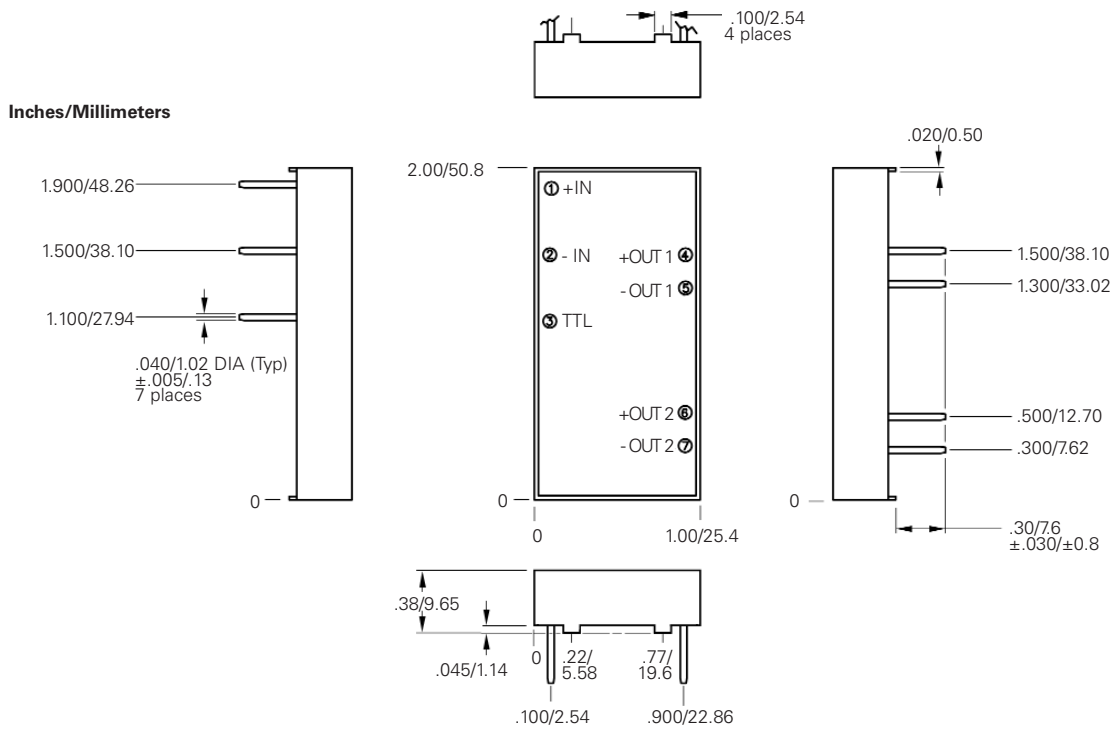
ISOLATION CHARACTERISTICS

	Min.	Units
Isolation:		
Input to Output	500	Vdc
Output to Case	250	Vdc
Input to Case	250	Vdc
Insulation Resistance (@50 Vdc)	50	MOhm

MECHANICAL CHARACTERISTICS

Weight	1.06 30	oz. grams
Size	2.0 x 1.0 x 0.38 50.8 x 25.4 x 9.7	inch mm
Volume	0.76 12.6	inch ³ cm ³
Material	Pin Case	Brass (Solder Plating) Aluminum 5052-H32

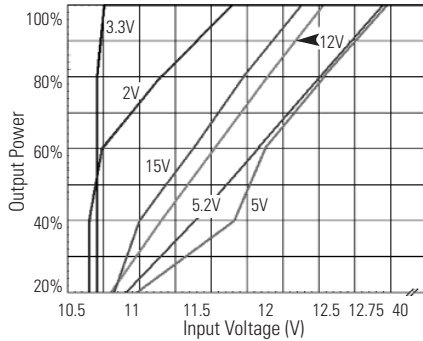
CASE DRAWINGS



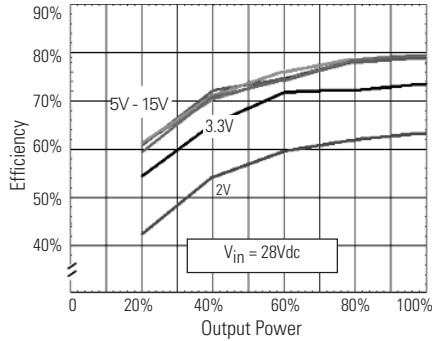
Tolerances: inches - x.xx = ±0.03 mm - x.x = ±0.8
 inches - x.xxx = ±0.015 mm - x.xx = ±0.4

