

CB75T triple-output DC/DC converters 16 – 40Vin, 3.3 – 15Vout, 75 watts



How to Order:

CB 75 T M / 5 / 12 - C - D

Series								
Total Output Power								
Triple Output								
Unscreened (I) or Screened (M)								
Main Output Voltage								
Auxiliary Output Voltage								
Options: B - pins out bottom of unit C - pins out top of unit D - through hole inserts (.115 DIA) (Standard threaded) I - M2.5 inserts								

INPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Input Voltage	16	28	40	Vdc
Brown Out (75% of FL)		13.5	14.4	Vdc
No Load Power Dissipation		3.0	4.0	W
Input Inrush Charge			2.0	mc
Reflective Ripple Current		1	3	%
Input Ripple Rejection(120Hz)	50	55		dB
Input Ripple Rejection(800Hz)	38	45		dB
Logic Disable Current (Sink)		270	300	μA
Logic Disable Voltage (TTL)	0		0.8	Vdc
Logic Disable Power In		620	700	mw
Sync Input Voltage	2.4		5.25	Vp-p
Sync Input Frequency	475		525	kHz
Sync Input Duty Cycle	10		55	%
Efficiency up to: See Page 31		87		%
EML: Units conform to Mil-Std-461D (on the input leads) with companion filter (CBF75)				
Input Transient: Units conform to Mil-Std-704E for transients up to 50Vdc for 0.1 second				

OUTPUT CHARACTERISTICS

	Main Output			Auxiliary Outputs				Units
	Min.	Typ.	Max.	Min.	Typ.	Max.		
Set Point Accuracy (FL)			1 ¹			1		%Vout
Load Regulation		0.05	0.2 ²		2.5 ³ /0.3 ³	3.0 ³ /0.5 ³		%Vout
Line Regulation		0.05	0.2 ²		0.05	0.2		%Vout
Ripple P-P (10 MHz)			1 ³			1		%Vout
Trim Range	90		110		N/A			%Vout
Remote Sense Compensation			0.5		N/A			Vdc
Overvoltage Protection	120	125	135		N/A			%Vout
Transient Response (Vout 1%) Time/Overshoot								
20-80% Load		200/3	500/5 ⁴		200/1	500/5		μS/%Vout
Low Line - High Line		350/5	500/5 ⁴		350/4	500/5		μS/%Vout
50-100% Load		200/3	500/5 ⁴		200/1	500/5		μS/%Vout
Temperature Drift		0.01	0.02		0.02	0.04		%/°C
Long Term Drift		0.01	0.02		0.01	0.02		%/1KHrs
Current Limit	110	125	140	110	125	140		%Iout
Short Circuit Current	20		50	25		75		%Iout
Load Capacitance			30 ⁷			30 ⁷		μF
Turn On Time		5	10		10	15		mS
Logic Turn On Time		5	10		10	15		mS
Status "OK" (TTL)	4.0		5.05	4.0		5.0		Vdc
Status "FAIL" (TTL)	0		2.0	0		3.0		Vdc

¹ 1% or 50mV, whichever is greater. ² 0.2% or 10mV, whichever is greater. ³ 1% or 100mV, whichever is greater. ⁴ 5% or 250mV, whichever is greater.
⁵ Unbalanced loads, 5% to 100% load. ⁶ Balanced loads, 0% to 100% load. ⁷ See Application Notes.

FEATURES

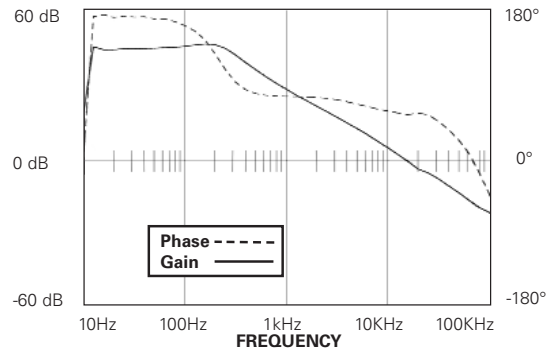
- .50 Inch Profile
- Remote Turn On / Status (TTL)
- Sync Input
- Fixed Frequency (500KHz) Conversion
- Output Overvoltage Protection
- Output Overcurrent Protection
- Over Temperature Protection
- Output Voltage Trim Pin
- High Temperature Burn-In
- No Minimum Load Requirement
- 100% Environmental Screening (M Models)

SELECTION CHART

Main Output Voltage	Main Output Current	Auxiliary Output Voltage	Auxiliary Output Current	Model Number
3.3	7.5	±12	1.6	CB75TI/3.3/12-C
3.3	7.5	±15	1.25	CB75TI/3.3/15-C
5	7.5	±12	1.6	CB75TI/5/12-C
5	7.5	±15	1.25	CB75TI/5/15-C

The above model numbers are for the Industrial grade power supplies. For the Military grade power supplies replace the 'I' with 'M'.

