chanhvinh.com

TDK·Lambda

CCG 15-30W Series

13.2 to 30W DC-DC Converters

https://product.tdk.com/en/power/ccg
www.emea.lambda.tdk.com/ccg



Industrial Test COMM Broadcast

The 1" x 1" footprint CCG15 and CCG30 series of isolated DC-DC converters operate from wide range 9 to 36Vdc or 18 to 76V inputs with 15W and 30W power levels and output voltages from 3.3V to 30V (1). Single output models can be adjusted -10% to +10% by using the trim terminal. The CCG can operate in ambient temperature of -40 to 100°C and has an input to output isolation of 1,500Vdc. Six sided shielding reduces radiated and conducted EMI.

Features	Benefits
• Wide 4:1 Input Ranges	• Supports Dual 12/24V or 24/48V System Voltages
• Space Saving Package Sizes	• Less Board Area Needed
• Certified to IEC 62368-1	• Easier System Compliance
• Reduced Derating at High Ambient Temperatures	• More Useable Power

Model Selector

Model	Input Voltage (V)	Voltage (V)	Output Current (A)	Maximum Power (W)	Input Current at nominal input (A)	Efficiency (%) (100% load, nominal input)
CCG15-24-03S	9 - 36	3.3	4	13.2	0.65	85
CCG30-24-03S		3.3	7	23.1	1.12	86
CCG15-24-05S		5	3	15.0	0.72	87
CCG30-24-05S		5	6	30.0	1.4	89
CCG15-24-12S		12	1.3	15.6	0.74	88
CCG30-24-12S		12	2.5	30.0	1.4	89
CCG15-24-15S		15	1	15.0	0.71	88
CCG30-24-15S		15	2	30.0	1.4	89
CCG15-24-12D (1)		24	0.65	15.6	0.73	89
CCG30-24-12D (1)		24	1.25	30.0	1.4	89
CCG15-24-15D (1)		30	0.5	15.0	0.7	90
CCG30-24-15D (1)		30	1	30.0	0.38	91
CCG15-24-12D		±12	±0.65	15.6	0.73	89
CCG30-24-12D		±12	±1.25	30.0	1.4	89
CCG15-24-15D		±15	±0.5	15.0	0.7	90
CCG30-24-15D	18 - 76	±15	±1.0	30.0	0.38	91
CCG15-48-03S		3.3	4	13.2	0.32	85
CCG30-48-03S		3.3	7	23.1	0.55	87
CCG15-48-05S		5	3	15.0	0.36	87
CCG30-48-05S		5	6	30.0	0.69	90
CCG15-48-12S		12	1.3	15.6	0.37	88
CCG30-48-12S		12	2.5	30.0	0.69	90
CCG15-48-15S		15	1	15.0	0.36	88
CCG30-48-15S		15	2	30.0	0.69	91
CCG15-48-12D (1)		24	0.65	15.6	0.37	89
CCG30-48-12D (1)		24	1.25	30.0	0.69	91
CCG15-48-15D (1)		30	0.5	15.0	0.35	90
CCG30-48-15D (1)		30	1	30.0	0.68	92
CCG15-48-12D		±12	±0.65	15.6	0.37	89
CCG30-48-12D		±12	±1.25	30.0	0.69	91
CCG15-48-15D		±15	±0.5	15.0	0.35	90
CCG30-48-15D		±15	±1.0	30.0	0.68	92

(1) ±12V dual output models can provide a 24V single output by utilizing just the +Vout and -Vout pins, leaving the COM unconnected. Similarly ±15V dual output models can be used as a 30V single output.

chanhvinh.com

CCG	15	-24	-03	S	-
Series Name	Output Power 15 = 15W 30 = 30W	Input Voltage 24 = 9 - 36V 48 = 18 - 76V	Output Voltage 03 = 3.3V 05 = 5V 12 = 12V 15 = 15V ±12V = +12V, -12V ±15V = +15V, -15V	S = Single Output D = Dual Output	Remote on/off Blank = Negative Logic /P = Positive Logic

Specification

Model		CCG15-30W
Input		
Input Voltage Range	Vdc	See model selector table
No Load Power Consumption	W	0.6 to 0.9 (model dependant). See evaluation data on website for further details. No load power can be reduced using the remote on/off function (standby mode)
Efficiency	-	See model selector table
Conducted & Radiated EMI	-	EN55011/EN55032-A, FCC Class A, VCCI-A (External components are required, consult Evaluation Data on website)
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8; IEC61000-6-2 (External components are required, consult Immunity Data on website)
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, CE Mark and UKCA Mark

