

DC/DC Ultra Wide Input Converter ECU 30 Series



DC/DC converter module with input to output isolation of 1500 VDC - Pi-filter at input - Continuous short circuit proof - High efficiency - Low output ripple and noise - Metal case with a non conductive base plate, six-sides shielded - Remote on/off control - External output voltage adjust - SMD technology - 2"x1" case

DC/DC Konverter-Modul mit galvanischer Trennung Eingang / Ausgang von 1500 VDC - Pi-Filter am Eingang - Dauerkurzschlussfest - Hoher Wirkungsgrad - Gute Werte von Ripple und Spikes - Metallgehäuse mit isolierender Bodenplatte, 6seitig abgeschirmt - Externer Ausgangsspannungsabgleich - Inhibit - SMD Technologie - 2"x1" Gehäuse

Module convertisseur CC/CC avec séparation galvanique entrée sortie 1500 VDC - Filtre en Pi à l'entrée - Protection courts-circuits permanente - Rendement élevé - Ondulation résiduelle de sortie très faible - Boîtier en métal blindé 6 faces avec fond isolé - Ajustement externe de la tension de sortie - Inhibit - Technologie CMS - 2"x1" boîtier

Product Range

Typenübersicht

Sommaire des types

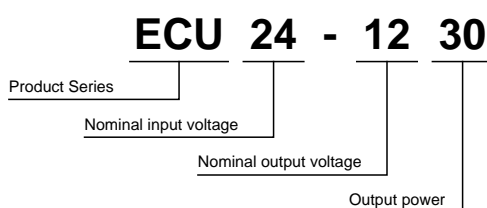
Model	Input		Input current @ U _{in} nom.		U _{out}	Output		Efficiency typ.
	nominal	range	full load	no load		lout max.	power	
Single								
ECU24-3V330	24VDC	9...36VDC	1200mA	100mA	3.3VDC	7500mA	24.75W	88%
ECU24-0530	24VDC	9...36VDC	1421mA	110mA	5.0VDC	6000mA	30W	89%
ECU24-1230	24VDC	9...36VDC	1405mA	35mA	12VDC	2500mA	30W	90%
ECU24-1530	24VDC	9...36VDC	1405mA	35mA	15VDC	2000mA	30W	91%
ECU48-3V330	48VDC	18...72VDC	600mA	55mA	3.3VDC	7500mA	24.75W	88%

ECU48-0530	48VDC	18...72VDC	711mA	55mA	5.0VDC	6000mA	30W	90%
ECU48-1230	48VDC	18...72VDC	695mA	25mA	12VDC	2500mA	30W	90%
ECU48-1530	48VDC	18...72VDC	688mA	20mA	15VDC	2000mA	30W	90%
Dual								
ECU24-121230	24VDC	9...36VDC	1437mA	35mA	+12VDC -12VDC	+1250mA -1250mA	15W 15W	90%
ECU24-151530	24VDC	9...36VDC	1437mA	35mA	+15VDC -15VDC	+1000mA -1000mA	15W 15W	90%
ECU48-121230	48VDC	18...72VDC	711mA	25mA	+12VDC -12VDC	+1250mA -1250mA	15W 15W	90%
ECU48-151530	48VDC	18...72VDC	711mA	20mA	+15VDC -15VDC	+1000mA -1000mA	15W 15W	90%

Nomenclature

Nomenklatur

Nomenclature



Specifications

Spezifikationen

Specifications

All values refer to an ambient temperature of 25°C and nominal rated values where nothing else is specified.

Input Specifications

Characteristic		Conditions	min	typ	max	unit
U_{IN}	Input voltage		9 / 18	24 / 48	36 / 72	V
U_{UVLO}	Under voltage lockout					V
	Max. input current at full load		See	product	range	A
	No load input current		See	product	range	mA

Output Specifications

Characteristic		Conditions	min	typ	max	unit
U_{ACC}	Output voltage accuracy		±1.0			%
	Output voltage adjust		±10			%
	Line regulation				±0.2	%
	Load regulation			±0.2 / ±0.5		%
	Load transient recovery time	25% / 100% step load change		< 250		us
	Load transient error band	25% / 100% step load change		±5		%
	Temperature coefficient			±0.02		%/K
	Ramp up time					ms
	Start up time					ms
	Ripple and noise	BW = 20MHz	with 0.1uF MLCC: 75/100			mVpp
	Current limit					%
	Over voltage protection					%
	Short circuit protection					%