STABILITY



Powering Business Worldwide

For additional information, call 310.542.8561
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 (Baseplate)	-55		+100	°C
Storage (Ambient)	-55		+125	°C
Thermal Resistance (Case - Ambient)		7.6		°C/W
Overtemperature Shutdown		107		°C

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

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 $V_{in}=28Vdc$ and output at full load
Final Testing	

ENVIRONMENTAL SCREENING - I MODEL

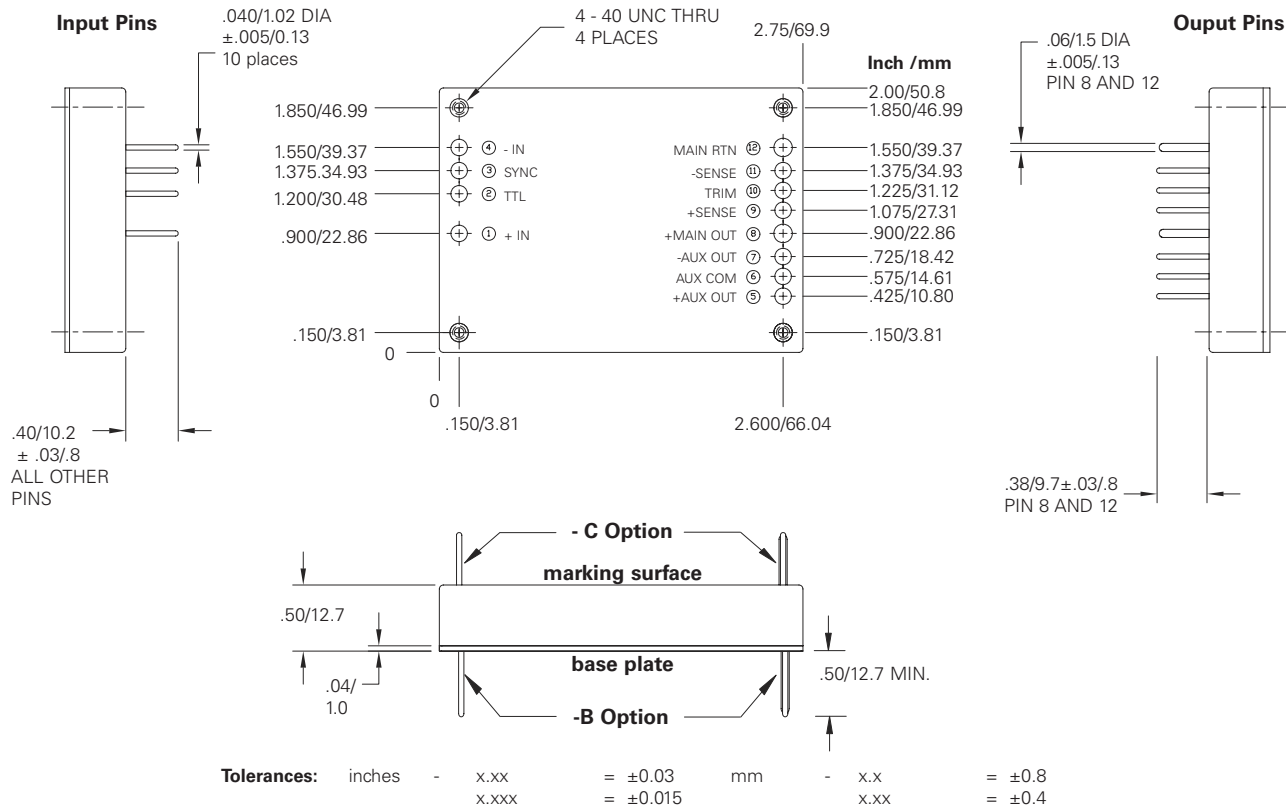
Burn in:	16 hours @ 85°C min. with $V_{in}=28Vdc$ and output at full load
Final Testing	
See "Guide to Operation" for full details	

