

# DC/DC Wide Input Converter ECW 15 Watt "B"



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 spikes • Low silhouette • Metal case with a non conductive base plate, six-sides shielded • SMD technology

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

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

## Product range

## Typenübersicht

## Sommaire des types

### SINGLE OUTPUT

Model	Input nominal	Input range	Input current max. @ full load	Output Uout	Output Iout	No load input current	Operating temperature	Efficiency typ.
ECW12-0315B(1)(2)	12 VDC	9...18 VDC	1086 mA	3.3 VDC	3000 mA	20 mA	For all models: -25...+71°C or max. case temperature of 100°C	76%
ECW12-0515B(1)(2)	12 VDC	9...18 VDC	1650 mA	5.1 VDC	3000 mA	20 mA		78%
ECW12-1215B(1)(2)	12 VDC	9...18 VDC	1570 mA	12.0 VDC	1250 mA	20 mA		82%
ECW12-1515B(1)(2)	12 VDC	9...18 VDC	1570 mA	15.0 VDC	1000 mA	20 mA		82%
ECW24-0315B(1)(2)	24 VDC	18...36 VDC	543 mA	3.3 VDC	3000 mA	20 mA		76%
ECW24-0515B(1)(2)	24 VDC	18...36 VDC	800 mA	5.1 VDC	3000 mA	20 mA		80%
ECW24-1215B(1)(2)	24 VDC	18...36 VDC	780 mA	12.0 VDC	1250 mA	20 mA		82%
ECW24-1515B(1)(2)	24 VDC	18...36 VDC	780 mA	15.0 VDC	1000 mA	20 mA		82%
ECW48-0315B(1)(2)	48 VDC	36...72 VDC	272 mA	3.3 VDC	3000 mA	15 mA		76%
ECW48-0515B(1)(2)	48 VDC	36...72 VDC	390 mA	5.1 VDC	3000 mA	15 mA		80%
ECW48-1215B(1)(2)	48 VDC	36...72 VDC	380 mA	12.0 VDC	1250 mA	15 mA		83%
ECW48-1515B(1)(2)	48 VDC	36...72 VDC	380 mA	15.0 VDC	1000 mA	15 mA		83%

## DUAL OUTPUT

Model	Input nominal	Input range	Input current max. @ full load	Output Uout	Output Iout	No load input	Operating temperature	Efficiency typ.
ECW12-050515B(1)	12 VDC	9...18 VDC	1570 mA	±5.1 VDC	±1500 mA	30 mA	For all models: -25...+70°C or max. case temperature of 100°C	80%
ECW12-121215B(1)	12 VDC	9...18 VDC	1570 mA	±12.0 VDC	±625 mA	30 mA		83%
ECW12-151515B(1)	12 VDC	9...18 VDC	1570 mA	±15.0 VDC	±500 mA	30 mA		83%
ECW24-050515B(1)	24 VDC	18...36 VDC	780 mA	±5.1 VDC	±1500 mA	25 mA		81%
ECW24-121215B(1)	24 VDC	18...36 VDC	780 mA	±12.0 VDC	±625 mA	25 mA		83%
ECW24-151515B(1)	24 VDC	18...36 VDC	780 mA	±15.0 VDC	±500 mA	25 mA		83%
ECW48-050515B(1)	48 VDC	36...72 VDC	380 mA	±5.1 VDC	±1500 mA	20 mA		83%
ECW48-121215B(1)	48 VDC	36...72 VDC	380 mA	±12.0 VDC	±625 mA	20 mA		83%
ECW48-151515B(1)	48 VDC	36...72 VDC	380 mA	±15.0 VDC	±500 mA	20 mA		83%

- (1) Suffix "T" with inhibit (remote on/off control)  
 (2) Suffix "A" for external output voltage adjustment

Nomenclature

Nomenklatur

Nomenclature

### ECW 24 - 05 15 B (1) (2)

Product Series

Nominal Input Voltage

Nominal Output Voltage

Output Power in Watts

Size of Casing

A = External Output Voltage Adjustment (Trim)

T = inhibit (remote on/off control)  
 (Refer to mechanical data on page 5)

EMC information

EMV Informationen

Information CEM

### EMC information ECW24-0515B EN55022/11 Class A

#### Electro-Metrics

##### EMV Messung

Date : 10/18/99  
 Technician : U. Luessi  
 Test Method : CONDUCTED EMISSION  
 Equipment : ECW24-0515B  
 Mode of Op. : Normal operation  
 Serial No. : 9920

Time : 09:40:14.57  
 Test Equip. : EMC-30 MKIV  
 Test Number : 1  
 Sensor Loc. : NA  
 Sensor Pol. : positiv  
 Ext. Atten. : 0 dB