Immunity

Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	Air and contact ± 8kV	A	
Radiated Susceptibility	EN61000-4-3	80M -1GHz: 10V/m 1.4 - 2.0GHz: 3V/m 2.0 - 2.7GHz: 1V/m	A	
Electrical Fast Transient Burst	EN61000-4-4	± 4kV for input and output ± 2kV for signal pins	A/B	CCG15S: B
Surge	EN61000-4-5	± 2kV	A	Normal mode
Conducted Susceptibility	EN61000-4-6	10Vrms	A	
Magnetic Fields	EN61000-4-8	30A/m	A	

Specification

Model		CCG15-30W
Output		
Output Voltage Tolerance	%	± 2
Output Voltage Adjustment	%	Single output only. ± 10%
Switching Frequency	kHz	CCG15-S: 430, CCG30S: 3.3/5V: 270, 12/15: 360, CCG-D: 430
Cross Regulation	%	Dual output only. ± 12V: 480, ± 15V: 600 (Asymmetrical, one output at 20%, the other at 100%)
External Load Capacitance	uF	3.3V: 10,000, 5V: 7,200, 12V: 1,200, 15V:1,000
Ripple & Noise	mV	3.3/5V: 70, 12/15V: 95
Temperature Coefficient	%/°C	0.02
Minimum Load	-	No minimum load required
Overcurrent Protection	%	Hiccup mode. >105%
Overvoltage Protection	-	No
Overtemperature Protection		No
Remote Sense		No remote sense
Remote On/Off	-	No suffix: Negative Logic - ON when pin is shorted , OFF when open /P suffix: Positive Logic - ON when pin is open, OFF when pin is Low
Parallel Operation	-	Not possible
Series Operation	-	Possible