MECHANICAL CHARACTERISTICS

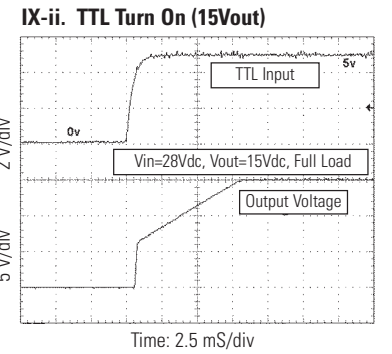
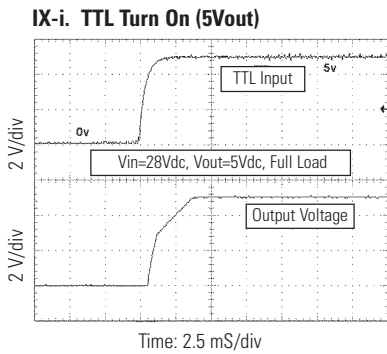
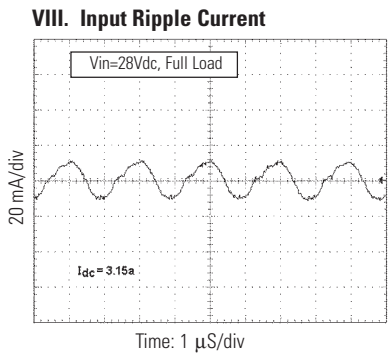
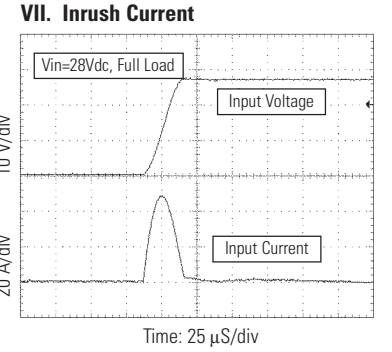
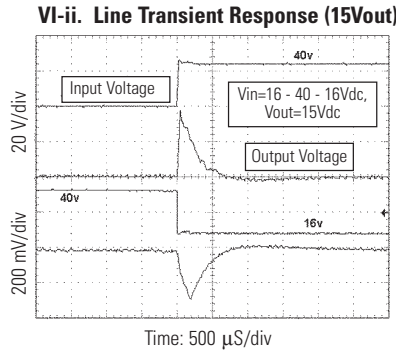
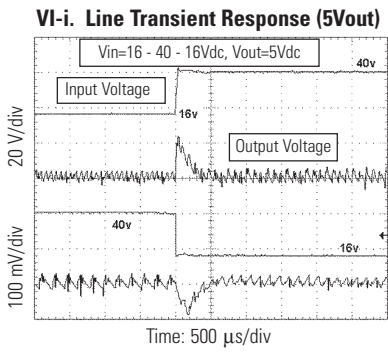
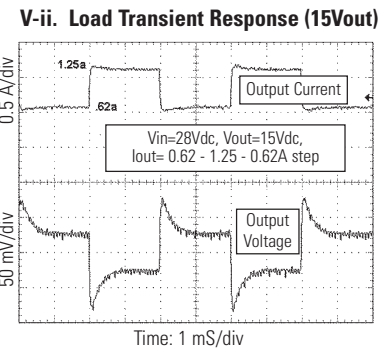
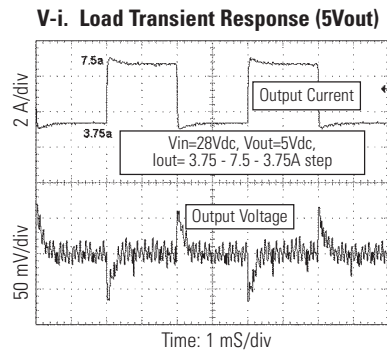
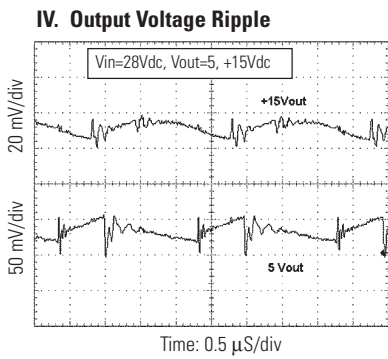
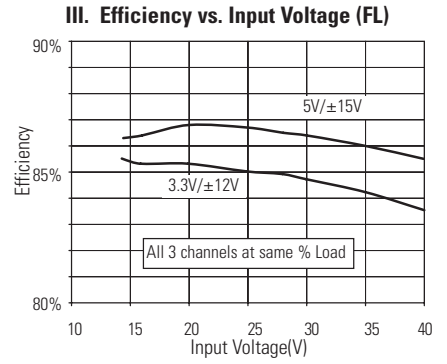
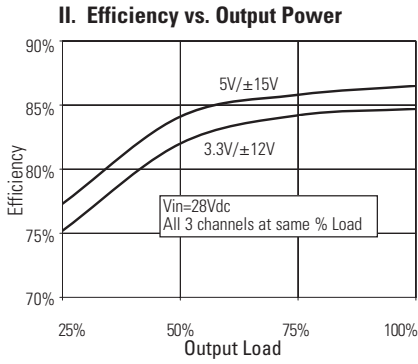
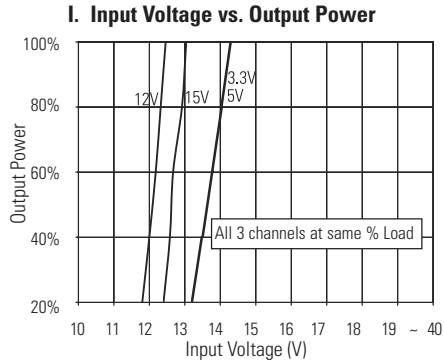
Weight	6.43 oz. 150 grams
Size	2.0 x 2.75 x 0.50 inch 50.8 x 69.85 x 12.7 mm
Volume	2.75 inch ³ 45.06 cm ³
Material	Pin: Brass (Solder Plating) Baseplate: Aluminum 5052-H32 Case: 28 GA Steel (Cold Rolled) Finish (Case): Nickel Plating
Mounting	Standard: 4-40 inserts provided in baseplate I Option: M2.5 metric inserts D Option: 0.115 DIA thru holes

