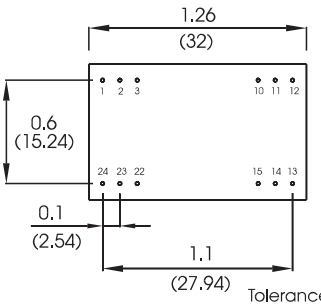
ISOLATED DC/DC CONVERTERS Unregulated

4CCN 3/4 WATT

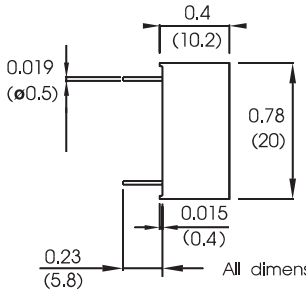
SINGLE X DUAL X

BOTTOM VIEW



Tolerances : ± 0,004 inches (Tolerances : ± 0,1mm)

SIDE VIEW



All dimensions in inches (millimeters)

SINGLE X

Pin	Single output
1	+Input
2	N/C
3	N/C
10	-Output
11	+Output
12	-Input
13	-Input
14	+Output
15	-Output
22	N/C
23	N/C
24	+Input

DUAL X

Pin	Dual output
1	+Input
2	-Output
3	Common
10	Common
11	+Output
12	-Input
13	-Input
14	+Output
15	Common
22	Common
23	-Output
24	+Input

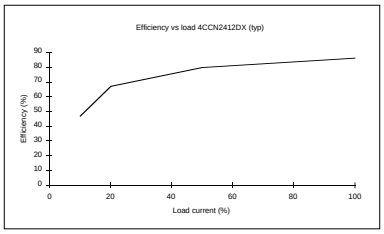
MODEL	INPUT SPECIFICATIONS			OUTPUT SPECIFICATIONS				
	minimum	maximum	nominal	Vout +	Iout +	Vout -	Iout -	power
	(Vdc)	(Vdc)	(Vdc)	(Vdc)	(mA)	(Vdc)	(mA)	(W)
4 CCN 0505 SX	4,5	5,5	5	5	600			3,00
4 CCN 0512 SX	4,5	5,5	5	12	290			3,48
4 CCN 0515 SX	4,5	5,5	5	15	235			3,53
4 CCN 1205 SX	10,8	13,2	12	5	700			3,50
4 CCN 1212 SX	10,8	13,2	12	12	330			3,96
4 CCN 1215 SX	10,8	13,2	12	15	265			3,98
4 CCN 2405 SX	21,6	26,4	24	5	700			3,50
4 CCN 2412 SX	21,6	26,4	24	12	330			3,96
4 CCN 2415 SX	21,6	26,4	24	15	265			3,98
4 CCN 0505 DX	4,5	5,5	5	5	350	5	350	3,50
4 CCN 0512 DX	4,5	5,5	5	12	145	12	145	3,48
4 CCN 0515 DX	4,5	5,5	5	15	115	15	115	3,45
4 CCN 1205 DX	10,8	13,2	12	5	350	5	350	3,50
4 CCN 1212 DX	10,8	13,2	12	12	165	12	165	3,96
4 CCN 1215 DX	10,8	13,2	12	15	130	15	130	3,90
4 CCN 2405 DX	21,6	26,4	24	5	350	5	350	3,50
4 CCN 2412 DX	21,6	26,4	24	12	165	12	165	3,96
4 CCN 2415 DX	21,6	26,4	24	15	130	15	130	3,90

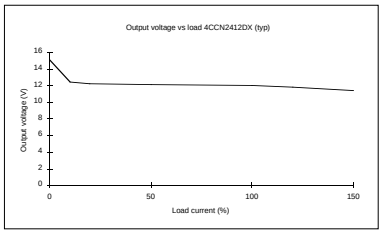
• NOTE 1 : These converters operate without any external components. However, in low noise applications it is commended that a low ESR capacitor be placed across the output or the input pins.
• Conducted noise filtering to EN 55022-B, VDE0871-B may be accomplished by putting an external capacitor. For more information, please contact factory.
• On dual output, the outputs are not isolated from each other and may be connected to provide 10 V, 24 V or 30 V.
• It is recommended to protect the input by fuses or other protection devices. Fuses are never supplied internally, and, without them, severe damage or even fire can occur in the event of a module failure. A slow fuse with a rating of 2X the Iin max is recommended.

