

DC/DC Wide Input Converter ECW 25...30 Watt "C"



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

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 derating 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

Model	Input range	Input nominal	Output Uout	Output Iout max.	No load input current	Operating temperature	Efficiency typ.
ECW12-0325C	9...18 VDC	12 VDC	3.3 VDC	5000 mA	typ. 30 mA	For all models:	74%
ECW12-0525C	9...18 VDC	12 VDC	5.1 VDC	5000 mA	typ. 30 mA	-25...+70°C	78%
ECW12-1230C	9...18 VDC	12 VDC	12.0 VDC	2500 mA	typ. 30 mA	or maximum case	82%
ECW12-1530C	9...18 VDC	12 VDC	15.0 VDC	2000 mA	typ. 30 mA	temperature of 95°C	82%
ECW24-0325C	18...36 VDC	24 VDC	3.3 VDC	5000 mA	typ. 30 mA	(refer to derating curve)	75%
ECW24-0525C	18...39 VDC	24 VDC	5.1 VDC	5000 mA	typ. 30 mA		79%
ECW24-1230C	18...36 VDC	24 VDC	12.0 VDC	2500 mA	typ. 30 mA		82%
ECW24-1530C	18...36 VDC	24 VDC	15.0 VDC	2000 mA	typ. 30 mA		82%

Model	Input range	Input nominal	Output Uout	Output Iout max.	No load input current	Operating temperature	Efficiency typ.
ECW48-0325C	36...72 VDC	48 VDC	3.3 VDC	5000 mA	typ. 20 mA	For all models: -25...+70°C or maximum case temperature of 95°C (refer to derating curve)	75%
ECW48-0525C	36...72 VDC	48 VDC	5.1 VDC	5000 mA	typ. 20 mA		79%
ECW48-1230C	36...72 VDC	48 VDC	12.0 VDC	2500 mA	typ. 20 mA		82%
ECW48-1530C	36...72 VDC	48 VDC	15.0 VDC	2000 mA	typ. 20 mA		82%
ECW12-050525C	9...18 VDC	12 VDC	±5.1 VDC	±2500 mA	typ. 35 mA		78%
ECW12-121230C	9...18 VDC	12 VDC	±12.0 VDC	±1250 mA	typ. 35 mA		82%
ECW12-151530C	9...18 VDC	12 VDC	±15.0 VDC	±1000 mA	typ. 35 mA		82%
ECW24-050525C	18...36 VDC	24 VDC	±5.1 VDC	±2500 mA	typ. 30 mA		79%
ECW24-121230C	18...36 VDC	24 VDC	±12.0 VDC	±1250 mA	typ. 30 mA		85%
ECW24-151530C	18...36 VDC	24 VDC	±15.0 VDC	±1000 mA	typ. 30 mA		85%
ECW48-050525C	36...72 VDC	48 VDC	±5.1 VDC	±2500 mA	typ. 25 mA		79%
ECW48-121230C	36...72 VDC	48 VDC	±12.0 VDC	±1250 mA	typ. 25 mA		85%
ECW48-151530C	36...72 VDC	48 VDC	±15.0 VDC	±1000 mA	typ. 25 mA		85%
ECW12-512T25C	9...18 VDC	12 VDC	5.1/±12.0 VDC	3500/±310 mA	typ. 35 mA		79%
ECW12-515T25C	9...18 VDC	12 VDC	5.1/±15.0 VDC	3500/±250 mA	typ. 35 mA		79%
ECW24-512T25C	18...36 VDC	24 VDC	5.1/±12.0 VDC	3500/±310 mA	typ. 30 mA		80%
ECW24-515T25C	18...36 VDC	24 VDC	5.1/±15.0 VDC	3500/±250 mA	typ. 30 mA		80%
ECW48-512T25C	36...72 VDC	48 VDC	5.1/±12.0 VDC	3500/±310 mA	typ. 25 mA		80%
ECW48-515T25C	36...72 VDC	48 VDC	5.1/±15.0 VDC	3500/±250 mA	typ. 25 mA		80%