CASE DRAWINGS

- C Option

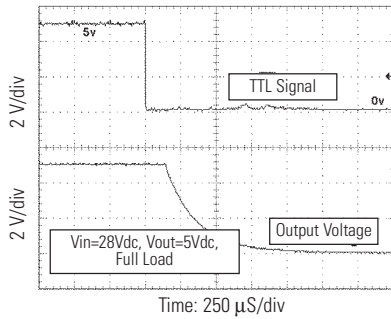


Performance characteristics

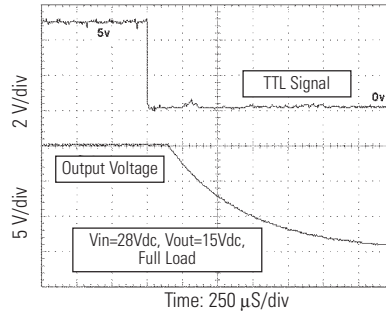


Performance characteristics

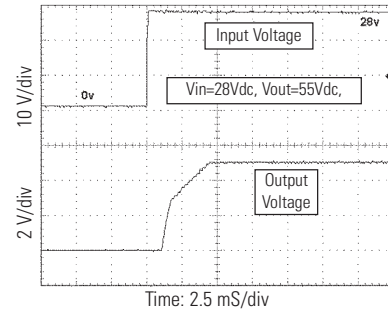
X-i. TTL Turn Off (5Vout)



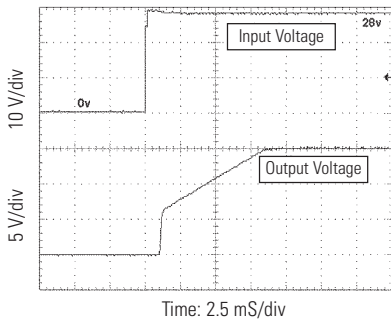
X-ii. TTL Turn Off (15Vout)



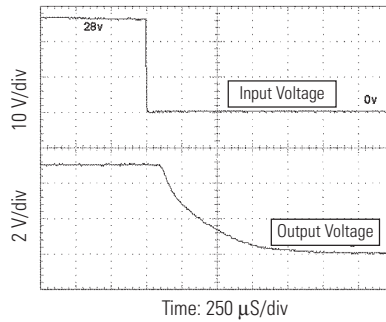
XI-i. Input Turn On (5Vout)



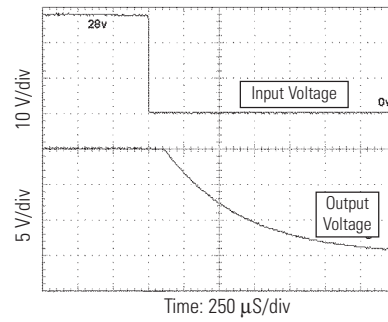
XI-ii. Input Turn On (15Vout)



XII-i. Turn Off /Hold-up Time (5Vout)



XII-ii. Turn Off /Hold-up Time (15Vout)



For additional information, call 310.542.8561
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