FABRIMEX POWER SUPPLIES
CH-8608 Bubikon/Switzerland

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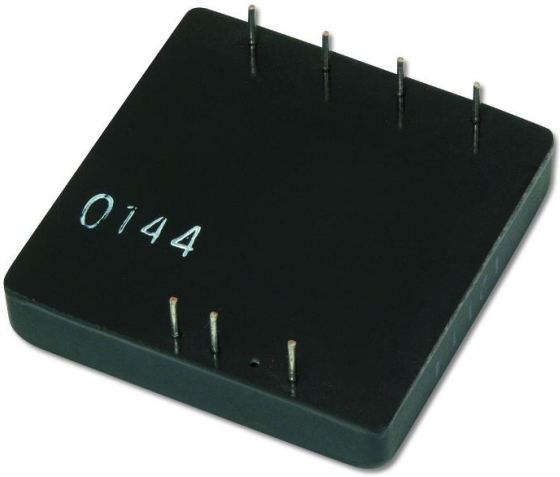
RoHS Compliant

Certified Management-System
SQS
ISO 9001
Reg. Nr. 12666

DC/DC Wide Input Converter
UCW 25-30C Series



c UL us
E237964

DC/DC converter module with input to output isolation of 500 VDC - Pi-filter at input - Continuous short circuit proof - High efficiency - No derating up to 70°C - Low output ripple and noise - Low silhouette - Metal case with a non conductive base plate, six-sides shielded - Shut down and output adjust functions standard - SMD technology - UL, cUL certified

DC/DC Konverter-Modul mit galvanischer Trennung Eingang / Ausgang von 500 VDC - Pi-Filter am Eingang - Dauerkurzschlussfest - Hoher Wirkungsgrad - Keine Lastminderung bis zu einer Umgebungstemperatur von 70°C - Gute Werte von Ripple und Spikes - Geringe Bauhöhe - Metallgehäuse mit isolierender Bodenplatte, 6seitig abgeschirmt - SMD Technologie - UL, cUL zertifiziert

Module convertisseur CC/CC avec séparation galvanique entrée sortie 500 VDC - Filtre en Pi à l'entrée - Protection courtscircuits permanente - Rendement élevé - Pas de derating jusqu' à 70°C - Ondulation résiduelle de sortie très faible - Profile bas - Boîtier en métal blindé 6 faces avec fond isolé - Technologie CMS - Approbation UL, cUL

Product Range Typenübersicht Sommaire des types

Model	Input		Iin @ Uin nom.		Output			Efficiency	Max.
	nominal	range	full load	no load	Uout	Iout max.	power	typ.	capacity
Single									
UCW12-0325C	12VDC	9...18VDC	1.860A	30mA	3.3VDC	5A	16.5W	74%	
UCW12-0525C	12VDC	9...18VDC	2.675A	30mA	5.0VDC	5A	25W	78%	
UCW12-1230C	12VDC	9...18VDC	3.050A	30mA	12VDC	2.5A	30W	82%	
UCW12-1530C	12VDC	9...18VDC	3.050A	30mA	15VDC	2A	30W	82%	
UCW24-0325C	24VDC	18...36VDC	0.920A	30mA	3.3VDC	5A	16.5W	75%	

UCW24-0525C	24VDC	18...36VDC	1.336A	30mA	5.0VDC	5A	25W	79%
UCW24-1230C	24VDC	18...36VDC	1.525A	30mA	12VDC	2.5A	30W	82%
UCW24-1530C	24VDC	18...36VDC	1.525A	30mA	15VDC	2A	30W	82%
UCW48-0325C	48VDC	36...72VDC	0.460A	20mA	3.3VDC	5A	16.5W	75%
UCW48-0525C	48VDC	36...72VDC	0.660A	20mA	5.0VDC	5A	25W	79%
UCW48-1230C	48VDC	36...72VDC	0.765A	20mA	12VDC	2.5A	30W	82%
UCW48-1530C	48VDC	36...72VDC	0.765A	20mA	15VDC	2A	30W	82%