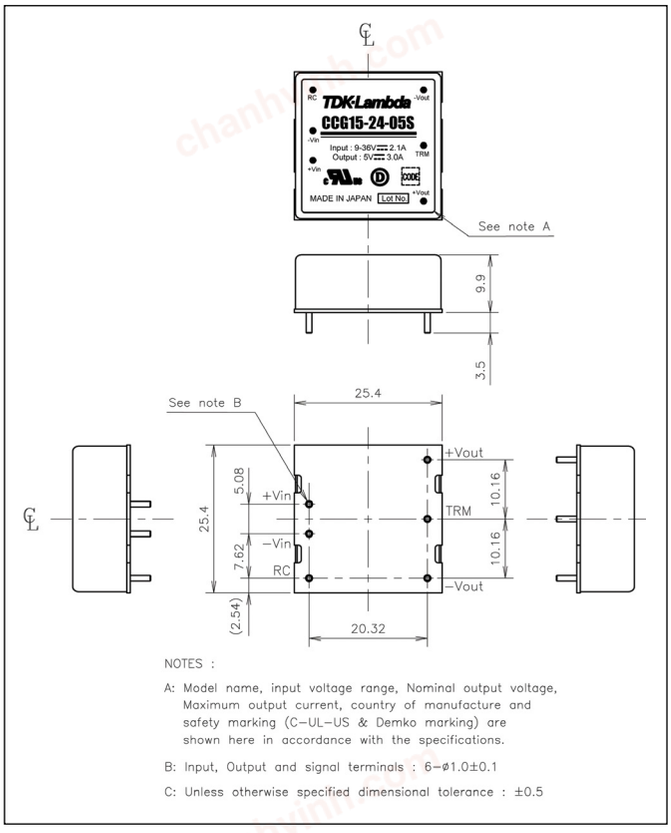
chanhvinh.com

Specification

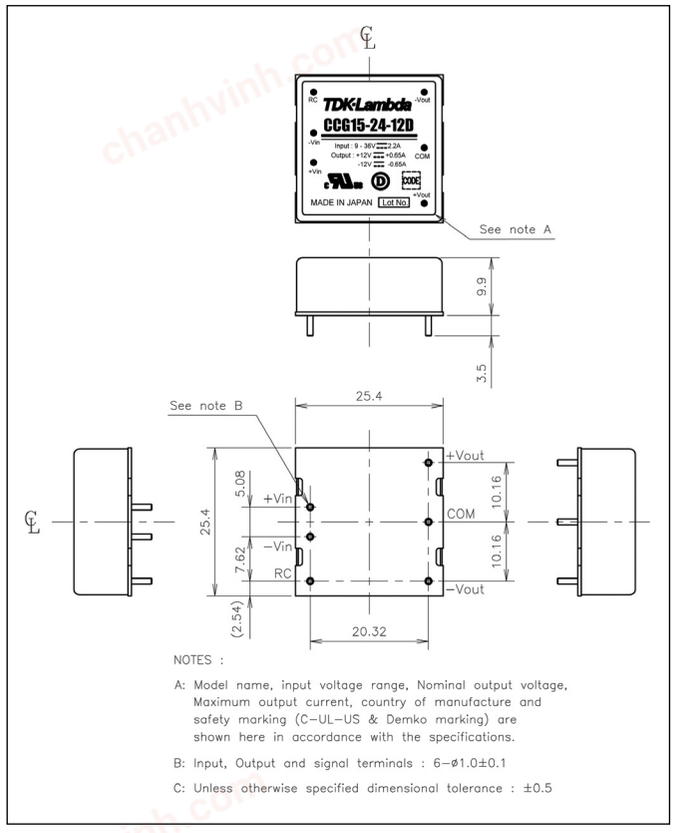
Model		CCG15-30W
Environmental		
Operating Temperature	°C	-40 to +100 (Ambient)
Maximum Case Temperature	°C	110
Storage Temperature	°C	-55 to +125
Humidity (non condensing)	%RH	5 - 95 (Operating & Storage)
Cooling	-	Convection or forced air
Altitude	m	5000
Withstand Voltage (For 1 minute)	Vdc	Input to case 1,000, input to output 1,500, output to case, 1,000
Isolation Resistance	MΩ	>100, output to case 500Vdc (25°C, 70%RH)
Vibration (Non operating)	-	10-55Hz (Sweep for 1min.) Amplitude 1.52 mm Constant (Maximum 90.8m/s^2) X, Y, Z 1 hour each
Shock (Non operating)	-	490.3m/s^2, 11ms, ±X, ±Y, ±Z 3 times each
Other		
Weight (Typ)	g	20
Size (LxWxH)	mm	25.4 x 25.4 x 9.9
Size (LxWxH)	Inches	1 x 1 x 0.39
Case Material	-	Metal
MTBF - Telcordia SR-332 issue 3*	Hours	3,191,064
Warranty	yrs	5

Notes
See website for detailed specifications, test methods and installation manual
*CCG302412S model, 25°C ambient, full load, 24Vdc input

Outline Drawing CCG15-S (Single Output)

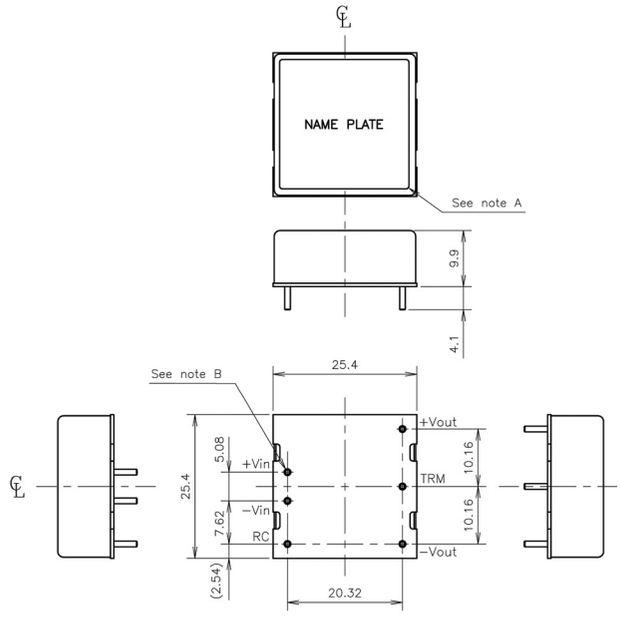


Outline Drawing CCG15-D (Dual Output)



chanhvinh.com

Outline Drawing CCG30-S (Single Output)



