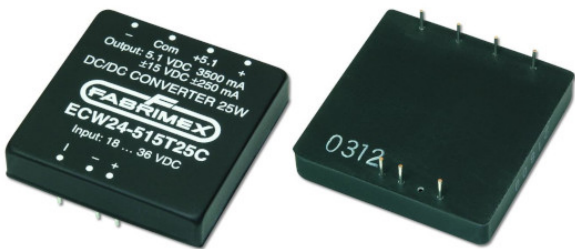


DC/DC Wide Input Converter

ECW 25-30C Series



- * DC/DC converter module with I/O 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
- * Remote On/Off
- * Trim on single and dual models
- * Metal case with a non conductive base plate, six-sides shielded
- * Safety meets IEC/EN/UL 62368-1

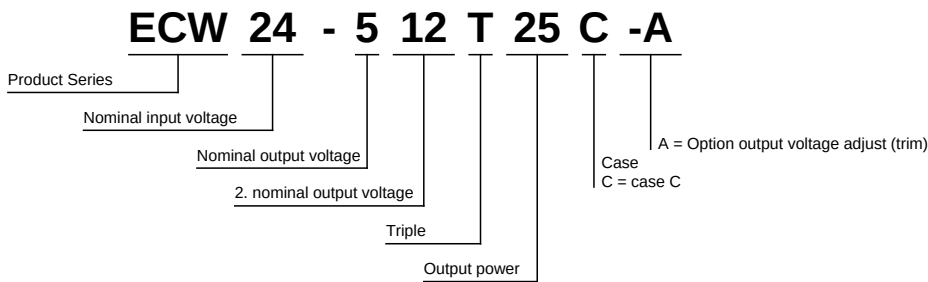
Product Range

Model	Input		lin @ Uin nom.		Uout	Output		Efficiency	Max.
	nominal	range	full load	no load		Iout max.	power	typ.	capacity
Single									
ECW12-0325C	12Vdc	9...18Vdc	1.860A	30mA	3.3Vdc	5A	16.5W	74%	5'000uF
ECW12-0525C	12Vdc	9...18Vdc	2.675A	30mA	5.0Vdc	5A	25W	78%	5'000uF
ECW12-1230C	12Vdc	9...18Vdc	3.050A	30mA	12Vdc	2.5A	30W	82%	2'400uF
ECW12-1530C	12Vdc	9...18Vdc	3.050A	30mA	15Vdc	2A	30W	82%	2'000uF
ECW24-0325C	24Vdc	18...36Vdc	0.920A	30mA	3.3Vdc	5A	16.5W	75%	5'000uF
ECW24-0525C	24Vdc	18...36Vdc	1.336A	30mA	5.0Vdc	5A	25W	79%	5'000uF
ECW24-1230C	24Vdc	18...36Vdc	1.525A	30mA	12Vdc	2.5A	30W	82%	2'400uF
ECW24-1530C	24Vdc	18...36Vdc	1.525A	30mA	15Vdc	2A	30W	82%	2'000uF
ECW48-0325C	48Vdc	36...72Vdc	0.460A	20mA	3.3Vdc	5A	16.5W	75%	5'000uF
ECW48-0525C	48Vdc	36...72Vdc	0.660A	20mA	5.0Vdc	5A	25W	79%	5'000uF
ECW48-1230C	48Vdc	36...72Vdc	0.765A	20mA	12Vdc	2.5A	30W	82%	2'400uF
ECW48-1530C	48Vdc	36...72Vdc	0.765A	20mA	15Vdc	2A	30W	82%	2'000uF

