

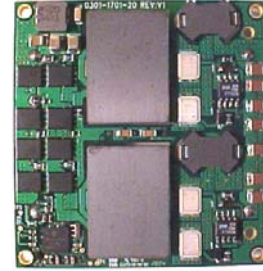
## Bus Converter

48V Input / 9.4V Output / 70A

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POWER PRODUCTS

### 07CN-70S10L PRELIMINARY

- Ideal for Intermediate Bus Architectures
- Industry standard half-brick package
- Up to 500W at 96.5% efficiency
- 1500V isolation
- Safety Agency Approvals



### Description

The 07CN-70S “Cimarron” Series are isolated DC/DC converters that operate from a nominal 48V source. These converters are intended to provide isolation and step down to generate an intermediate bus for the purpose of powering non-isolated Point-of-Load (POL) converters. These units will provide up to 500W of output power from a 48V input. These units are designed to be highly efficient and very low cost and are thus unregulated. The downstream POL converters will provide the precise regulation required by the load. Features include remote on/off, over current protection and undervoltage lockout. These converters are provided in an industry standard half-brick package.

### Part Selection

Output Voltage	Input Voltage	Max. Output Current	Max. Output Power	Typical Efficiency	Model Number
9.4V	48V	70A	500W	96.5%	07CN-70S10L

### Input Specifications

Parameter	Min	Typ	Max	Notes
Input Voltage Range	36 VDC		55 VDC	
Input Current (no load)			165mA	
Input Current (full load)			15A	
Reflected Ripple Current (pk-pk)			5mA rms 15mA pk-pk	with a 12uH source inductor at nom. Vin and full load.
Undervoltage Lockout				
Turn-on		35 VDC		
Turn off		33 VDC		
Overvoltage Lockout		57.5 VDC		

### Output Specifications

Parameter	Min	Typ	Max	Notes
Output Voltage				
36Vin		7.1		Setpoint at no load.
48Vin		9.4		
55Vin		10.8		
Output Current	0A		70A	
Output Power			500W	
Load Regulation		0.25V		
Ripple and Noise			160mV pk-pk	0 to 20MHz Bandwidth Use 4, 1uF ceramic caps and 2, 15uF tantalum capacitor on output
Load Capacitance	0uF		3000uF	

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### Output Specifications (continued)

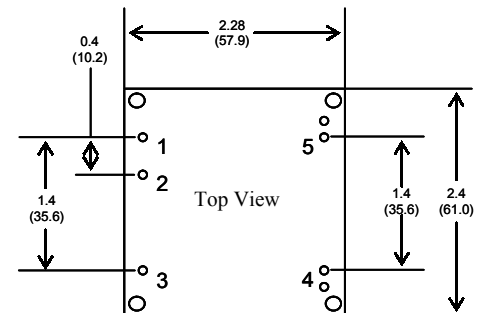
Parameter	Min	Typ	Max	Notes
Transient Response Max deviation Recovery to within $\pm 1\%$		150mV 150 $\mu$ S	200mV 200 $\mu$ S	di/dt = 0.1A/ $\mu$ S, Vin = 48VDC Ta = 25°C, 25% load change.

### General Specifications

Parameter	Specification
Switching Frequency	100kHz typical (fixed)
Dimensions	inches 2.28 x 2.4 x .41 mm 57.9 x 61.0 x 10.4
Weight	TBD
Operating Temperature	-40°C to 85°C
Non-Operating Temperature	-55°C to 125°C
Overtemp Shutdown	135°C (10°C hysteresis) Note: measured on Q9
Protection Features	Latching Short circuit 110% to 125% max Io Over current UVLO Vin < 35.0 Undervoltage OVSD Vin > 57.0 Overvoltage
Remote On/Off	Active Low (Optional Active High) Turn on delay 3mS (typ.) Output voltage rise time 6.5mS (typ.)
Safety Agency Approvals (pending)	UL / cUL Recognized Certified to EN60950

### Pin Connections

Pin	Function
1	+ Vin
2	Remote On/Off
3	- Vin
4	- Vout
5	+ Vout



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#### CORPORATE

Bel Fuse Inc.  
206 Van Vorst Street  
Jersey City, NJ 07302  
Tel 201-432-0463  
Fax 201-432-9542  
[www.belfuse.com](http://www.belfuse.com)

#### FAR EAST

Bel Fuse Ltd.  
8F/ 8 Luk Hop Street  
San Po Kong  
Kowloon, Hong Kong  
Tel 852-2328-5515  
Fax 852-2352-3706  
[www.belfuse.com](http://www.belfuse.com)

#### EUROPE

Bel Fuse Europe Ltd.  
Preston Technology Management Centre  
Marsh Lane, Suite G7, Preston  
Lancashire, PR1 8UD, U.K.  
Tel 44-1772-556601  
Fax 44-1772-888366  
[www.belfuse.com](http://www.belfuse.com)