Performance characteristics

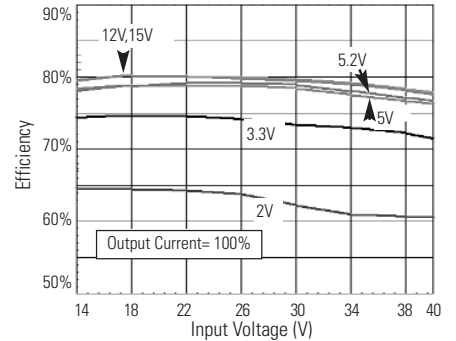
I. Input Voltage vs. Output Power



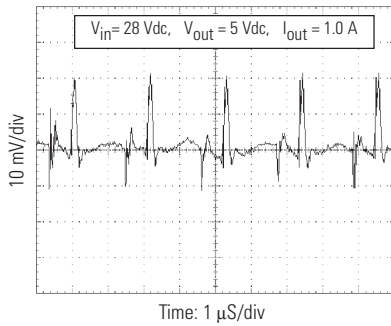
II. Efficiency vs. Output Power



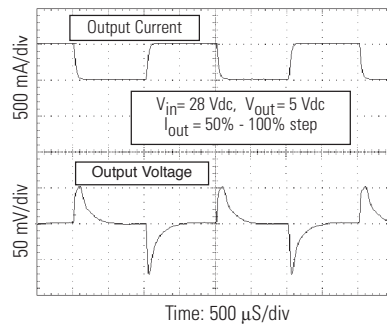
III. Efficiency vs. Input Voltage



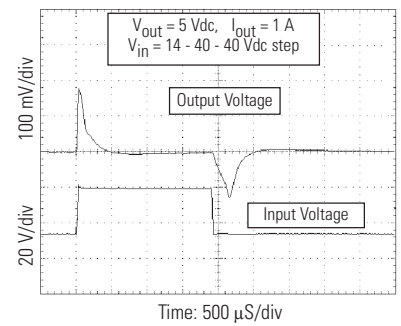
IV. Output Voltage Ripple



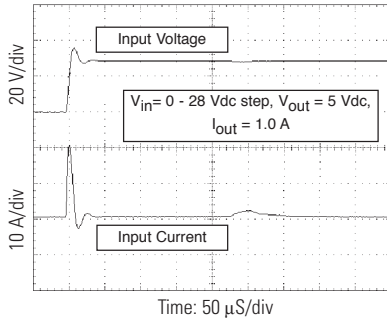
V. Load Transient Response



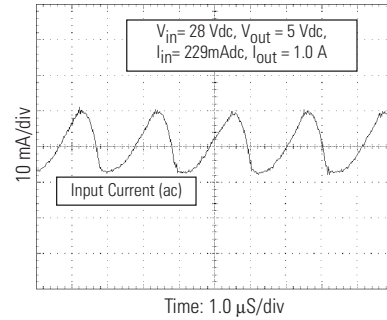
VI. Input Transient Response



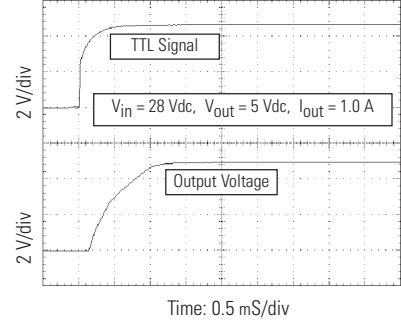
VII. Input Inrush Current



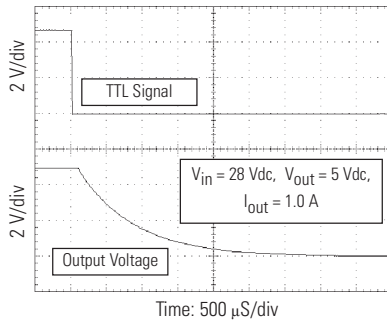
VIII. Input Current Ripple



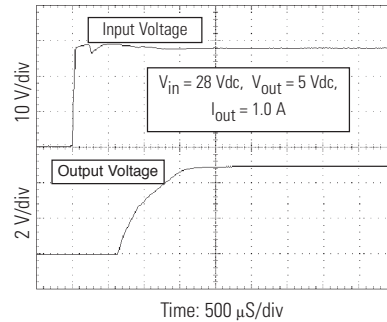
IX. TTL Turn On



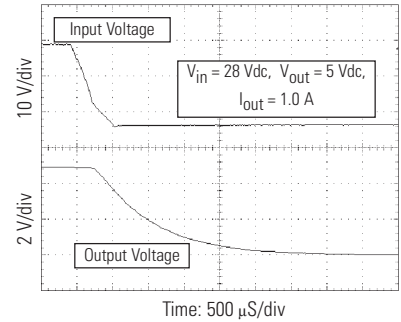
X. TTL Turn-off



XI. Turn-on



XII. Turn-off / Hold-up Time



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