	Short circuit characteristic		continuous	
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General Specifications

Characteristic		Conditions	min	typ	max	unit
U _{ISO}	Isolation voltage	in/out, in/case, out/case	1500			V
R _{ISO}	Isolation resistance		> 1000M			Ohm
R _{ISO}	Switching frequency		430			kHz
	Approvals					
	MTBF					h
	Case material		Copper, black coated			
	Compound material					
	PCB material					
	Weight		35			gr
	Dimensions		50.8 x 25.4 x 10.2			mm
	Soldering infos		275°C for 10			s

EMC Specifications

Characteristic		Conditions	min	typ	max	unit
	EMC conducted					

Environmental Specifications

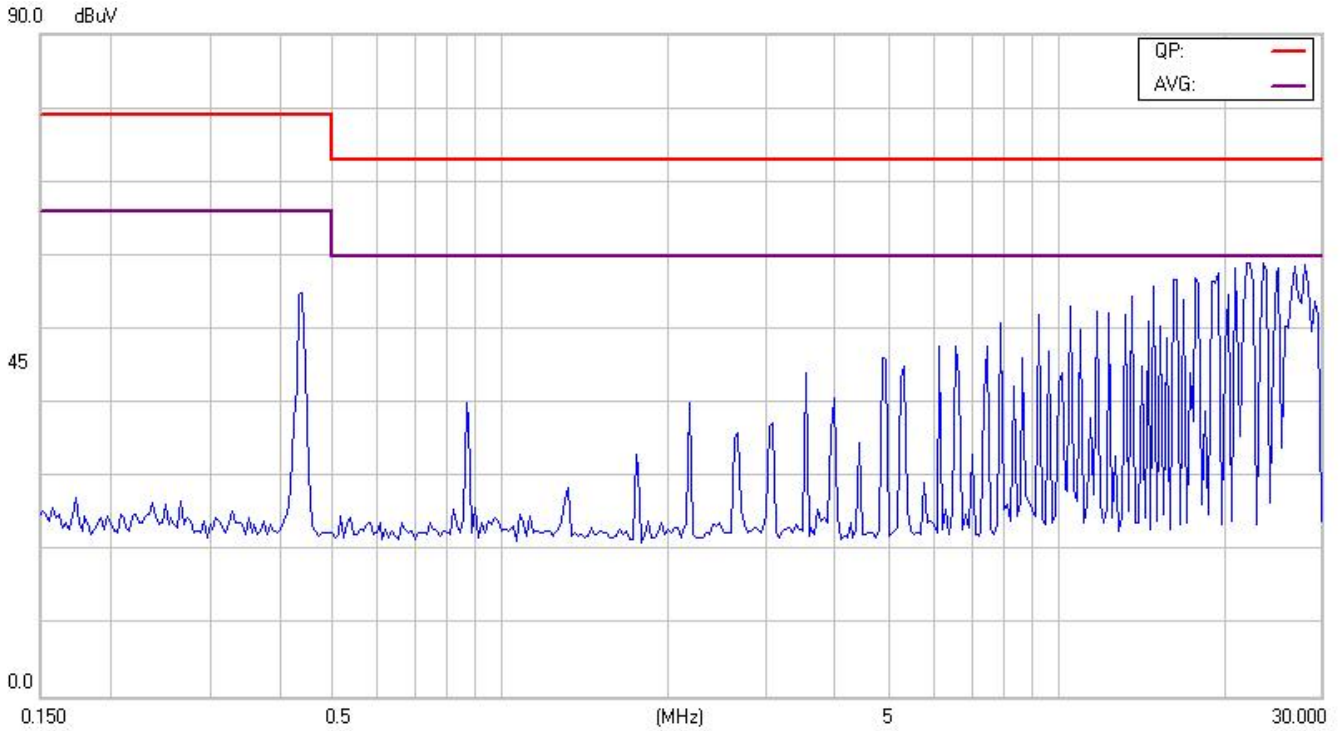
Characteristic		Conditions	min	typ	max	unit
T _{CASE}	Operation temperature		-40...+75			°C
T _{AMB}	Storage temperature		-55...+125			°C
T _{SD}	Thermal shutdown range		Tcase = max.110			°C