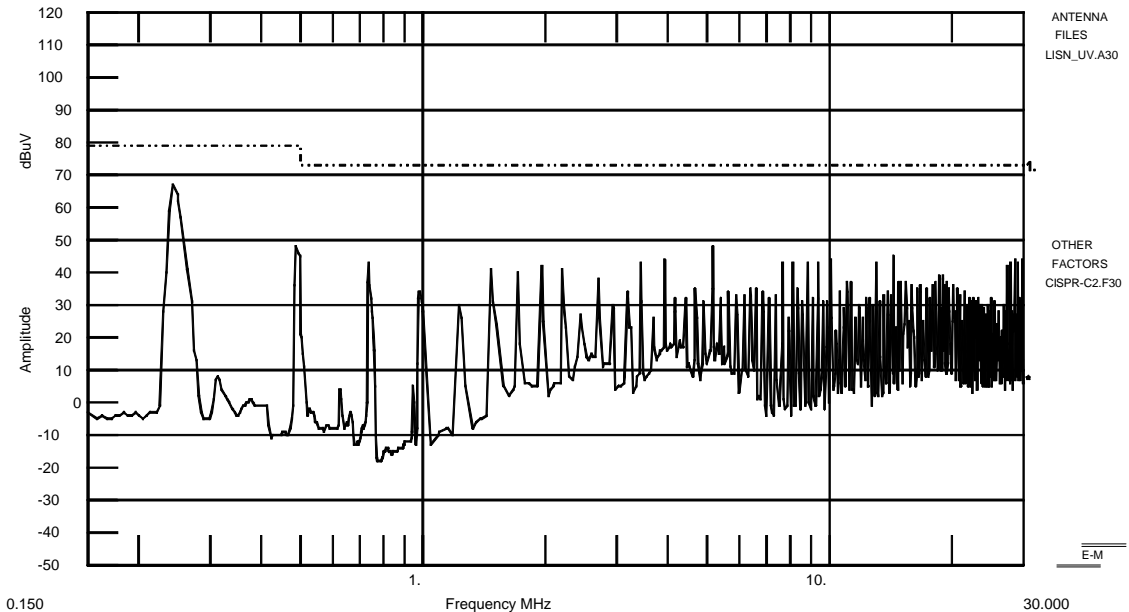
##### EMC-30 SETTINGS

Detector QuasiPeak  
 Bandwidth CISPR  
 Dwell N/A  
 RF Atten. 0 dB  
 IF Atten. 0 dB

##### SPECS

1) EN 55022 Class A QuasiPeak

Comment : 24DC input voltage with 220uF capacitor near input



El. characteristics

El. Eigenschaften

Caractéristiques él.

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

Output voltage accuracy	Ausgangsspannungsgenauigkeit	Précision de la tension de sortie	±1% of Uout nom.
Output voltage balance	Abgleich zwischen den Ausgängen	Balance des sorties	±1%; Dual
Ext. output voltage adjustment*	Ext. Ausgangsspannungsabgleich*	Ajustement ext. de la tension de sortie*	±10%
Residual output ripple (BW 20 MHz)	Ausgangsspannungsrippel (BW 20 MHz)	Ondulation résiduelle de sortie (BW 20 MHz)	75 mVpp
Short circuit protection	Kurzschlussfestigkeit	Protection courts-circuits	Continuous
No load input current	Leerlaufeingangsstrom	Courant d'entrée à vide	20 - 30 mA (ECW12/ECW24) 10 - 15 mA (ECW48)
Line regulation (max...min)	Leistungsregulierung (max...min)	Régulation ligne (max...min)	±0.2%; single,dual
Load regulation	Lastregulierung	Régulation charge	±1.0%; single,dual (100%...25%)
Isolation voltage	Isolationsspannung	Tension d'isolement	500 VDC
Isolation resistance	Isolationswiderstand	Résistance d'isolement	> 1 GOhm
Switching frequency	Schaltfrequenz	Fréquence de découpage	typ. 300 kHz
MTBF (MIL-HB 217E at 25°C)	MTBF (MIL-HB 217E bei 25°C)	MTBF (MIL-HB 217E à 25°C)	>1'000'000 hrs.
EMC Conducted	EMV Leitungsgelunden	EMC Emis	EN55022/11 Class A with external input capacitor
Temperature coefficient	Temperaturkoeffizient	Coefficient de température	typ. ±0.02% per °C
Storage temperature	Lagertemperatur	Température de stockage	-40...+100°C
Soldering information	Lötinformationen	Information de soudage	275°C for 10 sec.
Weight	Gewicht	Poids	approx. 32 g; Copper Case six sides shielded

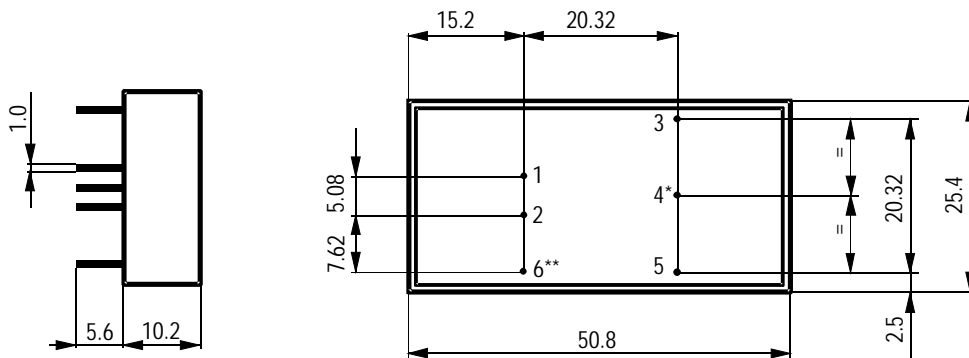
\*) Option

Case

Gehäuse

Boîtier

View from bottom; Normal tolerance ±0.2 mm; Pin distance tolerance ±0.05 mm



Pin No.	Single Output	Dual Output
1	+ Input	+ Input
2	- Input	- Input
3	+ Output	+ Output
4	Trim*	Common
5	- Output	- Output
6	Inhibit**	Inhibit**

\* without suffix "T" no pin

\*\* without suffix "A" no pin

**Remote On/Off Control (Option)**

Logic Compatibility..... CMOS or Open Collector TTL  
Output-ON..... > +5.5 VDC or Open Collector  
Output-OFF..... < 1.8 VDC  
Control Common..... Referenced to Input Minus

## Own Notes

**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.

The logo for FABRIMEX POWER SUPPLIES features the company name in a bold, sans-serif font. The word 'FABRIMEX' is positioned above 'POWER SUPPLIES'. To the left of the text is a stylized graphic consisting of three overlapping, slanted rectangular shapes in shades of gray and black, creating a sense of depth and movement.

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