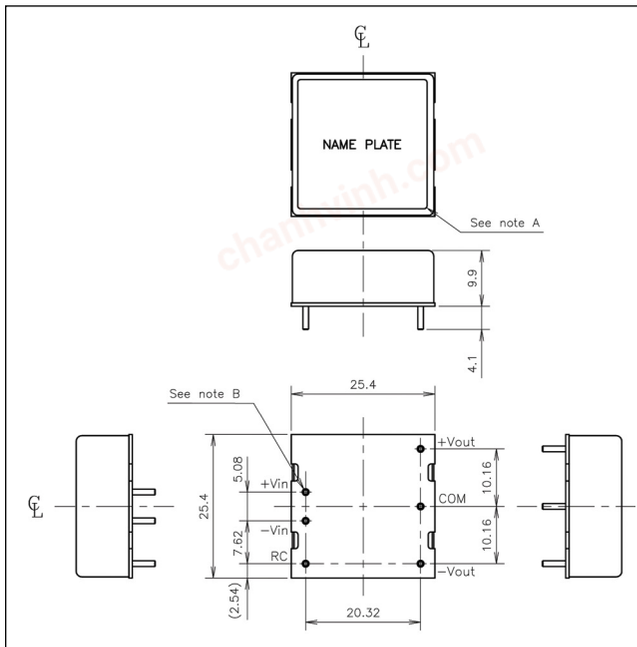
NOTES :

A: Model name, input voltage range, Nominal output voltage, Maximum output current, country of manufacture and safety marking (for only approved products) are shown here in accordance with the specifications.

B: Input, Output and signal terminals : 6–ø1.0±0.1

C: Unless otherwise specified dimensional tolerance : ±0.5

Outline Drawing CCG30-D (Dual Output)



NOTES :

A: Model name, input voltage range, Nominal output voltage, Maximum output current, country of manufacture and safety marking (for only approved products) are shown here in accordance with the specifications.

B: Input, Output and signal terminals : 6–ø1.0±0.1

C: Unless otherwise specified dimensional tolerance : ±0.5

chanhvinh.com

TDK·Lambda

Trusted • Innovative • Reliable



TDK-Lambda France SAS
Tel: +33 1 60 12 71 65
france@fr.tdk-lambda.com
www.emea.lambda.tdk.com/fr



Italy Sales Office
Tel: +39 02 61 29 38 63
info.italia@it.tdk-lambda.com
www.emea.lambda.tdk.com/it



Netherlands
info@nl.tdk-lambda.com
www.emea.lambda.tdk.com/nl



TDK-Lambda Germany GmbH
Tel: +49 7841 666 0
info@de.tdk-lambda.com
www.emea.lambda.tdk.com/de



Austria Sales Office
Tel: +43 2256 655 84
info@at.tdk-lambda.com
www.emea.lambda.tdk.com/at



Switzerland Sales Office
Tel: +41 44 850 53 53
info@ch.tdk-lambda.com
www.emea.lambda.tdk.com/ch



Nordic Sales Office
Tel: +45 8853 8086
info@dk.tdk-lambda.com
www.emea.lambda.tdk.com/dk



TDK-Lambda UK Ltd.
Tel: +44 (0) 12 71 85 66 66
info@uk.tdk-lambda.com
www.emea.lambda.tdk.com/uk



TDK-Lambda Ltd.
Tel: +9 723 902 4333
info@tdk-lambda.co.il
www.emea.lambda.tdk.com/il



C.I.S.
Commercial Support:
Tel: +7 (495) 665 2627
Technical Support:
Tel: +7 (812) 658 0463
info@tdk-lambda.ru
www.emea.lambda.tdk.com/ru



TDK-Lambda Americas
Tel: +1 800-LAMBDA-4 or 1-800-526-2324
powersolutions@us.tdk-lambda.com
www.us.lambda.tdk.com



TDK Electronics do Brasil Ltda
Tel: +55 11 3289-9599
sales.br@tdk-electronics.tdk.com
www.tdk-electronics.tdk.com/en



TDK-Lambda Corporation
Tel: +81-3-6778-1113
www.jp.lambda.tdk.com



TDK-Lambda (China) Electronics Co. Ltd.
Tel: +86 21 6485-0777
powersolutions@cn.tdk-lambda.com
www.lambda.tdk.com.cn



TDK-Lambda Singapore Pte Ltd.
Tel: +65 6251 7211
tls.mkt@sg.tdk-lambda.com
www.sg.lambda.tdk.com



TDK India Private Limited, Power Supply Division
Tel: +91 80 4039-0660
mathew.philip@in.tdk-lambda.com
www.sg.lambda.tdk.com