Own notes

Eigene Notizen

Vos notices

EMC information conducted,



No EMC filter available yet, please contact factory

Inhibit

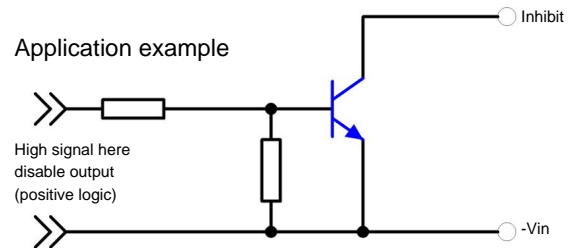
Inhibit

Inhibit

The ECU 30 Series allows the user to switch the module on and off electronically by inhibit on/off feature.

Logic table

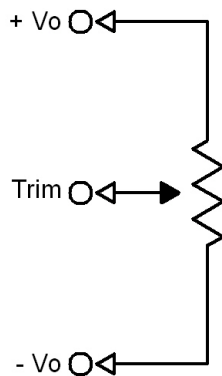
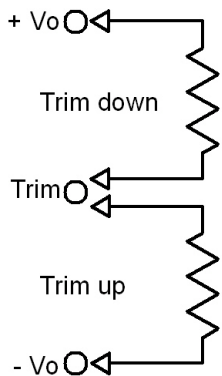
Logic state	Positive logic
Logic low	Module off
Logic high	Module on



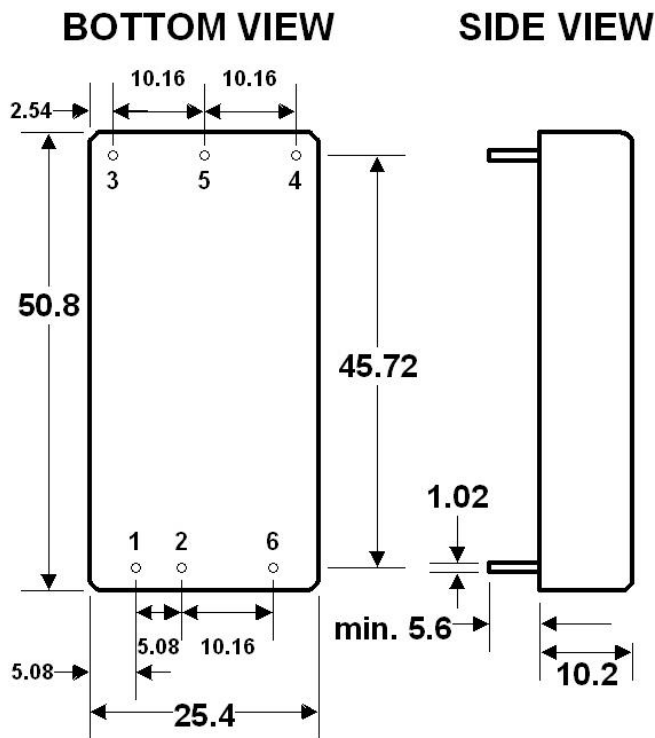
Trimming

Trimmen

Ajuster



Normal tolerance 1/10 ± 0.5 mm, 1/100 ± 0.25 mm; Pin tolerance ± 0.5 mm diameter, NP = No pin, NC = Not connected



Pin	Single	Dual	Pin
1	+Vi	+Vi	1
2	-Vi	-Vi	2
3	+Vo	+Vo	3
4	Trim	-Vo	4
5	-Vo	Com	5
6	on/off	on/off	6

Cleaning

Waschen

Lavage

The modules are cleanable with the today's known and in the electronics industry usually used products. Due to the different cleaning processes and new available products, we highly recommend to do a compatibility test when using the converters the first time.

Die Module sind waschbar mit den heute bekannten und in der Elektronikindustrie üblichen Reinigungsmitteln. Bedingt durch die verschiedenen Reinigungsprozesse und neu auf den Markt kommende Mittel, raten wir dringend beim Ersteinsatz der Konverter eine Verträglichkeitsprüfung vorzunehmen.

Les modules sont lavables avec les solvants couramment utilisés dans l'industrie électronique. Dû aux différents processus de lavage et aux nouveaux détergents disponibles sur le marché, il est strictement recommandé de faire un test de compatibilité avant la première utilisation.

Notice: All statements, technical information, and recommendations related to FABRIMEX's products are based on information believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before utilizing the product, the user should determine the suitability of the product for its intended use.



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