El. characteristics

El. Eigenschaften

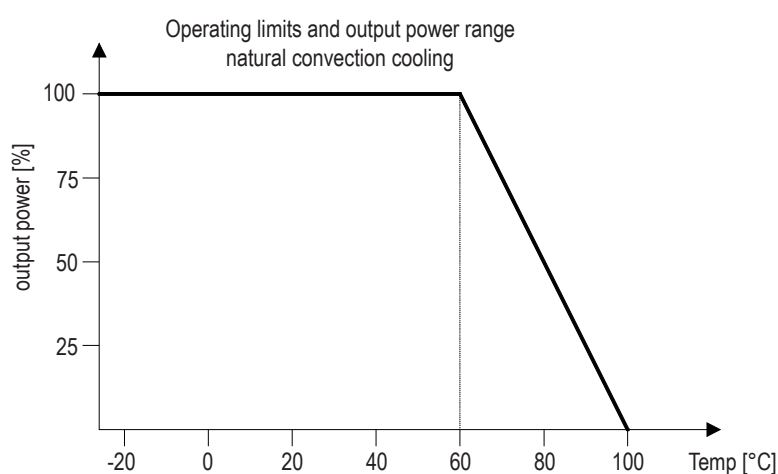
Caractéristiques él.

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

Output voltage accuracy Single Output Dual Outputs Triple Outputs	Ausgangsspannungsgenauigkeit Einfachausgang Zweifachausgang Dreifachausgang	Précision de la tension de sortie Sortie simple Sortie double Sortie triple	at Uout nominal ±2% max. ±2% (+Out); ±3% (-Out) max. ±2% (5V); ±5% (12/15V) max.
Output voltage balance	Abgleich zwischen den Ausgängen	Balance des sorties	±1%; on dual outputs
Residual output ripple and noise [BW 20 MHz]	Ausgangsspannungsrippel und HF Spitzen [BW 20 MHz]	Ondulation résiduelle et bruit de sortie [BW 20 MHz]	75 mVpp max.
Short circuit protection	Kurzschlussfestigkeit	Protection courts-circuits	continuous
Line regulation (Umax...Umin)	Leistungsregulierung (Umax...Umin)	Régulation ligne (Umax...Umin)	±0.5% (Single & dual types) ±1% (Triple types)
Load regulation (100...25%)	Lastregulierung (100...25%)	Régulation charge (100...25%)	±1% (Single & dual types) ±5% (Triple types)
Isolation voltage	Isolationsspannung	Tension d'isolement	500 VDC
Isolation resistance	Isolationswiderstand	Résistance d'isolement	>1 GOhm

Switching frequency	Schaltfrequenz	Fréquence de découpage	min. 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 and radiated	EMV Leitungsgebunden und abgestrahlt	EMC Emis et conduit	EN 55022/11 Class A
Temperature coefficient	Temperaturkoeffizient	Coefficient de température	typ. $\pm 0.02\%$ per °C
Storage temperature	Lagertemperatur	Température de stockage	-40...+100°C
Case material	Gehäusematerial	Matière du boîtier	Copper, black coated; Grounded to -Vout resp. Common
Soldering information	Lötinformationen	Information de soudage	275°C for 10 sec.
Compound material	Vergussmaterial	Racine d'enrobage	Two component resin UL94-V0
Weight	Gewicht	Poids	approx. 63 g

Derating curve



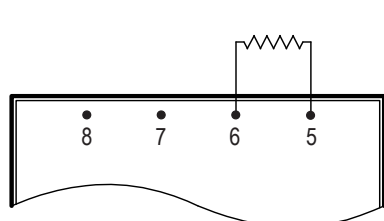
Additional Functions

Zusatzfunktionen

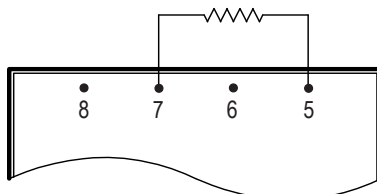
Fonctions compl.