Dual									
ECW12-050525C	12Vdc	9...18Vdc	2.675A	35mA	+5.0Vdc -5.0Vdc	+2.5A -2.5A	12.5W 12.5W	78%	2'400uF 2'400uF
ECW12-121230C	12Vdc	9...18Vdc	3.050A	35mA	+12Vdc -12Vdc	+1.25A -1.25A	15W 15W	82%	1'250uF 1'250uF
ECW12-151530C	12Vdc	9...18Vdc	3.050A	35mA	+15Vdc -15Vdc	+1A -1A	15W 15W	82%	1'000uF 1'000uF
ECW24-050525C	24Vdc	18...36Vdc		30mA	+5.0Vdc -5.0Vdc	+2.5A -2.5A	12.5W 12.5W	79%	2'400uF 2'400uF
ECW24-121230C	24Vdc	18...36Vdc	1.470A	30mA	+12Vdc -12Vdc	+1.25A -1.25A	15W 15W	85%	1'250uF 1'250uF
ECW24-151530C	24Vdc	18...36Vdc	1.470A	30mA	+15Vdc -15Vdc	+1A -1A	15W 15W	85%	1'000uF 1'000uF
ECW48-050525C	48Vdc	36...72Vdc		25mA	+5.0Vdc -5.0Vdc	+2.5A -2.5A	12.5W 12.5W	79%	2'400uF 2'400uF
ECW48-121230C	48Vdc	36...72Vdc	0.735A	25mA	+12Vdc -12Vdc	+1.25A -1.25A	15W 15W	85%	1'250uF 1'250uF
ECW48-151530C	48Vdc	36...72Vdc	0.735A	25mA	+15Vdc -15Vdc	+1A -1A	15W 15W	85%	1'000uF 1'000uF

Triple									
ECW12-512T25C	12Vdc	9...18Vdc	2.640A	35mA	5.0Vdc +12Vdc -12Vdc	3.5A +0.31A -0.31A	17.5W 3.75W 3.75W	79%	3'500uF 310uF 310uF
ECW12-515T25C	12Vdc	9...18Vdc	2.640A	35mA	5.0Vdc +15Vdc -15Vdc	3.5A +0.25A -0.25A	17.5W 3.75W 3.75W	79%	3'500uF 250uF 250uF
ECW24-512T25C	24Vdc	18...36Vdc	1.320A	30mA	5.0Vdc +12Vdc -12Vdc	3.5A +0.31A -0.31A	17.5W 3.75W 3.75W	80%	3'500uF 310uF 310uF
ECW24-515T25C	24Vdc	18...36Vdc	1.320A	30mA	5.0Vdc +15Vdc -15Vdc	3.5A +0.25A -0.25A	17.5W 3.75W 3.75W	80%	3'500uF 250uF 250uF
ECW48-512T25C	48Vdc	36...72Vdc	0.655A	25mA	5.0Vdc +12Vdc -12Vdc	3.5A +0.31A -0.31A	17.5W 3.75W 3.75W	80%	3'500uF 310uF 310uF
ECW48-515T25C	48Vdc	36...72Vdc	0.655A	25mA	5.0Vdc +15Vdc -15Vdc	3.5A +0.25A -0.25A	17.5W 3.75W 3.75W	80%	3'500uF 250uF 250uF

Nomenclature



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	Vdc
U_{UVLO}	Under voltage lockout					Vdc
	Max. input current at full load	$I_0 = I_{0max}$	See	product	range	A
	No load input current	$I_0 = 0$	See	product	range	mA
	Inrush current					A ² s
	Input surge voltage					Vdc

Output Specifications

Characteristic		Conditions	min	typ	max	unit
U_{ACC}	Output voltage accuracy		± 2 , (-out: ± 3 , Triple: ± 5)			%
	Output voltage adjust			± 10		%
	Line regulation		dual: ± 0.5			%
	Load regulation	25% / 100% step load change	dual: ± 1			%
	Cross regulation					%
	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	BW = 20MHz	75			mVpp
	Current limit					% Inom
	Over voltage protection					% Unom
	Short circuit protection					% Inom
	Short circuit characteristic		continuous			

General Specifications

Characteristic		Conditions	min	typ	max	unit
U_{ISO}	Isolation voltage	in/out, in/case, out/case	500			Vdc
R_{ISO}	Isolation resistance		> 1G			Ohm
C_{ISO}	Isolation capacity		500			pF
F_{SW}	Switching frequency		300			kHz
	Approvals					
	Safety Approvals					
	MTBF		>900'000			h
	Case material		Copper, black coated			
	Compound material		94V-0			
	PCB material		94V-0			
	Weight		65			gr

	Dimensions		50.8 x 50.8 x 10.2	mm
	Soldering infos		275°C for 10	s

EMC Specifications

Characteristic		Conditions	
	EMC conducted	See EMC information	EN 55032 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		-			°C

Own notes

EMC information

No EMC graph available yet, please contact factory

No EMC filter available yet, please contact factory

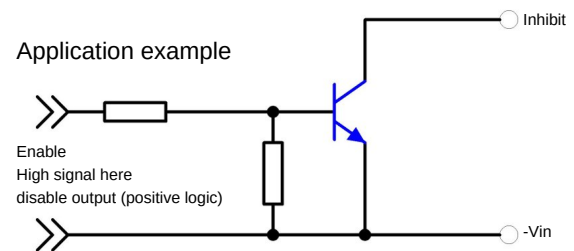
Inhibit

The ECW 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" (standard) or "negative logic" (option) versions for inhibit on/off.