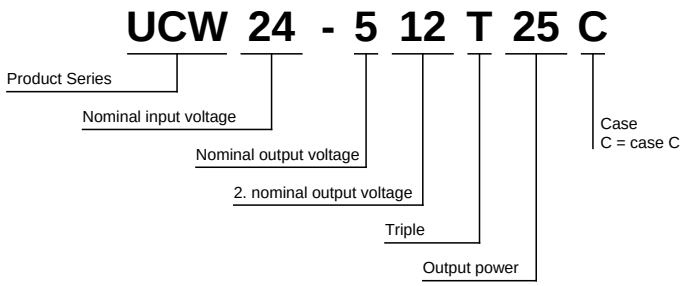
Dual

UCW12-050525C	12VDC	9...18VDC	2.675A	35mA	+5.0VDC -5.0VDC	+2.5A -2.5A	12.5W 12.5W	78%
UCW12-121230C	12VDC	9...18VDC	3.050A	35mA	+12VDC -12VDC	+1.25A -1.25A	15W 15W	82%
UCW12-151530C	12VDC	9...18VDC	3.050A	35mA	+15VDC -15VDC	+1A -1A	15W 15W	82%
UCW24-050525C	24VDC	18...36VDC		30mA	+5.0VDC -5.0VDC	+2.5A -2.5A	12.5W 12.5W	79%
UCW24-121230C	24VDC	18...36VDC	1.470A	30mA	+12VDC -12VDC	+1.25A -1.25A	15W 15W	85%
UCW24-151530C	24VDC	18...36VDC	1.470A	30mA	+15VDC -15VDC	+1A -1A	15W 15W	85%
UCW48-050525C	48VDC	36...72VDC		25mA	+5.0VDC -5.0VDC	+2.5A -2.5A	12.5W 12.5W	79%
UCW48-121230C	48VDC	36...72VDC	0.735A	25mA	+12VDC -12VDC	+1.25A -1.25A	15W 15W	85%
UCW48-151530C	48VDC	36...72VDC	0.735A	25mA	+15VDC -15VDC	+1A -1A	15W 15W	85%

Triple

UCW12-512T25C	UCW12-512T25C	12VDC	9...18VDC	2.640A	35mA	5.0VDC +12VDC -12VDC	3.5A +0.31A -0.31A	17.5W 3.75W 3.75W	79%
UCW12-515T25C	UCW12-515T25C	12VDC	9...18VDC	2.640A	35mA	5.0VDC +15VDC -15VDC	3.5A +0.25A -0.25A	17.5W 3.75W 3.75W	79%
UCW24-512T25C	UCW24-512T25C	24VDC	18...36VDC	1.320A	30mA	5.0VDC +12VDC -12VDC	3.5A +0.31A -0.31A	17.5W 3.75W 3.75W	80%
UCW24-515T25C	UCW24-515T25C	24VDC	18...36VDC	1.320A	30mA	5.0VDC +15VDC -15VDC	3.5A +0.25A -0.25A	17.5W 3.75W 3.75W	80%
UCW48-512T25C	UCW48-512T25C	48VDC	36...72VDC	0.655A	25mA	5.0VDC +12VDC -12VDC	3.5A +0.31A -0.31A	17.5W 3.75W 3.75W	80%
UCW48-515T25C	UCW48-515T25C	48VDC	36...72VDC	0.655A	25mA	5.0VDC +15VDC -15VDC	3.5A +0.25A -0.25A	17.5W 3.75W 3.75W	80%

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	$T_A < T_{MAX}$	See	product	range	V
U_{UVLO}	Under voltage lockout					V
	Max. input current at full load		See	product	range	A
	No load input current	$I_0 = 0$	See	product	range	mA

Output Specifications

Characteristic		Conditions	min	typ	max	unit
U_{ACC}	Output voltage accuracy			±2		%
	Output voltage adjust			±1		%
	Line regulation		single: ±0.5	dual: ±0.5	triple: ±1	%
	Load regulation		single: ±1	dual: ±1	triple: ±5	%
	Load transient recovery time					us
	Load transient error band					%
	Temperature coefficient			±0.02		%/K
	Ramp up time					ms
	Start up time					ms
	Ripple and noise			75		mVpp
	Current limit					%
	Over voltage protection					%
	Short circuit protection					%
	Short circuit characteristic			continuous		

General Specifications

Characteristic		Conditions	min	typ	max	unit
U_{ISO}	Isolation voltage	in/out, in/case, out/case		500		V
R_{ISO}	Isolation resistance			> 1G		Ohm
R_{ISO}	Switching frequency			300		kHz
	Approvals					
	Safety Approvals	UL / cUL 60950-1		UL / cUL File No. E195564		
	MTBF			>1'400'000		h

	Case material		Copper, black coated	
	Compound material			
	PCB material			
	Weight		63	gr
	Dimensions		50.8 x 50.8 x 10.2	mm
	Soldering infos		275°C for 10	s

EMC Specifications

Characteristic		Conditions	min	typ	max	unit
	EMC conducted	See EMC information	EN 55022/11 Class A			

Environmental Specifications

Characteristic		Conditions	min	typ	max	unit
T_{AMB}	Operation temperature		-25...+70			°C
T_{AMB}	Storage temperature		-40...+100			°C
T_{SD}	Thermal shutdown range		Tcase = 100			°C

Own notes Eigene Notizen Vos notices

EMC information EMV Informationen Information CEM

No EMC graph available yet, please contact factory

No EMC filter available yet, please contact factory

Inhibit Inhibit Inhibit

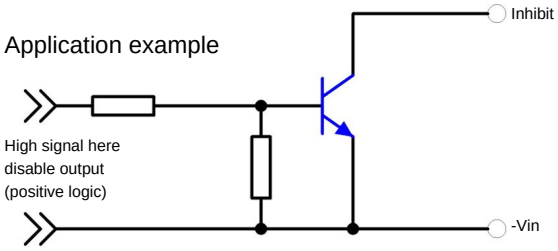
The UCW 25-30C Series allows the user to switch the module on and off electronically by inhibit on/off feature. The converters are available in "positive logic" or "negative logic" (option) versions for inhibit on/off.