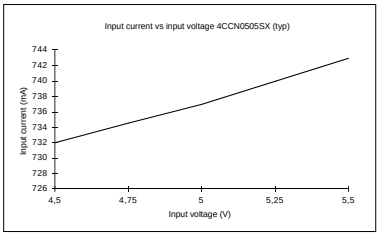
ETRI 4CCN DC/DC Converters
3/4W

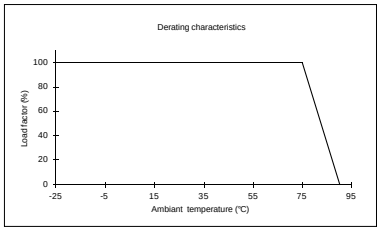
PARAMETERS	CONDITIONS	4 CCN								
Input voltage	Tc = - 25 °C to + 90 °C	5 V			12 V			24 V		
Input voltage range	Iout = 0 % to 100 %	4,5 V to 5,5 V			10,8 V to 13,2 V			21,6 V to 26,4 V		
Input over voltage	0,1 second Max.	10 V			20 V			32 V		
No load input current	Iout = 0 mA : Vin = Nom.	70 mA			40 mA			20 mA		
Output voltage	Iout = 100 % : Vin = Nom.	5 V	12 V	15 V	5 V	12 V	15 V	5 V	12 V	15 V
Output current (Single)	Vin = Min. to Max.	600 mA	290 mA	235 mA	700 mA	330 mA	265 mA	700 mA	330 mA	265 mA
Output current (Dual)	Tc = - 25 °C to + 90 °C	±300 mA	±145 mA	±115mA	±350 mA	±165 mA	±130 mA	±350 mA	±165 mA	±130 mA
Input current Max.	Vin = Min. : Iout = Max.	860 mA	950 mA		380 mA	420 mA		190 mA	220 mA	
Efficiency	Vin = Nom. : Iout = Max.	70 %	75 %		80 %					
Output voltage accuracy	Vin = Nom. : Iout = Max.	±5 %								
Load regulation (Iout = 50% to 100%)	Vin = Nom.	+ 10 % to 0	+ 5% to 0							
Line regulation (Vin = Min. to Max.)	Iout = Max.	1,2 % of Vout per 1 % of Vin								
Limitation range (Vin = Min. to Max.)	Vout = Vout - 4 %	180 % of Iout Max.								
Output ripple peak to peak	BW = 10 Hz to 20 MHz	100 mV								
Input filter (see note 1)		PI filter								
Temperature coefficient	Tc = - 25 °C to + 90 °C	≤ 0,02 % per °C between - 25 °C to + 75 °C								
Input / Output isolation	1Minute	500 VDC								
Isolation resistance	Vtest = 500 VDC	>10 Gohm								
Input / Output coupling capacitor	Rh = 48 % : Tc = 25 °C	100 pF at 100 Hz								
Switching frequency	Vin = Nom. : Iout = Max.	160 KHz								
Operating temperature range	Ta:	- 25 °C to + 75 °C								
Storage temperature	Ts:	- 40 °C to + 105 °C								
Maximum package temperature	Tc:	+ 90 °C								
MTBF : MIL-HDBK-217, Rev E	Ground bening, Ta = 25 °C	> 430.000 h								
Weight	Gr	12 Gr								

PERFORMANCE CURVES









1503, Rocky River Road North
Monroe, NC 28110 USA
Tel: 704.289.5423
Fax: 704.283.7170

9-11, rue de Moulin des Bruyères
92400 Courbevoie FRANCE
Tel: (33-1) 49 04 92 00
Fax: (33-1) 47 89 09 38

Website: http://www.etrinet.com Email: sales@etrinet.com

Specifications subject to change without notice.