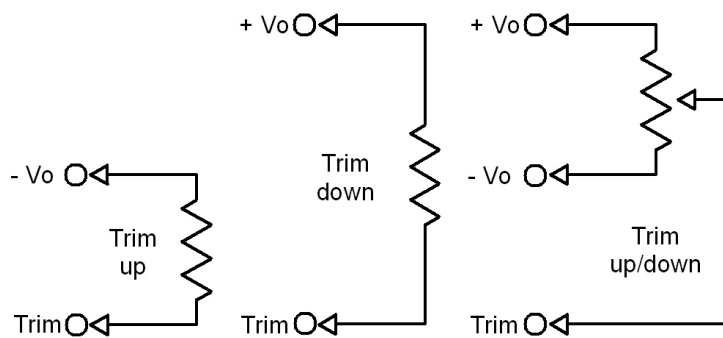
Logic table (inhibit pin)

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



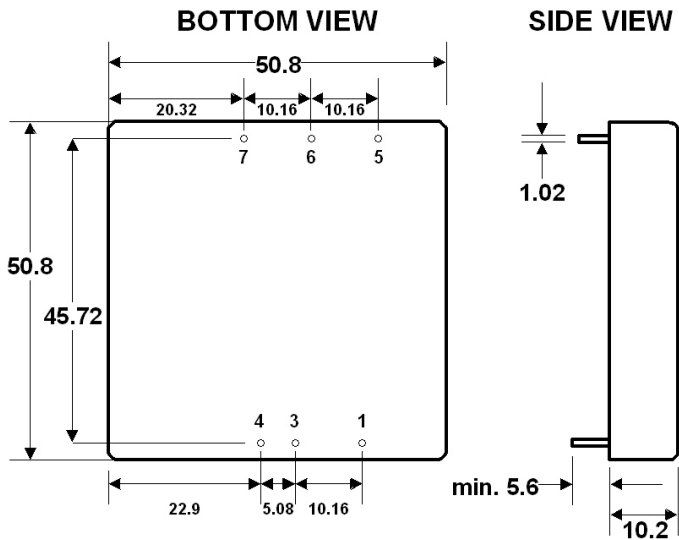
Trimming



Case

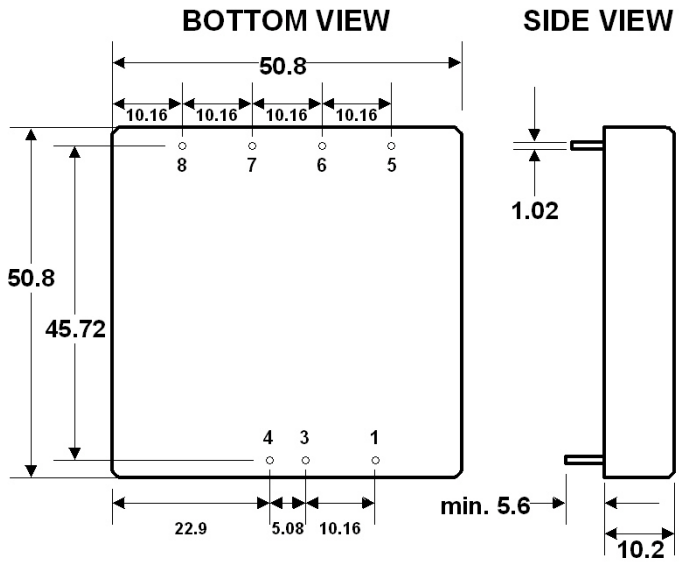
Normal tolerance 1/10 ± 0.5 mm, 1/100 ± 0.25 mm; Pin tolerance ± 0.05 mm diameter
NP = No pin, NC = Not connected, NA = Not available for electrical contact, do not connect, (opt) = optional

SINGLE OUTPUT



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

DUAL & TRIPLE OUTPUT



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

Cleaning

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.

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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The logo for EXISTA, featuring the word "EXISTA" in a bold, sans-serif font. The letters "EX" are dark blue, and the letters "ISTA" are a lighter blue color.