Logic table

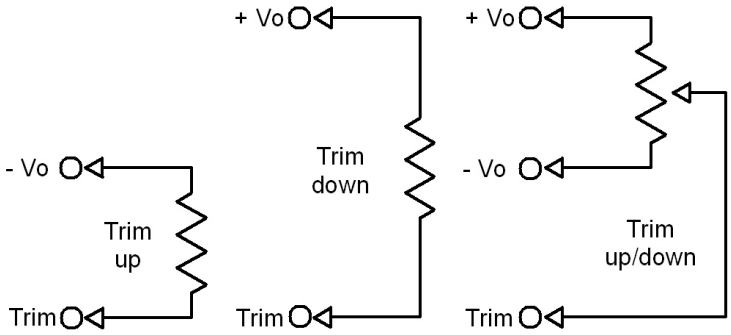
Logic state	Negative logic*	Positive logic
Logic low	Module on	Module off
Logic high	Module off	Module on

* Suffix "N" to the model number with active low inhibit on /off

Application example



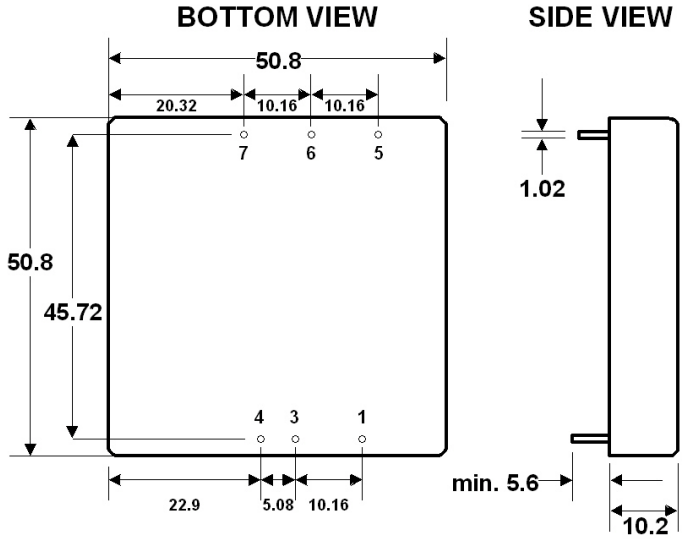
Trimming Trimmen Ajuster



Case Gehäuse Boîtier

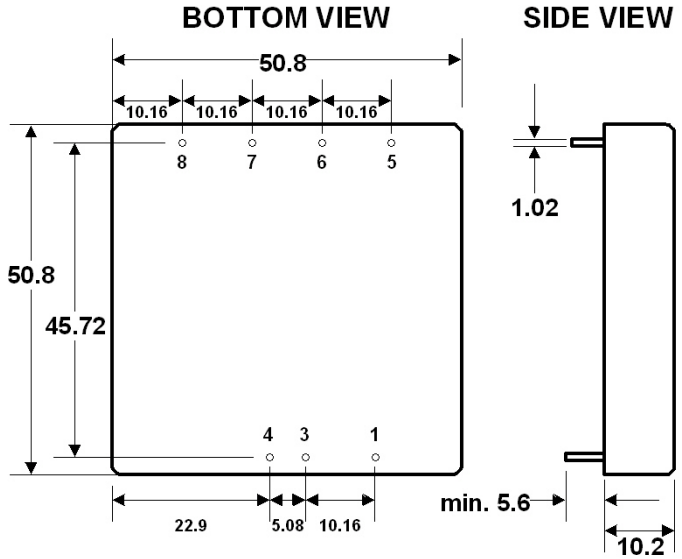
Normal tolerance 1/10 ±0.5 mm, 1/100 ±0.25 mm; Pin tolerance ±0.5 mm diameter
NP = No pin, NC = Not connected, NA = Not available for electrical contact, do not connect

SINGLE OUTPUT



Pin	Single
1	on/off
3	-Vi
4	+Vi
5	Trim
6	-Vo
7	+Vo

DUAL & TRIPLE OUTPUT



Pin	Single	Dual	Pin
1	on/off	on/off	1
3	-Vi	-Vi	3
4	+Vi	+Vin	4
5	Trim	-Vo2	5
6	-Vo	Com	6
7	Com	+5Vo	7
8	+Vo	+Vo2	8

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 differents 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.

Own notes Eigene Notizen Vos notices

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 utlizing the product, the user should determine the suitability of the product for its intended use.

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