External Output Trimming

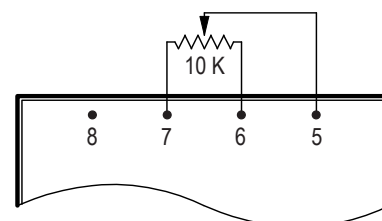
Output may be externally trimmed ($\pm 10\%$) with a fixed resistor or an external trimpot as shown:



Trim up
(nom. output voltage to +10%)



Trim down
(nom. output voltage to -10%)



Trim up or down
(nom. output voltage $\pm 10\%$)

Remote On/Off Control

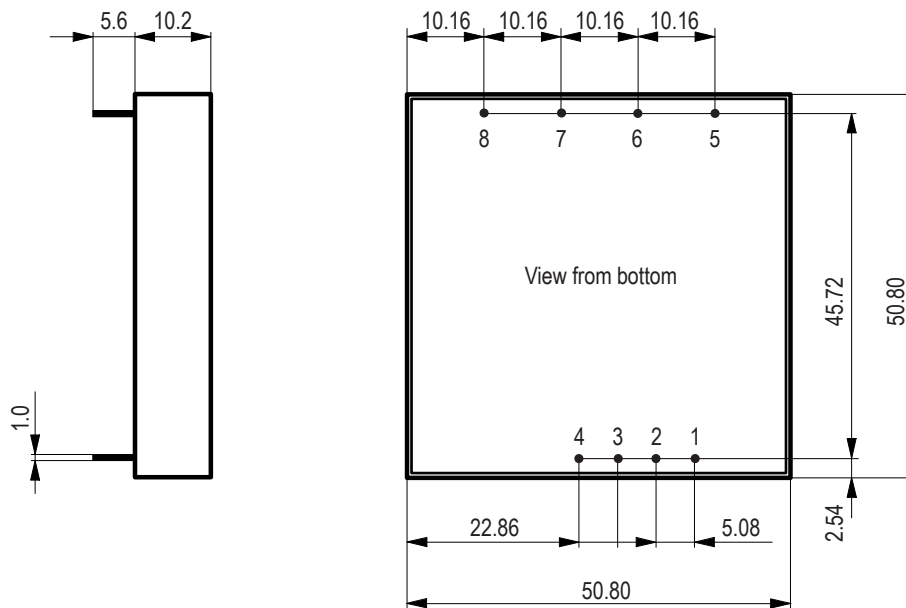
Logic Compatibility.....CMOS or Open Collector TTL
Output-ON.....> +5.5 VDC or Open Collector
Output-OFF.....< 1.8 VDC
Shutdown Idle Current.....10 mA
Input Resistance.....100k ohms (ON 0...9 VDC)
Control Common.....Referenced to Input Minus

TRIPLE OUTPUT LOADING TABLE FOR ECW 25..30 WATT "C"

Pin No.	Uout	Iout min.*	Iout nom.
7	+5 V	0.5 A	3.5 A
8 & 5	+12 & -12 V	0.1 A	0.31 A
8 & 5	+15 & -15 V	0.1 A	0.25 A

* Min. current on each output is required to maintain specified regulation.

Normal tolerance ± 1.0 mm; Pin distance tolerance ± 0.05 mm; Round pins 1.0 mm diameter



Pin Connection Single Output Models

- 1..... Remote ON/OFF Control
- 2..... No Pin
- 3..... -Vin
- 4..... +Vin
- 5..... Trim
- 6..... -Vout
- 7..... +Vout
- 8..... No Pin

Pin Connection Dual Output Models

- 1..... Remote ON/OFF Control
- 2..... No Pin
- 3..... -Vin
- 4..... +Vin
- 5..... Trim
- 6..... -Vout
- 7..... Common
- 8..... +Vout

Pin Connection Triple Output Models

- 1..... Remote ON/OFF Control
- 2..... No Pin
- 3..... -Vin
- 4..... +Vin
- 5..... -Aux. Output
- 6..... Common
- 7..... +5 VDC Output
- 8..... +Aux. Output

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.

Waschen

Die Module sind waschbar mit den heute bekannten und in der Elektronikindustrie üblichen Reinigungsmitteln.

Bedingt durch die verschiedenen Reinigungsprozesse und neu auf den Markt kommenden Mittel, raten wir dringend, beim Ersteinsatz der Konverter eine Verträglichkeitsprüfung vorzunehmen.

Lavage

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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